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Comparative Study of Emotional Correlations, Academic Information-Seeking Behaviour, and Library Services in Special Schools in Karnataka, India

Dayanandappa Kori[1*] and K.R. Mulla[2]

[1]*University Library, Doctor Harisingh Gour Vishwavidyalaya Sagar- 470 001, Madhy Pradesh, India*
[2]*Deptartment of Library and Information Centre, M.S.Ramaiah Institute of Technology, Bangalore- 560 054, Karnataka, India*
[*]*E-mail: koridh@gmail.com*

ABSTRACT

The study examines a comparative analysis of students' emotional correlations, academic information-seeking behavior, and library services in special schools in Karnataka, India. The research data was gathered using qualitative and quantitative methods, including in-depth interviews, survey methods, and focus groups conducted among 2054 specially-abled students in Karnataka. The study is confined to visual and hearing-impaired students. Students from both groups demonstrated high emotional similarity (strong positive correlation, r= .928). However, hearing-impaired students exhibited stronger information-seeking behavior (significant t-value, 3.145). While libraries offered similar service types to both groups (t-value, 1.145), visually impaired students had better access to assistive technology (significant t-value, 5.678), highlighting a resource disparity and suggesting libraries require strategies tailored to student needs.

Keywords: School library; Information seeking; Assistive technology; Visually impaired students; Hearing-impaired students; Digital inclusivity; Differently abled students; Specially-abled children

1. INTRODUCTION

The library has long been recognised as the central repository of information for all academic community members. However, the visual and hearing-impaired library and information services are often constrained due to social, financial, and logistical challenges. Libraries and librarians play a critical role in giving access to information today, and organising it and assisting users in locating the information they need is critical. The current research inspects comparative analysis of students' emotional correlations, academic information-seeking behavior, and library services in special schools.

2. ACADEMIC INFORMATION-SEEKING BEHAVIOUR AND LIBRARY USE

Academic information-seeking behavior and library use can be important resources for specially-abled children, providing access to information, resources, and technology to support their academic success and personal growth. Specially-abled children have unique abilities and challenges that require specialized attention and support. Identifying and understanding their strengths and challenges is necessary to provide them with the appropriate resources and opportunities for success. Libraries can also serve as a safe and welcoming space for students with disabilities to socialise, connect with peers, and participate in extracurricular activities.

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3. LITERATURE REVIEW

Bogdanović and Gligorovic[1] found that Serbia teachers lacked sufficient knowledge and skills to work with specially-abled children, highlighting the need for targeted professional development. Fernando and Kuhn[2] emphasise the significance of ongoing training and support for teachers to implement inclusive practices effectively. Woodard[2] and McAdam[3], describe the design elements that make the Perkins Library, which serves patrons who are blind, visually impaired, or deafblind, accessible. Lipton and Paez[4] found that while many academic libraries in New York State offer some services for students with disabilities, there is room for improvement.

4. OBJECTIVES OF THE STUDY

- To verify the emotional correlation
- To examine academic information-seeking behavior
- To explore the types of information services provided
- To study variations in assistive technology facilities
- To evaluate the challenges faced by libraries

5. RESEARCH HYPOTHESIS

H1: There is a positive correlation between visual and hearing-impaired students regarding emotional feelings.

H0: There is no significant difference between visual and hearing-impaired students concerning the pattern of their information-seeking behavior scores.

H0: There is no significant difference between visual and hearing impairment students concerning the type of information services

H0: There are no variations in providing Assistive Technology (AT) facilities by the special schools' libraries for visual and hearing-impaired students.

H0: There is no significant difference in the challenges faced by the libraries in special schools for students with visual and hearing impairment in providing library and information services.

6. SCOPE AND LIMITATION OF THE STUDY

The present study is confined to emotional correlations, academic information-seeking behavior, and library and information services among specially-abled students in Karnataka. The data collected is from 36 specially-abled schools selected and 2,054 students in Karnataka. The study focuses on specially-abled students. There are many types of specially-abled students; however, this investigation is confined due to the time limit of physically disabled people, such as visual and hearing-impaired students only.

