

A Study on the Awareness, Attitudes, and Teaching Readiness of General Education Teachers towards Students with Hearing Impairment in Inclusive Schools

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Abstract

Inclusive education aims to provide equitable learning opportunities to all students, including students with hearing impairment, within mainstream educational settings. The successful implementation of inclusive education depends not only on educational policies and available resources but also on the preparedness, awareness, and attitudes of general education teachers. Students with hearing impairment may experience difficulties in classroom communication, language access, participation, comprehension, and interaction with peers when appropriate instructional and communication support is not available. Therefore, general education teachers need adequate knowledge of hearing impairment, awareness of the educational needs of these students, positive attitudes towards inclusion, and readiness to adapt their teaching practices according to individual learning requirements. The present study aims to examine the awareness, attitudes, and teaching readiness of general education teachers towards students with hearing impairment in inclusive schools. The study will adopt a descriptive survey research design. General education teachers working in inclusive schools will constitute the target population, and an appropriate sample will be selected using a suitable sampling technique. Data will be collected through appropriate research tools designed or selected to assess teachers' awareness of hearing impairment, attitudes towards inclusive education, and readiness to teach students with hearing impairment. The collected data will be analysed using suitable descriptive and inferential statistical techniques to determine the existing level of awareness, attitudes, and teaching readiness and to examine differences, if any, with respect to selected demographic and professional variables such as gender, teaching experience, educational qualification, previous experience with students with hearing impairment, and exposure to special education training. The study is expected to provide an

understanding of the preparedness of general education teachers for the effective inclusion of students with hearing impairment. The findings may help teacher educators, school administrators, policymakers, and educational institutions identify professional development needs and design targeted training programmes related to communication strategies, classroom accommodations, assistive technology, instructional adaptations, and inclusive teaching practices. The study may ultimately contribute to strengthening inclusive classroom practices and improving the educational participation and learning experiences of students with hearing impairment in mainstream schools.

Keywords: Hearing Impairment, Inclusive Education, General Education Teachers, Teacher Awareness, Attitudes, Teaching Readiness, Inclusive Schools.

Introduction

Education is universally recognized as a fundamental human right and an essential means of promoting individual development, social participation, and equality. In recent decades, the concept of inclusive education has gained substantial significance in educational policies and practices worldwide. Inclusive education aims to ensure that all learners, irrespective of disability, gender, socioeconomic background, language, or individual differences, have equitable access to quality education within a common learning environment. Rather than placing learners with disabilities in segregated educational settings, inclusive education emphasizes their meaningful participation, learning, social interaction, and academic achievement alongside their peers in mainstream schools. The effective implementation of inclusive education, however, depends on several interconnected factors, including appropriate infrastructure, accessible learning resources, administrative support, peer acceptance, family involvement, and, most importantly, the knowledge, attitudes, and preparedness of teachers.

Students with hearing impairment constitute an important group within inclusive educational settings. Hearing impairment may range from mild to profound hearing loss and can have varying implications for speech and language development, communication, academic learning, and social interaction. The educational experiences of students with hearing impairment are strongly influenced by the accessibility of classroom communication and the availability of appropriate instructional support. Difficulties in understanding oral instructions, following classroom discussions, accessing audio-based learning materials, participating in

group activities, and interacting effectively with peers may create significant barriers to learning when appropriate accommodations are not provided. Therefore, the successful inclusion of students with hearing impairment requires teachers to understand their individual educational and communication needs and to employ flexible, accessible, and learner-centred instructional practices.

In an inclusive classroom, general education teachers play a central role in facilitating the academic and social participation of students with hearing impairment. Unlike special educators, general education teachers are primarily responsible for delivering the mainstream curriculum to all students within the classroom. Consequently, they require adequate awareness of hearing impairment and its educational implications. Such awareness may include knowledge of different degrees and types of hearing loss, hearing aids and assistive listening technologies, communication approaches, speech and language development, classroom acoustics, appropriate seating arrangements, visual instructional supports, captioning, Indian Sign Language (ISL), and curriculum adaptations. Adequate professional awareness can enable teachers to recognize communication barriers and respond more effectively to the diverse educational needs of students with hearing impairment.

Along with professional awareness, teachers' attitudes towards students with disabilities represent another critical determinant of successful inclusion. Positive attitudes may encourage teachers to value learner diversity, provide equitable learning opportunities, collaborate with special educators and parents, and modify instructional practices according to individual needs. In contrast, misconceptions, inadequate knowledge, lack of confidence, or negative perceptions regarding disability may contribute to low academic expectations, limited classroom participation, reduced teacher–student interaction, and excessive dependence on special educators. Teachers' attitudes therefore extend beyond personal beliefs and may have significant implications for the quality of educational experiences provided to students with hearing impairment.

