

Attitudes of a Group of Primary School Teachers Towards The Educational Inclusion of Hearing-Impaired Learners in Regular Classrooms

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ABSTRACT

Research has clearly demonstrated a link between the attitudes of regular education teachers and the success of inclusion of learners with special educational needs. Therefore, the present study aimed to investigate the attitudes of a group of junior primary school teachers from the Gauteng area towards the inclusion of hearing-impaired children into regular classes. A survey research design was employed which utilized a questionnaire as the research tool. Analysis of results indicated that the teachers surveyed were relatively positive in their attitudes towards inclusion. Greater exposure to disability in terms of training and experience was related to more positive attitudes. Similarly, more positive attitudes were related to greater perceived competence in teaching hearing-impaired pupils. All of the teachers surveyed felt that speech-language pathologists and audiologists (SLPs & As) should be involved in facilitating inclusion of hearing-impaired children. Many of the respondents expressed concern regarding their lack of training, knowledge and skills. The findings from the research project highlight the need for an adequate training and support system for teachers prior to the implementation of an inclusive educational policy, and the potential role of SLPs & As in this regard.

OPSOMMING

Vorige navorsing het getoon dat daar 'n duidelike verband is tussen die houding van onderwysers in hoofstroom-onderwys en die suksesvolle integrasie van leerders met spesiale opvoedingsbehoefte. Die doel van hierdie studie was dus om ondersoek in te stel na die houding van 'n groep junior primêre onderwysers in die Gauteng-gebied teenoor die insluiting van gehoorgestremde kinders in gewone klasse. 'n Opname is deur middel van 'n vraelys gedoen. Ontleding van die resultate het getoon dat die onderwysers relatief positief teenoor insluiting voel. Onderwysers met meer blootstelling aan gestremdheid deur middel van opleiding en ondervinding was in die algemeen meer positief teenoor insluiting. Onderwysers wat meer bekwaam was in die opleiding van gehoorgestremdes was ook meer positief oor insluiting. Al die onderwysers wat aan die studie deelgeneem het, was van mening dat die spraak-taalpatoloog en audioloog 'n fasiliterende rol behoort te speel by die insluiting van gehoorgestremde kinders. Talle respondente het kommer uitgespreek oor hul gebrek aan opleiding, kennis en vaardighede. Hierdie navorsing beklemtoon ten eerste die noodsaaklikheid van toepaslike opleiding en ondersteuning vir onderwysers voordat 'n inklusiewe opleidingsbeleid ingestel kan word; en ten tweede die belangrike rol van die spraak- taalpatoloog en audioloog in hierdie verband.

KEY WORDS: education, inclusion, hearing-impaired

The inclusion of learners with special educational needs (LSEN) into regular classes is a topic of major interest in South Africa at the present time. The new political dispensation in this country, along with the recognition of the rights of minorities and the Constitutional prohibition of discrimination against people with disabilities, has had a profound impact on the educational system and has opened the way for inclusive education to be implemented. In order to facilitate the process of inclusion, the National Commission on Special Needs in Education and Training (NCSNET) and the National Committee for Education Support Services (NCESS) were appointed by the Minister and Department of Education to investigate and make recommendations on all aspects of special needs and training in South Africa. The NCESS and the NCSNET, in their summary of Public Discussion Document (August, 1997, p.12) state as a recommended strategy that "the

separate systems of education which presently exist ('special' and 'ordinary') need to be integrated, providing a system which is designed to recognise and respond to *all* learners". The need for a revised system of education currently enjoys wide support in current legislation (such as the present South African Schools Act, the Education Act, the Standard Rules and the Integrated National Disability Strategy). This recognition is largely due to the fact that as many as 80% of all disabled learners of school going age are presently excluded from the education system due to the high costs of special education and the inadequate number of special schools available (Disabled People South Africa Policy Brief, 1997). The White Paper on Integrated National Disability Strategy (November, 1997, p.38) has, thus, stated as one of its policy objectives that recommendations will be made to "develop a single education system that will cater for the needs of all learners within an

inclusive environment with various placement options".

It is a distinct possibility that with greater awareness surrounding the issue of inclusion and the improved provision of appropriate support services for the LSEN, more parents of hearing-impaired children will consider inclusion as a viable option. Such a movement toward the inclusion of hearing-impaired children into regular classes is likely to have far-reaching ramifications for teachers, speech-language pathologists and audiologists, parents and the pupils involved.

Although there is a paucity of research on inclusion in the South African context, this area has received extensive attention in overseas literature. The integration movement began in the 1960s and gained momentum through the 1970s with the realisation that many children were in special schools when they did not need to be and that ordinary schools really could cater for a wider range of students (Hegarty, 1993). The philosophy of inclusion is based on the belief that all people, including those with special needs, form an integral part of society. Many countries, consequently, enacted laws mandating a move away from segregated education which gave rise to hundreds of research projects comparing the relative effects of segregated and integrated education and investigations into the factors related to successful integration.

Among the key issues that have arisen from this large data source, is the effect of attitudinal factors on the success of inclusion. It has become increasingly evident that the climate within which mainstreaming is implemented is probably one of the most important determiners of its outcome (Schmelkin, 1981). Burden (1995, p.44) avers that inclusion is "more than just a matter of placement" and distinguishes it from "traditional" mainstreaming. She asserts that inclusion expects society to facilitate the acceptance of those who do not fit in by accepting them for who they are, while mainstreaming endeavours to help the one who does not fit in to eventually fit in. Larrivee (1981, p.34), maintains that "while education in the least restrictive environment may be imposed by binding laws, the manner in which the regular classroom teacher responds to the special needs child may be a far more potent variable in ultimately determining the success of mainstreaming than any administrative or curriculum strategy". Moreover, teachers who have positive attitudes towards inclusion tend to employ effective mainstreaming strategies more consistently than those teachers whose attitudes toward inclusion are negative (Bender, Vail & Scott, 1995). The success of inclusion, therefore, appears to be closely related to the attitudes of regular school teachers. Although mixed results regarding teacher attitudes toward inclusion have been found, with some researchers demonstrating positive teacher attitudes (Schmelkin, 1981; Luckner, 1991), and others negative (Thomas, 1985 and Hayes & Gunn, 1988, cited in Leyser, Kapperman & Keller, 1994), overall, predominately negative attitudes have been documented in the literature (Leyser et al., 1994).

