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# A Retrospective Audit (Paper A) and the Effects of Educational Intervention (Paper B) on Attitudes towards Inclusive Education in School teachers

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## Abstract

**Aim and Objectives:** Although inclusive education of children with intellectual disability is currently an accepted practice, it is often challenged by negative attitude of schoolteachers. We undertook two surveillance studies aimed at

*Study A - identifying knowledge and teachers' attitudes towards children with intellectual disability and practices of inclusive education in a semi-urban school of South India.*

*Study B - Determining the effect of educational intervention towards attitudes on inclusive education.*

**Method:** Knowledge, Attitude and Practice surveillance questionnaires (KAP and ATPD) were given to ninety-six consenting schoolteachers in Study A and twenty schoolteachers in Study B and analyzed.

**Results:** In Study A, the overall attitude mean indicated a favorable attitude towards the children with intellectual disability. The mean overall attitude score was 77.1 (SD: 9.58), with a normal distribution. Forty to fifty percent were aware of intellectual disability and attributed them to biological causes. Ninety-two percent agreed on the need for education and stepwise training for a child with an intellectual disability. In real-life practice, results of classroom management were inaccurate. In Study B, knowledge, attitudes and practices towards inclusive education improved with educational intervention with a positive change of 7.19% on the ATPD scale.

**Conclusion:** These findings suggest a generally positive attitude towards intellectual disability and inclusive education. Comprehensive training programs improve knowledge and attitudes towards inclusive education.

**Keywords:** Intellectual disability, Inclusive education, Attitudes, Child and adolescent psychiatry, School teachers, South India

## Introduction

A disability is an umbrella term covering impairments, activity limitations, and participation restrictions. Thus, disability is a complex phenomenon, reflecting an interaction between features of a person's body and features of the society in which he or she lives. Child with disabilities are one of the most marginalized and excluded groups in society. Facing daily discrimination in negative attitudes, lack of adequate policies and legislation, they are effectively barred from realizing their rights to healthcare, education, and even survival. Estimates suggest that there are at least 164.5 million (5.6%) children with disabilities in India, about 660 thousand more than the number recorded in 2001. These disabilities can occur in various forms such as impairment in seeing, speech, listening, movement or mental functioning. In India, there are several schemes that were designed to address the needs of the disabled but not put into effective action due to various deficits in resources. Children with disabilities are covered under the Persons with Disabilities (Equal Protection of Rights and Full Participation) Act 1995, which mentions central and state coordination committees, prevention and early detection of disabilities and recognition of institutions for persons with disabilities. Sarva Siksha Abhiyaan emphasizes free elementary and compulsory education to children 6-14 years of age. Several programs have been designed to address the educational needs of children with special needs in India. School-based programs include special schools, mainstreaming, remediation and inclusive education, further subdivided as partial and fully inclusive education. There has been a movement from segregated special education settings into general education classrooms in India, particularly in urban settings.

Inclusive Education (IE) is a new approach towards educating children with disabilities and learning disabilities. UNCIEF 2007 defines IE as a process of addressing the diverse needs of all learners by reducing barriers within the learning environment. Inclusive education offers the opportunity for each student to attend the appropriate age class with tailored support to each student. It brings all students (normal and the disabled) together in one classroom

and community, regardless of their strengths or weaknesses in any area, and seeks to maximize the potential of all students. Several studies suggest inclusive education can reform children's education and learning. It is one of the most effective ways to promote an inclusive and tolerant society with an effort to make sure that the child becomes a diverse learner, has a larger social network, positive self-esteem while imbibing multicultural and multilingual skills.

## How Far are We in the Implementation of IE in India?

Today, we still lag far behind in promoting inclusive education services to children with intellectual disability (CWID), with only few schools practicing IE. Although the Government of India has attempted to create policies since 1974, that are inclusive for CWID, their efforts have not resulted in an inclusive system of education, with about 94% of CWID not receiving any special education services. We have minimal progress in incorporating IE in our education system because of the numerous challenges we face.