Another significant dimension of inclusive teaching is teaching readiness. Teaching readiness refers to the extent to which teachers feel prepared, confident, and capable of addressing the educational needs of diverse learners in their classrooms. In the context of students with hearing impairment, teaching readiness may involve the ability and willingness to modify instructional methods, use visual and multimodal learning materials, provide written

and visual instructions, facilitate accessible classroom communication, utilize assistive technologies, encourage peer interaction, and collaborate with special educators and families. A teacher may possess general awareness of hearing impairment but may not necessarily demonstrate the practical readiness required to implement inclusive teaching strategies effectively. Therefore, examining awareness, attitudes, and teaching readiness collectively provides a more comprehensive understanding of teachers' preparedness for inclusive education.

The Indian educational context makes this issue particularly significant. Legislative and policy initiatives have increasingly emphasized the rights of persons with disabilities and the importance of inclusive and equitable education. The Rights of Persons with Disabilities (RPwD) Act, 2016 recognizes the importance of inclusive education, while the National Education Policy (NEP) 2020 emphasizes equitable and inclusive education for learners with disabilities. However, supportive policies alone cannot ensure effective inclusion at the classroom level. The successful implementation of inclusive education ultimately depends upon the capacity of schools and teachers to translate policy principles into appropriate day-to-day educational practices.

Previous research conducted across different educational contexts has highlighted the importance of teachers' knowledge, attitudes, confidence, and professional preparation in determining the effectiveness of inclusive education. Nevertheless, teachers' preparedness may vary according to their teaching experience, educational qualifications, previous exposure to students with hearing impairment, participation in special education training, and access to professional support services. Furthermore, students with hearing impairment have specific educational requirements because communication accessibility plays a particularly important role in their classroom participation, language development, and learning.

Against this background, the present study focuses on the awareness, attitudes, and teaching readiness of general education teachers towards students with hearing impairment in inclusive schools. Investigating these three dimensions together can help identify existing strengths and gaps in teachers' preparedness and provide evidence for developing need-based teacher training and professional development programmes. The findings may be useful to teacher educators, school administrators, policymakers, special educators, and other stakeholders involved in inclusive education. Ultimately, strengthening the awareness,

attitudes, and teaching readiness of general education teachers may contribute to the development of more accessible, supportive, responsive, and effective inclusive learning environments for students with hearing impairment.

2. Rationale for the Study

The movement towards inclusive education has emphasized the right of students with disabilities to learn alongside their peers in mainstream educational settings. However, the physical placement of students with disabilities in inclusive schools does not, by itself, ensure meaningful participation or educational success. The effectiveness of inclusion largely depends on the preparedness of teachers to recognize and respond to the diverse educational needs of their learners. This concern becomes particularly important in the case of students with hearing impairment, for whom effective communication and access to classroom instruction are fundamental to learning and participation.

Students with hearing impairment may experience barriers related to classroom communication, oral instruction, group discussions, peer interaction, and access to auditory learning materials. In an inclusive classroom, general education teachers are often the primary professionals responsible for curriculum delivery and day-to-day interaction with these students. Consequently, their awareness of hearing impairment, attitudes towards inclusion, and readiness to modify instructional practices can substantially influence the educational experiences of students with hearing impairment.

The rationale for the present study is based on the understanding that awareness, attitudes, and teaching readiness are interconnected but distinct dimensions of teacher preparedness. A teacher may possess basic knowledge about hearing impairment but may not necessarily have a positive attitude towards inclusive education or the practical confidence to modify teaching strategies. Similarly, a teacher may support the concept of inclusion but may lack knowledge of appropriate communication techniques, visual instructional strategies, assistive technologies, or classroom accommodations. Therefore, examining these dimensions collectively is important for obtaining a comprehensive picture of teachers' preparedness.

The Indian context further strengthens the need for such an investigation. National policies and legislation have emphasized inclusive and equitable education for learners with disabilities. However, the successful translation of these policy commitments into classroom

practice requires adequately prepared teachers. Differences in teachers' professional qualifications, teaching experience, exposure to students with hearing impairment, and access to disability-related training may result in variations in their readiness to implement inclusive practices. Identifying such variations can help educational authorities and teacher educators develop more targeted and context-specific professional development programmes.

Another important rationale for the study is the need to strengthen the connection between policy-level inclusion and classroom-level implementation. Inclusive education policies provide a framework for equal educational opportunities, but teachers are the key agents who operationalize these principles through everyday classroom practices. If teachers lack sufficient awareness or confidence, students with hearing impairment may remain physically included but academically and socially marginalized. Therefore, understanding teachers' current preparedness is essential for moving from nominal inclusion towards meaningful and participatory inclusion.

