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RESEARCH PAPER

Identification of Problems faced by Children with Hearing Impairment in Acquisition of basic Skills: Exploration of Possible Solutions

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ABSTRACT

This quantitative study aims to identify the problems faced by children with hearing impairment in acquisition of basic skills including cognitive, social, academic, psychological, communication and also explore the solutions. In this study, a self-developed and validated questionnaire on five-point Likert type scale (Cronbach Alpha 0.86) was used to collect data from 110 special education teachers working in public and private schools of children with hearing impairment in Punjab. Data were collected personally by visiting schools, through Google forms, social media, online meetings, and e-mail. The data was analyzed on SPSS deriving the frequencies, Independent sample t-test and One Way ANOVA was run. These tests were applied to find differences in the opinions of teachers regarding identification of problems of children with hearing impairment in acquisition of basic skills. Results showed that children with hearing impairment haven't any type of problem in their cognition. They are facing behavioural, socialization and academic issues due to language gaps.it is recommended that parents should be aware about early assessment. Trained teachers and technology should be provided by the government.

Keywords: Academic Problems, Children With Hearing Impairment, Cognitive Problems, Communication Problems, Psychological Problems, Social Problems

Introduction

Hearing has a dynamic role in determining the individual life. A fact that hearing is a source of learning and knowledge acquisition. Children with hearing impairment are one of the groups of special children who need special education and health programs (Hallahan, 2018). According to healthcare specialists Children with hearing impairment must have access to suitable services (Schniedewind, 2020). It's a public health demand that hearing loss must also be taken seriously because it has an adverse effects on all aspects of individuals' lives, regardless of the age at which it occurs (Tsimpida ,2018).Children with hearing impairment show difficulties in communication and emotional management because emotions affects on behaviors and relationships (Riefe, 2012).It is known that negative emotions and emotional difficulties are common in children with hearing impairment (Ashori & JalilAbkenar, 2022).

Children with Hearing impairment are vulnerable because of communication obstructions and difficulty expressing emotion (Crowe, 2021). These children experience more adverse emotions than normal-hearing individuals, and these things negatively affect their quality of life (Shin & Hwang, 2017). On the other hand, general health is closely related to the quality of life (Gao, 2020). Therefore, children with hearing

impairment are more likely to have general health issues than their normal-hearing peers (Wong, 2020).

The development of basic skills among deaf children is a critical issue for deaf educators as well (Golos & Moses, 2013). Social interaction of hearing-impaired children reveals various social problems because they can't obtain huge audio information, which has a primary impact on students' social behavior patterns and this thing influence their social skills (AbuSha'ban, 2016).

Communication can be challenging for children with hearing impairment (McKean et al., 2017). When children with hearing impairment are unable to meet the communication expectations of teachers and classmates then apparently their academic and social development can be negatively affected (Parsons, 2009). These effects can include emotional and behavioural problems, low self-esteem, learning difficulties, unsatisfactory social relationships, and experiences with bullying (Perfitt, 2018). Children with hearing impairment often display communication challenges that are atypical for their chronological age (Bishop et al., 2017). Several studies indicate that childhood education can be affected by speech and other language difficulties that interfere with curricular access, social skills, or social interaction (Perfitt, 2013).

Children with hearing impairment often lack skills necessary for learning in the mainstream classroom. For example, children with language-related difficulties may struggle with literacy (Lindsay et al., 2014).

Literature Review

Cognitive problems faced by children with hearing impairment

Individuals with Hearing loss are at a greater risk for cognitive decline and dementia (Lin, 2013).Different studies examined that where Hearing loss is present, greater cognitive resources are dedicated to auditory system (Loughrey, 2019). A person's risk for dementia may decrease by 9%, according to the Lancet International Commission on Dementia, Prevention, Intervention, and Care which was the highest percentage of any of the modifiable risk factors studied(Ortega , 2019).

Cognitive load theory (CLT) is a learning and instruction theory that describes implications of human cognition based on permanent knowledge base in long-term memory (LTM) and a temporary conscious processor of information in working memory. Most recent descriptions of CLT take three categories.