The predominant negative attitude of teachers and parents towards CWID in India is the most important challenge that we currently face. Recent review reported that nearly 70% of the regular school teachers in India had neither received training in special education nor had any experience teaching students with disabilities. Teachers' and parents' attitude towards disability is known to significantly affect learning in children and alters the success and the effectiveness of the intervention. The second main challenge we currently face is the lack of access to mainstream education, with about 80% of CWID stemming from rural India. Scarcity of adequate human (child psychiatrists, social workers, special education teachers etc.) and material resources (special education schools) are other issues we face. Disabilities cause significant learning problems in children and therefore, only one percent of children with disabilities have access to school. Most schools in India are poorly designed and few are equipped to meet the unique needs of students with disabilities. Large class sizes present another challenge for the implementation of IE. Diversity of the students

(diverse culture, religion, language, socio-economic and caste) also presents another significant challenge in the successful execution of IE.

Studies done on knowledge and attitude of the practice of inclusive education in India are scarce. In this study, we examined the knowledge, practice and attitude towards inclusive education among teachers in a suburban school. The study was done in two parts. The first one was an observational study (Paper A) while the second one was an educational intervention study (Paper B). In this pilot interventional study, the primary and secondary objectives are highlighted below.

### Paper A

#### Aim

To assess the knowledge, attitude and practices of inclusive education among schoolteachers in a suburban school in India.

#### Methodology

Ninety-six consenting teachers of Vedavalli Vidyalaya School, Ranipet, willing to participate, were recruited. All English-speaking school teachers at all teaching levels willing voluntarily to participate were eligible for the study. The study was done as a retrospective audit and approved by IRB.

Two standard questionnaires (KAP survey and ATPD Scale) were provided. KAP questionnaire had seventeen questions that covered the domains of knowledge, explanatory models, degree of disability, attitudes and real-life practice. Some questions had multiple options provided that included two types of choices - yes/no/not sure and logical choices. The second questionnaire was the standard ATDP

(Attitudes towards disabled persons) questionnaire. The ATDP scale was released by the American Psychological Association in 1960 and widely used since. It has twenty standard questions scored on a six-point Likert scale (I disagree very much, disagree pretty much, disagree a little, agree a little, agree pretty much, agree very much). Higher scores have a positive attitude, the highest total score being 120 and the lowest total score being 20. The scale has excellent internal consistency, Cronbach's alpha coefficients of 0.90, test-retest reliability coefficients median value of 0.73; split-half equivalence reliability of 0.73 to 0.89, median stability equivalence reliability of 0.7 and high construct validity.

#### Scoring

Items were scored from 1 to 6; 1 - quantifying 'I disagree very much' to 6 - qualifying 'I agree very much'. Reverse scoring was applied to items 6 and 12 and calculated accordingly. The data was analyzed by SPSS 16.0 & measures of central tendency were calculated.

### Results

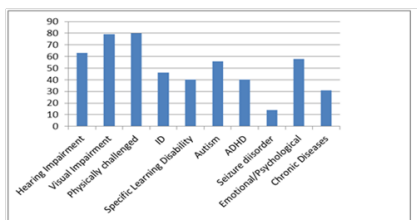
#### Questionnaire 1

Nearly 50% were aware of intellectual disability and attributed them to biological causes. 36 (37.8%) believed that faith healing could make their child alright. The majority 87 (91.5%), agreed to the need for education and step wise training for a child with intellectual disability. In real-life practice, more than half (53%) agreed to allow interaction with their children a quarter (21%) found treatment too expensive & practice of inclusive education was inaccurate.

**Table 1: General Statements on Disability**

Item	Yes	No	Not sure
Faith healing can make the child alright	36 (37.8%)	23 (23.9%)	25 (26%)
A child with disability can go to school	87 (91.5%)	0	5 (5%)
Appropriate training improves the condition of the child	82 (86.3%)	4 (0.04%)	8 (8%)
The person can marry and enjoy his or her life	60 (63.1%)	0	31 (32%)
The child can be involved in household activities	76 (80%)	9 (0.09%)	12 (12.5%)
The person can look after his/ her property	55 (57.8%)	0	29 (30.2%)
The child can learn new skills with stepwise training	87 (91.5%)	45 (46.8%)	4 (4%)
The child should have a disability certificate to prove disability	25 (26.3%)	45 (46.8%)	21 (21%)

### Common Disabilities known to the Local Teachers



### Causes of Disability

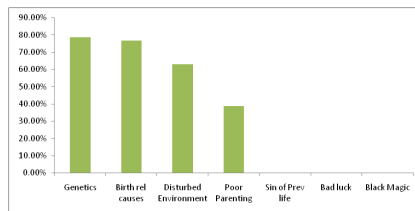


Table 2: Real Life Practice (Percentage of teachers that responded)