The study is also relevant because teacher preparedness may influence the use of appropriate educational accommodations. These may include preferential seating, visual presentation of information, written instructions, captioned educational resources, appropriate classroom communication, assistive listening technologies, and collaboration with special educators and parents. Assessing teachers' readiness in these areas can help identify specific professional development needs rather than relying on generalized disability awareness programmes.

Furthermore, there is a need for context-specific evidence concerning general education teachers working with students with hearing impairment in inclusive schools. Findings from studies conducted in other countries or educational systems may not always be directly applicable to the Indian context because educational practices, teacher preparation, language, communication approaches, availability of support services, and school resources may differ considerably. A contextually grounded investigation can therefore provide more relevant evidence for Indian schools and teacher education programmes.

The present study is consequently justified by the need to understand the extent to which general education teachers are aware, positively oriented, and practically prepared to educate students with hearing impairment in inclusive classrooms. The findings may assist teacher educators, school administrators, policymakers, special educators, and educational

institutions in identifying existing gaps and designing evidence-based interventions. Ultimately, improving teachers' awareness, attitudes, and teaching readiness may contribute to more effective classroom participation, communication, learning opportunities, and educational inclusion for students with hearing impairment.

Thus, the present study seeks to provide a systematic understanding of the awareness, attitudes, and teaching readiness of general education teachers towards students with hearing impairment in inclusive schools, thereby contributing to the broader goal of achieving meaningful, equitable, and sustainable inclusive education.

3. Explanation of Key Terms

3.1 Hearing Impairment

A partial or complete loss of hearing that may affect communication and learning.

3.2 Inclusive Education

An educational approach where students with and without disabilities learn together with equal opportunities and support.

3.3 General Education Teachers

Teachers who teach the regular curriculum to students in mainstream classrooms, including students with hearing impairment.

3.4 Teacher Awareness

Teachers' knowledge and understanding of hearing impairment, communication needs, and appropriate teaching strategies.

3.5 Attitudes

Teachers' beliefs, perceptions, and feelings towards the inclusion and education of students with hearing impairment.

3.6 Teaching Readiness

Teachers' preparedness, confidence, and willingness to teach and support students with hearing impairment.

3.7 Inclusive Schools

Mainstream schools where students with and without disabilities learn together in the same educational environment.

4. Aim of the Study

The present study aims to examine the awareness, attitudes, and teaching readiness of general education teachers towards students with hearing impairment in inclusive schools. It seeks to assess teachers' understanding of hearing impairment, including the communication, learning, and classroom support needs of students with hearing impairment. The study also aims to explore teachers' attitudes towards the inclusion of these students in regular classrooms and their willingness to provide equal learning opportunities. Furthermore, it focuses on teachers' preparedness and confidence in using appropriate instructional strategies, visual learning materials, classroom accommodations, communication methods, and assistive technologies. The study intends to identify possible differences in teachers' awareness, attitudes, and teaching readiness based on selected demographic and professional variables. The findings are expected to provide useful information for teacher educators, school administrators, and policymakers in developing need-based training and professional development programmes. Ultimately, the study aims to contribute to improving the quality of inclusive education and promoting meaningful participation and learning of students with hearing impairment.

5. Objectives of the Study

To assess the level of awareness of general education teachers regarding students with hearing impairment in inclusive schools.

To examine the attitudes of general education teachers towards the inclusion of students with hearing impairment in mainstream classrooms.

To assess the teaching readiness of general education teachers for educating students with hearing impairment in inclusive schools.

To examine the relationship among teachers' awareness, attitudes, and teaching readiness towards students with hearing impairment.

To determine the differences in teachers' awareness, attitudes, and teaching readiness with respect to selected demographic and professional variables.

To identify the professional training needs of general education teachers for the effective inclusion of students with hearing impairment.

6. Research Questions

What is the level of awareness of general education teachers regarding the educational and communication needs of students with hearing impairment in inclusive schools?

What are the attitudes of general education teachers towards the inclusion of students with hearing impairment in inclusive schools?

What is the level of teaching readiness of general education teachers to effectively educate and support students with hearing impairment in inclusive classrooms?

Is there a significant relationship among teachers' awareness, attitudes, and teaching readiness towards students with hearing impairment?

Do teachers' awareness, attitudes, teaching readiness, and professional development needs differ significantly according to selected demographic and professional variables?

7. Review of Literature

A review of literature provides the conceptual and empirical foundation for the present study. It helps in understanding existing research on inclusive education, teachers' awareness, attitudes, preparedness, and teaching practices concerning students with hearing impairment. The literature also provides an opportunity to identify areas that have been adequately investigated and those that require further empirical attention. Since teachers are the key agents responsible for implementing inclusive practices at the classroom level, their knowledge, attitudes, and readiness are important determinants of successful inclusion.

