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Perceptions of Students with Hearing Impairment about Inclusive Education at Higher Education

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Abstract

This research aimed to explore the perception of students with hearing impairment about inclusive education at higher education. Inclusion is an important contributor for hearing impaired students to interact and learn. Sometimes hearing impairment causes barriers for the students to get along with the inclusive classroom environment. That's why it is important to find out about the perception of students with hearing impairment about inclusive education at the level of higher education to make it much better for them. In this quantitative research, the descriptive methodology was used to infer the conclusion. A self-made questionnaire was developed by the researcher to explore the perception of students with hearing impairment. Population of this research was the hearing impaired students who were enrolled in any inclusive education program at university level. Convenient and purposive sampling was used to select sample from students with hearing impairment of BS and MA Special education and other programs as well for collecting the data and then it was analyzed by using descriptive as well inferential analysis by using SPSS. Response of majority students was positive towards the inclusive setups. This research highlighted a new direction for improving inclusive educational environment so that it can also be helpful for the students with mild to moderate and even full hearing impairment in developing country like Pakistan, by exploring their own perceptions.

Keywords: *Higher Education, Hearing Impairment, Inclusive Education.*

Introduction

Inclusive education is recognized as an elementary human right and the foundation of a rational and unbiased society (Forlin 2013; Watkins). It also reflected the moral component (Randal 2016). Inclusive education emphasized and required to provide a high-quality educational response for all students which also increased the practices that lead to full participation (Ainscow 2015; Messiou et al. 2016). Within the inclusive philosophy, variety is regarded in a broad sense containing the different skills, gender differences and differences in social and cultural origin. These differences are seen as a benefit rather than as a problem. It is based on the belief that all the students with any disability should benefit from high-grade education and enjoy full contribution in the educational system.

In the inclusive education system, all the students get the benefit of teachers who are trained to teach all the students by understanding their needs and provide appropriate education to those with special needs as these schools includes normal students and students with special needs. In inclusive education schools, students are trained to develop classroom communities so that the needs (educational and social needs) of all the children with or without disabilities are being fulfilled. They do not focus on training the students to adopt and acquire already established educational programs as mainstreaming do. In Pakistan, only 2% quota is reserved for disabled people at all educational levels due to which they are unable to get admissions at accessible institutes (Ahmed 2015).

Prior to higher education, inclusive education was established and applied within educational settings. However, inclusive concepts and practices have been making inroads into university agendas, policies, and teaching and learning practices for a number of years. There is still a long way to go in higher education before we can claim full inclusion, and many hurdles must be overcome in order to match educational practices with inclusive education concepts (Ahmed 2015).

Purpose of the Study

Previous studies shows that deaf students, teachers and hearing peers, however, see this inclusion of deaf students as new event so that confusions and feeling uncomfortable is common in the first occasions. With great concern, the disturbance among deaf students is high because they experienced very different social world than others in inclusive classes. Despite these assumptions of social belongingness and togetherness, deaf student's inclusion with hearing students in regular classrooms experience various academic challenges in teaching-learning process and in obtaining special support service. Their academic accomplishment and success to join next step is weak in comparison to their hearing counterparts (Dagnew 2013; Barton 2003; Polat 2003).
On the basis of previous studies there is dire need to explore the challenges and difficulties of deaf students faced in inclusive education, how they perceive the education system, their hearing peers and the behaviors of their teachers.

Statement of the Problem

This study is aimed to explore and identify the perceptions of students with hearing impairment about inclusive education at higher education.

Objective of the Study

This study was intended to investigate the perception of students with hearing impairment about inclusive education at higher education:

- To explore the perceptions of students with hearing impairment about the degree and curriculum taught in inclusive classrooms.
- To explore the perceptions of students with hearing impairment about the attitudes of hearing and hearing impaired classmates in inclusive classrooms.
- To explore the perceptions of students with hearing impairment about the attitudes of teachers and sign language interpreters in inclusive classrooms.

Question of the Study

On the basis of objectives, the researcher raised the following questions:
What are the perceptions of students with hearing impairment about the degree and curriculum taught in inclusive classrooms?

What are the perceptions of students with hearing impairment about the attitudes of teachers and sign language interpreters in inclusive classrooms?
What are the perceptions of students with hearing impairment about the attitudes of hearing and hearing impaired classmates in inclusive classrooms?

Literature Review

This part deals with collection of literatures which relates to the topic under consideration. Integrated education concept, introduction of concept of hearing impairment, challenges of inclusive education and academic challenges of deaf students in inclusive education, ...etc. have been addressed in these literature. Again, both concept and scientific reports were reviewed to generate good insights for the study and to indicate existing gaps.

Hearing Impairment and its Levels

According to WHO, hearing loss is defined as a person's inability to hear as well as someone with normal hearing, which is defined as hearing thresholds of 25dB (decibels) or better in both ears. Mild, moderate, severe, or profound hearing loss are all possible scenarios. It can damage one or both ears, making it difficult to understand conversational speech or loud noises.