	Paper A	Paper B (Pre-test)	Paper B (Post-test)
<b>When you encounter a child with disability in your classroom?</b>			
Feel sorry	(5%)	(25%)	(15%)
Try to help	(60%)	(30%)	(60%)
Behave the usual	(15%)	(10%)	(5%)
Ignore the child	(0%)	(10%)	(0%)
Feel thankful for your life	(0%)	(20%)	(15%)
<b>How do you manage behavioral problems?</b>			
Make them understand	(69%)	(20%)	(35%)
Report to parents	(10%)	(30%)	(40%)
Ignore	(1%)	(10%)	(5%)
Punish	(1%)	(20%)	(15%)
Fail them in exams	(0%)	(10%)	(0%)
Sit in separate classrooms	(0%)	(5%)	(0%)
<b>Whom do you consult to help a child with disability?</b>			
Media and internet	(30%)	(25%)	(15%)
Friends and teachers	(24%)	(30%)	(20%)
Daily experiences	(8%)	(20%)	(15%)
1&2 combination	(2%)	None	None
1,2,3 combination	(2%)	None	None
Library	(0%)	(5%)	(10%)
Hospital/Doctors	(0%)	(10%)	(35%)
Nobody	(0%)	(5%)	None
Others	(0%)	None	None
<b>Have you ever referred a child to a doctor/psychologist/psychiatrist for disability?</b>			
Yes	(25%)	(15%)	(70%)
No	(37%)	(45%)	(15%)
Sometimes I think about it	(21%)	(20%)	(10%)
Never	(0%)	(5%)	None
No treatment available	(0%)	(10%)	None

### Questionnaire 2

Results of the attitudes towards the children with intellectual disability are tabulated.

- The overall attitude indicated a mildly favorable attitude towards the children with intellectual disability with the mean overall attitude score
- Nearly one third of the teachers (31/96) had a negative attitude (Total ATDP score is 120; Lowest ATDP score 20; Mean ATDP score 70.

being 77.1 (SD: 9.58), showing a normal distribution (minimum total score 59; maximum total score 108).

A value above 70 indicates positive attitude).

- 8 % (8/96) of the teachers had a high degree of favorable attitude (with scores above 90)
- The table 3 below highlights the item response mean of the Likert Scale (scored from 1-6). Items with the highest scores were Items 1, 2 and 19. Item 2 has a negative answer (I disagree very much) hence can be ignored. Items with the lowest scores were 8, 13 and 10. Mean scores were similar across the subdomains with slightly higher scores in Interpersonal and Communication, Education and Emotional strengths suggesting a satisfactory understanding in these domains.

### Discussion

Our findings show a predominantly positive attitude among teachers towards children with intellectual disability with nearly two thirds having an overall ATDP score well above 70. However, several Indian studies have found that a predominant negative outlook prevails among teachers towards the children with intellectual disability especially towards behavioral problems and cognitive deficits like decreased attention. Unskilled teachers is another factor that leads to negative attitudes. Other factors of teachers that correlate with negative attitudes included middle aged groups of teachers, male gender, lower education status and lesser income of teachers. Indifference in a teacher's attitude to learning difficulties, personal beliefs and values persists which greatly hinders teaching skills as well as learning in children with intellectual disability.

Factors that highly correlates with positive attitudes has been found to be a higher acquaintance with the children with intellectual disability. The latter has been found in the Western and Middle Eastern studies and is said to be the most influential factor in determining success of inclusion. However, factors contributing to a positive attitude in our study can be explained by the fact that the territory around Vellore is knowledgeable, with two universities located here and with a school liaison program in our center. Another contributory factor could be that this territory is known to follow high moral standards of living in their day to day life, which is reflective of the positive result.

Even so, our study reveals that classroom management among teachers was poor (KAP questionnaire) and a striking one third of the teachers had a negative attitude with an ATDP score less than 70. These issues can be addressed through frequent school liaisons that include regular reassessment and focused group discussion.

### Conclusion

As opposed to other inclusive education studies findings from this study demonstrate a positive attitude among school teachers towards children with nearly two thirds having a moderately positive outlook. Difference of outcome within the country is a point to note and factors contributing to the same need to be looked into. However, this paper reflects the need for more comprehensive teacher training programs and research for inclusive education.

### (Paper B)

**Objective:** To assess the effectiveness of a pilot intervention in improving the knowledge, attitude and practice of inclusive education for schoolteachers.