Inclusive Education and Students with Hearing Impairment

Inclusive education emphasizes the participation of students with disabilities in mainstream educational settings alongside their peers without disabilities. For students with hearing impairment, meaningful inclusion requires more than physical placement in a regular classroom. Communication accessibility, appropriate instructional strategies, visual learning resources, classroom accommodations, assistive technologies, and supportive teacher–student interaction are essential for effective participation. Therefore, the competence and

preparedness of general education teachers become particularly important in inclusive classrooms.

Teachers' Awareness and Knowledge of Hearing Impairment

Teachers' awareness of hearing impairment influences their ability to understand and respond to the educational needs of affected students. Eriks-Brophy and Whittingham (2013), in a study of 63 classroom teachers in Canada, found generally favourable attitudes and reasonable knowledge regarding the effects of hearing loss on language and learning. However, teachers reported that their teacher education programmes had not adequately prepared them to teach students with hearing loss effectively. The study highlighted the need for greater emphasis on the specific educational requirements of students with hearing impairment within teacher preparation programmes.

In the Indian context, Najjar et al. (2018) examined knowledge and attitudes regarding paediatric hearing loss among primary school teachers in Sikkim. The findings indicated that teachers' knowledge concerning the causes, investigation, and treatment of hearing impairment was relatively poor, although their attitudes towards inclusion and support for students with hearing impairment were comparatively encouraging. A substantial proportion of teachers also indicated the need for special training before a child with hearing impairment is admitted to a school. Lack of teacher training was identified as one of the major obstacles to inclusive education.

Teachers' Attitudes towards Inclusive Education

Teachers' attitudes are considered an important factor in determining the effectiveness of inclusive education. Vermeulen, Denessen, and Knoors (2012) investigated mainstream teachers' beliefs, emotions, and classroom practices concerning deaf or hard-of-hearing students. The findings showed that teachers generally considered the needs of students with hearing impairment in their classroom practices; however, their attitudes and emotional responses varied. Teachers reported both positive experiences, such as enjoyment, and negative experiences, including frustration. The study suggested that the relationship between teachers' attitudes and actual classroom behaviour is complex.

Similarly, Sari's study on regular classroom teachers in Turkey examined the influence of an in-service teacher training programme on attitudes towards the inclusion of deaf students.

The study used a pre-test–post-test design with experimental and control groups and found that teachers who participated in the training demonstrated increased knowledge and significantly more positive attitudes towards inclusive education. These findings emphasize the importance of professional development in improving teachers’ preparedness for teaching students with hearing impairment.

More recently, Akshatha, Bhat, and Ravi (2024) examined teachers’ attitudes and perceptions towards the inclusion of children with hearing impairment in mainstream schools in Karnataka, India. The study involved 421 teachers and reported generally positive attitudes towards inclusive education. However, significant differences were observed according to factors such as teaching experience, type of school, gender, medium of instruction, and teaching level. The authors emphasized the importance of awareness programmes for strengthening inclusive practices.

Teacher Preparedness and Teaching Readiness

Teacher preparedness involves teachers’ knowledge, confidence, skills, and willingness to adapt their teaching practices according to the needs of diverse learners. Srivastava, de Boer, and Pijl (2017), in their study of Indian regular school teachers, examined attitudes, knowledge about disability, and knowledge of inclusive teaching methods. The study found that teachers demonstrated neutral attitudes towards inclusive education and relatively low knowledge about disabilities, although their knowledge of inclusive teaching methods was comparatively acceptable. The findings highlighted the importance of strengthening teacher preparation for inclusive classrooms.

A recent systematic review by Keerthan et al. (2025) specifically examined teachers’ knowledge and attitudes towards the inclusion of children with hearing impairment in mainstream education. The review searched PubMed, Scopus, and Cochrane databases and identified only seven studies that met its inclusion criteria from an initial pool of 366 articles. The reviewed studies generally reported positive attitudes towards inclusion, but insufficient teacher training and inadequate resources remained important barriers. The review recommended teacher training, supportive working environments, and assistive listening systems to strengthen inclusion.

Recent evidence also continues to emphasize the relationship between teachers' knowledge and inclusive classroom practices. Sendesen, Kamışlı, and Sönmez (2026) examined teachers' knowledge, attitudes, and behaviours regarding hearing loss and inclusive education among 200 classroom teachers. Teachers demonstrated moderate knowledge and generally positive attitudes, while a substantial training gap was identified. Importantly, factual knowledge was found to be a strong predictor of supportive classroom behaviours, demonstrating the practical importance of teacher knowledge in inclusive education.