Tables 1, 2, 3, and Figures 1 and 2 explain the students' sample size and population. The current research included 18 visually impaired schools with a population of 1,146 and a sample size of 1,027 students, 18 hearing-impaired schools with a total population of 1,740 and a sample size of 1,027 students, and a total of (Visually and Hearing impaired) 2,886 students with a sample size of 2,054 students, by including 18 visually impaired schools and 18 hearing-impaired schools. The large sample size (2,054 students) ensures that the findings are more likely to be representative of the entire population of visually and hearing-impaired students in schools. This particular sample is justified based on the comprehensive representation of visually and hearing-impaired students in schools, which allows for comparisons between the two groups; an appropriate and unbiased sample is essential for reliable research findings and accurate interpretations about the population of interest.

Figures 3 explain the research methods utilised in the current study; when the investigator asked hearing-impaired students the questions, they were uncomfortable answering them. Also, the investigator needed help understanding what he was trying to convey. Therefore, the investigator enlisted the help of teachers teaching hearing-impaired students while collecting data from each hearing-impaired student. The investigator asked teachers who teach hearing-impaired students this question during data gathering. Then, the same was communicated to the student using sign or finger language, etc., at the student's convenience. Then, the student answered, and the teacher told the investigator the same thing. The same method was followed in gathering the data for each student with a hearing impairment from each

Table 1. Selected visually impaired schools for the study

S. No.	Visual impaired schools	Abbreviation used
1	Government School for Blind Children (Boys), Mysore district	GSM
2	Ranga Rao Memorial School for Visually Impaired Girls Mysore district	RRMM
3	Government School for Blind Children Hubli (Boys), Dharwad district	GSH
4	Sadguru Siddaroodh Blind School Hubli, Dharwad district	SSBH
5	Government School for Blind Children (Boys), Kalburgi district	GSBG
6	Maheshwari School of Blind Children, Belagavi district	MSBB
7	Sri Shivasarana Haralaiah Vidyavardhaka Blind Children, Bijapur district	SSHVB
8	Sri Siddaganga Blind School, Tumakuru district	SSBT
9	Karnataka Navachetana Blind School, Kunigal, Tumakuru district	KVBT
10	Ashakirana Blind School, Chikkamagalore district	ABSC
11	Sharada Devi School for Blind Children, Shimoga district	SDBS
12	Shri Manik Prabhu Academy for Blind , Raichur district	SMPAR
13	Shri Manik Prabhu Blind School, Maniknagar Bidar district	SMPBM
14	Gnanajyothi Blind Children's School, Haveri district	GBCH
15	Jnana Prajna Blind School Mundagod, Uttara Kannada district	JBSM
16	JSB Free Residential School for Blind, Ramanagara district	JSBR
17	Ashakiran Blind School Sidlaghatta, Chikkaballapur district	ABSS
18	Tikshna Special School for Blind, Chitradurga district	TBSC

Table 2. Selected hearing-impaired schools for the study

S. No.	Hearing-impaired schools	Abbreviation used
1	Parmanand Jana Seva Sikshan Samiti School for Deaf and Dumb Sindagi, Vijayapura district	PJSSS
2	Shri B D Tatti Residential School for Hearing Impairment Laxmeshwar Shirahatti Taluk, Gadag district	SBDTRSHL
3	Manfort School for the Disabled Belagola Village of Shrirangapattana, Taluk of Mandya district	MSDB
4	Shri Annaddaneshwar School for Deaf Naregal, Gadag district	SASDN
5	Honnamma Education Society School for Deaf, Dharwad district	HESSD
6	Indian Redcross Society Deaf School Belagumba, Tumkur district	IRSSD
7	Govt Deaf School, Mysore district	GDSM
8	Govt School for Deaf, Kalburgi district	GSDK
9	Shraddanjali Deaf Primary School Basavakalyan, Bidar district	SDPSB
10	Shri Ganayogi Pandit Panchakshari Gavayigal Deaf and Dumb School Shiggaon, Haveri district	SGPPGDD
11	Mercy Residential School for Hearing Impaired Srirampura Mysore District	MRSHIS
12	Sairanga Deaf Boys School Mysore District	SDBSM
13	Anjana Deaf Girls Schools Gulbarga District	ADGSG
14	Deaf and Dumb Children School Challakere Taluk Chitradurga District	DDCSC
15	Vagjyothi Deaf School Amparu, Kundapur Taluk Udupi District	VDSC
16	Priyadarshini Deaf and Dumb School Hubli, Dharwad District	PDDSH
17	Mahadevbhattkoors Deaf School Sirasi Taluk Uttara Kannada District	MKDSS
18	Mouneshwara Deaf School Davanagere District	MDSD

