

Perception of Hearing-Impaired Students About Their University Fellows in Inclusive Environments



Snober Bukhari *

Faisal Anis †

Muhammad Anwer ‡

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Abstract: This study investigated the interpersonal relationship of hearing-impaired students in inclusive universities with their typical peers and fellows. A convenient sampling method was used. Data was collected from three inclusive universities in Lahore through a survey. The sample consisted of 57 hearing-impaired students. SPSS software was utilized for calculating frequency distributions and conducting ANOVA, and t-test analyses. Results showed that most of the hearing-impaired students enjoyed group activities with peers, learned to communicate, and helped operate computers. However, sometimes peers made them feel isolated in classrooms. No significant difference was found between perceptions of male and female students across degree programs or universities.

Key Words: Hearing-impaired, Inclusive, Peers, Communication, Isolation, Perception, University

Introduction

Students with disabilities, including those with hearing impairments, face unique challenges in higher education (Bukhari, Butt, & Muhammad, 2021). While many colleges and universities have initiated more inclusive admission policies, creating a truly accessible learning environment requires addressing attitudinal, social, and academic barriers (Khalid, Muhammad, & Masood, 2021; Tahira, Muhammad, & Masood, 2020). A key factor influencing the experiences of hearing-impaired students is the nature of their relationships and interactions with hearing peers (Iqbal & Muhammad, 2020; Tahira, Muhammad, & Masood, 2020). This study explored how students with hearing impairments perceived their typical hearing counterparts in inclusive university settings.

Hearing loss impacts how individuals access spoken communication and environmental sounds. Those

with severe to profound hearing loss rely heavily on visual modes of communication like sign language (Marschark & Spencer, 2010). Spoken languages pose barriers to participation, learning, and social connections. Assistive technologies can aid hearing but do not restore normal auditory function. Despite these challenges, many deaf and hard-of-hearing students demonstrate academic potential on par with hearing peers when given proper support.

Inclusive higher education aims to provide students with disabilities access to the same learning opportunities as typical students. This is anchored on notions of social justice, diversity, and universal design in education (Gewurtz & Kirsh, 2009). While policies have evolved to promote inclusion, putting ideals into practice remains complicated. Hearing-impaired students continue facing marginalization and isolation

* M.Phil. Graduate, Department of Education, University of Management and Technology, Lahore, Punjab, Pakistan.

† Assistant Professor, Department of Education, University of Management and Technology, Lahore, Punjab, Pakistan.

‡ Associate Professor, Division of Education, University of Education, Lahore, Punjab, Pakistan.

Corresponding Author: Snober Bukhari (M.Phil. Graduate, Department of Education, University of Management and Technology, Lahore, Punjab, Pakistan. Email: snoberbukhari@gmail.com)

in college environments designed around the needs of the hearing majority (Komesaroff, 2005).

Attitudes and behaviours of professors and peers shape how included hearing-impaired students feel. Stigmatization, discrimination, and dismissal of accommodation needs threaten their self-esteem, learning, and retention (Bowe, 2003; Foster & Kinuthia, 2003). Cultivating a culture of understanding regarding hearing loss is critical for inclusion (Armstrong, Armstrong, & Spandagou, 2009; Komesaroff, 2005). Hearing students' willingness to communicate with and provide academic support to hearing-impaired peers affects their success.

Interpersonal relationships provide opportunities for social growth, emotional support, collaboration, and knowledge exchange. Forming connections in college boosts satisfaction and well-being for hearing-impaired students (Albertini, Kelly, & Matchett, 2012). Yet, hearing loss hinders relationship building, group work, extracurricular participation, and help-seeking (Foster & Kinuthia, 2003; Komesaroff, 2005). Untrained peers may react adversely to unfamiliar communication strategies. Social exclusion can cause withdrawal and undermine self-determination.

While past studies captured hearing-impaired students' perspectives on college life generally, few examined their specific peer relations. Research on inclusiveness tends to emphasize policy and support services for students with disabilities as a whole, seldom differentiating unique requirements by impairment type (Graham, 2020; Khanna & Bhola, 2023; Tmkaya & Miller, 2020). Given the distinct communication needs posed by hearing loss, it is vital to understand how hearing-impaired students themselves perceive their social positioning among hearing peers. Exploring this phenomenon will provide insights to guide targeted interventions promoting successful integration.