Hearing impairment is a broad phrase that encompasses a range of hearing loss from mild to severe, as well as the sub-categories of hard of hearing and deaf people. People who are hard of hearing have enough residual hearing to use hearing (typically with a hearing aid) as their primary mode of language acquisition and communication (Shemesh 2010; Safder et al. 2012).

In this concept, whether it is permanently or fluctuating, it ranges between 21-69 Db (decibels). The child's academic performance may be affected as a result of this disease. Deaf people have a hearing loss that prevents them from communicating normally, whether with or without the use of a hearing aid. Normally, the loss exceeds 70 decibels. It is so severe that the person's ability to process linguistic information is inhibited which has a negative impact on academic performance. (Reed, Antia, and Kreimeyer 2008).

According to the WHO (), in the world the total number of people with the disability of hearing loss are 360 million (5.3% of the world's population). Among these, 328 million (91%) of these are adults (183 million males, 145 million females) and the rest 32 (9%) millions of these are children. In South Asia, Asia Pacific and Sub Saharan Africa., the occurrence of disabling hearing loss in children and in adults is greatest. Approximately one-third of persons over 65 years are affected by disabling hearing loss (Organization 2017).

The prevalence of disabling hearing loss in children is greatest in South Asia, Asia Pacific and Sub Saharan Africa. The prevalence of disabling hearing loss in adults over 65 years is highest in South Asia, Asia Pacific and Sub-Saharan Africa. Approximately one-third of persons over 65 years are affected by disabling hearing loss(Safder et al. 2012).

Hearing impairment in Pakistan

As the special education program for the children with hearing impairment has more focus on communication and language skills to understand the regular curriculum. The auditory training and speech development program has been added to their curriculum. However, due to lack of auditory aids, instruments and trained teachers, it is not very effective for the students. Therefore, it was perceived that the education system for the children with hearing impairment is not very effective in the schools and the teachers were also not capable of handling all of the subjects due to lack of training (Khatoon 2003).

However, the idea of "education for all" in Pakistan is bringing more attention towards inclusive education but due to the restricted abilities of children with hearing impairment, there is a need for assessing their strengths and weaknesses to understand the difficulties they face in schools as well as in society. Lack of policy initiative by government and perception of parents and teachers of the children with hearing impairment were considered to be prominent barriers for inclusive education in Pakistan (Bashir 2005; Atique and Mushtaq 2005). Due to these reasons children with hearing impairment were educated in separate special schools which placed them in a segregated system. This segregation reduces the chances of social interaction and social emotional experience with the hearing peers(Bashir 2005).

Some policy reforms were introduced by the Government of Pakistan for special children such as Disabled Persons (Employment and Rehabilitation) Ordinance, 1981; National Policy for Persons with Disabilities (2002); National Plan of Action for Persons with Disabilities, 2006 ; Special Citizens Act, 2008; Special Citizens (Right to Concessions in Movement) Act, 2009. Although different rights of special people were introduced in these policies but higher authorities are unsuccessful in implementing these rights.

The director of DMH Deaf services, explains, "It is necessary to become aware of the people who are having impairment of hearing especially the children and how they perceive this world. Their life experiences are different, they view their world visually and most of them miss the correct information about the world. They can't communicate properly with their parents and siblings so their social and emotional development is different and can be impaired" (Bevy's Critch field, 2004).

Concept of Inclusive Education

Inclusive education means delivering a high-quality education to everyone, regardless of age, disability, gender, or other factors. It is founded on the right of all students to receive a high-quality education that meets their specific learning needs. Inclusive education is currently considered as a key component of human rights and equal opportunity, as well as a top governmental issue. All policies and practices that serve to deny some children their right to an education are challenged by inclusion. The underlying concept is that all children, regardless of special needs or disabilities, have the right to be educated together. Inclusive education means that disabled and able-bodied students learn together, allowing them to get to know one another and spend time in the same room during lessons and leisure activities to get to know one another (Hornby, 2011).

Inclusive education refers to an education system that is open to all learners, regardless of poverty, gender, ethnic background, language, disabilities and impairments. Inclusive education is a process of enabling all children to learn and participate effectively within mainstream school systems. It does not segregate children who have different abilities or needs. This, in other words, is to indicate the shift of thinking from an unnatural segregated setting toward inclusive education must be given the due attention it deserves if inclusive education is to be favored and practiced as educational modality. The main concern of inclusion emphasizes that all children and students can learn (Shemesh, 2010).

It entails identifying learning barriers and reducing or eliminating them in schools, vocational training, higher education, teacher education, and educational administration. Its main focus was on ensuring universal access and promoting equity for disadvantaged groups, with a particular focus on closing educational gaps. In its implementation, inclusive education offers both benefits and drawbacks. From the advantage side, it promotes social learning and participation in hearing society; it also eliminates minorities' isolation, and children become more tolerant of one another when they learn together. This, in turn, aids in the shaping of their future lives (Myers &Bagree, 2011).