Intrinsic load

Extraneous load

Germane load

Children with hearing impairment face intrinsic cognitive load issues due to the complexity of language and communication. Language and communication are complex processes that require the integration of various cognitive processes, such as perception, attention, memory, and reasoning. This leads to an increased cognitive load on the working memory system, which limits the ability to process and retain information (Sweller ,2011).

Extraneous cognitive load is related to cognitive functions that are not required for learning and are induced by inadequate instructional designs, such as processing

duplicate information or conducting irrelevant search-and-match operations. Instead of being necessary for accomplishing instructional goals, extraneous load is imposed by the cognitive activities that a learner is engaged in because of the organization and presentation of the learning tasks (Sweller ,2020).

Children with hearing impairment face germane cognitive load issues due to the challenges in integrating new information into their existing knowledge structures. The difficulties in language and communication affect the development of mental models, which are essential for problem-solving and decision-making. This leads to an increased germane cognitive load on the working memory system, which affects the ability to process and retain information. Children with hearing impairment have delayed language development, which can lead to difficulties in communication, social interaction, and academic performance (DesJardin, 2014).

Psychological Problems faced by Children with Hearing Impairment

The psychological problems are vary among Hearing impaired children due to several aspects, such as child's age when deafness occur, severity level , level of hearing loss and other environmental conditions(Alrousan, 2016).Abu Dreea and Arramamneh (2019) conducted a study to investigate about the level of intelligence and its relation to behavioral problems of hearing-impaired students. The results shown that hearing-impaired students have a normal intelligence level and an average level of psychological problems. Luckner (2011) have concerns in social and behavioral skills of teaching deaf and hearing-impaired students in public found that these students have a medium level of social and behavioral problems according to their teachers' perspectives. The negative influence of hearing loss is not limited to only communication problems. The general worth of life overall is lower among children with hearing loss (Nordvik, 2018). According to a tendency, anxiety levels rise together with the severity of hearing loss (Contrera, 2017).

Interpersonal behavioural problems are, in (Reitzes' 2012) opinion, all that tedious and hideous problematic feelings and behavior demonstration among children with hearing impairment which create a very negative impact on their ability to form and maintain healthy and rewarding relationships with others. According to studies, hearing loss obstructs the overall behavioural development of the hearing impaired, resulting in retardation and personality issues. A study was conducted in Leiden University Medical Center in 2013 (Netherlands). The purpose of this research was to observe several behavioral problems in school-aged hearing-impaired children with hearing aids or cochlear implants, compared to normally hearing children. Hearing-impaired children showed significantly more proactive aggression, symptoms of psychopathy, attention deficit hyperactivity disorder, oppositional defiant disorder, and conduct disorder than their normally hearing peers (Briaire & Frijns, 2014).

Social Problems faced by Children with Hearing Impairment

Children with hearing loss often experience social, emotional, and academic difficulties. Development of social skills, peer relationships, and academic performance of the children is extremely influenced by hearing impairment (Moeller, 2007). Social interaction of hearing-impaired children with their hearing peers show several social problems for hearing impaired since they do not acquire huge audio information, which has a primary influence on children's social behavior patterns. Consequently, this deficit of information will surely influence their social skills (AbuSha'ban, 2016).

Table 1
Erikson's theory

Age	Erikson's General Stage	Erikson's Ego Mode
Birth to 1 year	Trust vs. Mistrust	Hope
1 to 3 years	Autonomy vs. Shame, Doubt	Will
3 to 6 years	Initiative vs. Guilt	Purpose
6 to 11 years	Industry vs. Inferiority	Competence
Adolescence	Identity vs. Role Confusion	Fidelity
Young adulthood	Intimacy vs. Isolation	Love
Adulthood	Generativity vs. Self-Absorption, Stagnation	Care
Old age	Ego Integrity vs. Despair:	Wisdom

Social-emotional development (SED) consists of the skills children develop to interact with others. Social-emotional development was notably defined by psychologist Erik Erikson. Erik Erikson, a psychologist, famously defined SED. According to Erikson, a person's personality goes through eight stages throughout the course of their lifetime. Each level requires the person to resolve a psychological conflict that contributes to the development of their own identity (Erikson, 1964). If individuals fail to achieve a balance during each stage, their self-concept can be affected later in life.