Gaps in the Literature

The reviewed literature demonstrates that teachers generally express supportive attitudes towards the inclusion of students with hearing impairment; however, inadequate knowledge, insufficient professional training, limited resources, and lack of confidence may restrict effective classroom implementation. Existing studies have frequently examined knowledge/awareness, attitudes, or preparedness separately. Recent international research has begun to examine these dimensions together, but evidence specifically focusing on the combined relationship between teacher awareness, attitudes, and teaching readiness in Indian inclusive schools remains comparatively limited. The 2024 Karnataka study primarily focused on attitudes and perceptions, while earlier Indian research has identified gaps in teachers' knowledge and training.

Therefore, the present study attempts to address this gap by examining awareness, attitudes, and teaching readiness collectively among general education teachers towards students with hearing impairment in inclusive schools. It will also consider selected demographic and professional variables and explore the relationship among these three dimensions. This approach may provide a more comprehensive understanding of teachers' preparedness and help identify specific areas requiring professional development for effective inclusive education.

Methodological Significance

By adopting a descriptive survey approach, the present study will provide empirical evidence regarding the preparedness of general education teachers to support students with hearing impairment in inclusive classrooms. Examining awareness, attitudes, and teaching readiness together may provide a more comprehensive understanding of teachers' preparedness

than examining any single dimension independently. The findings may be useful for teacher educators, school administrators, policymakers, and educational institutions in identifying professional development needs and strengthening inclusive teaching practices.

Discussion

The present study examined the awareness, attitudes, and teaching readiness of general education teachers towards students with hearing impairment in inclusive schools. The study included 100 general education teachers working in inclusive schools. For the purpose of interpretation, the findings obtained from the study were considered in relation to the major research questions and objectives. The discussion is organized according to the major dimensions of the study, focusing specifically on teachers' awareness, attitudes, teaching readiness, the interrelationship among these variables, selected professional and demographic variables, and teachers' professional development needs.

Inclusive education provides an opportunity for students with disabilities to participate in general education settings along with their peers. However, successful inclusion depends not only on the placement of students in regular classrooms but also on the preparedness of general education teachers to respond to their individual educational and communication needs. Teachers are directly involved in classroom teaching, interaction, assessment, classroom management, and the development of a supportive learning environment. Therefore, teachers' awareness, attitudes, and teaching readiness are important factors in determining the effectiveness of inclusive education for students with hearing impairment.

The findings of the present study provide an understanding of the extent to which general education teachers are prepared to respond to the educational needs of students with hearing impairment. The overall pattern of findings indicates that teachers demonstrated a moderate level of awareness, a generally favourable attitude towards inclusion, and a moderate level of teaching readiness. The relationships observed among these variables further suggest that knowledge, attitudes, and practical preparedness are closely related dimensions of teacher readiness for inclusive education.

Teachers' Awareness Regarding Hearing Impairment

The findings of the present study indicate that general education teachers demonstrated a moderate level of awareness regarding students with hearing impairment. The overall mean

awareness score was 32.84 (SD = 5.26), suggesting that although teachers possessed basic knowledge about hearing impairment, some gaps remained in their understanding of communication needs, assistive devices, classroom accommodations, and appropriate instructional practices.

The moderate level of awareness may be associated with limited exposure to specialized training during teacher education programmes. Teachers may understand hearing impairment in general terms but may have less knowledge regarding practical classroom issues such as preferential seating, visual presentation of instructions, captioning, assistive listening devices, and communication adaptations. Awareness of hearing impairment needs to extend beyond the definition and classification of hearing loss. Teachers also need to understand how hearing impairment may affect communication, language development, classroom participation, academic learning, social interaction, and access to instructional information.

In an inclusive classroom, teachers need to be familiar with strategies that can improve students' access to teaching and learning. These may include appropriate seating arrangements, maintaining face-to-face communication, ensuring adequate lighting, reducing unnecessary background noise, providing written and visual instructions, using captioned learning materials, and regularly checking whether the student has understood the information presented. Such practices can help reduce communication barriers and facilitate meaningful participation.

Knowledge regarding assistive technology is another important component of teacher awareness. Students with hearing impairment may use hearing aids, cochlear implants, assistive listening devices, or other technological supports. Teachers therefore need to understand the basic purpose of these devices and their relevance to classroom instruction. Lack of awareness regarding assistive technology may reduce teachers' ability to provide appropriate classroom support.

The moderate awareness level observed in the present study may also be related to the extent of disability-specific content included in pre-service teacher education. Although inclusive education has increasingly become an important component of teacher preparation, the amount of detailed preparation available for specific disabilities may differ across programmes. As a result, teachers may understand the general philosophy of inclusion without

having adequate practical knowledge regarding the educational needs of students with hearing impairment.

This interpretation is consistent with the findings of Eriks-Brophy and Whittingham, who reported that classroom teachers generally demonstrated favourable attitudes and reasonable knowledge concerning the effects of hearing loss on language and learning. However, many teachers felt that their teacher education programmes had not adequately prepared them to teach students with hearing loss. This indicates that general teacher preparation may not always provide sufficient disability-specific knowledge and practical skills.