From disadvantages, its implementation requires special service (inclusion into non special schools and classes)which is much more expensive due to special equipment, teachers with knowledge of sing language should be hired for translation purposes, and another issue is a lack of social preparation and

information about the handicapped of the teachers and children and children with hearing impairment and their families have additional requirements to implement educational inclusion.(Mpofu&Chimhenga, 2013).

Challenges of Inclusive Education

When attending mainstream schools, Deaf students experience problems if they don't receive proper help and support. In inclusive education, practical problems could be occurred while including Deaf students with different educational needs. But, commonly, the practical difficulties have more to do with bringing attitudinal change and the reorganization of learning environments and school activities, with the arrangement of facilities and resources than with the needs of these deaf students.

The real problem of inclusive education is meeting the particular needs of all children, disabled and not. In practice, inclusion is a difficult process because it requires a great deal of effort and commitment to overcome a variety of barriers, the most common of which are attitudinal and social. Inclusive education can only thrive in a system that promotes inclusion ideology; people must change their long-held ideas, habits, and ways of functioning.(Polat, 2003).

According to Barton, (Barton, 2003) the key determinant elements that influence and regulate the development of inclusive education include: poor understandings of the idea of disability, negative attitudes toward people with disabilities, and a hardened resistance to change. The barrier to inclusive education could come from a variety of sources, including attitudes, strict school systems, opposition to change, a lack of clear educational guidelines, and so on.

Among other factors, the most significant factor for successful inclusion is the teachers' attitudes towards the students. Taking into consideration the cooperation of teachers' assumption behind inclusion education is that teachers will be willing to include students with disabilities into regular classes and be responsible for providing their needs. Regular classroom teachers, on the other hand, do not believe that they have the necessary training or skills to address the educational demands of kids with disabilities. (Moberg, 1997).

In addition, successful implementation of inclusive education needs trained professionals on special need with mentality of supporting disabled and have taken courses which are designed in that manner. Again, in order to provide an inclusive education, the class teacher must be imaginative, flexible, and creative, as well as willing to learn from the students and capable of modelling active learning. In other schools, however, regular instructors are asked to teach special needs pupils without receiving any training or administrative support. Teachers who do not have enough previous knowledge in special education are technically at a loss. As a result, developing an inclusive educational policy, curriculum, and teacher training programs must focus on a method to ensure that inclusive education is effective and beneficial to targeted populations (Dagnew, 2013).

Teaching Strategies for Inclusive Class

There are a variety of teaching strategies that can help all students learn, but there are a few that are particularly useful when teaching a group of Deaf students in inclusive classes. Encourage Deaf students to sit in the front row of the lecture hall, where they will have an unhindered line of vision, as a way (Cawthon, 2001). If the student is using an interpreter, lip-reading, or a hearing device with a limited range, this method is very critical. Deaf students, once again, require written materials to accompany all lectures, tutorials, and laboratory sessions. Class schedules, activities, and field work announcements should be made in writing as well as vocally (Mpofu&Chimhenga, 2013; Myers &Bagree, 2011).

In inclusive class, the way teachers teach is also of critical importance in any reform designed to improve integration. If the method of instruction in the classes for a large group is teacher directed, so many of the

students are not actively engaged in the learning process. Teachers face challenges, but also enormous personal rewards, in knowing that they can have an impact on children's lives and change their future predictions for the better (Susanne, 2008).

Recognizing individuality in students is crucial, but it must be done in a way that does not bias either the person or the class. Regardless of the type of the hearing status, a teacher should greatly improve the ability of students with hearing impairment to function in the classroom by making minor changes and arrangements based on his/her teaching style.

However, the fundamental issue with inclusive education is that it has not been accompanied by modifications in the regular school's organization, curriculum, or teaching learning methodologies. One of the greatest obstacles to the implementation of inclusive policies has been a lack of organizational reform. Based on the problems seen thus far, adopting inclusive education as a guiding practice often requires educational system change, which is frequently fraught with issues such as those listed above. (Cawthon, 2001; Myers &Bagree, 2011)

Practically, the shift toward inclusive education involves more than a technological or organizational shift; it is also a philosophical one. Countries must create a set of guiding strategies as well as practical concepts to guide the transition to policies that address inclusive education in education if inclusive education is to be implemented effectively (Mpofu&Chimhenga, 2013).

Challenges of Deaf Students in Inclusive Classroom

Deaf students face numerous problems both academically and socially. In our current societal setting, children with even minor hearing loss are academically at risk when compared to their peers who have normal hearing. Unfortunately, a child's impaired hearing can lead to long-term social, emotional, and learning challenges (Carrington & Robinson, 2006; Dagnew, 2013). Obviously, children with hearing challenges had a lower grade point average than their peers in all-inclusive institutions. It was discovered that students with hearing difficulties had lower average grades than those with normal hearing. (Hear-it, 2012) Deaf students have difficulties in regular schools unless they receive adequate assistance and support. They may not feel fully included, and they tend to blend into the background in order to avoid standing out among their peers (Beyene&Tizazu, 2010).