According to Erikson, the most important task for the 1st year of life is to establish a trust in the world and it's based on the mother- child bonding being nurtured in caring environment. Erikson describes the feeling developed in the child at this early stage. This is called the critical period of child's life. The 2nd stage is to develop an acquisition of language but for a Hearing impaired child it will be a difficult. Schlesinger (1972) suggests that, frequent lack of manual communication with their parents, "many hearing impaired children go through this stage with an intensity of negativism that interferes with normal maturation". During the 3rd stage of Erikson's theory, verbal and motor exuberances mark this age but these exuberances may be restricted for hearing impaired children due to lack of communication (Schlesinger, 1972). At 4th stage, "children master important cognitive and social skills". Erikson believes that in 5th stage, there is a modified reiteration of previous stages (Erikson, 1968). Erikson's theory predicts that many Hearing impaired adolescents will come to this stage of their lives with a variety of unsolved crises from earlier stages. The 6th stage is intimacy versus Isolation, Low self-esteem and an unsuccessful resolution of the adolescent identity crisis have a negative impact on this stage(Crain1992). Generativity versus Self-Absorption is 7th stage of Erikson theory. Last stage of Erikson's theory, Integrity versus Despair begins at age 65 and lasts throughout the rest of life. Because of communicational barriers, for Hearing impaired persons there can be nothing but a life of deprivation, social loneliness and psychological frustration. Hearing impaired people often find it very difficult to verbalize their own short comings or their resentments against society for their frustrations, but feel them very deeply. According to(Woolfolk et al.2007), socio-emotional development is essential for both academic and personal growth. It is not surprising that there is interest in the socioemotional development of DHH children given that the presence of deafness has implications for spoken language development, social engagement, mental processes, learning ability, and quality of life (Brown & Cornes, 2015).

Communication Problems faced by Children with Hearing impairment

It is well recognized that a range of factors influence spoken language skills in children with hearing loss regardless of the type of sensory device used (Geers et al.

2007). An understanding of the reasons for differences in children's spoken language abilities can have important implications for rehabilitation planning. Factors identified as influencing outcomes in the recent literature include age at identification of hearing loss or intervention, severity of hearing loss, and parental involvement (Sininger et al. 2010). some of these studies have found that vocabulary and/or word learning skills get worse with poorer hearing thresholds (Davis et al., 1986; Wake et al., 2004, 2005), others have not (Blamey et al., 2001). studies have typically shown that children with mild to moderate hearing loss perform more poorly than their peers with normal hearing on standardized and experimental measures of language, including vocabulary and word learning, morphology and syntax, and phonology and reading, although these studies have also tended to identify marked individual variability in performance (Spencer, 2013).

Communication can be challenging for students with Speech, Language, and Communication Needs (McKean et al., 2017). Children with SLCN often display communication challenges that are atypical for their chronological age (Bishop et al., 2017).

Academic Problems faced by Children with Hearing Impairment

The three skills of language, reading, and writing are closely related. If language skills are delayed for any reason, literacy will also be affected. Reading and writing is complicated process for Hearing impaired. Different studies have been shown that Hearing impaired reader are facing the difficulties in acquiring several reading skills, and also found that Hearing impaired students are pathetic as compared hearing students in many areas such as word identification, meta cognitive strategies, memory span; attention span (Moeller ,2010). Vernon (2005) stated that in total, there are about 50 comparative studies on the knowledge of children with hearing impairment. Results from these studies display that the academic performance of children with hearing impairment is below satisfactory levels (Qi & Mitchell, 2012).

Learners with hearing impairments just like other exceptional learners face challenges in their education. Studies in Zambia have shown the existence of learning barriers for learners with hearing impairments that have affected their educational pursuit and academic performance over the years.Communication barriers (Kamukwamba, 2018), lack of sign language interpreters and limited vocabulary among deaf learners, challenges with standardized assessments ,lack of adequate knowledge and skills to teach learners with hearing impairments by some teachers and existence of unqualified and/or incompetent teachers (Ndonyo, 2019,insufficient resources both human and material, inappropriate infrastructure and the use of inappropriate teaching methods are some of the barriers to the education of learners with hearing impairments(Muzata & Mahlo,2019).