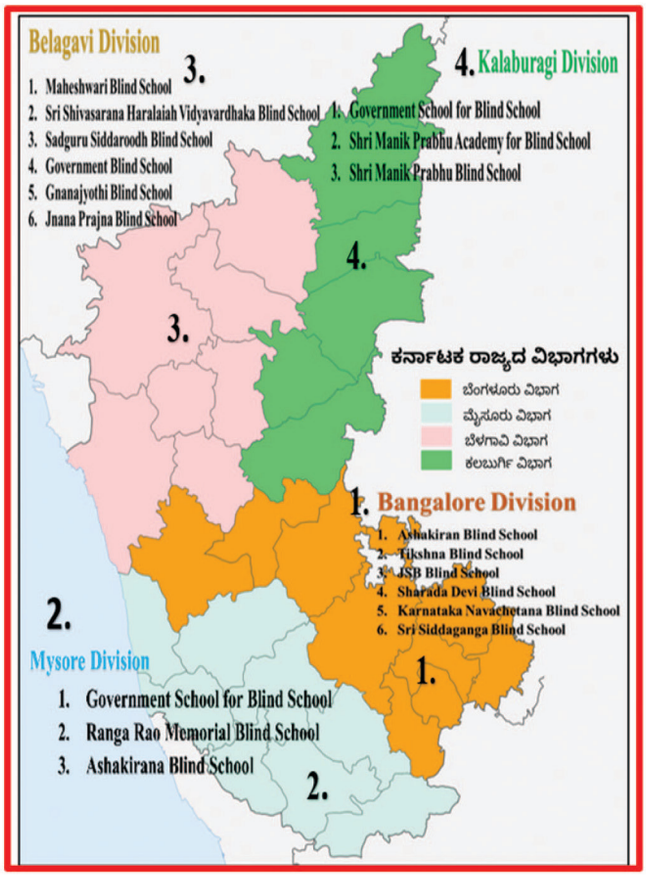

Figure 1. Visually impaired selected schools.

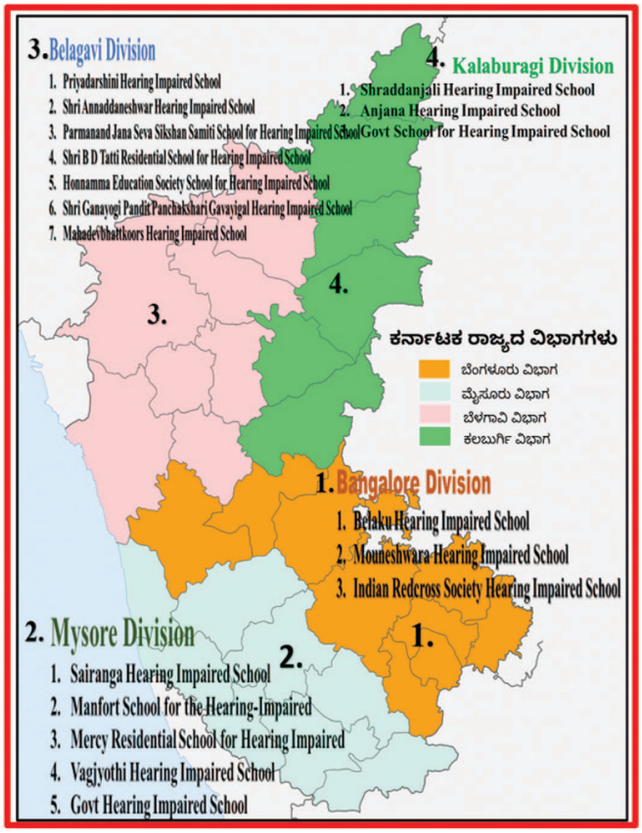

Figure 2. Hearing-impaired selected schools.