This study tried to address gaps in existing knowledge by investigating the following research questions:

1. RQ1: How do students with hearing impairments in inclusive higher education institutions perceive their typical hearing peers?
2. RQ2: Are there significant differences in the perceptions of male versus female students with hearing impairments regarding their typical hearing peers?
3. RQ3: Do any significant differences exist in the perceptions of hearing-impaired students

across varying degree programs regarding their typical hearing peers?

4. RQ4: What strategies can be suggested based on the findings to improve peer relationships for students with hearing impairments in inclusive university settings?

This research provides useful insights into an understudied area concerning an important yet often marginalized population in higher education. Findings can guide educators and administrators in facilitating supportive climates enabling hearing-impaired students to fully engage peers, realize academic potential, and have enriching collegiate experiences.

Methods

This is a descriptive quantitative study conducted using the survey method (Akram, Butt, & Muhammad, 2022; Leavy, 2022). The population comprised hearing-impaired students in inclusive higher education institutions in Lahore. 'Convenience sampling' (Creswell & Creswell, 2022) was used to select a sample of 57 students from the University of Management and Technology, the University of Punjab, and the National College of Arts.

A 53-item questionnaire on a 5-point Likert scale was developed through a literature review to assess students' perceptions of their peers in inclusive universities. It was validated by experts and pilot-tested on 15 students to determine the reliability using Cronbach's alpha (.972) through SPSS. Pilot testing ensured reliability (Cohen, Manion, & Morrison, 2018).

Convenience sampling was used to select 57 hearing-impaired students from 3 Lahore universities (Salkind, 2017). Data was collected via a questionnaire and coded numerically (Brace, 2018). A 53-item Likert questionnaire assessed perceptions and data collected was numerically coded and analysed using SPSS. SPSS 21.0 was used for calculating frequency distribution, independent sample t-test and ANOVA to analyse data on students' perceptions (Edmonds & Kennedy, 2017; Mills & Gay, 2019). Responses were gathered, coded, and entered in SPSS. The questions focused on hearing-impaired students' perceptions of their peers in inclusive universities (Brian, 2023).

Results

The analysis of data and its interpretation are described below:

Frequency Distribution of Demographic Variables

The demographic analysis of the 57 hearing-impaired student participants showed that 66.7% (n=38) were male and 33.3% (n=19) were female. In terms of degree programs, 49.1% (n=28) were enrolled in BS programs, 43.9% (n=25) in Masters Programs, and 7.0% (n=4) in MPhil programs. For the semester of study, 21.1% (n=12) were in 1st semester, 12.3%

(n=7) in 2nd semester, 26.3% (n=15) in 3rd semester, 21.1% (n=12) in 4th semester, and 19.3% (n=11) in other semesters. Regarding university, 63.2% (n=36) studied at the University of Management and Technology, Lahore, 28.1% (n=16) at Punjab University, Lahore, and 8.8% (n=5) at the National College of Arts, Lahore. In summary, the majority of participants were male BS students of the University of Management and Technology, Lahore enrolled in their 1st, 3rd or 4th semesters.

