

Inclusion of Children with Hearing Impairment in Schools: A Survey on Teachers' Attitudes

Santhi S Prakash*

ABSTRACT

Purpose: *Inclusion of children with disabilities in mainstream classrooms has become the focus of extensive research in education. It has both academic and social benefits for all students, such as providing opportunities for communication and social interaction. The evaluation of teachers' attitudes towards inclusion appears to be a good method to determine the success of the programme. Although this has been widely researched in many countries, the available evidence is not consistent. This study was undertaken in the state of Andhra Pradesh in India, to measure and compare teachers' attitudes towards the inclusion of children with hearing impairment in schools.*

Method: *A questionnaire developed by Giles and Tanner (1995) measuring three domains - (1) effective strategies for meeting the needs of all students, (2) the support for educational change in their district, and (3) inclusive education - was modified in keeping with cultural and geographical variations and used as the test tool. A hundred teachers of various Government and non-Government schools in 2 districts of Andhra Pradesh, India, participated in the study.*

Results: *Higher scores on domain 1 indicate that teachers feel effective strategies to benefit students with disabilities should be implemented in schools. The results also indicate that most teachers are agreeable to the inclusion of students with disabilities in their classrooms. Significant difference in attitudes was observed, based on the teachers' qualifications, teaching experience, gender, level of teaching and management.*

Conclusion: *The study concludes that there is a need for intervention to foster more positive attitudes among teachers, if the implementation of inclusive education is to succeed. It also has implications for the framing of laws and policies for children with hearing impairments.*

Key words: *inclusive education, hearing impairment, teachers' attitudes*

*Corresponding Author: Lecturer, Department of Special Education, Ali Yavar Jung National Institute for Hearing Handicapped, Southern Regional Centre, Secunderabad 500009, India. Email:santhiprakash5@gmail.com

INTRODUCTION

Over the past two to three decades, in most developed countries there has been a significant trend towards the placement of students with special educational needs in mainstream schools rather than in segregated special schools and special classes. This move has been referred to variously as integration, mainstreaming, and more recently, inclusion. Inclusion refers to students with disabilities becoming part of the general education classroom, receiving a meaningful curriculum with necessary support, and being taught with effective strategies (Smith 2004). The basic premise of the integration/ inclusion movement is that principles of anti-discrimination, equity, social justice, and basic human rights make it imperative that students with disabilities and special needs should enjoy the same access as all other students to a regular school environment and to a broad, balanced and relevant curriculum (UNESCO, 1994; Knight, 1999).

Though the move towards integration began in a few countries during the late 1960s and early 1970s, it became a worldwide movement in the 1980s and throughout the 1990s. A major influence was the promulgation of the Salamanca Statement and Framework for Action on Special Needs Education (UNESCO, 1994). The Government of India has played a role in providing a comprehensive range of services for the education of children with disabilities. Initiatives in the area of Inclusive Education can be traced back to the National Educational Policy (1986) which recommended as a goal, 'to integrate the handicapped with the general community at all levels as equal partners, to prepare them for normal growth and to enable them to face life with courage and confidence'. The Scheme of Integrated Education for Disabled Children (IEDC) was started in 1974. It is implemented in 27 States and 4 Union Territories (UTs) through 41,875 schools, and benefits more than 133,000 children with disabilities (Ministry of Human Resource Development [MHRD] Report, 2002-2003). A Survey (Disabled Persons in India, 58th Round, 2002) by the National Sample Survey Organisation (NSSO) shows that there are 9,029 children with disability for every 0.1 million children in the age group of 5-14 years.

Inclusion or organised placement of children with disabilities in mainstream classrooms has been one of the major topics in education for the last two decades (Avramidis et al, 2000) and has become the focus of extensive research (Jobe & Rust, 1996). Inclusion has academic and social benefits for all students, whether with or without disabilities, such as increased communication and social interaction opportunities, age-appropriate models of behaviour skills, more

active participation in the school community, individualised education goals, as well as access to the rich core curriculum (Grenot-Scheyer et al, 1996). It is believed that integration into the mainstream enables students with disabilities to benefit from the stimulation of mixing with relatively more able students and to have the opportunity to observe higher models of social and academic behaviour (Elkins, 1998). Those who oppose the adoption of such a model express concerns about the lack of training, personnel and administrative support, and are uncertain about academic and social gains (Lewis & Doorlag, 2003; Peterson & Hittie, 2003; Salend, 2001, 2005). Although these issues are important, perhaps a better method would be to evaluate the attitudes of those who form an important part of this dynamic system, namely the teachers, to determine the success of the inclusionary programme (Rose & Cole, 2002). Indeed, teachers' attitudes have been found to influence the process and the outcome of inclusion to a great extent (Avramidis et al, 2000).

The factors which play a role in determining the attitudes of teachers include age, gender, qualifications, experience, level of teaching, school management and proficiency. Diebold and Trentham (1987) investigated teacher attitudes toward inclusion in Alabama, and found that regular educators were positively inclined towards teaching students with disabilities, were confident about their skills and sufficiency of time to carry out the mainstreaming programme in the regular classroom, and about the effects of teacher inputs in the educational programme. Zambelli and Bonni (2004) also stated that two factors are important in the formation of positive attitudes towards inclusion, namely, increased knowledge and information about school inclusion and disabilities. Even Galis and Tanner (1995) in their study concluded that it is both important as well as legally mandated, to make modifications for those students who need it, to benefit from the educational environment.

There are various opinions in literature regarding the relationship between a teacher's gender and the attitude towards inclusive education. Several studies support the view that there is no correlation between the two (Cornoldi et al, 1998; Avramidis et al, 2000; Kuester, 2000; Van Reusen et al, 2001). In a similar study, Harvey (1985) concluded that gender was not a significant factor in determining a teacher's attitude toward inclusive education.