Table 3 Population and sample size

S. No.	Name of the schools (VI)	Total population	Sample selected	Name of the schools (H.I.)	Total population	Sample selected
1	GSM	26	20	PJSSS	44	32
2	RRMM	87	64	SBDTRSHL	150	71
3	GSH	35	35	MSDB	62	60
4	SSBH	87	86	SASDN	104	60
5	GSBG	48	35	HESSD	67	32
6	MSBB	133	108	IRSSD	100	75
7	SSHVB	25	23	GDSM	52	32
8	SSBT	42	41	GSDK	132	95
9	KVBT	37	35	SDPSB	82	64
10	ABSC	60	60	SGPPGDD	74	50
11	SDBS	94	94	MRSHIS	118	111
12	SMPAR	49	46	SDBSM	97	75
13	SMPBM	56	38	ADGSG	118	48
14	GBCH	50	38	DDCSC	68	63
15	JBSM	58	58	VDSC	47	44
16	JSBR	196	196	PDDSH	112	50
17	ABSS	23	19	MKDSS	41	24
18	TBSC	40	31	MDSD	272	41
Total		**1146**	**1027**		**1740**	**1027**

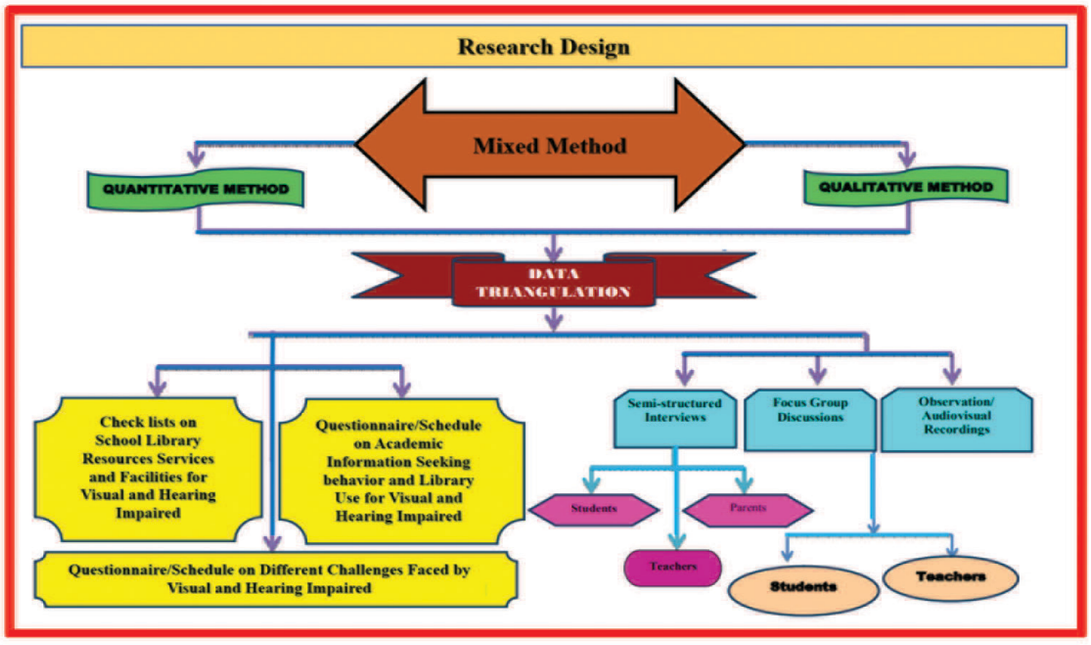

Figure 3. Research methods.

school. Visually impaired students gathered data through personal visits. Since they could not see the questions, the investigator asked each question, and the answers were marked. In the same way, data was also gathered personally from the teachers who teach exceptionally sensory students and parents who have very sensory children.