The inclusion of hearing-impaired children into regular classes is an issue that elicits diverse opinions and proponents both for and against mainstreaming practices cite relevant studies that support their opposing views. Nevertheless, research has generally indicated that although, hearing-impaired children in integrated settings tend to achieve lower academic scores compared to their hearing peers (Luckner, 1991), their academic achievement scores tend to be higher than those of hearing impaired

students in segregated settings (Gjerdingen & Manning, 1991). However, the opposite appears to be true for psychosocial development, as it has been consistently shown that hearing-impaired pupils in segregated settings tend to receive more positive social ratings than those in more integrated settings (Stinson & Lang, 1994). Cappelli et al., (1995) demonstrated that children with hearing impairments are more likely to be rejected by their peers than are children with normal hearing. Investigators have often attributed the problems of social integration and participation of hearing-impaired students in integrated settings to the negative attitudes of hearing people towards deafness (Lampropoulou & Padelidu, 1997).

The significance of the effect of attitudes on the success of integration has led researchers to examine the variables that are associated with attitude and attitude change. Such studies have considered three types of variables, namely, (a) biographical characteristics, such as age, level of education and length of teaching experience (Larrivee & Cook, 1979), (b) contact and exposure to the exceptional child (Leyser et al., 1994) and (c) training in concepts and skills related to teaching special needs students (Larrivee, 1981). Inconsistent and often contradictory results regarding which factors impact on teacher attitudes have been found (Leyser et al., 1994).

Of particular value, however, are research findings that demonstrate the ability of education and training programmes to overcome negative attitudes. A classic study by Haring, Stein and Cruick-Shank (1958) indicated that in-service workshops resulted in more positive attitudes (cited in Cline, 1981). Larrivee (1981) showed that the more intensive the in-service training, the more positive teacher attitudes became. Leyser et al. (1994) cite studies such as those by Leyser and Lessne (1985) and Eichinger, Rizzo and Sirotnik (1991) as demonstrating that in-service training efforts have resulted in the formation of more positive attitudes. Through a cross-cultural study across six nations, Leyser et al. (1994) were also able to demonstrate that the training of teachers is critical for the formation of a more favourable view towards mainstreaming.

Literature has, thus, shown a clear link between the attitudes of teachers and the success of integration, as well as the positive effect of in-service training on attitude change. Warger and Trippe (1982) consequently state that overcoming negative attitudes toward integrated students has become a major training goal. Knowledge of teachers' attitudes as well as their fears and anxieties about integrated students could potentially enable professionals to provide relevant training and information. Although Warger and Trippe (1982) describe such training as the function of teacher educators, the Speech-Language Pathologist and Audiologist (SLP&A) also has an extremely valuable role to play in such education. The NCSNET/NCESS (1997) avers that it is the therapists who have the responsibility to lead the way in inclusion. Northcott (1973) maintains that the role of specialists in speech pathology and audiology is expanding beyond the provision of speech, hearing and language therapy for hearing-impaired children to an increased interest in their educational management in the classroom. This new focus is especially important in the South African context where the SLP&A's role is changing and many are concerned with what Burden (1995, p.50) refers to as "role release". According to Burden (1995) professionals should be able to transcend the boundaries of their own disciplines and help in other areas

as well. With the integration movement, SLPs&As have become increasingly involved in providing services in their clients' classrooms in addition to the services they provide through pull-out therapy models (Beck & Dennis, 1997). Gjerdingen and Manning (1991) suggest that schools and teachers need to be provided with a basic introduction to hearing impairments; the effects of hearing impairment on the child's learning; technology and technical assistance available; the fundamental support services these students usually require; and the typical difficulties they encounter.

While the overseas literature on integration provides valuable information and insight and can guide professionals in determining problem areas, the South African context is distinct and it may present challenges not experienced in America or Europe. Such challenges may include the limited educational budget, the relative lack of appropriately trained teachers, the large teacher to pupil ratio and a paucity of support services. However, there appears to be little research that has been undertaken in South Africa to uncover the present state of regular teachers' knowledge, attitudes and skills in relation to inclusion.

Two studies by Choles (1997) and Christie (1998) respectively, have considered the attitudes of teachers towards the inclusion of LSENs in South Africa. Choles (1997) found that the majority of educators at teachers' training colleges in South Africa were ambivalent towards both mainstreaming and the requirements specified for teacher competency in this regard. Christie (1998) found more negative results and showed that 72% of teachers at schools in Gauteng believed that mainstreaming was not very practicable. Both studies, however, focused on LSENs in general and included children with a wide variety of disabilities. While such information is certainly valuable, teachers may have greatly differing opinions regarding inclusion depending on the particular impairments of the children included in their classes. The present research project, consequently, provided a more in-depth focus by investigating the attitudes of teachers toward the inclusion of hearing-impaired children only. The speech and hearing therapist is a specialist in the sphere of hearing-impaired children and, therefore, should be actively involved in educating and consulting with regular school teachers. By investigating South African teachers' attitudes towards the inclusion of hearing-impaired children, it was anticipated that SLPs&As could learn which areas specifically needed to be addressed in such training, education and consultation.

METHODOLOGY

AIMS OF THE STUDY

- To investigate the attitudes of a group of junior primary school teachers toward the inclusion of hearing-impaired children into regular classes.
- To examine the relation between exposure to hearing impairment and other disabilities and teacher attitudes towards educational inclusion.
- To consider the relation between perceived competence to teach hearing-impaired children and teacher attitudes towards educational inclusion.
- To explore the role of speech-language pathologists and/or audiologists, as perceived by regular junior primary school teachers, in facilitating the inclusion of hearing-impaired students.

RESEARCH PROCEDURE

In order to investigate the aims of the study, a cross-sectional survey research design, which made use of a questionnaire, was employed.