However, some studies found that female teachers were more favourably inclined towards the inclusion of students with disabilities into regular settings (Pearman et al, 1992; Leyser & Tappendorf, 2001) and appeared to have higher expectations

of these students than their male counterparts (Hodge & Jansma, 2000). In contrast, other studies found that male teachers were either significantly more confident than female teachers about their ability to teach students with disabilities (Jobe et al, 1996), or held more positive views about inclusive education (Lampropoulou & Padelliadu, 1997).

Factors which are major impediments to the development of inclusive education in Andhra Pradesh are a limited understanding of the concept of disability, negative attitudes towards persons with disabilities and a resistance to change. The inclusion of students with hearing impairment is even more challenging because of the communication barrier between them and their non-impaired peers and teachers. McCain and Antia (2005) of the University of Arizona compared the academic achievements, communication participation and social behaviour of five hearing-impaired students, five hearing-impaired students with additional disabilities and 18 peers without hearing impairment studying in an inclusive classroom. It was found that hearing-impaired students were not significantly different from their hearing peers in all the above areas, indicating that co-enrolment is a possible model of inclusion for hearing-impaired students.

Need for the Study

The issues of inclusive education and its implications have been under scrutiny during the past thirty years. Today, societies have become concerned about ensuring the educational rights of all children, regardless of the severity of disabilities. As a result, the inclusion of students with disabilities into the regular educational setting has become the concern of educators, governments, and society at large (Tsfay, 2005).

An attitude is a person's point of view about an idea or object in his /her everyday life, and it can be either positive or negative. It is necessary to have a positive attitude towards a given task in order to do it effectively, and it is true that an individual will invest more effort in a programme that is perceived to be positive and functional. Teachers' attitudes have been regarded as one of the major factors guaranteeing the success of inclusive education for students with special needs. It is important to examine the attitudes of mainstream educators as their perceptions may influence their behaviour towards, and acceptance of, such students (Sideridis & Chandler, 1996; Van Reusen et al, 2001; Hammond & Ingalls, 2003). The success of an inclusionary programme may be at risk if regular classroom teachers have negative perceptions regarding the inclusion of students

with disabilities (Horne, 1983; Van Reusen et al, 2001). Negative perceptions of inclusive education may become obstacles as general education teachers attempt to include students with disabilities (Cawley et al, 2002).

Although the attitude of teachers towards inclusion is a widely researched topic in many countries, the available evidence is not consistent and evidence from the state of Andhra Pradesh in India is scarce. Hence there is a need for a study on the attitude of teachers in this region towards inclusive education.

OBJECTIVES

The objectives of this study were to measure and compare the attitudes of teachers in regular schools towards the inclusion of children with hearing impairment:

1. On three domains: a) Effective strategies for meeting the needs of all students, (b) The support in their district for educational change, and (c) Inclusive education.
2. With respect to: a) Management b) Gender c) Level of teaching d) Experience of the teachers e) Qualifications of the teachers.

Operational Definitions of Variables and Terms used in the Study

Management: Teachers belong either to schools managed by the government, referred to as government organisations, or to schools managed by non-government authorities, referred to as non-government organisations.

Gender: Gender is considered as one of the variables

Qualification: The level up to which teachers have been educated is divided into three groups: 1) Intermediate with Teacher Training Certificate (TTC)

2) Graduate with Bachelor's degree in Education (B Ed) and 3) Post-graduate with Bachelor's degree in Education, considered as experience.

Level of teaching: It refers to the section/class which they teach, i.e., primary level and secondary level, and is one of the variables.

Experience: It stands for the number of years that teachers have been in the profession and is considered as one of the variables. In this study, teaching experience has been categorised as less than 10 years and above 10 years.

Inclusive education: Organised placement of children with disability in mainstream schools.

Regular teachers: Those who teach in mainstream schools.

Attitude: A tendency to respond positively or negatively to an idea.

Hearing aid: A device used for the amplification of sound.

Cochlear implant: A surgically implanted device that provides a sense of sound.

METHOD

Subjects: A total of 100 regular teachers participated in the study and were classified into 5 groups based on the variables - management, gender, level of teaching, teaching experience and qualifications.

Table 1: Demographic Data of Participants

S. No.	Variable	Details of variable	No. of Teachers	Total
1	Management	GO	59	100
		NGO	41	
2.	Gender	Male	50	100
		Female	50	
3.	Level of teaching	Primary level	56	100
		Secondary level	44	
3.	Experience	Below 10 yrs (<10)	61	100
		Above 10 yrs (>10)	39	
4.	Qualification	Inter with TTC	10	100
		Degree with B Ed	61	
		PG with B Ed	29	

Tool: A standardised questionnaire related to teachers' attitudes towards inclusion, developed by Galis and Tanner (1995), was used as a test tool (Appendix 1). It lays emphasis on three areas - effective strategies for meeting the needs of all students, the support in their district for educational change, and inclusive education.

The test tool consists of 24 statements. Respondents indicate whether they agree or disagree with the statement using a six-point Likert scale, which ranges from strongly agree (6 points) to strongly disagree (1 point), measuring the following three domains.

Domain I: Effective strategies for meeting the needs of all students.

A total of 10 questions (question nos. 1, 2, 6, 7, 8, 13, 15, 18, 20, 24) were included in the first domain, e.g.

- (i). *Remedial classes are needed in regular schools for children with disability.*
- (ii). *Maximum class size should be lowered when including students with disabilities.*

Domain II: The support in their district for educational change.

A total of 6 questions (question nos. 3, 5, 10, 12, 17, 21) were included in the second domain, e.g.

- (i). *Efforts are made to provide opportunities for mutual planning and collaboration among personnel in my school/district.*
- (ii). *I give inputs to the programme of students with disabilities who are placed in my classroom.*

Domain III: Inclusive education.