7. DATA ANALYSIS AND INTERPRETATION

7.1 Correlation Between the Emotional Feelings

Table 4 and Figure 4 illustrate the association between visually and hearing-impaired students regarding their emotional feelings. A Spearman coefficient correlation test was used. At a significance level of 5 %, a very high positive correlation (r = .928) is observed. This

Table 4. Shows a correlation between the emotional feeling of students with V.I and H.I

S. No.	Emotion	V.I. students N=1027	H.I. students N=1027	Rank1	Rank2	D^2
1	Happy	988	957	1	1	0
2	Contented	0	47	4	2	4
3	Sad	25	23	2	3	1
4	Worried	0	0	4	4	0
5	Restless	0	0	4	4	0
6	Angry	0	0	4	4	0
7	Fearful	12	0	3	4	1
8	Overjoyed	0	0	4	4	0
		Total	$\sum d_i^2$			**6**

$$\frac{\sum 6d^2}{n(n^2-1)}) \quad =1-(\frac{6X6}{8(8^2-1)}) =.928$$

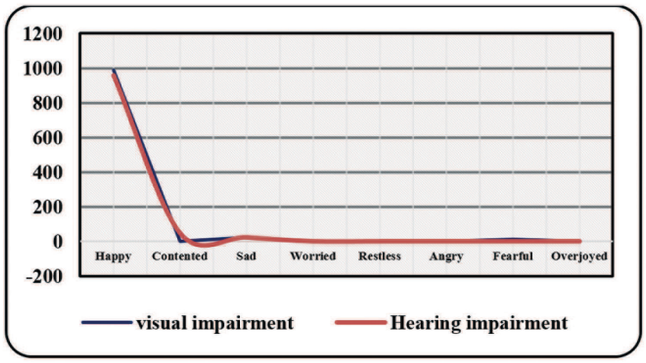

Figure 4. Correlation between the emotional feelings of students V.I and H.I. students.

suggests a perfect match between visually and hearing-impaired students regarding their emotional feelings.

7.2 Difference Between Academic Information-Seeking Behavior Scores

As shown in Table 5 and Figure 5, the "t" value for the variance in the mean scores of academic information-seeking behavior patterns of visual and hearing-impaired students is 3.145. This calculated value is significant at both levels, *i.e.*, 0.01 and 0.05. Therefore, it could be interpreted there is a substantial variance in the mean scores of information-seeking behavior patterns of visual and hearing-impaired students. The mean scores of visual and hearing-impaired students are 24.321 and 32.12. Their standard deviation is 2.92690 and 3.55638, i.e., the groups' information-seeking behavior patterns differ. Furthermore, to concluded that hearing-impaired students' information-seeking behavior pattern scores are much higher than those of visually impaired students. Thus, the Hypothesis stating, "There is no significant

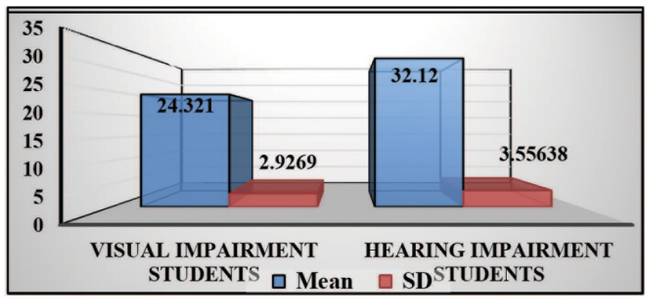

Figure 5. Mean, SD, and "t" value for the difference in the mean scores of information-seeking.

Table 5. Mean, SD, and "t" values for the difference in the mean scores of academic information-seeking

S. No.	Test statistics	Students category	
		V.I.	H.I.
1	Mean	24.321	32.12
2	SD	2.92690	3.55638
3	t-value	3.145	
4	Sign	S	
	Rem	Sig	

difference between the visual impairment students and hearing impairment students concerning their information-seeking behavior pattern scores," was rejected, and the alternative hypothesis was accepted.