Hearing Impaired Children face multiple problems regarding to Acquisition of Basic skills. Hearing impairment produces different problems and adversely impacts on basic skills.Several studies indicate that children with Hearing impairment are at greater risk for behavioural problems ,emotional difficulties and delays in academic achievement. So,there is need to identify those problems which are faced by hearing impaired children regarding to acquire the basic skills. This study aims to identify the problems faced by children with hearing impairment in acquisition of basic skills including intellectual, social, academic, psychological, communication and also explore the possible solutions.

Material and Methods

Research Design

In this study a quantitative research design was selected to identify the problems of children with hearing impairment in acquisition of basic skills. Basically, the purpose to choosing the quantitative research was to attain greater and detail information about problems.it was also helpful for processing and analyzing the data in detail.

Population

Population is a group of people or persons having some characteristics. The Sample is a group of people which represent the whole population. The quantitative component involve educators of children with hearing impairments. The sample population was consisted of children with hearing impairments between the 3rd to 5th grade.

Sample

The sample for quantitative data selected special education teachers teaching in different public and private schools of hearing impaired children in Punjab. The total number of sample were 110 teachers. The data was collected from different schools of Punjab province.

Table2
Sample Distribution

Sr#	Description	Numbers
1	Districts of Punjab (Lahore, Multan, Okara,)	3
2	Public Sectors	8
3	Private Sectors	3
4	Sample of Study	110

Research Tool

A questionnaire on five point Likert type scale was developed and administered on teachers. This questionnaire included 35 statements on five components.These components included cognitive problems,psychological problems,social problems ,communication problems and academic problems. The estimated reliability of the tool was 0.86 (Cronbach's alpha). The questionnaire was validated by a panel of five experts.

Table3
Conceptual Frame Work of the Study

Cognitive	Social	Academics	Psychological	Communication
Problem solving	Cooperation	Reading	Emotions	Verbal
Critical thinking	Leadership	Writing	Behaviors	Non-verbal
Intelligence	Making connections	Mathematics	Coping with stress	Visual
Decision making	Interpersonal relationships	Scientific concepts	Self-esteem	Gestures
Attention	Team work	Computational skills	Attitudes	Facial expression
Creativity	Collaboration	Learning	Self-confidence	Manual communication
Reasoning	Cooperation	English	Self -awareness	Written form

Data Collection

Data was collected personally by visiting schools, through Google forms, social media, online meetings, and e-mail. After the collection of data,it was analyzed in frequencies and percentages. The questionnaire was distributed among 145 teachers of children with hearing impairment. Out of which 110 questionnaires were received.

Data Analysis

The research was descriptive in nature . A questionnaire was utilized as an instrument to collect data for this research. Independent sample *t*-test and One Way ANOVA was used to find differences in the opinions of teachers regarding identification of problems of children with hearing impairment in acquisition of basic skills and finding out their solutions on the basis of gender, experience, qualifications, classes and institutes.

Table 4
Frequency Distribution on the basis of Demographics

Description	Description	Frequency	Percent
Gender	Male	31	28.2
	Female	79	71.8
Class	Class 3	42	38.2
	Class 4	36	32.7
	Class 5	32	29.1
Age	21-25	5	4.5
	26-30	27	24.5
	31-35	29	26.4
	36-40	26	23.6
	41-45	17	15.5
	46-50	6	5.5
Qualification	Masters	68	61.8
	M.Ed	9	8.2
	M.Phil	29	26.4
	Ph.D	4	3.6
Schools	Govt. School	76	69.1
	Private School	34	30.9
Experience	1-5	36	32.7
	6-10	36	32.7
	11-15	21	19.1
	16-20	17	15.5