A total of 8 questions (question nos. 4, 9, 11, 14, 16, 19, 22, 23) were included in the third domain, e.g.

- (i). *Placement of a student with a disability in a regular classroom is not disruptive to students without disability.*
- (ii). *Students should be served in regular classes regardless of disability.*

These domains were selected to determine the perceptions and beliefs of teachers in regular schools regarding the provision of services to students with hearing impairment, and also to identify the needs and strategies at school and district levels for the implementation of effective changes for inclusive education.

The questionnaire was modified to suit the geographical and cultural variations. For the purpose of establishing content validity, it was shared with 10 senior professionals from the disciplines of Audiology, Speech-Language Pathology and Special Education, who were chosen for their expertise in the education of persons with disabilities and for having served on National committees pertaining to special education and rehabilitation of these persons. Their suggestions or recommendations related to change of wording and rephrasing. Sentences in the original questionnaire that were consistent and met the criteria of 50% and above were considered, and modifications were incorporated (enclosed as Appendix 1).

Question nos. 1,2,3,5,6,10,13,16,17,19,21 were simplified in terms of wording and rephrasing of the sentence. Questions 22 and 23 were modified from negative weighting to positive weighting, and question 24 was changed as it provided the same information as question 18.

Data Collection: Data were initially collected from the teachers who attended the “Public Information Campaign on Disability” conducted by Bharat Nirman, Government of India, in East & West Godavari districts of Andhra Pradesh. There were around 150 teachers working in schools managed by both Government (GO) and non-Governmental organisations (NGO). The questionnaire was distributed to all the participants but only 72 completely filled-in forms were returned. As the sample size was small, the author decided to post 60 questionnaires along with a covering letter to those participants who did not respond. However, only 28 filled-in questionnaires were mailed back within the stipulated period and were considered for the study. Thus, a total of 100 filled-in questionnaires were obtained from 150 participants.

Scoring: The respondents had to indicate by a cross (x) whether they strongly agree / agree / agree somewhat / disagree somewhat / disagree or strongly disagree with the statement. The scoring ranged from 6 (strongly agree) to 5, 4, 3, 2 and 1 (strongly disagree), thereby making a total score of 144. After scoring the responses, the analysis was done with the computer programme ‘Statistical Package for the Social Sciences (SPSS)’. The level of significance for this study was chosen at 0.05 probabilities.

Statistical Analysis

The obtained data was analysed and compared by computing the mean scores and standard deviations for each of the groups. Inter-group comparisons were done with appropriate statistical tools. One-Way Analysis of Variance and t-test were performed to obtain between- group comparisons.

RESULTS

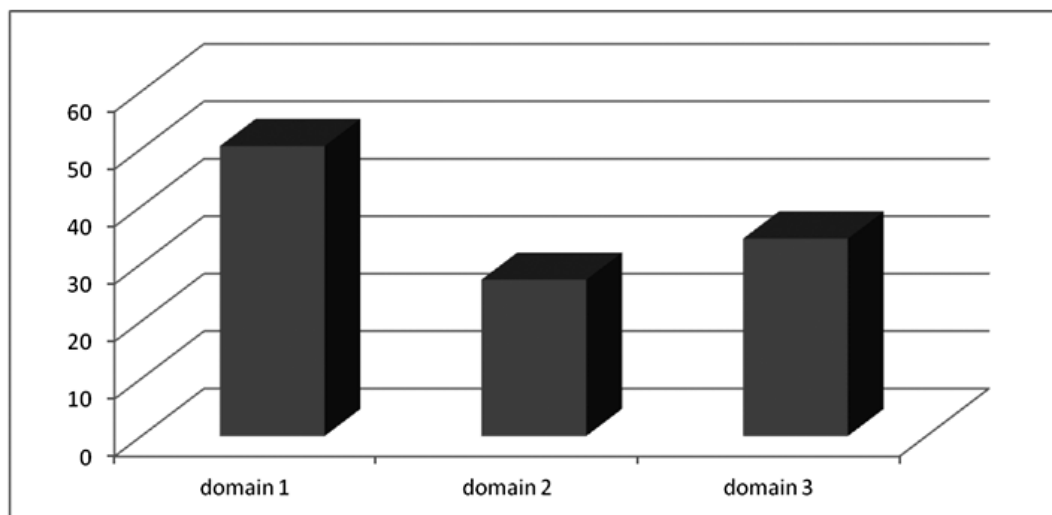
The objectives and results of the study are discussed as follows:

Objective 1: To measure and compare the attitudes of teachers working in regular schools towards the inclusion of children with hearing impairment, in three domains: 1) effective strategies for meeting the needs of all students, (2) the support in their district for educational change, and (3) inclusive education.

Table 2: Mean values of attitudes of teachers working in regular schools towards the inclusion of children with hearing impairment.

S. No.	Domains	N	Mean	SD	F	Sig
1	Effective strategies for meeting the needs of all students,	100	50.47	5.14	598.283	.000
2	The support in their district for educational change	100	27.21	4.14		
3	Inclusive education	100	34.36	5.24		

Figure 1: Mean values of attitudes of teachers working in regular schools towards the inclusion of children with hearing impairment in schools.



The highest mean value on the attitudes of teachers working in regular schools towards the inclusion of children with hearing impairment was obtained for domain 1 - "Effective strategies for meeting the needs of all students" (50.47), followed by domain 3 - "Inclusive education" (34.36), and domain 2 - "The support in their district for educational change" (27.21). ANOVA revealed a statistically

significant difference between the three domains with an 'f' value of 598.28 at significance level $p=0.00$.