Table I

Frequency Distribution of Responses

Statement	SD	D	N	A	SA
My hearing class fellows involve me in activities	9	3	11	23	11
I use university computer labs with my hearing peers	5	8	17	17	10
Hearing peers help me if I don't know how to operate a computer	5	13	14	15	10
I learn the same lecture as my hearing peers	6	5	6	23	17
The teacher gave me the task in groups with hearing peers	1	6	15	17	18
Hearing peers feel comfortable to make pair with me	6	6	16	18	11
Hearing peers guide me if I don't know how to make the assignment	8	3	14	19	13
Hearing class fellows understand my language	3	10	21	14	9
Hearing Peers have a little problem understanding my language	4	10	27	15	1
Hearing peers can understand my language even interpreter is not present	8	12	19	12	6
Hearing peers learn my language to talk with me	6	11	8	24	8
I enjoyed the hearing pair group studies	3	13	12	12	17
Hearing class fellows include me in their social activities	4	10	22	9	12
Hearing peers concerned with me about my experiences	6	6	24	15	6
Hearing peers make me a part of parties or hangouts other than class	8	10	20	13	6
Hearing peers help me with academic concerns	3	13	17	16	8
Hearing peers guide me in my studies	12	8	11	18	8
Hearing peers makes me down in my studies	8	17	13	14	5
Hearing peers make me a part in making presentation or assignment	6	7	8	24	12
Hearing peers makes me part to present the presentation or any task in the class	6	6	17	14	14
Hearing peers include me in their talking and planning	4	8	18	19	8
Hearing peers spend a great deal of time with me	5	14	15	12	11
I have many opportunities to show my abilities in group activities	4	6	18	20	9
Placement of hearing students into a regular classroom is disruptive for me	6	14	11	19	7
I participate with my hearing peers in sports, dramas and artwork	5	13	14	16	9
I enjoy with my hearing peers on university trips	10	10	10	10	10
I feel nervous to communicate with hearing peers	12	13	14	15	3
Hearing peers' openness and warmth encourages students to interact with me	8	7	10	19	13
Hearing peers give respect to me and my ideas	9	9	11	11	17
Hearing peers share their ideas and listen to my ideas	4	11	20	9	13
Hearing peers solve my problems related to my studies	7	10	15	18	7

Statement	SD	D	N	A	SA
Hearing peers help me to interact with other fellows in the university	6	10	12	12	17
Hearing peers appropriately introduce me to others without any hesitation	4	13	12	17	11
Hearing peers behave positively with me in the classroom	5	7	14	19	12
Hearing peers behave positively with me outside the classrooms	8	11	16	11	11
I feel comfortable asking questions about studies from peers	9	6	17	13	12
Hearing peers treat me equally as their other hearing friends	10	12	11	15	9
I feel my study skills improved due to my hearing class fellows	7	12	10	14	14
Hearing peers had a bad impact on my study skills	14	16	12	11	4
I feel isolated in the classroom even in the presence of my hearing class fellows	11	9	12	14	11
Hearing peers are quite helpful for me to build stronger interaction with others	10	5	18	18	6
Successful mutual interaction assists me to build mutual trust with my hearing class fellows	6	8	17	17	9
Hearing peers resolve conflicts about studies and other fellows	3	8	19	17	10
Hearing peers help me to follow university discipline and classroom routines	4	8	16	15	14
Hearing peers help me to stay updated about university activities	4	6	11	17	19
Hearing peers wish and celebrate my birthday	15	9	11	7	15
Hearing peers like to play games with me	9	13	15	12	8
Hearing peers feel bored (fed up) in my company	7	12	19	10	9
Hearing peers avoid communicating with me	11	6	15	16	9
Hearing peers don't get interested in studies with me	6	16	14	15	6
I can take part in group discussions with my hearing class fellows	2	7	22	19	7
Hearing peers help me when I feel stuck	5	7	17	18	10
I feel nervous in group discussions with my hearing class fellows	7	10	17	15	8

The above table shows that most hearing-impaired students have a relatively positive perception of their interactions and relationships with hearing university fellows in an inclusive environment.

For many statements related to academic assistance and inclusion, the majority of responses fall in the "Agree" or "Strongly Agree" categories. This suggests hearing peers are perceived as helpful, inclusive, and supportive in academic contexts.

However, for some social interaction/relationship statements like "Hearing peers wish and celebrate my birthday" and "Hearing peers like to play games with me", more responses fall in the "Disagree" side. This indicates hearing peers may not be as socially engaged with hearing-impaired students outside of academics.

There are also mixed perceptions of hearing peers' willingness and ability to communicate effectively. Many students agreed hearing peers try to understand their language, but some disagreed that communication is always clear, especially without an interpreter present.

Responses were fairly split on whether hearing peers include hearing-impaired students in discussions and presentations. This suggests some variability in how much hearing students actively involve their hearing-impaired peers.

Overall, the data shows hearing-impaired students feel reasonably included by hearing peers in academic contexts, but social connections may be more limited. There are also ongoing communication barriers reported by some students. Targeted efforts to improve social integration and direct communication skills could further improve perceptions and inclusion.