Table 5
Frequency Distribution of the Special Education Teachers' Responses

Sr.#	Questions	Strongly Disagree		Disagree		Neutral		Agree		Strongly agree	
		F	%	F	%	F	%	F	%	f	%
1	CHI experience difficulties with memory	3.6		30.9		13.6		42.7		9.1	
2	CHI experience difficulties with attention and concentration.	3.6		33.6		17.3		38.2		7.3	
3	CHI experience May Struggle with problem-solving.	1.8		39.1		15.5		37.3		6.4	
4	CHI Experience difficulties with organization and Planning.	5.5		53.6		9.1		30.0		1.8	
5	CHI May Struggle with self-monitoring and self-regulation.	8.2		51.8		8.2		30.0		1.8	
6	CHI Exhibit unsatisfactory performance in executive functioning.	9.1		47.3		15.5		23.6		4.5	

7	CHI Have been found to experience anxiety or depression as a result of their condition.	5.5	27.3	22.7	36.4	8.2
8	CHI Encounter bullying or teasing from others.	3.6	28.2	13.6	44.5	10.0
9	CHI May struggle to cope with the emotional and psychological impact of their condition.	0	21.8	18.2	55.5	4.5
10	CHI May face stigma and discrimination in society.	4.5	16.4	13.6	50.0	15.5
11	CHI May require additional support and accommodation in their daily lives.	3.6	20.0	11.8	52.7	11.8
12	CHI Can lead fulfilling lives with appropriate Support and intervention.	3.6	11.8	8.2	57.3	19.1
13	CHI May experience difficulties when participating in group activities, which can be different from their peers who don't have hearing impairment.	2.7	22.7	12.7	53.6	8.2
14	CHI May feel left out of conversations or activities with people who have normal hearing due to their impairment.	0	18.2	21.8	47.3	12.7
15	CHI May have difficulty forming close relationships with their family members who don't have hearing impairment.	09	28.2	18.2	44.5	8.2
16	CHI May experience social discrimination when compared to their peers without hearing impairment.	.9	24.5	12.7	51.8	10.0
17	CHI Feel comfortable making friendship with normal peers	.9	35.5	16.6	40.0	7.3
18	CHI often feel downhearted and experience low self-esteem when they are bullied by their peers who don't have hearing impairment.	0	25.5	19.1	48.2	7.3
19	CHI cannot express their feelings due to the challenges of communication.	2.7	29.1	11.8	45.5	10.9
20	CHI cannot express their point of view effectively to hearing people.	2.7	22.7	12.7	49.1	12.7
21	CHI May experience difficulties with attention and focus in the classroom due to language barriers resulting from their hearing difficulties.	3.6	17.3	15.5	50.9	12.7
22	CHI May have weak bonds with their parents and siblings Due to communication gaps.	2.7	31.8	17.3	40.9	7.3
23	The use of sign language or other forms of visual communication can improve the communication of CHI.	1.8	8.2	9.1	49.1	31.8
24	Assistive technologies such as hearing aids or cochlear implants can enhance the communication of CHI.	3.6	10.0	8.2	52.7	25.5
25	CHI May have week bonds with the Teachers and Peers in school.	6.4	39.1	16.4	25.5	12.7
26	CHI Often face difficulties understanding lectures in inclusive class.	4.5	26.4	18.2	40.0	10.9

27	CHI May require additional assistance in order to meet academic demands.	.9	9.1	10.9	58.2	20.9
28	CHI may Have difficulty in reading and writing compared to their hearing peers.	2.7	8.2	13.6	54.5	20.9
29	CHI Struggling with phonics & phonemic awareness skills in reading.	.9	7.3	16.4	50.9	24.5
30	A lack of access to assistive technology and specialized educational resources hinder CHI in reading and writing.	.9	11.8	10.9	51.8	24.5
31	CHI May experience difficulties with spelling Grammar, and sentence structure when writing	.9	10.0	10.9	55.5	22.7
32	CHI often have difficulty to reading the lengthy paragraphs	0	14.5	12.7	50.0	22.7
33	Early intervention and specialized instruction can	0	7.3	14.5	47.3	30.9
34	CHI May have difficulty staying focused during instructions, Particularly in a noisy or busy classroom environment.	.9	20.9	13.6	45.5	19.1
35	CHI May feel exhausted at the end of the school day.	5.5	31.8	25.5	25.5	11.8

Table 6
ANOVA for Differences in Mean Scores of special Education teachers on the basis of Age