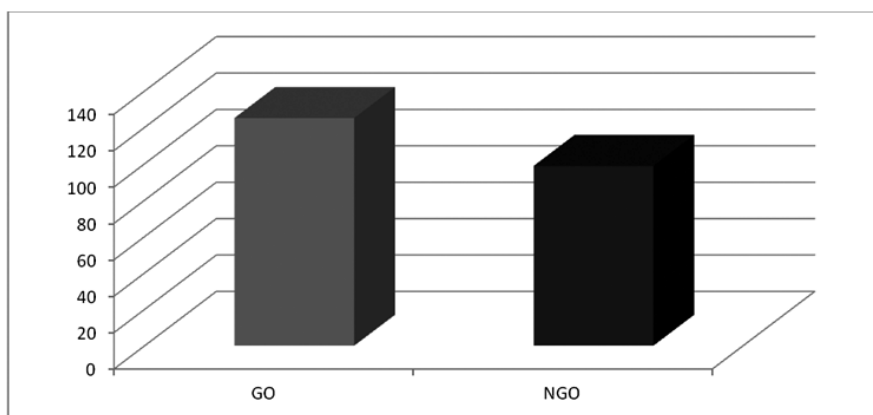
Objective 2: To measure and compare the attitudes of teachers working in regular schools towards the inclusion of children with hearing impairment, with respect to: a) Management b) Gender c) Level of teaching d) Experience of the teachers e) Qualifications of the teachers.

a) Management

Table 3: Mean values and standard deviation of attitudes of teachers working in regular schools towards inclusive education of children with hearing impairment.

S.No	Management	N	Mean	SD	't' value	Sig
1	Government Organisation (GO)	59	125.11	10.74	9.88	0.000
2	Non-Government Organisation (NGO)	41	98.78	15.93		

Figure 2: Mean values of attitudes of teachers working in regular schools towards inclusive education of children with hearing impairment.



The mean values and standard deviation obtained for teachers working in Government Organisations with reference to inclusive education of children with hearing impairment were 125.11 and 10.74, and for teachers working in

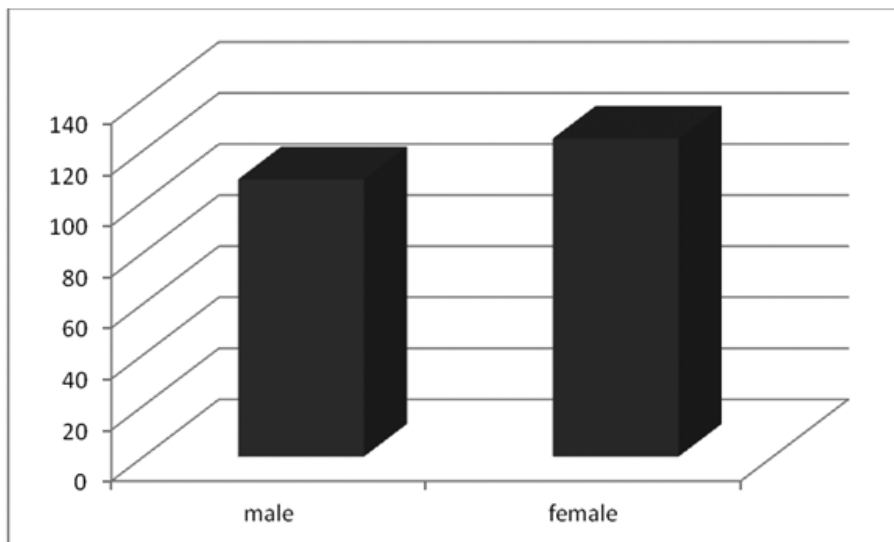
Non-Government Organisations were 98.78 and 15.93. The “t” test revealed a statistically significant difference at $p=0.00$ with a “t” value of 9.88.

b) Gender

Table 4: Mean values and standard deviation of attitudes of teachers working in regular schools towards inclusive education of children with hearing impairment with reference to Gender.

S.No	Gender	N	Mean	SD	‘t’ value	Sig
1	Male	50	108.54	11.64	7.41	0.000
2	Female	50	124.54	9.87		

Figure 3: Mean values of attitudes of teachers working in regular schools towards inclusive education of children with hearing impairment with reference to Gender.



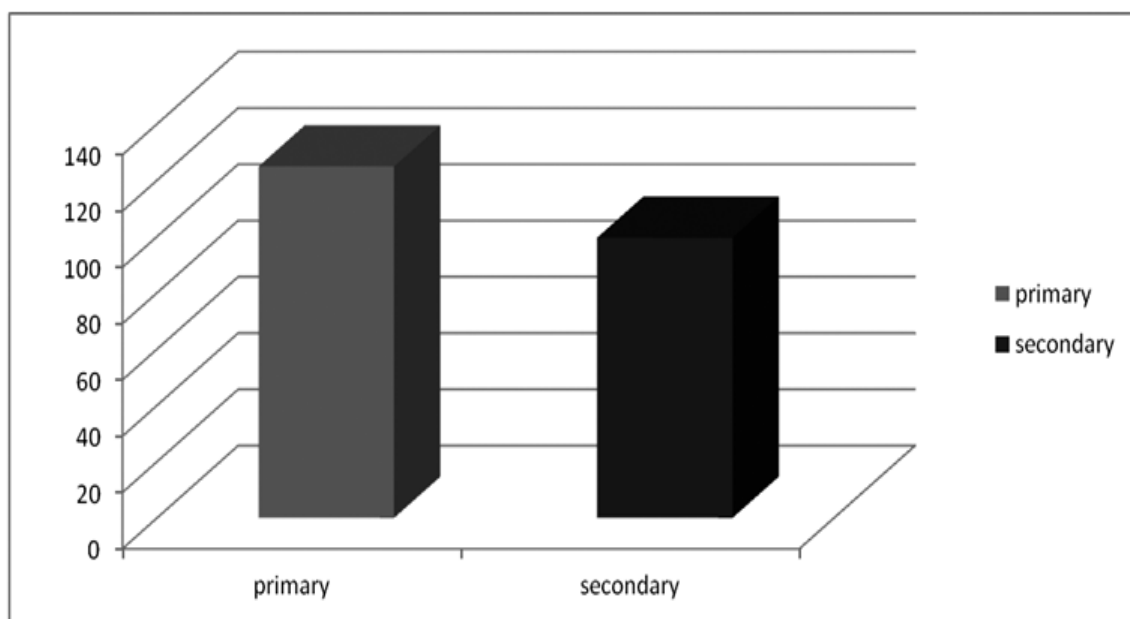
The mean values and standard deviation obtained regarding inclusive education of children with hearing impairment were 108.54 and 11.64 for male teachers, and 124.54 and 9.87 for female teachers. The “t” test revealed a statistically significant difference at $p=0.00$ with a “t” value of 7.41.