Most practically, Teachers' training programs, customized curricula, teachers' attitudes, materials and equipment distribution, and financial resources are just a few of the barriers to inclusive education implementation in our country. As a philosophy, the change in mindset from an intentionally separated setting to inclusive education, with special focus paid to providing benefits to impaired students. However, the school environment and implementation procedures keenly need improvement so that expectations could be happened (Beyene&Tizazu, 2010). Not only in the classroom, but also in the public places, such as schools, hospitals, and other places, deaf people have faced numerous challenges. For a long time, sign language has not been regarded as a vital language in many fields. People with hearing loss have been denied access to information and education as a result of this. Deaf persons have missed out on many possibilities as a result of the gap created by linguistic limitations. Later, vocational training for the deaf was developed as a way to teach them the skills they need to become self-sufficient. (Beyene&Tizazu, 2010).

Another issue for hearing-impaired students is a lack of resources center. A resource center is a pedagogical center that is equipped with specialized materials and assistive devices, as well as staffed by professionals, to provide help to special education students, instructors, and surrounding schools (Carrington & Robinson, 2006). However, the resources center was not set up, and hearing-impaired students receive less assistance. Teachers who work with hearing impaired or other impaired students are finding it difficult to stay motivated. Many teachers were hesitant in changing their teaching methods to include adaptable curriculum

to help students with hearing impairments learn more easily. Teachers are unwilling to participate in the training because they believe it will add to their workload. Because they aren't paid, they aren't inspired (Beyene&Tizazu, 2010).

Perception of Deaf Students towards Inclusive Education

In terms of the role of positive attitudes in healthy development, research has shown that open and positive views that are consistent with reality lead to increased interaction and improved social and emotional development. Similarly, when discussing the significance of social and cultural aspects, as well as the impact of attitudes on a country's educational systems, it was pointed out that each country's educational system reflects its social and cultural character. This could explain why different countries have diverse inclusion policies, which could be associated to variations in attitudes toward inclusive education (Flem, Moen, &Gudmundsdottir, 2004; Tamiru, 2015).

Students with disabilities in regular classes suggested that attitudes play a key role in achieving successful social interaction among various groups of instructors and students and winning their attention in favor of the required educational modality in the field of special education, particularly in inclusive education. In terms of the role of positive attitudes in healthy development, research has shown that open and positive attitudes combined with reality-based perceptions lead to more interaction and improved social and emotional development (Safder et al., 2012).

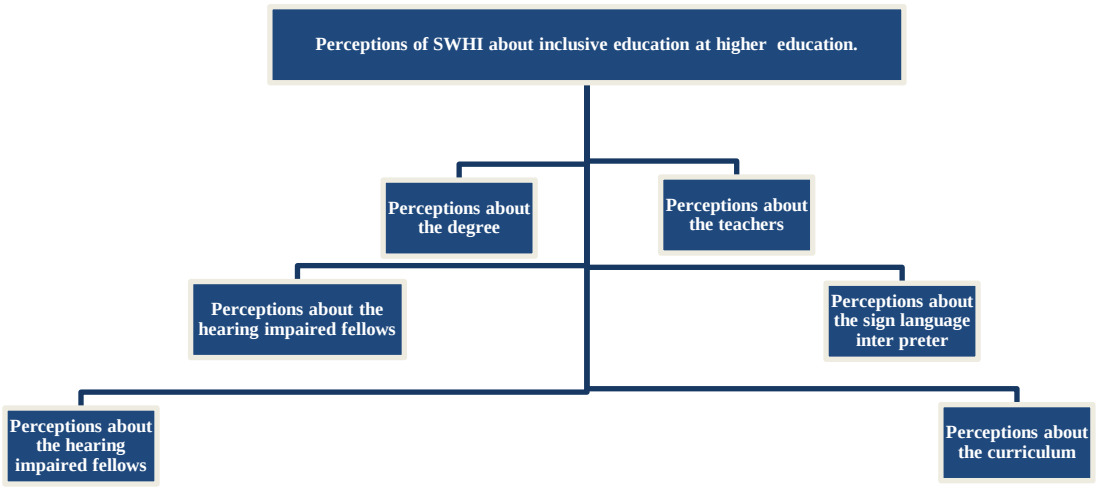
In some cases, the nature of the social context inside the school setting might cause children (particularly hearing-impaired students) to react negatively to inclusion. Related to this same issue, Hornby pointed out that the social context or setting in which an exceptional individual exists can play a significant impact in both producing difficulties and deciding the individuals' behavioral outcomes. As a result, while assessing the attitudes of non-hearing and hearing students regarding integration, the overall school context should be taken into account (Hornby, 2011).

In Pakistan, the inclusive education movement proceeds on the assumption that deaf students would enroll in regular classes and will be committed to satisfying their needs. However, in other circumstances, unfavorable attitudes and misconceptions have begun to show. Previous research findings in the field of inclusive education indicate that attitudes play an important role in achieving successful social interaction among students and winning their attention to the essential instructional modality. Negative attitudes restrict students with special needs and prevent them from taking responsibility for their own success (Olika, 2009).