	Sum of Squares	*df*	Mean Square	*f*	Sig.
Cognitive problems Between Groups	.875	5	.175	.406	.844
Within Group	44.821	104	.431		
Psychological problems Between Groups	1.831	5			
Within Group	45.175	104			
Social problems Between Groups	1.534	5	.3.07	.861	.510
Within Group	37.072	104	.0356		
Communication problems Between Groups	2.747	5	.549	1.203	.313
Within Group	47.52	104	.457		
Academic problems Between Groups	.715	5	.143	.380	.861
Within Group	39.129	104	.376		

Table 4, showed that there was no statistically significant difference among the responses of special education teachers regarding 5 problems on the basis of their age: F= .406;p=.844 (cognitive problems), F=.843;p=.522(psychological problems) , F =.861;p = .510 (social problems), F=.861; p=.313,(communication problems) , F= .380;p=.861 (Academic problems).

Table 7
ANOVA for Differences in Mean Scores of special Education teachers on the basis of Experience

	Sum of Squares	*df*	Mean Square	*f*	Sig.
Cognitive problems Between Groups	.434	3	.145	.339	.797
Within Group	45.262	106	.427		
Psychological problems Between Groups	1.4773	3	.492	1.146	.334
Within Group	45.530	106	1.146		
Social problems Between Groups	.390	3	.130	.360	.782
Within Group	38.216	106	.361		
Communication problems Between Groups	1.984	3	.661	1.452	.232

Within Group	48.285	106	.456		
Academic Problems Between Groups	1.794	3	.598	1.665	.179
Within Group	38.050	106	.359		

Table 5 showed that there was no statistically significant difference among the responses of special education teachers regarding five problems on the basis of their Experience: F= .339;p=.797 (cognitive problems), F=1.146;p=.334(psychological problems) , F =.360;p .782(social problems), F=.1.452; p=.2.32,(communication problems) , F= .1.665;p=.179 (Academic problems).

Table 8
ANOVA for Differences in Mean Scores of special Education teachers on the basis of Qualification

	Sum of Squares	*df*	Mean Square	*f*	Sig.
Cognitive problems Between Groups	2.144	3	.715	1.739	.163
Within Group	43.552	106	.411		
Psychological problems Between Groups	1.642	3	.547	1.279	.286
Within Group	45.364	106	.428		
Social problems Between Groups	.496	3	.165	.460	.711
Within Group	38.110	106	.360		
Communication problems Between Groups	1.136	3	.379	.817	.487
Within Group	49.133	106	.464		
Academic Problems Between Groups	.398	3	.133	.357	.784
Within Group	39.446	106	.372		

Table 6, showed that there was no statistically significant difference among the responses of special education teachers regarding 5 problems on the basis of their Experience: F= .1.739;p=.163 (cognitive problems), F=1.279;p=.286(psychological problems) , F =.460;p = .711(social problems), F=.817; p=.487,(communication problems) , F= .357;p=.784 (Academic problems).

Table 9
ANOVA for Differences in Mean Scores of special Education teachers on the basis of classes

	Sum of Squares	*df*	Mean Square	*f*	Sig.
Cognitive problems Between Groups	.748	2	.374	.890	.414
Within Group	44.948	107	.420		
Psychological problems Between Groups	1.415	2	.708	1.661	.195
Within Group	45.591	107	.426		
Social problems Between Groups	.791	2	.396	1.119	.330
Within Group	37.815	107	.353		
Communication problems Between Groups	2.167	2	1.083	2.410	.095
Within Group	48.102	107	.450		
Academic Problems Between Groups	.632	2	.316	.863	.425
Within Group	39.211	107	.366		

Table 7, showed that there was no statistically significant difference among the responses of special education teachers regarding 5 problems on the basis of their Experience: F= .890;p=.414 (cognitive problems), F=1.661;p=.195(psychological problems) , F =1.119;p = .330(social problems), F=.2.410; p=0.95,(communication problems) , F= .863;p=.425 (Academic problems).