c) Level of teaching

Table 5: Mean values and standard deviation of attitudes of teachers working in regular schools towards inclusive education of children with hearing impairment with reference to Level of teaching.

S.No	Level of teaching	N	Mean	SD	't' value	Sig
1	Primary	56	124.89	11.17	10.30	0.000
2	Secondary	44	99.54	13.42		

Figure 4 shows the mean values of attitudes of teachers working in regular schools towards inclusive education of children with hearing impairment, with reference to Level of teaching.



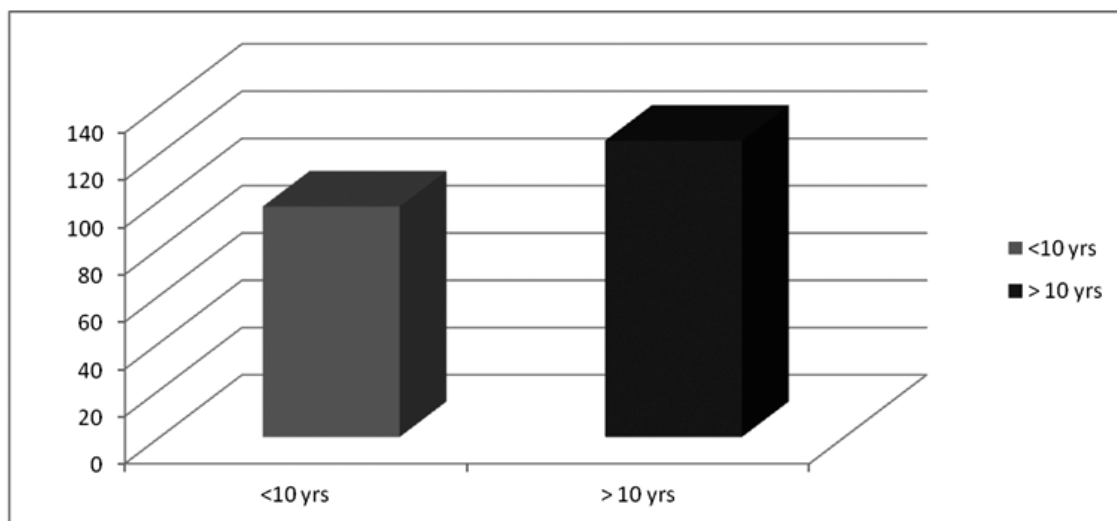
The mean values and standard deviation obtained on inclusive education of children with hearing impairment were 124.89 and 11.17 for teachers at primary level, and 99.54 and 13.42 for teachers at secondary level. "T" test revealed a statistically significant difference at $p=0.00$ with a "t" value of 10.30.

(d) Experience of the teachers

Table 6: Mean values and standard deviation of attitudes of teachers working in regular schools towards inclusive education of children with hearing impairment with reference to their Experience in teaching.

S.No	Experience	N	Mean	SD	't' value	Sig
1	Below 10 yrs	61	97.44	14.86	10.08	0.000
2	Above 10 yrs	39	125.30	10.92		

Figure 5: Mean values of attitudes of teachers working in regular schools towards inclusive education of children with hearing impairment with reference to their Experience in teaching



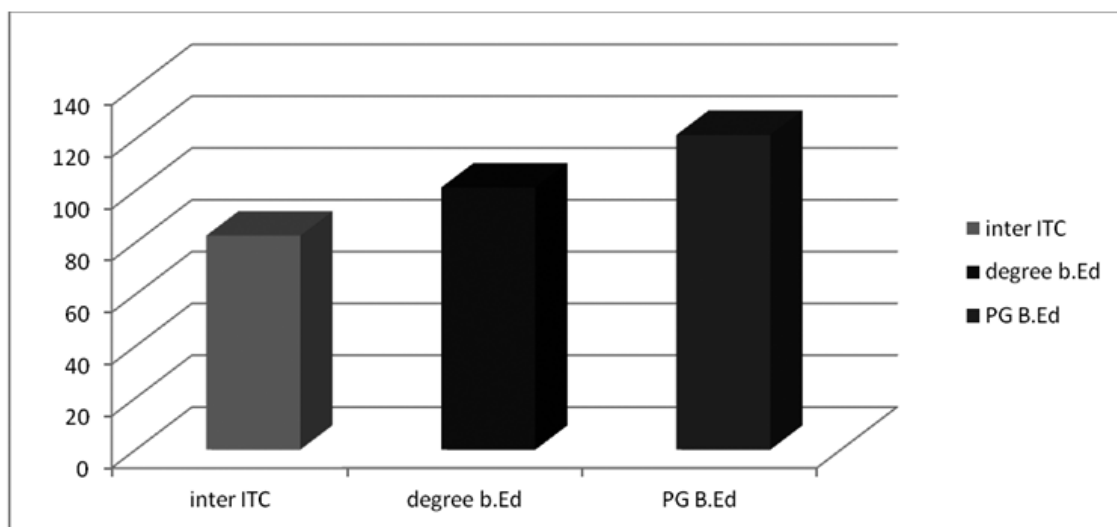
The mean values and standard deviation obtained on attitudes of teachers working in regular schools towards inclusive education of children with hearing impairment were 97.44 and 14.86 for teachers with less than 10 years experience, and 125.30 and 10.92 for those with more than 10 years experience. "T" test revealed a statistically significant difference at $p=0.00$ with a "t" value of 10.30.