Methodology

This research was descriptive and quantitative by nature. This type of research helps to describe the new fact and meaning. Basic purpose of the study was to describe, observe and document the different aspect of the study which occur naturally (Polit&Hungler, 1999). Research study aims to find out the perceptions of hearing impaired students about the inclusive education at university level. Research collected the views of hearing impaired students about their respective degree, curriculum, teachers, sign language interpreters and their hearing and hearing impaired fellows. Data was collected from a renowned university of Lahore, namely, University of Management and technology, Lahore, Punjab. Convenient sampling techniques were used to collect data from the participants. The sample this study was 50 which included currently studying and passed out students, precisely those who were deaf or hard of hearing, from Pakistan. Sample size was calculated manually by the researchers, keeping previous literature in mind.

Hypothetical Framework



Instrument

The research question was "To explore the perception of students with hearing impairment about inclusive education at higher education." This instrument was developed according to the nature of the problem to be studied. In this instrument, the researcher kept the literature in her mind while developing it. The data collection tool used was online self-structured questionnaires using close ended questions which were reviewed after the consent of the participant. Questionnaires took not more than 20 minutes to complete. Questionnaires consisted of 7 sections. Firstly it collected the demographics of the participants. Then the sections 2-7 covered the opinion of participants regarding their degree, teachers, interpreters, curriculum, hearing and hearing impaired fellows respectively. Each section contained about a minimum of six and a maximum of thirteen questions about the relevant topic, with a total of 50 questions in the questionnaire, graded with a Likert scale of three; No, To some extent and Yes. Respondents were requested to give their consent prior to filling the questionnaire.

Data was collected from hearing impaired students in the form of online questionnaires. Approval letter was taken from university prior to data collection. It was explained to all the participants that the study had no likely harm to them and all data gained from them will be coded to protect their individuality and would not be revealed to anyone. Ethical consent was also taken prior to data collection. Questionnaires with close ended questions were explained to the respondents. The questionnaire consisted of 7 sections and the responses were collected by the researchers themselves. The researchers collected the responses online via call due to the covid-19 pandemic in the world. The responses collected through the questionnaire were coded in numeric from, demographic data of the respondents in the tool and was entered into SPSS.

Data Analysis

Frequency Distribution of Demographic Variables

Following tables show demographic details of the respondents' of this study.

Table 1: Frequency distribution of respondents' Degree

Sr.no	*Degree*	*f*	*%*
1	BS Special needs Education	30	60
2	M.A. Special needs education	15	30
3	Other disciplines	5	10
	Total	**50**	**100**

Table no 1 shows that out of total 50 respondents 30 (60 %) Students were enrolled in BS Degree program, 15 (30%) were enrolled in M.A sp.edu degree program and 5 (10%) students were from other disciplines.

Table 2

Variable	**Categories**	**f**	**%**	**Total**
Age	20 years to 30 years	48	96	100
	30 years and above	2	4	100
Educational status	Degree Continue	26	52	100
	Pass Out	24	48	100
Gender	Male	37	74	100
	Female	13	26	100
Semester	1 to 4 semester	26	52	100
	5 to 8 semester	24	48	100

Table 2 shows that out of total 50 respondents Students 20 years to 30 years 48 (96.0%), students were age of above 30 years. 2 (4.0%), who respond the questionnaire of the research. 26(52%) student were currently enrolled whereas 24(48%) students were completed their degrees, 37 (74.0%) students were male and 13 (26.0%) students were female, 26 (52%) respondents were enrolled in 1st to 4th semester whereas 24(48%) students were enrolled in 5th to 8th semester.

Section 1: About the Degree

Statement	**Responses**	**f**	**%**
You knew the worth of your degree at the time of admission.	To some extent	12	24
	Agree	31	62
You have learned useful skills in your degree.	To some extent	16	32
	Agree	34	68
You are satisfied with the time duration of your degree.	To some extent	12	24
	Agree	38	76
On the basis of this degree, you are capable for further education.	Disagree	1	2
	To some extent	15	30
	Agree	34	68
Your degree has improved your knowledge level.	Disagree	3	6
	To some extent	15	30
	Agree	32	64
You have improved the skills by enrolling in inclusive education program.	To some extent	14	28
	Agree	36	72
Your degree will prepare you for a good job.	Disagree	3	6
	To some extent	10	20
	Agree	37	74

In response of "You knew the worth of your degree at the time of admission", 12(24.0%) responded "To some extent" 31(62.0%) respond and showed agreement, In response of "You have learned useful skills in your degree", 16(32%) respondents answered as to some extent and 34(68%) respondents show agreement. in response of "You are satisfied with the time duration of your degree", 12(24%) respondents has answer to some extent and 38(76%) respondents show agreement , In response of "On the basis of this degree, you are capable for further education." 1(2%) respondents has answer Disagree, 15(30%) respondents as to some extents and 34(68%) show agreement, in response of "Your degree has improved your knowledge level", 3(6%) responded has answer Disagree, 15(30%) respondents as to some extents and 32(64%) show agreement , in response of "You have improved the skills by enrolling in inclusive education program", 14(28%) respondents has answer to some extent and 36(72%) respondents show agreement, in response of "Your degree will prepare you for a good job." 3(6%) responded has answer Disagree, 10(20%) respondents as to some extents and 37(74%) show agreement out of total 50 respondents.