SUBJECTS

Subject Selection Criteria

- The participants in the study were required to be junior primary (grade 0 to grade 3) school teachers. One of the policy objectives stated in the White Paper on Integrated National Disability Strategy (November, 1997, p.39) is "to facilitate earlier access to education for all learners, but in particular for learners with special education needs". The study, thus, focused on the attitudes of primary school teachers, as they are likely to be targeted first in the implementation of inclusion. Junior and senior primary school teachers receive different training and deal with vastly different student needs in their classes. Leyser et al. (1994), furthermore, demonstrated that teachers of older children were more supportive of inclusion than were teachers of younger children. Only junior primary school teachers were, thus, included in the study in order to avoid the interference of confounding variables that might clearly have exerted an impact on attitudes toward inclusion.
- Participants were recruited from regular schools rather than special schools, as Larrivee (1981) points out that it is the regular classroom teacher who is the indispensable professional who will carry the primary responsibility for inclusion.
- Only participants who worked at English medium schools were included in order to avoid problems that might have arisen with the translation of the questionnaire into other languages.
- Various schools in the Gauteng area were targeted in the study, as they were geographically accessible to the researcher, thereby facilitating the delivery and collection of the questionnaires.

Sample selection procedure

Due to time constraints it was not possible to include all the schools in the Gauteng area and thus, convenience, non-probability sampling was used.

Description of Subjects

Nine regular schools participated in the study yielding a sample size of 90 junior primary teachers. Four of the schools were private schools and the other five were government subsidised. Four of the schools (including two private and two government schools) included hearing-impaired children in their regular schools. The socio-demographic characteristics of respondents are set out in Table 1.

RESEARCH INSTRUMENTATION

Construction of the questionnaire

Larrivee and Cook (1979) designed a questionnaire to investigate the attitudes of teachers towards the mainstreaming of special-needs students. Their study was conducted in New England and considered attitudes of

teachers toward all special-needs students. For this reason, it was not considered suitable for the present study. The researchers thus designed a questionnaire that was based on the questionnaire used by Larrivee and Cook, but which focused on the attitudes of teachers specifically toward hearing-impaired children and that was more appropriate to the South African context. A copy of the questionnaire is available from the authors on request.

Content of the questionnaire

Cover letter

The cover letter introduced the purpose of the questionnaire, gave assurance of confidentiality and anonymity, and indicated how and when to return the questionnaire.

Demographic Information

The aim of this section was to obtain data on factors such as gender, age, home language, type of school at which participants were teaching, length of teaching experience, grade currently taught, and size of present class.

Exposure to hearing impairment and disability

Several studies, including those by Larrivee (1981) and Leyser et al. (1994) have demonstrated that training in special education and increased contact with disabled students results in the formation of more positive attitudes towards inclusion. Information on teachers' exposure to

hearing impairment and disability was, therefore, included in the questionnaire. This section contained questions on whether teachers had had any courses on disability as part of their undergraduate or postgraduate training. Participants were also asked to indicate whether they had any children with a disability in their class or had ever taught at a special school. To target their exposure to hearing impairment, they were asked whether there were any hearing-impaired children in their school and whether they had any hearing-impaired children in their own classes.

Open-ended question on mainstreaming

An open-ended question regarding what teachers understood by the term "Mainstreaming" or "Inclusion" was included to establish what this term meant to the majority of teachers. It was included at this point in the questionnaire, to avoid the effect of later questions regarding the benefits and disadvantages of integration influencing respondents' answers.

Attitudes towards the Inclusion of Hearing-Impaired Pupils

An attitude scale was designed using a Likert-type format. Respondents were asked to indicate the extent of their agreement with positively and negatively phrased statements using a 5-point response format, ranging from strongly disagree to strongly agree. The attitude scale

TABLE 1: Description of Subjects (N=90)

| Demographic factor | Sample | Number | Percentage |
|---------------------------|--|---------------------------|--|
| 1. Gender | Female Male | 90 0 | 100% 0% |
| 2. Home language | English Afrikaans English and Afrikaans No response | 44 4 3 39 | 48.9% 4.5% 3.3% 43.3% |
| 3. Age | 18-25 years 26-35 years 36-45 years 46-55 years 46 + years | 11 26 31 21 1 | 12.2% 28.9% 34.5% 23.3% 1.1% |
| 4. Type of School | Private Model C | 40 50 | 44.4% 55.6% |
| 5. Length of experience | Less than 1 year 1-3 years 4-6 years 7-9 years 10 years + | 3 9 12 8 58 | 3.3% 10% 13.3% 8.9% 64.5% |
| 6. Grade currently taught | Grade 0 Grade 1 Grade 2 Grade 3 No response | 12 27 28 22 1 | 13.3% 30% 31.1% 24.5% 1.1% |
| 7. Size of present class | Less than 10 children 10-20 children 21-30 children 31-40 children 41 + children | 2 23 34 27 4 | 2.2% 25.6% 37.8% 30% 4.4% |

consisted of 28 items, with 15 of these positively stated and 13 negatively worded. Larrivee and Cook (1979) developed a questionnaire on teacher attitudes toward the mainstreaming of special needs students. Some of the statements used in the attitude scale were adapted from their questionnaire.

Competence in teaching integrated hearing-impaired children

Luckner (1991) states that positive teacher attitudes toward mainstreaming appear to be related to their ability to teach mainstream students. This section, thus, considered teachers' perceived competence in teaching integrated hearing-impaired pupils. Competence comprises the three dimensions of skills, knowledge and emotional comfort or attitudes (Clark & Horejsi, 1979) and teachers were asked to rate their perceived level of competence in respect of each of these attributes on a 5-point scale. A question on how they achieved this level of competence (if applicable) followed in order to ascertain what strategies might have been used by teachers to improve their competence.

Teachers were then asked to indicate whether they felt that overall they possessed adequate skills and knowledge to work with integrated hearing-impaired children. If teachers replied in the negative, they were asked to indicate in what ways they felt that they were lacking in their abilities. The list included knowledge of the philosophy of inclusion and educational policies to determine whether teachers felt that they were lacking in these areas of knowledge. Gjerdingen and Manning (1991) suggest that teachers need to know about the effects of hearing impairment on the child's learning; technology and technical assistance available; the fundamental support services these children usually require; and the typical difficulties they are likely to encounter. The areas that were considered important for teaching hearing-impaired children, included knowledge of specialised teaching methods; an understanding of the needs of a hearing-impaired child; knowledge of different types of hearing loss; and knowledge of the equipment and support services available for the hearing-impaired child.