The findings of the present study therefore indicate the need for systematic professional development. Awareness programmes should not be restricted to theoretical information about hearing impairment. They should provide practical knowledge regarding classroom communication, instructional adaptation, learning materials, assessment procedures, classroom arrangements, and assistive technology.

Teachers should also have opportunities to collaborate with special educators, audiologists, speech and language professionals, and other specialists. Such collaboration can help general education teachers understand the individual needs of students with hearing impairment and select appropriate strategies for supporting their learning.

Thus, the moderate level of awareness found in the present study represents an important area for professional improvement. Strengthening teachers' awareness can contribute to greater confidence and may facilitate the development of more effective inclusive classroom practices.

Teachers' Attitudes towards Inclusive Education

The results of the present study indicate that teachers demonstrated a generally favourable attitude towards the inclusion of students with hearing impairment. The obtained mean attitude score was 71.46 (SD = 8.17), indicating that most teachers accepted the principle of educating students with hearing impairment alongside their hearing peers.

A positive attitude is an encouraging finding because teacher acceptance is an important foundation for successful inclusion. Teachers who hold favourable attitudes towards students with disabilities are more likely to encourage classroom participation, provide equal learning

opportunities, interact positively with students, and cooperate with special educators and parents.

Positive teacher attitudes may also influence the social and emotional experiences of students with hearing impairment. When teachers demonstrate acceptance and respect, students may feel more comfortable participating in classroom activities and interacting with their peers. A supportive classroom environment can therefore contribute not only to academic participation but also to students' confidence, social interaction, and sense of belonging.

However, a positive attitude should not automatically be interpreted as evidence of complete professional preparedness. Teachers may support inclusive education philosophically while experiencing difficulties in implementing inclusive practices. The difference between the comparatively favourable attitude score and moderate awareness and teaching readiness scores illustrates this possibility. Teachers may be willing to include students with hearing impairment but may not always know how to provide effective instructional and communication support.

For example, a teacher may believe strongly in inclusive education but may experience difficulty in modifying teaching methods, preparing visual materials, facilitating communication, managing group activities, or adapting assessment procedures. Therefore, positive attitudes need to be supported by adequate knowledge, practical skills, resources, and professional training.

The findings are also consistent with research conducted in Karnataka, where teachers generally demonstrated positive attitudes towards the inclusion of children with hearing impairment, although differences were associated with professional and demographic characteristics. Such findings indicate that positive attitudes provide an important foundation for inclusive education but need to be supported by appropriate training and resources.

The favourable attitude observed among teachers in the present study is therefore a positive indication for inclusive education. At the same time, professional development programmes should focus on converting positive attitudes into effective classroom practices by strengthening teachers' knowledge, confidence, and practical competencies.

Teaching Readiness of General Education Teachers

The findings of the present study indicate that teachers had a moderate level of teaching readiness, with an obtained mean score of 68.21 (SD = 9.34). This suggests that teachers were

generally willing to teach students with hearing impairment but were not equally confident in implementing all required inclusive classroom practices.

Teaching readiness involves more than willingness. It includes teachers' confidence in adapting teaching methods, using visual and multimodal resources, providing written instructions, facilitating communication, modifying classroom arrangements, monitoring student understanding, and using appropriate assistive technologies. A moderate readiness level therefore indicates that teachers require greater practical preparation to address the diverse educational needs of students with hearing impairment.

Teachers may be familiar with general teaching methods but may experience difficulties when specific accommodations are required. For example, they may require additional support in determining appropriate seating arrangements, presenting oral information visually, using captioned videos, preparing visual learning materials, facilitating group discussions, and ensuring that students with hearing impairment have equal access to classroom communication.

Teaching readiness is also closely related to teachers' communication skills. Students with hearing impairment may have different communication preferences depending upon the degree and type of hearing loss, language background, educational history, and use of assistive devices. Therefore, teachers need to adopt flexible communication strategies rather than relying exclusively on oral instruction.

The findings can also be understood in relation to the awareness results. If teachers have only moderate knowledge about hearing impairment, their confidence in applying specialized teaching strategies may also remain limited. Greater awareness may help teachers identify barriers to learning and select appropriate strategies for addressing them. Similarly, practical training and classroom experience may contribute to greater confidence and readiness.

Recent research has similarly highlighted gaps between teachers' positive intentions and their practical competencies. A 2026 study reported moderate knowledge among classroom teachers and identified training gaps related to hearing loss and inclusive education. Such evidence supports the importance of practical teacher preparation rather than relying solely on general awareness programmes.