Section 2: Attitude of Teachers

Statement	Responses	f	%
Teachers show welcoming attitude in the inclusive classroom towards students with hearing impairment.	To some extent	7	14
	Agree	43	86
Teachers show supportive attitude in the inclusive classroom towards students with hearing impairment.	Disagree	3	6
	To some extent	11	22
	Agree	36	72
Teachers show respect in the inclusive classroom towards students with hearing impairment.	Disagree	2	4
	To some extent	7	14
	Agree	41	8
Teachers from special education department can understand the characteristics of student with hearing impairment.	Disagree	1	2.0
	To some extent	9	18.0
	Agree	40	80.0
Teachers from other departments can understand the characteristics of student with hearing impairment.	Disagree	1	2
	To some extent	9	18
	Agree	40	80
Teachers modify their teaching method according to your special needs.	Disagree	3	6
	To some extent	11	22
	Agree	36	72

In response of "Your academic performance is improved after enrolling in the inclusive classrooms", 3(6%) respondents answered as Disagree, 5(10%) respondents as to some extents and 42(84%) showed agreement , in response of "Teachers show welcoming attitude in the inclusive classroom towards students with hearing impairment", 7(14%) respondents has answer to some extent and 43(86%) respondents show agreement ,in response of "Teachers show supportive attitude in the inclusive classroom towards students with hearing impairment" 3(6%) responded has answer Disagree, 11(22%) respondents as to some extents and 36(72%) show agreement , in response of "Teachers show respect in the inclusive class room", out of total 50 respondents 2(4%) responded as Disagree, 7(14%) responded as to some extent and 41(8%) showed agreement, in response of "Teachers from special education department can understand the characteristics of student with hearing impairment", out of total 50 respondents 1(2%) responded as Disagree, 9(18%) responded as to some extent and 40(80%) showed agreement , In response of "Teachers from other departments can understand the characteristics of student with hearing impairment." out of total

50 respondents, 1(2%) responded as Disagree, 9(18%) responded as to some extents and 40(80%) showed agreement.

Section 3: Attitude of Sign Language Interpreter

Statement	Responses	f	%
Sign Language interpreters are expert and fluent in sign Language.	Disagree	3	6
	To some extent	6	12
	Agree	41	82
Sign Language interpreters are available in each class.	Disagree	1	2
	To some extent	13	26
	Agree	36	72
Sign Language interpreters make the content accessible for you.	Disagree	4	8
	To some extent	7	14
	Agree	39	78
Sign Language interpreters communicate your questions to teacher during class.	Disagree	1	2
	To some extent	9	1
	Agree	40	80
Sign Language interpreters fair in dealing with you and teacher in term of communication.	To some extent	9	18
	Agree	41	82
Sign Language interpreters guide you for completing your assignments/projects after class.	Disagree	1	2
	To some extent	6	12
	Agree	43	86
Educational background of sign language interpreter effects the concept clarification	Disagree	2	4
	To some extent	8	16
	Agree	40	80
Experience of sign language interpreter effects the concept clarification.	Disagree	1	2
	To some extent	15	30
	Agree	34	68
Sign language interpreter support you in other departments as well. (As registrar office, admission office, account office etc.)	Disagree	6	12
	To some extent	14	28
	Agree	30	60

In response of "Teachers modify their teaching method according to your special needs." out of total 50 respondents, 6(12%) responded as Disagree, 9(18%) responded as to some extents and 35(70%) showed agreement. In response of "Sign Language interpreters are expert and fluent in sign Language", 3(6%) responded as Disagree, 6(12%) responded as to some extents and 41(82%) showed agreement. In response of "Sign Language interpreters are available in each class." 1(2%) responded as Disagree, 13(26%) responded as to some extents and 36(72%) showed agreement, in response of "Sign Language interpreters make the content accessible for you." 4(8%) responded as Disagree, 7(14%) responded as to some extents and 39(78%) showed agreement, in response of "Sign Language interpreters communicate your questions to teacher during class." 1(2%) responded as Disagree, 9(1%) responded as to some extents and 40(80%) showed agreement out of total 50 respondents. In response of "Sign Language interpreters are fair in dealing with you and teacher in term of communication." 9(18%) responded as to some extent and 41(82%) respondents showed agreement out of total 50 respondents. In response of "Sign Language interpreters guide you for completing your assignments/projects after class."1(2%) responded as Disagree, 6(12%) responded as to some extents and 43(86%) showed agreement, in response of "Educational background of sign language interpreter effects the concept clarification." 2(4%) responded as Disagree, 8(16%) responded as to some extents and 40(80%) showed agreement out of total 50 respondents. In response of "Experience of sign language interpreter effects the concept clarification." 1(2%) responded as Disagree, 15(30%) responded as to some extents and 34(68%) showed agreement out of total 50 respondents.