Hamre-Nietupski et al. (1993) demonstrated that once teachers have gained some hands-on experience in a mainstreamed class, they become more supportive of mainstreaming and more confident in their ability to cope with LSEN. Experience with hearing-impaired children was thus included as a possible area in which teachers might feel that they were lacking.

The role of the Speech, Language Therapist and/or Audiologist (SLT & A) in inclusion

In discussing the planning and implementation of the policy of inclusion, the G.D.E. (1996) states that the functional role of therapists needs to be redressed and should include consultation with staff and parents. A study by Larrivee (1981) showed that the availability of supportive personnel served to enhance the regular classroom teacher's development of a positive attitude. This section, therefore, asked teachers to indicate whether they felt that the SLT & A had a role to play in inclusion and if so, what this role should involve. Kampfe (1984) avers that mainstream education requires an in-depth knowledge of the physical,

psychosocial, and educational aspects of deafness as well as familiarity with methods of facilitating communication with hearing-impaired children. These considerations provided the rationale for the first two statements. Ross, Brackett and Maxon (1982) stress the importance of providing hearing aids and listening devices to hard of hearing children being educated in the mainstream. They go on to explain that it is the teacher who must take responsibility for the device on a daily basis. The demonstrations and explanations of hearing aids and other listening devices was, thus, included as a possible role of therapists. The effect and management of room acoustics is emphasised by Leavitt (1984) and a statement on this aspect was included in the list. Finally, as Brackett (1997) maintains that hearing-impaired students in the mainstream continue to require speech-language intervention through pull-out services, the role of SLT & A in individual speech and/or language therapy was probed.

Furthermore, an open-ended question was used to encourage respondents to express any additional ideas regarding ways in which the SLT & A should be involved in the facilitation of inclusion.

Additional comments or concerns

This final open-ended question allowed the respondent the opportunity to include additional comments or concerns regarding the integration of hearing-impaired pupils, which might not have been covered in earlier sections of the questionnaire.

RESEARCH PROTOCOL

Pre-testing the questionnaire

The first phase of the research project involved a pre-test of the questionnaire. Six junior primary school teachers, from English medium schools in the Gauteng area were used in the pre-test and were excluded from participation in the final study. From the pre-test it was evident that the questions were clear and unambiguous and that the average time taken to complete the questionnaire was approximately 20 minutes.

DATA COLLECTION

Permission was obtained to visit each of the participating schools and distribute questionnaires to all the junior primary teachers. These were returned anonymously and collected a week later.

DATA ANALYSIS

A Cronbach Alpha Coefficient which is a measure of internal-consistency reliability was calculated and a score of 0.95 was obtained. The high score attained thus indicated that respondents answered the questions consistently and it was, therefore, not necessary to remove any items as none were detracting from the internal validity of the questionnaire. A factor analysis was also employed to determine the factor structure of the scale. From this procedure it was evident that a single dominant factor explained a large proportion of the variance. The attitude scale was consequently retained as a single scale and not divided into sections or factors.

Data were analysed using descriptive statistics. Results obtained from closed-ended questions were analysed using frequencies and percentages and were presented in the form of tables. The method of summated ratings was used to yield composite scores to indicate teacher attitudes, with high mean values representative of positive attitudes toward inclusion. The variables of exposure to disabilities and perceived competence in teaching hearing-impaired children were cross tabulated with composite attitudinal scores in order to assess the association between these variables and teacher attitudes. Content analysis was used to analyse open-ended questions qualitatively according to themes expressed by respondents.

RESULTS AND DISCUSSION

Out of the 120 questionnaires that were distributed to the participating schools, 90 were returned fully completed, thus yielding a 75% return. The following results are presented and discussed in accordance with the aims formulated for the study.

TEACHERS' ATTITUDES TOWARDS THE EDUCATIONAL INCLUSION OF HEARING-IMPAIRED CHILDREN

a) Interpretations of the terms "Inclusion" or "Mainstreaming"

It has been found that many fears or concerns surrounding inclusion have resulted from a lack of understanding of what it is (Vaughn et al., 1996). The teachers surveyed were consequently asked to express what they understood by the terms "mainstreaming" or "inclusion". The majority of teachers (72%) did not distinguish between these terms, viewing them as synonymous. Furthermore, those teachers who did distinguish between them were incorrect in their understanding of these differences. This finding is consistent with Burden's (1995) view that although these two terms are different in respect to their underlying philosophies, they are often used interchangeably. This result further highlights the need to provide regular teachers with a clear, well-defined outline of the philosophy and ideas of inclusive education.

b) Attitudes towards the educational inclusion of hearing-impaired children

The 5-point scale was collapsed into 3 categories to allow for easier analysis of the data. Examination of the data revealed that there were seven statements that the majority (50% or more) of teachers disagreed with and nine statements that the majority agreed with. These statements will be discussed individually.

Statement 1 - Just over half (52.2%) of respondents disagreed with the statement that the inclusion of hearing-impaired children would lead to a lowering of present standards in the schools. This finding reflected a positive attitude toward inclusion of hearing-impaired pupils and echoes the results obtained by Choles (1997, p.46). Some teachers did, however, comment that maintenance of standards depended largely on other factors, such as the number of hearing-impaired children who were placed in a

school and the severity of their disabilities.

Statement 2 - A negative attitude towards inclusion was reflected in the fact that 57.8% of teachers disagreed with the notion that hearing-impaired children would receive a better quality of education at a regular school than at a school for the deaf or hard of hearing. This finding indicated that although the majority of respondents did not believe that there would be a decline in the standards in schools, they still felt that separate education would provide the hearing-impaired child with a better quality of education. This viewpoint is likely to be due to the fact that the regular teachers surveyed felt that they were inadequately trained or ill-equipped to deal with hearing-impaired children, and therefore believed that these children would receive more benefit from teachers who have specialised training and knowledge in dealing with hearing-impaired pupils.