### Methodology

20 teachers of Vedavalli Vidyalaya School, Ranipet, consented to participate in our study. Eligibility criteria included English speaking of all level classes (primary, middle and high school). The sample size was estimated using the formula

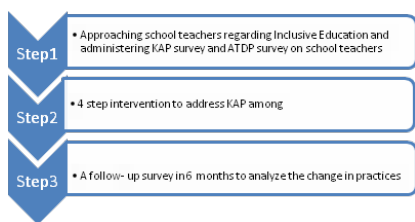
$n = (Z \sigma / E)^2$ , where  $\sigma = 15$  taken from the  $\sigma$  of Yukers book on ATDP. The required sample size was 35. We recruited 20 for this pilot study.

The 20 teachers were subjected to a pre-intervention surveillance and post intervention surveillance using the same scales in Paper A. Post intervention surveillance was done six months after the intervention was given. The collected data was further analyzed using SPSS. The intervention provided was a four-step educational program which included educating the teachers regarding common disabilities, identification of children with intellectual disability (CWID), screening and treatment along with use of audiovisual aids. This intervention was done on a single day at the developmental disorders unit at our hospital. During this visit, we taught them how to identify the clinical features of CWID. The

treatment part of the protocol was focused on the use of audiovisual aids, emotional regulation and behavior modification techniques.

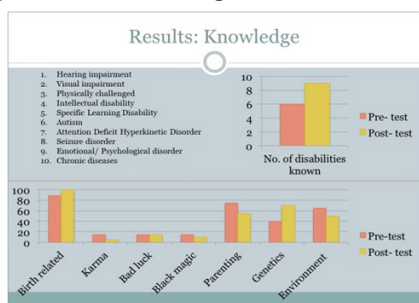
### Results

Few striking results from the KAP questionnaire are listed in the 9 bar graphs. Knowledge about causes of intellectual disability improved with intervention. With intervention, more participants agreed to CWID attending school, taking on household chores and include government authorities in charge seeking treatment from doctors. Practice based knowledge in a classroom also improved to a large extent, with intervention.



### Attitude Towards Disabled Persons Scale (ATDP)

- Mean of pre-test score = 69.8, SD of 5.27
  - Mean of post- test score = 78.35, SD of 5.94
  - Total change in score = 8.55
- Percentage change in score with intervention = 7.19%  $[(78.35/120) - (69.8/120)]$ ; 120 being the total score of the ATDP scale, score above 60 indicating a favorable attitude, higher scores indicating a better attitude.

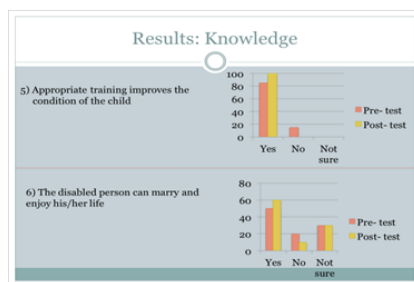
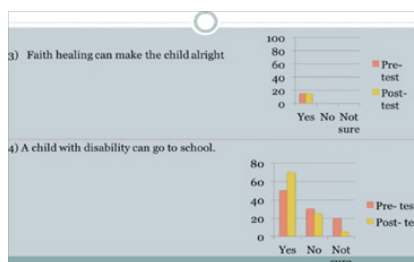


### Discussion

This study serves as pilot for larger studies. In Paper A of our pilot study, a favorable attitude of about 96 teachers towards CWID was found, with a mean ATDP score of 77.1; SD of 9.58. Factors that bring about the positive outlook are mentioned in Paper A and will not be elaborated here. Our study

showed a favorable attitude among the 20 teachers, with the pre- intervention mean ATDP score of 69.8, SD of 5.27. There was a significant positive change by 7% on the ATDP with intervention. (Mean of post-intervention score= 78.35, SD of 5.94). Knowledge, attitudes and practices improved significantly as well (KAP questionnaire and bar graphs) with intervention. ATDP scales showed increased positive attitudes in communication, interpersonal skills and educational needs of CWID.

Our findings suggest that education can bring about a positive change to the attitudes and practice of inclusive education. This can help overcome the challenges we face to implementing IE like the negative attitudes among teachers. Not many intervention studies in CWID exist in India. Those that were done were family interventions. Thus, there is a need for educational intervention studies and focused group discussions in those schools that practice IE. Biannual school liaisons suffice in raising community awareness. Interventions can be done by child psychiatrists, child psychologists and trained social workers. The liaison projects also need to include government authorities in charge of school administration so that better educational systems for CWID are designed.