Section 4: About the Curriculum

Statement	Responses	f	%
Your curriculum is well modified according to your needs.	Disagree	4	8
	To some extent	13	26
	Agree	33	66
You are satisfied with the content of the curriculum.	Disagree	5	10
	To some extent	8	16
	Agree	37	74
You are satisfied with the weekly planning of the curriculum.	Disagree	6	12
	To some extent	12	24
	Agree	3	64
Learning goals of the courses are achievable.	To some extent	9	18
	Agree	41	82
Learning goals of the courses are clear.	Disagree	1	2
	To some extent	18	36
	Agree	31	62
You are too much burdened with the assignments and projects.	Disagree	2	4
	To some extent	14	28
	Agree	34	68
You have learned same concepts in the inclusive classrooms as you learn in the segregated setup.	Disagree	4	8
	To some extent	17	34
	Agree	29	58
Teachers modify the curriculum to make it accessible for students with hearing impairment during class.	Disagree	5	10
	To some extent	6	12
	Agree	39	78
Teachers modify the curriculum to make it accessible for students with hearing impairment in exams.	To some extent	15	30
	Agree	35	70
Teachers modify their teaching material according to your special needs during class.	To some extent	14	28

	Agree	36	72
Teachers modify their teaching method according to your special needs for exams.	To some extent	13	26
	Agree	37	74

In response of "Sign language interpreter support you in other departments as well. (As registrar office, admission office, account office etc.)" 6(12%) responded as Disagree, 14(28%) responded as to some extents and 30(60%) showed agreement, in response of "Your curriculum is well modified according to your needs." 4(8%) responded as Disagree, 13(26%) responded as to some extents and 33(66%) showed agreement, in response of "You are satisfied with the content of the curriculum." 5(10%) responded as Disagree, 8(16%) responded as to some extents and 34(74%) showed agreement, in response of "You are satisfied with the weekly planning of the curriculum." 6(12%) responded as Disagree, 12(24%) responded as to some extents and 32(64%) showed agreement, in response of "Learning goals of the courses are achievable." 9(18%) responded as to some extents and 41(82%) respondents showed agreement, in response of "Learning goals of the courses are clear." 1(2%) responded as Disagree, 18(36%) responded as to some extents and 31(62%) showed agreement, in response of "You are too much burdened with the assignments and projects." 2(4%) responded as Disagree, 14(28%) responded as to some extent and 34 (68%) showed agreement, in response of "You have learned same concepts in the inclusive classrooms as you learn in the segregated setup." 4(8%) responded as Disagree, 17(34%) responded as to some extents and 29(58%) showed agreement, in response of "Teachers modify the curriculum to make it accessible for students with hearing impairment during class." 5(10%) responded as Disagree, 6(12%) responded as to some extents and 39(78%) showed agreement, in response of "Teachers modify the curriculum to make it accessible for students with hearing impairment in exams." 15(30%) responded as to some extent and 35(70%) respondents showed agreement, in response of "Teachers modify their teaching material according to your special needs during class." 14(28%) responded as to some extent and 36(72%) respondents showed agreement out of total 50 respondents.

Section 5: Attitude of Hearing Fellows

Statement	Responses	f	%
You are satisfied with your hearing fellows in class.	Disagree	2	4
	To some extent	12	24
	Agree	36	72
Your hearing fellows assist you during regular class tasks when needed.	To some extent	12	24
	Agree	38	76
You can easily communicate with your hearing fellows.	Disagree	3	6
	To some extent	10	20
	Agree	37	74
You like to make group with your hearing fellows for class projects.	To some extent	9	18
	Agree	41	82
Your hearing fellows like to make group with you for class projects.	Disagree	1	2
	To some extent	10	20
	Agree	39	78
Your hearing fellows make fun of you.	Disagree	3	6
	To some extent	7	14

	Agree	40	80
You have an improved confidence level after studying with the hearing fellows in the inclusive classroom environment.	Disagree	3	6
	To some extent	10	20
	Agree	37	74
There is a sense of mutual cooperation between hearing and hearing impaired fellows in inclusive classrooms.	To some extent	13	26
	Agree	37	74

In response of "Teachers modify their teaching method according to your special needs for exams." 13(26%) responded as to some extent and 37(74%) respondents showed agreement, in response of "You are satisfied with your hearing fellows in class." 2(4%) responded as Disagree, 12(24%) responded as to some extents and 36(72%) showed agreement, in response of "Your hearing fellows assist you during regular class tasks when needed."12(24%) responded as to some extents and 38(76%) respondents showed agreement, in response of "You can easily communicate with your hearing fellows" 3(6%) responded as Disagree, 10(20%) responded as to some extents and 37(74%) showed agreement, in response of "You like to make group with your hearing fellows for class projects."9(18%) responded as to some extent and 41(82%) respondents showed agreement, in response of "Yours hearing fellows like to make group with you for class projects." 1(2%) responded as Disagree, 10(20%) responded as to some extents and 39(78%) showed agreement, in response of "Yours hearing fellows make fun of you." 3(6%) responded as Disagree, 7(14%) responded as to some extents and 40(80%) showed agreement, in response of "You have an improved confidence level after studying with the hearing fellows in the inclusive classroom environment." 3(6%) responded as Disagree, 10(20%) responded as to some extents and 37(74%) showed agreement out of total 50 respondents.