Statement 5 - Just under two-thirds (61.1%) of the teachers surveyed agreed with the statement that hearing-impaired children should be given every opportunity to function in a regular class, where possible, suggesting that most teachers were positive toward the philosophy of inclusion.

Statement 8 - Almost 75% of teachers agreed that inclusion was likely to foster greater understanding and acceptance of differences. Brackett (1997, p.356) asserts that separate education fosters intolerance and emphasis on differences, whereas inclusion emphasises the similarity between students and encourages a helping attitude and an acceptance of disability. This result again reflected a positive attitude towards the philosophy of inclusion.

Statement 10 - In response to the statement that hearing-impaired children who are mainstreamed would have a greater ability to function in a "hearing world" than those who attended schools for the deaf or hard of hearing, 52.2% agreed. Proponents of inclusion, argue that a mainstream environment provides hearing-impaired children with the opportunity to interact with hearing children, which is important for living and functioning in a hearing world and for the development of self-sufficiency (Stoefen-Fisher & Balk, 1992). A positive attitude toward the inclusion of hearing-impaired children was reflected in this response.

Statement 12 - Half of the teachers did not believe that hearing-impaired children were likely to be isolated by their hearing peers, reflecting a positive attitude towards the effect that inclusion might have on the hearing-impaired child. In contrast, the literature has repeatedly shown that integrated hearing-impaired children are more likely to be rejected by their classmates than are their hearing peers (Cappelli et al., 1995). Nevertheless, Germain (1973) contends that by building knowledge and encouraging positive attitudes among the teachers, a big step can be taken towards educating the hearing students. Consequently, positive attitudes on the part of teachers towards hearing-impaired students is likely to influence the perceptions held by hearing children and so enhance social interaction between hearing and hearing-impaired pupils.

Statement 13 - A positive attitude towards the effect of inclusion on hearing-impaired children was further suggested by the finding that 56.7% of participants agreed that hearing-impaired children who were integrated were likely to be more socially well adjusted adults than those who were taught at schools for the deaf or hard of hearing. According to Stafford and Green (1996), there are many

social benefits that are derived from inclusive education, including, increased acceptance and appreciation of diversity, improved communication and social skills, increased moral and ethical development, creation of friendships and increased self-esteem. Such social benefits do suggest that greater social adjustment is likely to be achieved later on.

Statement 17 - A large proportion of teachers (83.3%) believed that children in regular classes were likely to develop a greater degree of acceptance of others with disabilities through contact with hearing-impaired children. This result suggested a positive attitude toward the effect that inclusion was likely to have on hearing children. This finding was encouraging in the light of the assertion made by Seltz (1973) that it is understanding and acceptance that make integration work. She avers that normal hearing students can be the hearing-impaired child's greatest support or severest handicap. It has been moreover suggested that children tend to reject handicapped children who are not accepted by the regular classroom teacher (Connor, 1979). Therefore, acceptance on the part of the teacher is likely to result in greater acceptance on the part of hearing students.

Statement 18 - A positive attitude towards the effect of inclusion on hearing children was again reflected in the fact that the vast majority (93,4%) of teachers disagreed with the statement that regular contact with a hearing-impaired child was potentially harmful for hearing children.

Statement 20 - A negative attitude towards the effect of inclusion on hearing children was suggested by the fact that half of the teachers felt that hearing-impaired children would require additional individual attention, which would be to the detriment of other pupils in the class. A study by Reese (1995) on the views of mainstream primary teachers indicated that 38% of teachers reported spending extra time with their hearing-impaired pupils, mostly at the expense of the rest of the class. It is possible that the teachers surveyed believed that they would be expected to deal with the hearing-impaired pupil predominantly on their own, with a paucity of support services available to them. The availability of support services has been shown to positively influence teacher attitudes (Larrivee & Cook, 1979) and the anticipated lack of such services might have accounted for the formulation of these negative opinions. Thus, it appeared that most teachers believed that increased contact with hearing-impaired children through inclusion would benefit hearing children socially, but might have a negative impact academically as teachers would have less time to devote to the hearing students in their classes.

Statement 21 - Almost two-thirds (63.3%) of the teachers surveyed did not feel that it would be more difficult to maintain order in a regular class that contained a hearing-impaired child, indicating a positive attitude towards the behaviour of integrated hearing-impaired children.

Statement 22 - The majority of teachers (55.6%) moreover believed that most hearing-impaired children in regular classes would be as well behaved as their hearing peers.

Statement 23 - Just over half (55.6%) of respondents agreed with the statement that a hearing-impaired child's classroom behaviour required more patience than did that of a hearing child. Although this statement was a negative item, teachers may have considered this response to reflect a positive attitude toward including hearing-impaired

children into their classes as patience is generally viewed as a virtuous quality.

Statement 24 - Over 72% of teachers did not think that the behaviour of hearing-impaired children was likely to set a bad example for the rest of the class, again suggesting that most teachers did not have negative feelings about the behaviour of hearing-impaired children in their classes.

Statement 26 - The majority of teachers (53.3%) did not believe that having a hearing-impaired child in their class would require too much extra effort. This finding reflected a positive attitude towards the teaching of integrated hearing-impaired children. However, regular teachers may not be fully aware of the special needs of these children. A study by Lampropoulou and Padeliadu (1997) revealed that regular education teachers were more positive towards inclusion than were educators of deaf learners. They, therefore, concluded that regular education teachers who have had no experience in or knowledge of the education of students with disabilities, and are unaware of the demands of their instruction, might have based their opinions about inclusion on humanitarian grounds and so seem more favourably inclined. They caution that such teachers may change their opinions once they have taught hearing-impaired students in the classroom. Therefore, ongoing support and reinforcement through special courses, aids and the provision of services is needed in order to retain and possibly enhance their favourable attitudes towards inclusion.

Statement 28 - A large proportion of respondents (73.3%) agreed that with the help of other professionals they were confident that they could teach a hearing-impaired child. This positive attitude towards their perceived ability was encouraging but also emphasises the need for support and help from other professionals.

The review of the individual statements seemed to suggest that although the group of teachers surveyed had negative feelings towards some aspects of inclusion, they were largely positive in their attitude towards the inclusion of hearing-impaired children into regular classes.