Comparison of respondents' perceptions of hearing-impaired students about their university fellows in an inclusive environment

In parametric statistics, an independent sample t-test is used when the means of two independent groups are to be compared to see a significant difference against one dependent variable score. Here independent sample t-test was used to compare the perceptions of respondents based on gender.

Table 2

Independent sample t-test

Gender	N	Mean	SD	t	df	Sig. (2-tailed)
Male	38	172.40	41.15	.276	37.902	.784
Female	19	169.32	39.00			

Independent sample t-test indicated that there was no significant difference (t=.271, sig2-tailed=.788) between the perceptions of male and female respondents.

Table 3

ANOVA test comparison between degree programs

Variance	df	F	Sig.
Between Groups	2	.276	.760
Within Groups	54		
Total	56		

The ANOVA indicated that there was no significant difference (F=.276, sig=.760) on the basis of their degree program.

Table 4

ANOVA test of comparison between semesters

Variance	df	F	Sig.
Between Groups	4	2.775	.036
Within Groups	52		
Total	56		

The ANOVA indicated that there was a significant difference (F = 2.775, sig = .036) on the basis of their semester.

Table 5

Semester (I)	Semester (J)	Mean Difference (I-J)	Sig.
3 rd	2 nd	37.80000*	.033
	Other	37.98182*	.014
4 th	2 nd	38.58333*	.037
	Other	38.76515*	.017

The LSD Post Hoc analysis comparison test indicated that students enrolled in 3rd semester have significantly better perceptions about their hearing counterparts than the students enrolled in 2nd (Sig.=.033) and other third semesters (Sig.=.014). Similarly, 4th semester

has a significantly better perception of their hearing counterparts than the students enrolled in 2nd (Sig.=.037) and the other three semesters (Sig.=.017).

Table 5

ANOVA test of comparison between universities

Variance	df	F	Sig.
Between Groups	2	1.589	.213
Within Groups	54		
Total	56		

The ANOVA indicated that there was no significant difference ($F=1.589$, $Sig=.213$) between the perception of the students with hearing impairment studying at the University of the Punjab, Lahore, University of Management and Technology, Lahore and National College of Arts, Lahore.

Conclusion

The present study aimed to explore the academic and social experiences of hearing-impaired students in higher education. The results revealed several insights into the dynamics between hearing-impaired students and their hearing peers. The study found that hearing-impaired students participated with their typical peers in activities including group tasks, sports, games, lectures, presentations, and assignments. They enjoyed university trips, pair study groups, parties, hangouts, and other social activities with hearing students. Even without interpreters, hearing peers understood and learned to communicate with hearing-impaired students. Hearing peers helped me operate computers, make assignments, and resolve study conflicts. Inside and outside class, hearing peers behaved positively and made hearing-impaired students feel comfortable asking questions and introducing them to other fellows.

The findings of this study provided key insights to inform these stakeholder actions. Significant work lies ahead, but the goal of inclusive, integrated higher education is worthy of the effort. By working together proactively, we can build more accepting, compassionate campuses and empower students with disabilities to thrive academically and socially.

Independent t-tests and ANOVA found no significant differences between perceptions of male and female hearing-impaired students across degree programs. Additionally, no significant perception differences appeared between hearing-impaired students at the University of the Punjab, Lahore, University of Management and Technology, Lahore and National College of Arts, Lahore.

Recommendation

Following are some recommendations based on the conclusion:

1. Implement mandatory disability awareness and sensitivity training for all university staff and students to promote inclusion. This training should cover best practices for communicating with and accommodating students with hearing impairments.
2. Provide enhanced academic support services tailored to hearing-impaired students, such as notetakers, captioning services, and assistive technologies. Adequate support will enable their full participation.
3. Create designated quiet spaces on campus for study and small group learning activities to optimize the learning environment for students with hearing impairments. This minimizes disruptive ambient noise.
4. Develop peer mentorship programs to match hearing-impaired students with other students for guidance. Peer mentors can help build a sense of belonging, provide tips for navigating campus life, and facilitate social connections.

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