Table 10
Independent Sample t-test for Comparison of Teachers' Responses on the Basis of institutes

	Public or Private	*N*	*m*	*Sd*	*df*	*T*	*Sig*
Cognitive Problems	Public	76	2.8355	.61794	.108	-1.72	.088
	Private	34	3.0637	.69269	57.475	1.650	.104
Psychological Problems	Public	76	3.4035	.66570	.108	1.002	.319
	Private	34	3.5392	.63572	66.29	1.020	.312
Social Problems	Public	76	3.3860	.57362	.108	.188	.851
	Private	34	3.3627	.64936	57.006	.180	.858
Communication Problem	Public	76	3.4624	.63839	.108	.387	.700
	Private	34	3.5168	.77133	54.090	.360	.720
Academic Problems	Public	76	3.7684	.58838	.108	1.379	.171
	Private	34	3.5971	.63221	59.592	1.342	.185

Table 8, indicates that an independent sample t-test was conducted using Leven's test of equality of variance to compare the opinion of teachers about the problems of hearing impaired children on the basis of public and private schools. There was no significant difference present in the mean scores of public and private school teachers.

Table 11
Independent Sample t-test for Comparison of Teachers' Responses on the Basis of Gender

	Gender	N	M	Sd	df	T	Sig
Cognitive Problems	Male	31	2.8817	.52386	.108	-.246	.050
	Female	79	2.9156	.69280	72.224	-277	72.224
Psychological Problems	Male	31	3.3763	.57730	.108	-.690	.4339
	Female	79	3.4726	.68689	64.888	-744	64.888
Social Problems	Male	31	3.3925	.53498	.108	-150	.784
	Female	79	3.3734	.62030	63.234	.160	63.234
Communication Problems	Male	31	3.3272	.53983	.108	-1.479	.522
	Female	79	3.5379	.72083	72.933	1.675	72.933
Academic Problems	Male	31	3.5839	.52415	.108	-1.437	.911
	Female	79	3.7671	.62894	64.4421	-1.556	65.442

Table 9, indicates that an independent sample t-test was conducted using Leven's test of equality of variance to compare the opinion of teachers about the problems of hearing impaired children on the basis of their gender. There was no significant difference present in the mean scores of male and female teachers.

Findings

The primary research objective was to identify the problems faced by children with hearing impairments in the acquisition of basic skills. Children with hearing impairments are facing a lot of problems related to different skills, like cognition, social, behavioural, and academic issues. The main issue facing children with hearing impairments is the communication gap. There is a strong relationship between language, reading, and writing. If language skills are delayed for any reason, literacy will automatically be affected.

The descriptive data shows that children with hearing impairments have no type of cognitive problem. Like the majority of the teachers, 40.9% disagree that children with hearing impairments may struggle with problem solving. 59.1% of teachers disagree that

children with hearing impairments experience difficulties with organization and planning. 60% of the teachers disagree that children with hearing impairments may struggle with self-monitoring and self-regulation. 56.4% of teachers disagreed that children with hearing impairments show unsatisfactory performance in executive functioning.

However, the majority of the teachers agreed that children with hearing impairments are facing psychological and social problems. Likely, 59% agreed that children with hearing impairments may struggle to cope with the emotional and psychological impact of their lives. 50% agreed, and 15% strongly agreed, that children with hearing impairments experience stigma and discrimination by society. It means discrimination will affect a child's personal life. 55% agreed, and 11.5% strongly agreed, that they required accommodation and additional support in their daily lives. 57.3% agreed, and 19% strongly agreed, that children with hearing impairments can lead fulfilling lives with appropriate support and early interventions. The majority of the teachers agreed that 3rd to 5th grade children with hearing impairments are facing social problems. Likely, 53.6 agreed that children with hearing impairments experienced difficulty in group and social activities. But mostly teachers responded that they haven't had any issues making friends with normal peers. 55% of teachers agreed that children with hearing impairments were bullied by society.

The majority of the special education teachers agree that children with hearing impairments face all these problems due to a lack of communication. The main reason is that there is a gap between children with hearing impairments and their normal peers, and this gap occurs due to language delay. The majority of the teachers (55% agreed) agreed that they cannot express their feelings due to a lack of communication, and they have a week to bond with their parents.