In order to substantiate this statement, statistical analysis of teachers' attitudes were included. Composite attitude scores were calculated for each individual through the method of summated ratings. Positively stated items were assigned a score of 1 for strongly disagreeing, 2 for disagreeing, 3 for a neutral response, 4 for agreeing and 5 for strongly agreeing with the statement. This scoring was reversed for negatively stated items. The composite attitude scores for each participant were added and divided by 90 to obtain a mean score. The range of possible scores extended from 28 to 140. The following categories were then devised: 28 - 50.4 = strongly negative; 50.5 - 72.8 = negative; 72.9 - 95.2 = neutral; 95.3 - 117.6 = positive; and 117.7 - 140 = strongly positive. The mean composite attitude score obtained was 91 which falls into the neutral category, indicating that overall, the teachers were neutral in their opinions regarding inclusion of hearing-impaired children into regular classes. The distributions of teacher attitudes are set out in Table 2.

From Table 2 it is evident that although the mean composite score fell within the neutral category, the largest proportion of teachers (41.1%) had a positive attitude score, while 7.8% were strongly positive in their attitudes. Therefore, almost half of the teachers surveyed (48.9%) felt positively or strongly positively towards the inclusion of

hearing-impaired children into regular classes. In a review of the international literature on integration, Hegarty (1993) asserts that predominantly negative teacher attitudes regarding inclusion have been found. Local studies by Choles (1997) and Christie (1998) uncovered ambivalent and negative attitudes on the parts of teacher educators and regular teachers, respectively. Findings from the present study were therefore encouraging in the face of prevailing reports of negative attitudes held by regular education teachers.

Lampropoulou and Padelidu (1997) aver that a receptive attitude on the part of teachers toward students with disabilities and their inclusion in regular education is considered a prerequisite for successful school integration. The findings from the present research project indicate that such a receptive attitude existed in a large proportion of teachers surveyed and therefore, this prerequisite had been largely fulfilled.

Only 18.9% of the participants demonstrated negative and strongly negative attitudes toward inclusion of hearing-impaired children. This lack of strongly developed negative attitudes in the research group suggests that they might be receptive to educational programmes to enhance their knowledge and awareness regarding inclusive education and the teaching of hearing-impaired pupils.

A relatively large proportion of participants (32.2%) nevertheless were ambivalent in their attitudes toward inclusion. This finding may have been due to a lack of knowledge respecting the integration of hearing-impaired children into regular classrooms. By virtue of their education and training, speech-language pathologists and audiologists possess specialised knowledge regarding the hearing-impaired child and would, therefore, appear to be in an ideal position to provide input to teachers on the needs of these learners.

RELATION BETWEEN EXPOSURE TO DISABILITY AND ATTITUDES

a) Teachers' exposure to disability

Lampropoulou and Padelidu (1997) maintain that there are two factors in particular that are important to the formation of positive attitudes toward inclusion: i) increased knowledge and information about social integration and disabilities, and ii) opportunities for positive contacts with learners with disabilities. Participants were consequently asked about their exposure to hearing impairment and other

disabilities. The results are set out in Table 3.

From Table 3 it is clear that overall, the teachers in the research group had had little exposure to disability in terms of training and experience. In fact, only 13 teachers reported having a child with a disability in their class and a mere 11.1% of participants had a hearing-impaired child integrated into their class at the time of data collection.

b) Relation between exposure and attitudes

It has been documented that increased exposure through training and contact with disabled students leads to more positive attitudes (Larrivee, 1981; Leyser et al., 1994). Mean attitude scores were thus calculated and compared for those participants who replied yes and those who replied no to each of the exposure to disability questions.

On examination of the data, it was clear that increased exposure tended to be related to more positive attitudes. For each item, the mean attitude score was higher for those who answered yes than for those who answered no. This finding was especially evident for the last two items, which specifically tapped respondents' exposure to hearing-impaired children. These findings highlight the need for teachers to be afforded greater opportunities to be exposed to hearing-impaired students both during training and following graduation. Through such exposure teacher attitudes may be further improved and awareness of hearing impairment may be increased. As it is the speech and language therapist and audiologist who is the on-site "expert", such exposure and training, is likely to rest on his/her shoulders.

RELATION BETWEEN PERCEIVED COMPETENCE TO TEACH HEARING-IMPAIRED CHILDREN AND TEACHER ATTITUDES

a) Teachers' perceived competence in teaching hearing-impaired students

Teachers were asked to rate their competence in teaching hearing-impaired children in terms of knowledge, skills and emotional comfort. They were required to rate themselves on a five-point scale where 1 equaled very low competence and 5 equaled very high competence.

The largest group of teachers (30%) rated their competence as low for knowledge, and medium for skill (32.2%) and attitudes (36.7%). More teachers (47.7%) rated their competence as high or very high for attitudes in

TABLE 2: Teachers' Attitudes Towards Inclusion (N=90)

| Category | Score | Number | Percentage |
|-------------------|--------------|--------|------------|
| Strongly Negative | 28 - 50.4 | 3 | 3.3% |
| Negative | 50.5 - 72.8 | 14 | 15.5% |
| Neutral | 72.9 - 95.2 | 29 | 32.2% |
| Positive | 95.3 - 117.6 | 37 | 41.1% |
| Strongly Positive | 117.7 - 140 | 7 | 7.8% |
| Total | | 90 | 100% |

contrast with their ratings for knowledge (low or very low 55.6%) and skills (low or very low 54.5%). Only 1.1% of participants rated their knowledge and skill as very high, compared to 14.4% who rated their attitudes as very high. Therefore, although the teachers surveyed felt that they were not adequately competent in terms of their knowledge and skill, they were more receptive in terms of their attitudes toward the inclusion of hearing-impaired pupils. This receptive attitude again suggests that these teachers might be open to in-service training and workshops aimed at increasing their knowledge and skills.

Teachers were further asked to indicate how they achieved their present level of competence. Most teachers (44.4%) indicated that this item was not applicable to them. This finding was probably due to the fact that these teachers did not perceive themselves to be competent in teaching hearing-impaired children. A relatively large proportion of teachers (30%), nevertheless, indicated that they achieved their level of competence through experience with hearing-impaired children. The finding again highlights the importance of exposure to and experience with hearing-impaired children.