7.3 Difference Between the Types of Information Services

Table 6, Figure 6 displays the "t" value for the difference in the mean scores of the types of information services provided by the both groups is 1.145. This calculated value is not significant at either of the levels, i.e., 0.01 and 0.05. Therefore, it could be interpreted that there is no significant variance in the scores of the types of information services provided by the libraries in the both groups. The mean scores of visual and hearing-impaired students are 26.987 and 31.234, respectively. Their standard deviation is 1.4332 and 1 5545, i.e.; neither group is different concerning the type of information services provided by the libraries in the special schools

Table 6. Mean, SD, and "t" value for the difference in the mean scores of information service

S. No.	Test statistics	Students category	
		Visually impaired	Hearing impaired
1	Mean	26.987	31.234
2	SD	1.4332	1.5545
3	t-value	1.145	
4	Sign	N S	
5	Rem	Sig	

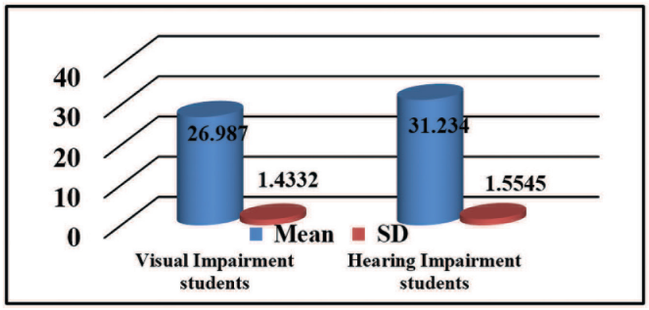

Figure 6. Mean, SD, and "t" value for the difference in the mean scores of information service.

under study. Furthermore, it is possible to conclude that libraries' information services to hearing-impaired students are similar to those provided to visually impaired students. Thus, Hypothesis No. 3, stating, "There is no significant difference between the visual impairment students and hearing impairment students concerning the scores of the types of information services provided by the libraries in the special schools' understudy," is accepted.

7.4 Variations in Providing Assistive Technology Facilities

As shown in Table 7, Figure 7, the 't' value for the difference in the mean scores of Assistive Technology (AT) facilities by the libraries in the special schools of visually and hearing impairment students is 5.678. This calculated' value is significant at both levels, i.e., 0.01 and 0.05. The both groups are different concerning the assistive Technology facilities by the libraries. To conclude, assistive technology library facilities for the special school scores of visual impairment students are much higher than for hearing impairment students. Thus, hypothesis no. 4, stating, "There is no significant variance in the visual impairment students and hearing impairment students concerning Assistive Technology (AT) facilities by the libraries in the special schools, " was rejected and accepted as an alternative hypothesis.

Table 7. Mean, SD, and t-value for the difference in the mean scores of facilities by the libraries

S. No.	Test statistics	Students category	
		Visually impaired	Hearing impaired
1	Mean	26.987	31.234
2	SD	1.4332	1.5545
3	t-value	1.145	
4	Sign	N S	
	Rem	Sig	

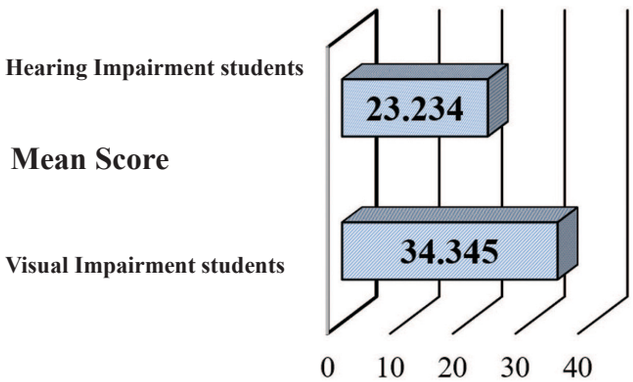

Figure 7. Mean, SD, and t-value for the difference in the mean scores of facilities by the libraries.