e) Qualifications of the teachers

Table 7: Mean values and standard deviation of attitudes of teachers working in regular schools towards inclusive education of children with hearing impairment with reference to their Qualification.

S.No	Qualification	N	Mean	SD	F value	Sig
1	Inter with TTC	10	82.60	16.89	29.60	0.001
2	Degree with B Ed	61	101.19	15.69		
3	PG with B Ed	29	121.47	13.43		

Figure 6: Mean values of attitudes of teachers working in regular schools towards inclusive education of children with hearing impairment with reference to their Qualification.



The mean value and standard deviations obtained for teachers working in regular schools with reference to their qualifications were 82.60 and 16.8 for those with Intermediate and Teacher Training Certificate (TTC), 101.19 and 15.69 for those with Bachelor's Degree in Education (B Ed.), and 121.47 and 13.43 for Post Graduates with B Ed. There was a statistically significant difference between the three groups at $p=0.00$ with an 'f' value of 29.60.

DISCUSSION

The highest scores on the attitudes of teachers working in regular schools towards the inclusion of children with hearing impairment, were obtained for domain 1- "Effective strategies for meeting the needs of all students", followed by domain 3- "Inclusive education" and domain 2- "The support in their district for educational change". Most teachers agreed that there is a need for curriculum and classroom modifications to include children with disabilities, and that inclusion benefits all children, whether with or without disability. A few of them stated that the school management provided opportunities and support to improve their skills. From the higher scores on domains 1 and 3, it would appear that teachers in the study were more exposed to ideas on educational reform and inclusive education. However, there are constraints in implementing these reforms by their society as reflected by the poor scores in domain 2. These results are supported by the study done by Diebold and Trentham (1987) which investigated teacher attitudes towards inclusion in Alabama. It stated that regular educators were positive regarding willingness to teach students with disabilities, and felt confident about skills and sufficiency of time in carrying out the mainstreaming programme in the regular classroom, and about the effects of teacher inputs towards the educational programme. Zambelli and Bonni (2004) also stated that the two important factors in the formation of positive attitudes towards inclusion are increased knowledge and information about school inclusion and disabilities. Even Galis and Tanner (2005) in their study concluded that it is not only important to make modifications in the educational environment for the benefit of those students who require it, but it is also legally mandated.

a) Management: Teachers working in Government institutions displayed significantly more positive attitudes towards inclusive education. This could be due to the availability of support services like teaching materials, special education teachers, speech therapists, etc. This result was in agreement with the study done by Myles and Simpson (1989). Working conditions in Government schools are more liberal when compared to non-Government organisations, and teachers are more functional because they have the freedom to change any modalities in the work structure as per need and demand. This could be another reason for higher scores among them.

b) Gender: Female teachers working in regular schools showed a positive attitude towards inclusive education for children with hearing impairment, when compared to male teachers. This could be due to better emotional intelligence of

women, with better adaptation ability and empathy (Baron-Cohen, 2003). Several studies support the view that there is no correlation between a teacher's gender and the attitude towards inclusive education (Cornoldi et al, 1998; Avramidis et al, 2000; Kuester, 2000; Van Reusen et al, 2001). Harvey (1985), in a similar study, concluded that gender was not a significant factor in determining teachers' attitudes towards inclusive education.

However, other studies found that female teachers were inclined to have more favourable attitudes (Pearman et al, 1992; Leyser & Tappendorf, 2001) and appeared to have higher expectations of students with disabilities, than their male counterparts (Hodge & Jansma, 2000). In contrast, some studies found that male teachers were either significantly more confident than their female counterparts regarding their ability to teach students with disabilities (Jobe et al, 1996), or they held more positive views about inclusive education (Lampropoulou & Padelliadu, 1997).

c) Level of teaching: The teachers at primary level agreed more strongly with the concept of inclusive education, compared to secondary level teachers. This result was in congruence with the work done by Cough & Lindsay (1991), where they reported that primary level teachers showed more positive attitudes as they were less concerned with subject-matter. To elaborate, teaching at primary school level involves the 'play way' method, so all the students can be equal participants and children with disabilities can cope easily through observation and learning, whereas at secondary level formal teaching is involved and not much consideration is given to the presence of children with disability.

d) Experience of the teachers: Teachers with more than 10 years experience showed a more positive attitude towards inclusive education when compared to teachers with less work experience. This could be due to the fact that as their experience increases, teachers become more aware about disabilities and the influencing factors, and this could create a positive attitude towards inclusion of students with disabilities in regular classrooms.

e) Qualifications of the teachers: Teachers with higher qualifications were more favourably inclined towards inclusive education when compared to those with lower qualifications. It is possible that those who graduated recently and are highly qualified could have greater exposure to ideas on educational reforms, and would consequently be more open to concepts such as inclusive education. This was in congruence with studies done by Florin (1995), LeRoy and Simpson

(1996), and Villa et al (1996). However, others have found that individuals with higher educational qualifications were more negatively disposed towards integration (Stoler, 1992; Antonak et al, 1995).