Section 6: Attitude of Hearing Impaired Fellows

Statement	**Responses**	**f**	**%**
You feel comfortable among your hearing impaired fellows.	Disagree	2	4
	To some extent	9	18
	Agree	39	78
Hearing impaired fellows support you when you need their help.	Disagree	2	4
	To some extent	10	20
	Agree	38	76
Hearing impaired fellow are more helpful for you in segregated setup.	Disagree	2	4
	To some extent	10	20
	Agree	38	76
Senior hearing impaired fellows support you to understand the inclusive system.	Disagree	3	6
	To some extent	8	16
	Agree	38	76
Hearing impaired fellow are more helpful for you in inclusive setup.	Disagree	2	4
	To some extent	8	16

	Agree	40	80
Senior hearing impaired fellows support you to understand the curriculum.	To some extent	9	18
	Agree	41	82
Senior hearing impaired fellows support you to complete assignments/projects.	Disagree	2	4
	To some extent	6	12
	Agree	42	84

In response of "There is a sense of mutual cooperation between hearing and hearing impaired fellows in inclusive classrooms." 13(26%) responded as to some extent and 37(74%) respondents showed agreement, in response of "You feel comfortable among your hearing impaired fellows." 2(4%) responded as Disagree, 9(18%) responded as to some extents and 39(78%) showed agreement, in response of "Hearing impaired fellows support you when you need their help." 2(4%) responded as Disagree, 10(20%) responded as to some extents and 38(76%) showed agreement, in response of "Hearing impaired fellow are more helpful for you in segregated setup." 2(4%) responded as Disagree, 10(20%) responded as to some extents and 38(76%) showed agreement, in response of "Hearing impaired fellows are more helpful for you in inclusive setup." 3(6%) responded as Disagree, 8(16%) responded as to some extents and 38(76%) showed agreement, in response of "Senior hearing impaired fellows support you to understand the curriculum." 9(18%) responded as to some extent and 41(82%) respondents showed agreement, in response of "Hearing impaired classmates help you to understand the inclusive system."5(10%) responded as to some extent and 45(90%) respondents showed agreement, in response of "Senior hearing impaired fellows support you to complete assignments/projects.", 2(4%) responded as Disagree, 6(12%) responded as to some extent and 42 (84%) showed agreement out of total 50 respondents.

Conclusion

Conclusion of this study is that students with hearing impairment satisfied with inclusive education and feel happy to learn new broader concepts in inclusive education but they want to start inclusive education from primary and secondary education level. The performance of students with hearing impaired students at higher education is depends on the concept and educational background and skill of sign language interpretation. Students with hearing impaired students are acceptable by teachers from special education background but having some difficulty with teachers from other departments. Students without hearing impairment have some communicational, acceptance and attitudinal barriers.

Discussion

In addition, successful implementation of inclusive education needs trained professionals on special need with mentality of supporting disabled and have taken courses which are designed in that manner. Again, in order to provide an inclusive education, the class teacher must be imaginative, flexible, and creative, as well as willing to learn from the students and capable of modelling active learning. In other schools, however, regular instructors are asked to teach special needs pupils without receiving any training or administrative support. Teachers who do not have enough previous knowledge in special education are technically at a loss. As a result, developing an inclusive educational policy, curriculum, and teacher training programs must focus on a method to ensure that inclusive education is effective and beneficial to targeted populations (Dagnew, 2013).

Limitations of the Study

Limitations of the study included less generalizability of the results. This was so, because there were less options available for the hearing impaired students to study in inclusive education in Pakistan and data was

collected only from a single university with a sample size calculated as 50. Another limitation was that the questionnaire was developed by the researchers themselves. It was not standardized which further reduced the generalizability of results. Thirdly, the research couldn't also be taken widely due to the lockdown situation after covid19 pandemic in the country.

Recommendations

In order to make inclusive education better for hearing impaired students, especially at the level of higher education, we should encourage them to participate in class activities. Teachers and sign language interpreters should find new and unique ways to cooperate and support the hearing impaired students. Hearing impaired community make an important part of the society, it should be dealt with friendliness and humbleness. Learning of students with hearing impairment at higher education in inclusive education setup is depended on sign language interpreter that's why they should be qualified, trained having experience, and background knowledge about the relevant field. It can be better for the learning of students with hearing impairment in inclusive setup at higher education. There should be introduced certificate courses or diplomas to produce sign language interpreters to promote the inclusive education with its true spirit. We have to equip the students without disabilities to communicate in sign language to promote social inclusive. We should trained the students with disabilities to accept the human exceptionalities to promote social inclusion.

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