As researchers, we have observed one thing: children with hearing impairments experience different problems in their lives, but the major and main problem they are facing is academic. Research has shown that 3rd to 5th grade children with hearing impairments can't understand scientific and mathematical concepts due to language delays. Most of the children need an IEP to understand the concepts of Mathematics. The majority of the teachers (58.2% agreed) and 20% strongly agreed that they may require additional support in order to meet their academic achievements. 54.9% agree and 20.9% strongly agree that they have experience in reading, writing, and phonemic awareness. The majority of the teachers (70%) responded that children with hearing impairments have experienced difficulty with grammar and sentence structure when writing. So all these findings show that children with hearing impairments are facing all these issues related to basic skills just due to the language barrier. If parents focus on early intervention and timely provide any type of language that can be adopted by a hearing-impaired child according to his level, then we can resolve different types of problems

Possible Solutions

The third research objective was to explore possible solutions related to the difficulties that children with hearing impairments face in the acquisition of basic skills. This research shows that 3rd to 5th grade children with hearing impairments are facing a lot of problems, like psychological, social, academic, and communication ones. But there is no issue with their cognition. They are facing these problems due to their communication gap. So we should try to remove this gap through early intervention and different types of services.

Early Intervention

Early identification and early intervention play a fundamental role in the lives of children with hearing impairments. Early intervention for children with hearing loss includes otorhinolaryngological services, developmental pediatric services, audio logical services, family-centered early intervention programs, therapeutic services, psychological counselling, or parent-organized self-help organizations. Identifying hearing loss within the first 3 years allows for timely facilitation and reduces the potential delay in language and other types of development. Most of the parents are normal, but their child has a hearing problem. In this case, the parents have no idea how to communicate with their child. Therefore, it is extremely important to clearly define the most appropriate early interventions for children with hearing impairments. For this purpose, every child should be examined after birth so we can provide different types of services according to their problem.

Use of Assistive technology

Assistive technology is crucial in providing support for children with hearing impairments in acquiring the basic skills. Assistive technology for children with hearing impairments helps promote listening skills and recognizing sounds. Assistive devices such as hearing aids, cochlear implants, F.M. systems, communication apps and software, Vibrating Alerts and Visual Signal Devices, and educational software and apps can be used to enhance communication skills.

Role of Speech therapy

Plays an important role in developing communication skills for children with hearing impairments. Speech therapists also know about the different phases of language development and the generalization of speech. It's too important after cochlear implantation. A speech therapist also works as a counsellor for the socialization of children with hearing impairments.

Communication strategies

There are different types of communication strategies that should be used for children with severe to profound hearing impairments. Such systems as AAC (augmentative and alternative communication systems) empower the children to express themselves and interact with normal peers .

Providing trained Teachers

Teachers play an essential role in the education of children with hearing impairments. Teaching learners with hearing impairments requires highly qualified teachers with knowledge and skills in special education. A qualified teacher for hearing-impaired children should know about the different methods, techniques, strategies, and communication techniques and make adaptations to the curriculum per the requirements of the students. The teacher should assess the diverse needs of students and then focus on adaptation and accommodations.

Conclusion

The study was conducted to explore the'' identification of problems faced by children with hearing impairment in the acquisition of basic skills: exploration of possible solutions'. The research has been focused on identifying the problems of 3rd to 5th grade

children with hearing impairments. Five problems—cognitive, psychological, social, communication, and academic—have been identified in this research. Results revealed that children with hearing impairments have no type of problem with their cognition. They are facing psychological, social, and academic problems due to language barriers.

Recommendations

Based on the findings of the study, it was recommended that

The government should provide different types of assessment tools in public schools and hospitals.

1. Parents should be aware of the importance of early assessment and early interventions.
2. Technology should be improved in class for children with hearing impairments.
3. The government and stakeholders should provide trained teachers for children with hearing impairments.
4. Monthly PTM should be arranged in schools for children with hearing impairments.
5. There should be proper supervision and checking for formative assessment in schools.
6. Special education teachers should focus on accommodations and adaptations according to the level of hearing impairment in their students. There should be a focus on alternative methods for speech, such as sign language, total communication, etc.

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