Teachers were also asked to indicate whether or not they felt that overall they possessed adequate skills and knowledge for working with hearing-impaired children who had been integrated. It emerged that the majority of teachers (75.6%) did not feel that they possessed adequate skills and knowledge.

Those teachers who felt that they were lacking in their abilities to work with hearing impaired children were asked to indicate in which ways they felt they were lacking. Most teachers (70%) expressed the view that they were lacking in their knowledge of specialised teaching methods. The other areas where the majority of respondents felt that they were lacking included an understanding of the needs of hearing-impaired children, knowledge of different types of hearing loss, knowledge of the equipment and support services available and experience with hearing-impaired children. This information is of great value to Speech-Language Pathologists and Audiologists as it can be used in planning in-service training seminars and workshops

targeting the inclusion of hearing-impaired children.
b) Relation between perceived competence and attitudes

As competence in teaching integrated students is related to teacher attitudes (Luckner, 1991), teachers' perceived competence was cross-tabulated with their attitude scores. Mean attitude scores were calculated for those who felt that they did and those who felt that they did not possess adequate competence in teaching hearing-impaired pupils. Data are presented in Table 4.

Table 4 reveals that those who felt that they did possess competence in teaching integrated hearing-impaired pupils obtained a positive attitude score, while those who did not feel that they were competent, attained a neutral score in terms of attitudes toward inclusion. These data indicate that perceived competence is important in developing positive attitudes towards inclusion. Speech-language pathologists and audiologists can help develop such competence by addressing those areas in which teachers felt they were lacking.

TABLE 4: Cross-tabulation of perceived competence and attitude scores (N = 90)

| Overall Competence | Attitude Score | Attitude Category |
|--------------------|----------------|-------------------|
| Yes | 108.45 | Positive |
| No | 85.26 | Neutral |

Key for Attitude Categories
28 - 50.4 = strongly negative
50.5 - 72.8 = negative
72.9 - 95.2 = neutral
95.3 - 117.6 = positive
117.7 - 140 = strongly positive

TABLE 3: Exposure to hearing impairment and other disabilities (N=90)

| Item | Response | Number | Percentage |
|---|-------------|--------|------------|
| Have you ever had courses on dealing with handicapped children as part of your teacher training? | Yes | 26 | 28.9% |
| | No | 64 | 71.1% |
| Have you ever had courses on dealing with handicapped children after you graduated? | Yes | 23 | 25.6% |
| | No | 67 | 74.4% |
| Do you have children in your class with a disability or handicap (other than hearing impairment)? | Yes | 13 | 14.4% |
| | No | 76 | 84.5% |
| | No response | 1 | 1.1% |
| Have you ever taught at a special school? | Yes | 16 | 17.8% |
| | No | 74 | 82.2% |
| Are there any hearing-impaired children in your school? | Yes | 38 | 42.2% |
| | No | 52 | 57.8% |
| Do you have any hearing-impaired children in your class? | Yes | 10 | 11.1% |
| | No | 79 | 87.8% |
| | No response | 1 | 1.1% |

THE ROLE OF SPEECH-LANGUAGE PATHOLOGISTS AND AUDIOLOGISTS (SLPs & As) AS PERCEIVED BY JUNIOR PRIMARY TEACHERS

Ross et al. (1982) state that speech-language pathologists and educational audiologists have a direct and crucial role to play as regards the total management of hearing-impaired students in regular classes. All of the teachers in the present study believed that the SLP & A had a role to play in facilitating inclusion of hearing-impaired children into regular classes. Almost all of the respondents (98.9%) believed that the SLP & A should be involved in providing individual therapy and most (94.4%) felt that they should provide information on communication strategies with hearing-impaired children.

Through in-service training, insight into the unique needs of pupils with hearing impairments can be built. Powers (1983) maintains that a strong consensus of professional opinion exists regarding the critical importance of in-service training for teachers. He avers that in-service training must provide opportunities for developing knowledge, skills and attitudes prerequisite to the effective integration of handicapped students. Such training should occur before the hearing-impaired child enters the class as well as on a continuing basis.

Other areas that teachers felt the SLP & A should be involved in were tapped in an open-ended question. The following themes emerged:

- The SLP & A should spend time in the classroom to assist the child and the teacher
- There should be constant communication between the therapist and the teacher
- A full time speech therapist should be available on a daily basis
- SLPs & As should assist and support the parents of hearing-impaired children
- Guidance as to the specific needs of each hearing-impaired child should be provided
- SLPs & As should provide student teachers with the necessary training regarding the handling of hearing impaired children
- Talks should be given at staff meetings.

The themes that emerged from the open-ended question highlight the need teachers have for constant support that is readily available. This finding may have implications in terms of expanding the role of the SLP & A to include greater participation in in-service training of regular teachers and direct work with hearing-impaired children, as well as their teachers, in the classroom situation.

ADDITIONAL COMMENTS

In the final item of the questionnaire the respondents were given the opportunity to express any further comments or concerns they had regarding the inclusion of hearing-impaired children. Various themes were extracted from the responses teachers provided to the open-ended question and are presented in Table 5.

The concerns and comments expressed by these teachers illustrate the fact that while most of the teachers surveyed did feel positive toward the inclusion of hearing-impaired children, these viewpoints were dependent on specific conditions. Therefore, it would seem imperative that these concerns be addressed, before inclusive education is implemented, in order to avoid probable failure of such educational programmes.

CONCLUSIONS

The main finding that emerged from the study was that the junior primary school teachers surveyed were relatively positive in their attitudes towards the inclusion of hearing-impaired children into regular classes. Increased exposure to disability and higher perceived competence in teaching these children were associated with more positive attitudes. However, many respondents expressed concern regarding their lack of knowledge and skills in teaching these children. They, moreover, stressed the need for additional training and support from other professionals. All of the teachers surveyed felt that the SLP & A should be involved in facilitating the inclusion of hearing-impaired children into regular classes.