CONCLUSION

This study attempted to investigate the attitudes of mainstream teachers toward inclusive education. The findings suggest that attitudes of teachers working in regular schools in East & West Godavari districts of Andhra Pradesh varied with respect to qualification, gender, experience, levels of teaching and management.

The study indicates a need for intervention to bring about more positive attitudes among teachers for the successful implementation of inclusive education. These findings can benefit all educators and professionals in related fields, and could help create more awareness among those who work with students with special needs. Individuals can reflect on their attitude towards inclusion and students with special needs, and observe how it affects the development and growth of the students. They can ensure they have the right training to teach students with special needs, and to make improvements so that a diverse classroom is a success.

The present study also has implications for the administrators or policy-makers to frame laws and policies so that hearing-impaired children have more opportunities. While the government should allocate more funds, support from the administration would also help teachers gain the necessary expertise to educate diverse populations of students.

The findings provide support to the idea that teachers' attitudes affect students academically, socially and emotionally. Students need the support of their peers and their teachers to learn and grow successfully. A teacher who focuses only on a student's deficits is unlikely to focus on a student's strengths.

The findings of this study should be interpreted in the light of the following limitations. As they were largely based on self-reports by mainstream teachers, there is some doubt as to whether the responses reflect teachers' true attitudes and concerns regarding the inclusion of students with disabilities into mainstream settings. Responses should therefore be interpreted with caution. Also, the study investigated only a limited number of variables pertaining to the attitudes and concerns of mainstream educators, and there are undoubtedly other variables that should be considered. Further studies should be carried out regarding the factors that affect the attitudes of teachers, such as the nature of disability, lack of

training, adapted curriculum, availability of support, materials and equipment, and class size.

Acknowledgement

The author would like to thank Prof. R. Rangasayee (Director), Dr. Geeta Mukundan (Deputy Director) and other colleagues of AYJNIHH for their support. The author would also like to thank the schools, the managements and all those who participated in the study.

REFERENCES

- Antonak RF, Mulick JA, Kobe FH, Fiedler CR (1995). Influence of mental retardation severity and respondent characteristics on self-reported attitudes towards mental retardation and eugenics. *Journal of Intellectual Disability Research*; 39(4): 316-325.
- Avramidis E, Bayliss P, Burden R (2000). A survey into mainstream teachers' attitudes towards the inclusion of children with special education needs in the ordinary school in one local education authority. *Educational Psychology*; 20(2): 191-212.
- Baron-Cohen S (2003). *The essential difference: Men, women and the extreme male brain*. Penguin/Basic Books.
- Cawley J, Hayden S, Cade E, Baker-Kroczyński S (2002). Including students with disabilities into the general education science classroom. *Exceptional Children*; 68(4): 423-435.
- Cornoldi C, Terreni A, Scruggs TE, Mastropieri MA (1998). Teacher attitudes in Italy after twenty years of inclusion. *Remedial and Special Education*; 19(6): 350-356.
- Cough P, Lindsay G (1991). *Integration and the support service*. NFER, London.
- Diebold MH, Trentham LL (1987). Special educator predictions of regular class teacher attitudes concerning mainstreaming. *Teacher Education and Special Education*; 10(1): 19-25.
- Elkins J (1998). The school context. In A. Ashman & J. Elkins (Eds.), *Educating children with special needs* (3rd ed., pp. 67 – 101). Sydney: Prentice Hall.
- Forlin C (1995). Educator's beliefs about inclusive practices in Western Australia, *British Journal of special Education*; 22: 179-185.
- Galis SA, Tanner CK (1995). Inclusion in elementary schools: A survey and policy analysis, *Education Policy Analysis Archives*; 3(15): 1- 24.
- Grenot-Scheyer M, Jubala KA, Bishop KD, Coots JJ (1996). *The inclusive classroom*. Westminster: Teacher Created Materials, Inc.
- Hammond H, Ingalls L (2003). Teachers' attitudes toward inclusion: Survey results from elementary school teachers in three southwestern rural school districts. *Rural Special Education Quarterly*; 22(2): 24-30.
- Harvey DHP (1985). Mainstreaming: teachers' attitudes when they have no choice about the matter. *Exceptional Children*; 32: 163-173.

- Hodge SR, Jansma P (2000). Physical education majors' attitudes towards teaching students with disabilities. *Teacher Education and Special Education*; 23(3): 211-224.
- Horne MD (1983). Attitudes of elementary classroom teachers toward mainstreaming. *The Exceptional Child*; 30: 93-97.
- Jobe D, Rust JO, Brissie J (1996). Teacher attitudes toward inclusion of students with disabilities into regular classrooms, *Education*; 117 (1): 148-154.
- Knight BA (1999). Towards inclusion of students with special educational needs in the regular classroom. *Support for Learning*; 14(1): 3-7.
- Kuester VM (2000). 10 Years on: Have teacher attitudes toward the inclusion of students with disabilities changed? Paper presented at the ISEC 2000, London.
- Lampropoulou V, Padelliadu S (1997). Teachers of the deaf as compared with other groups of teachers: Attitudes towards people with disability and inclusion. *American Annals of the Deaf*; 142(1): 2633.
- LeRoy B, Simpson C (1996). Improving students' outcomes through inclusive education. *Support for Learning*; 11(1): 32-36.
- Lewis RB, Doorlag DH (2003). *Teaching special students in general education classrooms* (6th ed.). New Jersey: Merrill Prentice Hall.
- Leyser Y, Tappendorf K (2001). Are attitudes and practices regarding mainstreaming changing? A case of teachers in two rural school districts. *Education*; 121(4): 751-760.
- McCain KG, Antia SD (2005). Academic and social status of hearing, deaf, and hard of hearing students participating in a co-enrolled classroom. *Communication Disorders Quarterly*; 27(1): 20-32.
- Ministry of Human Resources Development (MHRD). Annual Report 2002-2003. New Delhi: GOI.
- Myles BS, Simpson RL (1989). Regular educators' modification preferences for mainstreaming mildly handicapped children. *The Journal of Special Education*; 22 (4): 479-89.
- National Policy on Education (1986). HRD Ministry retrieved from <http://www.education.nic.in/policy/npe86-mod92.pdf>.
- NSSO (2002). Disabled persons in India. Retrieved from <http://www.disabilityindia.org>.
- Pearman EL, Huang AM, Barnhart MW, Mellblom C (1992). Educating all students in school: Attitudes and beliefs about inclusion. *Education and Training in Mental Retardation*; 27: 176-182.
- Peterson M, Hittie M (2003). *Inclusive teaching: Creating effective schools for all learners*. Boston: Allyn and Bacon.
- Rose R, Cole C (2002). Special and mainstream school collaboration for the promotion of inclusion. *Journal of Research in Special Educational Needs*; 2(2): 1-17.
- Salend SJ (2001). *Creating inclusive classrooms: effective and reflective classrooms* (4th ed.). Upper Saddle River, NJ: Merrill Prentice Hall.
- Salend SJ (2005). *Creating inclusive classrooms: Effective and reflective practices for all students* (54th ed.). New Jersey: Pearson-Merrill Prentice Hall.