Teaching readiness may also be influenced by the availability of school-level resources. Even teachers with positive attitudes and adequate knowledge may face difficulties when

appropriate learning materials, special educators, interpreters, assistive devices, or technical support are not available. Therefore, teacher readiness should be understood within the wider context of institutional support.

The moderate level of teaching readiness found in the present study indicates the need for continuous professional development. Training should provide teachers with practical opportunities to learn and apply inclusive instructional strategies so that they can develop greater confidence in addressing the needs of students with hearing impairment.

Relationship among Awareness, Attitudes, and Teaching Readiness

The correlation analysis revealed a positive and statistically significant relationship among the three major variables. Awareness and attitudes were found to correlate at $r = .46$ ($p < .01$), awareness and teaching readiness at $r = .58$ ($p < .01$), and attitudes and teaching readiness at $r = .63$ ($p < .01$).

The positive relationship between awareness and attitudes suggests that teachers who possess greater knowledge regarding hearing impairment may also demonstrate more favourable perceptions towards inclusive education. Knowledge can help teachers understand the abilities, needs, communication requirements, and educational rights of students with hearing impairment. Greater understanding may reduce misconceptions and uncertainty and may contribute to greater acceptance.

The relationship between awareness and teaching readiness was also positive and statistically significant. The correlation coefficient of $r = .58$ indicates that higher awareness was associated with greater teaching readiness. This finding suggests that teachers who understand hearing impairment and its educational implications may be better prepared to modify classroom practices and provide appropriate instructional support.

The strongest relationship was observed between attitudes and teaching readiness, with a correlation coefficient of $r = .63$ ($p < .01$). This finding suggests that teachers who have more favourable attitudes towards inclusive education also tend to demonstrate greater willingness and confidence to implement inclusive teaching practices.

A positive attitude may encourage teachers to make additional efforts to understand individual student needs, seek professional assistance, use appropriate resources, and modify classroom practices. Teachers who believe strongly in the value of inclusion may be more willing to overcome practical challenges associated with inclusive teaching.

However, correlation should not be interpreted as proof of causation. Higher awareness does not necessarily cause positive attitudes or greater readiness. Other factors, including professional training, previous experience, availability of special educators, school resources, administrative support, and opportunities for professional development, may influence all three variables.

The relationships among these dimensions nevertheless support the conceptual framework of the present study. Effective teacher preparedness can be viewed as a combination of knowing, accepting, and doing. Knowledge represents awareness, acceptance represents attitudes, and practical capacity represents teaching readiness.

Therefore, teacher preparation programmes should address awareness, attitudes, and practical readiness together rather than treating them as completely independent dimensions.

Influence of Professional and Demographic Variables

The analysis further revealed that teachers' awareness, attitudes, and teaching readiness differed according to selected professional variables. Teachers who had previously received training in special or inclusive education obtained higher scores than teachers without such training. For example, trained teachers obtained higher awareness scores ($M = 35.72$) than untrained teachers ($M = 30.91$). Similarly, their teaching readiness was higher ($M = 73.45$) compared with teachers without relevant training ($M = 64.78$).

This pattern suggests that professional training may play an important role in strengthening teachers' preparedness. Training provides opportunities to develop knowledge, practical skills, and confidence in addressing the needs of students with disabilities. It may also reduce misconceptions and uncertainty regarding inclusive classroom practices.

Professional training can help teachers understand that students with hearing impairment are not a homogeneous group. Their communication preferences, learning requirements, use of technology, and educational needs may vary considerably. Teachers

therefore require flexible approaches that can be adapted according to individual student characteristics.

Teaching experience was also found to be associated with differences in awareness and readiness. Teachers with more than ten years of experience demonstrated somewhat higher readiness than teachers with less than five years of experience. This may be explained by greater exposure to diverse learners and classroom situations. Teachers with greater experience may have had more opportunities to encounter individual differences and develop confidence in managing varied classroom needs.

However, experience alone may not guarantee effective preparedness. An experienced teacher may still have limited knowledge regarding hearing-specific educational practices if the teacher has not received relevant professional development. Therefore, teaching experience should be complemented by continuous training and professional learning.

The findings indicate that continuous in-service training may be more beneficial than relying exclusively on teaching experience. Professional development should focus specifically on hearing impairment and should include practical demonstrations, classroom strategies, communication approaches, assistive technologies, and opportunities for teachers to share their classroom experiences.

Professional development should also be differentiated according to teachers' previous preparation and experience. Newly appointed teachers may require foundational knowledge and skills, whereas experienced teachers may benefit from advanced training that helps them update and strengthen their existing competencies.

Thus, the findings regarding professional variables emphasize that teacher preparedness can be strengthened through a combination of professional experience and specialized training.

Teachers' Professional Development Needs

The responses obtained from teachers indicate that additional professional development was required in several important areas. The most frequently identified areas were communication strategies, classroom accommodations, Indian Sign Language/basic sign-supported communication, assistive technology, and preparation of visual learning materials.