7.5 Difference in the Challenges Faced by the Libraries

As shown in Table 8, Figure 8, the "t" value for the difference in the challenges faced by the libraries in special schools for visual impairment and hearing impairment students in providing library and information services scores is 2.11. This calculated value is not significant at either of the levels, i.e., 0.01 and 0.05. Therefore, it could be interpreted that there is no significant variance in the scores of challenges faced by the libraries in both groups in providing library and information services. The mean scores of visual impairment students and hearing impairment students are 21.345 and 18.234, and their standard deviations are 1.937 and 2.816, i.e., both groups are not different concerning the challenges faced by the libraries in in both groups in providing library and information services. To conclude, the scores of challenges faced by the libraries in in both groups in providing library and information services are similar. Thus, Hypothesis No.5, stating, "There is no significant difference in the challenges faced by the libraries in special schools for students with visual and hearing impairment in providing library and information services," was rejected and accepted as an alternative hypothesis.

Table 8. "t" value for the difference in the mean scores of differences in the challenges faced by the libraries

S. No.	Test statistics	Students category	
		Visually impaired	Hearing impaired
1	Mean	21.345	18.234
2	SD	1.937	2.816
3	t-value	2.11	
4	Sign	N S	
5	Rem	Sig	

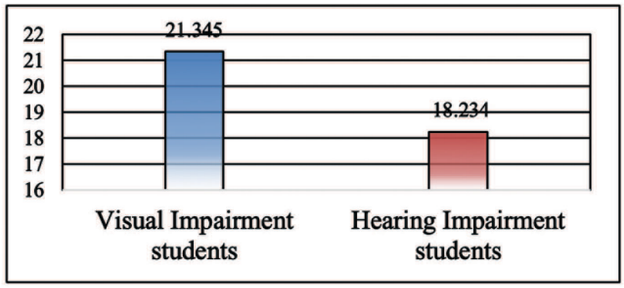

Figure 8. "t" value for the difference in the mean scores of differences in the challenges faced by the libraries.

8. DISCUSSION

Addressing visually and hearing-impaired students' unique needs is crucial in inclusive education. The investigation found emotional similarities between visually and hearing-impaired students but differences in academic information-seeking behavior and access to assistive technology. While both groups faced library challenges, hearing-impaired students sought information more actively, and visually impaired students had better access to assistive devices. These insights call for tailored support, including emotional programs for both groups and improved library services and technology access.

9. FURTHER RESEARCH

Further research is needed on the similar aspect, but studying in regular schools, colleges, universities, and private government and adding academic institutions having inclusive settings would be supportive in knowing the conditions of information-seeking behavior and library use among the specially-abled students.

10. CONCLUSION

The present study examines a comparative analysis of students' emotional correlations, information-seeking behavior, and library services in special schools in Karnataka, India. There is a need for suitable school library information resources, information technology facilities, and qualified librarians to administer libraries and establish a good reading environment for school children. It concludes that tailored information services and supporting technologies are critical to their inclusion and success. Educational institutions implement these strategies to make a supportive environment for all students.

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CONTRIBUTORS

Dr Daynandappa Kori holds a PhD, Masters in Library and Information Science, and PG Diplomas in Digital library and information management, Computer applications, and Yoga studies. He works as an Information Scientist at Central Library, Dr. Harisingh Gour Vishwavidyalaya (A Central University), Sagar (MP) India.
His contributions to the current work include preparing the research instruments, framing the objectives and hypothesis of the study, collecting data and evaluating its reliability and validity, and developing a formal analysis.

Dr K.R. Mulla is currently working at Ramaiah Institute of Technology, Bangalore, as the head of the Library and Information Centre. Previously, he served as a librarian at Visvesvarya Technological University, Belgaum. He holds a PhD from the university of Mysore and an MLISc from Karnataka university, Dharwad. With over 26 years of experience of library and information science (LIS), he has been actively involved in various professional library associations. His areas of interest are Automation, Networking, Resource sharing, E-learning, Digitisation and information systems, Library portals, Bibliometrics, Scientometrics, and Webometrics.
His contributions to the current work include supervision of this research.