- Sideridis GD, Chandler JP (1996). Comparison of attitudes of teachers of physical and musical education towards inclusion of children with disabilities. *Psychological Reports*; 78(3): 768-771.
- Smith S (2004). IDEA 2004: Individuals with disabilities education improvement act: A parent handbook for school age children with learning disabilities: Author House.
- Stoler RD (1992). Perceptions of regular education teachers toward inclusion of all handicapped students in their classrooms. *The Clearing House*; 66(1): 60-62.
- Tesfaye A (2005). The attitudes of special and regular class teachers towards the inclusion of individuals with mental retardation. Unpublished Master's Thesis. Addis Ababa. AAU press.
- United Nations Educational, Scientific and Cultural Organisation (1994). The Salamanca Statement and Framework for Action on Special Needs Education. Paris: UNESCO.
- Van Reusen AK, Shoho AR, Barker K S (2001). High school teacher attitudes towards inclusion. *The High School Journal*; 84(2): 7-17.
- Villa R, Thousand J, Meyers H, Nevin A (1996). Teacher and administrator perceptions of heterogeneous education. *Exceptional Children*; 63(1): 29-51.
- Zambelli F, Bonni R (2004). Beliefs of teachers in Italian schools concerning the inclusion of disabled students: A Q-sort analysis. *European Journal of Special Needs Education*; 19(3): 351-364.

Teacher Attitude Questionnaire

Name of the Teacher:

Age/ Gender:

Qualification:

Experience:

Name of the School & Address:

Govt. / Non-Govt.

Level of teaching: Primary/ Secondary

This survey concerns “inclusive education” as one method of meeting the needs of students with disabilities in the “least restrictive environment”. Inclusive education means that all the students with disabilities are mainstreamed and become the responsibility of the regular class teacher who is supported by specialists.

For each statement below, indicate the extent to which you agree or disagree with statement by circling the appropriate number

Strongly agree	6	Disagree somewhat	3
Agree	5	Disagree	2
Agree somewhat	4	Strongly disagree	1

Sl. No.	Statement	Score					
1	It is important to make modifications in the curriculum for students who need adaptations to benefit in general classroom.	6	5	4	3	2	1
2	Students' progress should be graded based on classroom performance rather than only with standardised tests.	6	5	4	3	2	1
3	Our school or our district has a broad continuum of services for meeting the needs of all students.	6	5	4	3	2	1
4	Inclusion of students with mild disabilities into regular classes is generally an effective strategy.	6	5	4	3	2	1
5	I have input into the programme of students with disabilities who are placed in my classroom.	6	5	4	3	2	1

6	Remedial classes are needed in regular school for children with disability.	6	5	4	3	2	1
7	Keeping academic expectations consistent for all students is important.	6	5	4	3	2	1
8	Maximum class size should be lowered when including students with disabilities.	6	5	4	3	2	1
9	The inclusion of students with disabilities into the regular classroom can be beneficial to the other students in the class.	6	5	4	3	2	1
10	I have support from my school management (i.e. Principal etc.) to try new ideas and implement creative strategies.	6	5	4	3	2	1
11	Students should be served in regular classes regardless of disability.	6	5	4	3	2	1
12	I have opportunities to talk and plan with my colleagues on a regular basis.	6	5	4	3	2	1
13	It is important to keep behavioural expectations the same for all students.	6	5	4	3	2	1
14	My school/district is a strong supporter of inclusive education.	6	5	4	3	2	1
15	Special education provides a valuable service for students with disabilities.	6	5	4	3	2	1
16	Regular teachers must spend a great deal of time with students with disabilities.	6	5	4	3	2	1
17	Efforts are made to provide opportunities for mutual planning and collaboration among personnel in my school/district.	6	5	4	3	2	1
18	Students should be grouped in ways which allow a wide variety of abilities in each class.	6	5	4	3	2	1
19	All students should be included in regular class to the greatest extent possible.	6	5	4	3	2	1
20	Slow learners should receive special help outside the regular classroom.	6	5	4	3	2	1
21	Opportunities for staff development are provided by my school that meets the needs for professional growth.	6	5	4	3	2	1
22	Inclusion in the regular classroom will not hurt the educational progress of the student with a disability.	6	5	4	3	2	1
23	Placement of a student with a disability into a regular classroom is not disruptive to students without disabilities.	6	5	4	3	2	1
24	It is possible to pay attention to all students in an inclusive classroom	6	5	4	3	2	1