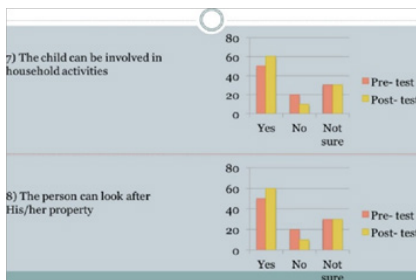
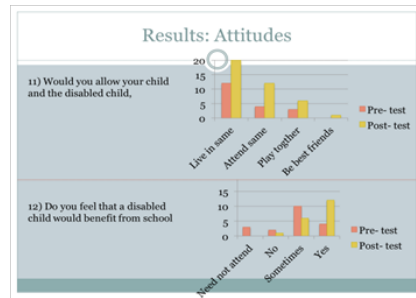
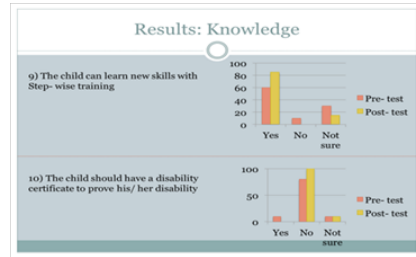
### Conclusion

Our study noted that pre- intervention revealed average knowledge about disabilities among teachers.

However, there was a significant improvement in scores in all domains following the educational program. Inclusive education practices can be easily influenced. To meet the challenges, the involvement of educators, parents, community leaders with the assistance of the government is necessary.

**Limitations of Both Studies**

Limitations of self-report scales have not been accounted for. Lack of demographic details was a shortcoming for elaborate analysis of data. Response bias, measurement bias and socially desirable responses have not been corrected for. In Paper B, the small sample size is a major limitation



**Table 3: ATDP Subdomains**

Subdomains	Items	Mean (Paper A)	Mean* (Paper B)	
			Pre-test	Post-test
Education	2,6,10	3.78	4.9	4.16
Communication and Interpersonal	1, 3,5,12,14,15,17,19	3.87	3.6	4.16
Work	7	3.10	2.8	3.5
Self-Care	None	None	None	None
Emotional strength of disabled	4, 9, 11, 13, 16, 18, 20	3.66	3.55	3.98
Societal	8	2.95	3.6	3

\*Mean is the mean score from the Likert scale of 1 to 6.

**Table 4: ATDP scale**

S. No.	Item	Item Response Mean (Paper A)	Item Response Mean* (Paper B)	
		Survey	Pre-intervention	Post-intervention
1	Parents of disabled children are less strict than other parents.	4.90	4.3	5.4
2	Physically disabled people are just as intelligent as non-disabled people.	4.84	2.5	3.85
3	Disabled people are generally easier to get along with than non-disabled people.	3.41	2.7	3.5
4	Most disabled people feel sorry for themselves.	3.81	3.65	4.2

5	Disabled people are the same as anyone else.	4.20	2.85	3.05
6	There should not be special schools for disabled people.	3.70	3.6	4.15
7	It would be best for disabled people to live and work in special communities.	3.10	2.8	3.5
8	It is up to the government to take care of disabled persons.	2.95	3.6	3
9	Most disabled people worry a great deal.	3.94	3.7	4.15
10	Disabled people should not be expected to meet the same standards as non-disabled children.	2.82	3.7	4.15
11	Disabled people are as happy as non-disabled ones.	3.49	2.55	3.15
12	Severely disabled people are no harder to get along with than minor disabilities.	3.29	3.2	4.15
13	It is almost impossible for disabled people to lead a normal life.	2.93	3.35	3.3
14	You should not expect too much from disabled people.	3.32	3.55	4.35
15	Disabled people tend to keep to themselves much of the time.	3.85	3.85	4.25
16	Disabled people are more easily upset than non-disabled people.	4.21	4.1	4.05
17	Disabled persons cannot have a normal social life.	3.10	3.25	3.15
18	Most disabled people feel that they are not as good as other people.	3.66	3.45	3.7
19	You have to be careful of what you say when you are with disabled people.	4.92	5.2	5.5
20	Disabled people are often grouchy.	3.63	4.1	3.8
*Response mean is the mean score from the Likert scale of 1 to 6				

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