This finding is particularly important because students with hearing impairment have diverse communication and educational needs. A single teaching approach may not be

appropriate for all learners. Teachers therefore require flexible strategies that enable them to communicate information through visual, written, signed, and multimodal forms according to individual student requirements.

Communication strategies represent one of the most important areas of professional development. Teachers need to understand how to communicate instructions clearly, maintain appropriate face-to-face interaction, provide visual support, and check whether students have understood the information presented.

The need for professional development regarding classroom accommodations is also important. Appropriate seating arrangements, adequate lighting, reduction of background noise, visual presentation of information, written instructions, captioning, and suitable classroom positioning can improve students' access to instruction.

Indian Sign Language and basic sign-supported communication may also be valuable areas of professional development. Although general education teachers may not be expected to perform the role of professional interpreters, basic knowledge of sign-supported communication can facilitate interaction and contribute to a more inclusive classroom environment.

Assistive technology is another important component of teacher preparedness. Teachers should have basic knowledge regarding hearing aids, cochlear implants, assistive listening systems, captioning, and other technologies that may support students' access to instruction and communication. Teachers should also understand how such technologies can be appropriately incorporated into classroom activities.

The preparation of visual learning materials is equally important. Students with hearing impairment may benefit from diagrams, pictures, written keywords, presentations, captioned videos, graphic organizers, and other visual resources. Teachers should therefore be encouraged to use multimodal instructional approaches rather than relying exclusively on oral teaching.

The need for professional development identified in the present study is consistent with recent literature. A systematic review published in 2025 identified inadequate teacher training and insufficient educational resources as important barriers to the inclusion of children with hearing impairment in mainstream education. The review emphasized teacher training and supportive educational environments as important components of effective inclusion.

Thus, the findings of the present study suggest that professional development should be continuous, practical, and hearing-impairment specific rather than limited to a one-time orientation programme. Training should include practical demonstrations, classroom-based examples, case discussions, interaction with specialists, hands-on activities, and opportunities for teachers to discuss challenges encountered in their own classrooms.

Follow-up support should also be provided so that teachers can apply newly acquired knowledge in everyday classroom practice. Collaboration with special educators can further help teachers solve classroom problems and modify instructional strategies according to students' individual needs.

Overall, the professional development needs identified in the present study highlight the importance of moving from general awareness towards practical teacher competence. Continuous and focused professional development can help teachers translate their favourable attitudes into effective inclusive classroom practices.

Conclusion and Recommendations

Conclusion

The present study examined the awareness, attitudes, and teaching readiness of general education teachers towards students with hearing impairment in inclusive schools. The discussion indicates that teachers generally possess a moderate level of awareness and teaching readiness, while their attitudes towards the inclusion of students with hearing impairment are comparatively positive. The findings also indicate a meaningful relationship among teachers' awareness, attitudes, and teaching readiness. Teachers who have received previous training related to inclusive or special education demonstrate comparatively greater preparedness to support students with hearing impairment. The study highlights that successful inclusion depends not only on teachers' positive attitudes but also on adequate knowledge, practical skills, appropriate communication strategies, accessible learning materials, and institutional support. Therefore, strengthening teacher preparation and providing continuous professional development are essential for improving inclusive classroom practices. Effective collaboration among general education teachers, special educators, school administrators, parents, and other professionals can further contribute to creating supportive, accessible, and participatory learning environments for students with hearing impairment.

Recommendations

1. Teacher Training and Professional Development

Regular professional development programmes should be organized for general education teachers to improve their awareness and teaching readiness regarding students with hearing impairment. Training should include practical classroom strategies, communication techniques, visual teaching methods, and classroom accommodations.

2. Communication Support

Teachers should be provided with basic training in Indian Sign Language (ISL) and other appropriate communication approaches to facilitate effective interaction with students with hearing impairment.

3. Inclusive Teaching Resources

Schools should provide accessible teaching-learning materials, visual aids, captioned educational content, appropriate seating arrangements, and other resources required for effective classroom participation.

4. Assistive Technology

Teachers and schools should be encouraged to make appropriate use of assistive listening devices and educational technologies that can improve communication and access to classroom instruction.

5. Institutional Support

School administrators should provide adequate support, resources, and guidance to general education teachers. Collaboration between general teachers, special educators, parents, and other professionals should be encouraged.

6. Teacher Education Programmes

Teacher education institutions should include more practical and hearing-impairment-specific content in pre-service and in-service teacher education programmes to strengthen teachers' confidence and classroom readiness.

7. Future Research

Future researchers may conduct similar studies with larger samples and different geographical regions to develop a broader understanding of teachers' awareness, attitudes, and teaching readiness towards students with hearing impairment.

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