The results of this research project suggest that placement of hearing-impaired pupils into integrated classes prior to the establishment of appropriate support systems and training programmes might lead to what Christie (1998) refers to as 'dumping' of these children and would discriminate against the very people inclusive education aims to help. If an inclusive educational policy is implemented before regular teachers feel sufficiently equipped to deal with them, hearing-impaired children may in fact be placed in the *most* restrictive environment, which offers them an inferior education that does not meet their special educational needs. Christie (1998) further maintains that inclusion without appropriate services may indeed constitute exclusion for some individuals. In such a case, the disadvantages that hearing-impaired children have experienced in the past may be further perpetuated in the future.

A critical evaluation of the study is necessary in order to reflect on the value of the results obtained. Firstly, as the

TABLE 5: Comments or concerns expressed by participants (N = 44)

| Theme | Number of respondents |
|--|-----------------------|
| 1. Teachers need specialised training, support and assistance from other personnel. | 22 |
| 2. Attitudes towards inclusion depend largely on the size of the class. | 13 |
| 3. Attitudes towards inclusion depend largely on the severity of the hearing impairment. | 13 |
| Teachers perceived inclusion of hearing-impaired children as a good idea. | 8 |
| 5. Inclusion will benefit children socially and emotionally but not in terms of academic achievements. | 3 |

study was conducted on a non-representative, non-probability sample, the results cannot be generalised to the broader population of junior primary school teachers. An additional limitation was the use of predominantly closed-ended questions, which, although time- saving and easy to analyse, allowed the respondents to guess or choose the most logical answer, rather than necessarily reflecting their true opinions. The five-point Likert-type scale employed in Section four of the questionnaire provided the option of a neutral response, which may have fostered a central tendency response set, and in this way, might have contributed to the failure to obtain strongly positive or negative attitudes.

Nevertheless, despite these methodological limitations, the findings hold important implications for support and training of regular education teachers, training of speech-language pathologists, and further research.

SUPPORT AND TRAINING OF REGULAR EDUCATION TEACHERS

The need for specialised training and support from other professionals was mentioned repeatedly by the group of teachers surveyed. Teachers need to be provided with pre-service training, which would include the fundamentals of special educational needs. Although such education is likely to be the primary responsibility of teacher educators, the SLP & A could give valuable insight into the specific needs of hearing-impaired children at this level.

Retraining at the in-service level should also be implemented. The SLP & A could organise workshops, seminars and demonstrations. In-service training should include information on different types of hearing losses and their possible effects on the student; different types of hearing aids; care of hearing aids; psychosocial aspects of deafness; techniques for improving communication between the teacher and student; teaching methods related to communication skills and other important academic areas; and manual communication.

Furthermore, teachers need support from other professionals if inclusion is to succeed. For this reason it is recommended that the SLP & A should not only be involved in training, but should become an integral member of the educational team.

TRAINING OF SPEECH-LANGUAGE PATHOLOGISTS & AUDIOLOGISTS

It has been suggested throughout this report that, as the on-site "expert" on hearing impairment, the SLP & A should be closely involved in training, supporting and consulting with regular teachers. All the teachers surveyed in the research project indicated that the SLP & A should be involved in inclusion of hearing-impaired children. However, as Brackett (1997, p.361) points out, "Speech-language pathology training programs are remiss in not providing their graduates with strategies for transmitting information effectively to classroom teachers and eliciting from them potential problem areas". Consequently, in light of the proposed educational policy reform, it is recommended that training institutions place greater emphasis on the role of the SLP & A as a consultant and pedagogue. Student training should, moreover, move away from a focus on individual therapy to a greater emphasis on intervention within the classroom. Beck and Dennis (1997) maintain

that it is imperative to increase the amount of training speech-language pathologists receive concerning classroom-based interventions.

FURTHER RESEARCH

The movement towards inclusive education in this country and the valuable role of the SLP & A in this movement, necessitates continuing research in this area. Specific areas that should be researched include the following:

- Teachers have been shown to become more supportive of mainstreaming and more confident in their ability to cope with integrated LSEN once they have gained some hands-on experience in a mainstreamed classroom (Giangreco et al., 1993). However, as previously noted, teachers' attitudes towards inclusion depend largely on the availability of support services. Therefore, future research should re-examine regular teacher attitudes subsequent to the implementation of inclusive education to ascertain if there has been a change in their attitudes and needs, and to establish whether they are receiving the support services they require.
- The value of in-service training has been highlighted in this research project. Future research could, thus, focus on the attitudes of teachers towards inclusion prior to and following in-service training. Such research could elicit suggestions from teachers regarding the efficacy and relevance of this kind of training to their needs in a mainstream class.
- Larrivee and Cook (1979) demonstrated the significant effect of administrative support on teacher attitudes toward inclusion. They aver that this finding reaffirms the well known importance of the school principal in fostering a positive learning environment for both teachers and students. Research should, consequently, examine the attitudes of principals towards inclusion, as they are likely to be instrumental in facilitating or impeding the success of such programmes.
- A shortcoming of the questionnaire utilized in the present study was the failure to consider the impact of variables such as severity of impairment and class size on teachers' attitudes towards the inclusion of hearing-impaired children into regular classrooms. These factors need to be incorporated into future research studies.
- Despite its methodological limitations, the present study can serve as the basis for further research. There is a need to replicate the study on a larger, more representative sample of junior primary school teachers. Furthermore, the attitudes of teachers of other grades should be examined and compared to determine whether their needs and concerns differ from those uncovered in the present research project.

In conclusion, regular teachers need substantial support in order for inclusive education to succeed. The South African Association for Learning and Educational Difficulties (SAALED, 1997, p.6) calls for the maximum emphasis on adequate support structures and states that without such support, "Inclusive Education is a recipe for disaster". The SLP & A needs to be intimately involved in supporting regular class teachers who have hearing-impaired learners in their classes. The NCSNET/ NCESS report states that as inclusion is a new situation, thera-

pists are in the unique position and have the responsibility to lead the way. Therapists can lead the way to successful inclusion through an understanding and fulfillment of the needs of regular education teachers. In the words of Germain (1973, p.116) our goal should be:

"to help the classroom teachers view the hearing impaired students as a *challenge* rather than a burden and as an *asset to the school*. In other words, we hope to do more than educate the teachers about hearing loss; we want to build positive attitudes".

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