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ATTITUDE OF PARENTS TOWARDS THE USE OF COCHLEAR IMPLANT AMONG STUDENTS WITH HEARING IMPAIRMENT SPECIAL SCHOOLS IN RIVERS-EAST SENATORIAL DISTRICT, RIVERS STATE

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Abstract

This study investigated the attitude of parents towards the use of cochlear implant among students with hearing impairment special schools in Rivers-East Senatorial District, Rivers State. The study adopted descriptive research design. The study was guided by five (5) objectives, five (5) research questions and five (5) null hypotheses. The population of the study comprised 130 parents of children with hearing impairment in special schools in Rivers-East Senatorial District. The sample size was 130 parents of children with hearing impairment in special schools. Census sampling technique was used for the study. The instrument for data collection was a structured questionnaire, titled: "Parental Attitude towards use of Cochlear Implant Questionnaire" (PACIQ)". The instrument was validated by two experts one in Measurement and Evaluation and the other in Special Needs Education. The reliability of the instrument was determined through test re-test reliability method which yielded r=0.77. Mean and standard deviation were used to answer the research questions and Independent t-test was used to test the null hypotheses at 0.05 level of significance. The study revealed that there was positive attitude of parents towards the use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State irrespective of gender, economic status, family size, marital status and educational qualifications. The study further

Keywords: Attitude, cochlear implant, hearing, impairment, students, special, use

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revealed that there was no significant difference in the mean rating of parents towards the use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State irrespective of gender, economic status, family size, marital status and educational qualifications. It was recommended among others that; Government should collaborate with international and private organizations to provide cochlear implants for low socioeconomic status families who are desirous to see their children make use of cochlear implant.

Introduction

Profound deafness in childhood affects the development of auditory speech perception, speech production, and language skills. Failure to develop adequate oral communication skills can have a significant negative effect on academic performance and psychosocial development in these children. A cochlear implant (CI) is an electronic prosthetic device that is surgically placed in the inner ear to provide useful sound perception by electrically stimulating the auditory nerve. It has been proved to be an effective management device for children with bilaterally severe-to-profound sensorineural hearing loss receiving limited benefit from hearing aids. Cochlear implants are electronic devices that can provide a sense of sound to individuals with severe hearing loss or deafness. Thakome (2020) revealed that cochlear implants are remarkable pieces of technology designed to provide a sense of sound to individuals with profound hearing loss or deafness. Diodemise and Sanikpege (2024) added that unlike hearing aids, which amplify sounds, cochlear implants bypass damaged portions of the ear and directly stimulate the auditory nerve to send signals to the brain. This process enables recipients to perceive sound and speech, giving them access to an essential aspect of human communication and connection.

Patora (2022) noted that cochlear implants has revolutionized the field of hearing rehabilitation by offering a transformative solution for individuals who do not benefit from traditional hearing aids. People of all ages, from young children to older adults, may be candidates for cochlear implants if they have severe to profound sensorineural hearing loss or bilateral deafness. Patora added that by restoring the ability to hear and understand speech, cochlear implants can significantly improve quality of life, social interactions, educational opportunities, and employment prospects for its recipients such as students.

Despite the incredible advancements in cochlear implant technology, challenges and controversies persist. Some individuals within the deaf community view cochlear implants as a threat to cultural identity and sign language use, sparking debates about the ethics of implantation in children and the promotion of linguistic diversity (Mustapha, 2022). Additionally, access to cochlear implants remains limited in many parts of the world due to financial constraints, healthcare disparities, and lack of awareness about hearing loss treatments. Jakdor (2021) raised concerns on possible misuse and disuse of cochlear implants by children and students alike which may be due to lack of encouragement and support on its usage which may have been orchestrated by negative attitude from parents. The decision to implant a cochlear device in a child often involves emotional, social, and cultural considerations that can influence parental attitudes and perceptions.

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Attitude refers to predisposition, perception or response of an individual towards an animate or inanimate object, event, subject or person among others. Niede (2017) defined attitude as one's positive or negative judgment about a concrete subject. Hassan (2020) disclosed that this shows that parents attitude towards use of cochlear implant by students with hearing impairment could be described as their positive or negative predisposition or perception about students with hearing impairment use of cochlear implant. Several studies have indicated that parents' attitude towards persons with disability in general was negative. Eastern (2020) stated that attitude is a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour as it involves three components: emotional component (how the object, person, issue or event makes you feel), cognitive component (your thoughts and beliefs about the subject) and behavioral component, (how the attitude influences your behavior towards the object).

Parents of students with hearing impairment are among those negatively affected by the disability as families often lament of their difficulties in been able to see this young ones excel in their academics and social life. The parents of students with hearing impairment suffer from psychological tension resulting from their feeling that their child does not possess the same potential as the regular/hearing children. Restly (2020) evinced that this case makes the parents in need of assistance; therefore, most programs/interventions such as; use of cochlear implant consider that parental acceptance and attitude are the most important resource that help facilitate students adoption of cochlear implant.

The attitude of parents towards the use of cochlear implants can vary significantly based on a multitude of factors. Some parents may see cochlear implants as a life-changing technology that can greatly improve their child's quality of life by enabling them to hear and communicate effectively. They may view the implant as a means to provide their child with access to sound, speech, and language development opportunities that they would not have otherwise. Edem (2020) disclosed that, some parents may have concerns or reservations about cochlear implants. Diodemise and Sanikpege (2025) added that these concerns could stem from worries about the surgical procedure, potential risks associated with the implant, financial considerations, cultural beliefs, or fear of the unknown. Some parents may also grapple with the decision of whether to pursue a cochlear implant for their child due to concerns about the impact on their child's identity within the deaf community.

Parents' attitudes towards cochlear implants is rooted in the importance of understanding parental perceptions and decision-making processes regarding this technology for their children with hearing loss. Parents play a crucial role in the decision to pursue cochlear implantation for their child, as it involves a significant medical intervention that can have long-lasting impacts on the child's quality of life. Adebanju (2021) evinced that it is essential for healthcare providers and professionals to approach discussions about cochlear implants with sensitivity, empathy, and a deep understanding of the complex emotions that parents may experience. Providing comprehensive information, support, and guidance can help parents make informed decisions that align with the best interests of their child. Ebuka (2019) disclosed that parents support for the use of cochlear implant by their children with hearing impairment holds great benefits such as;

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employment, good social status, self-confidence, academic success, positive family connections, job satisfaction and life satisfaction.

Ultimately, the attitude of parents towards the use of cochlear implants is deeply personal and nuanced. Ubani and Sanikpege (2023) revealed that by fostering open and honest communication, offering support throughout the decision-making process, and respecting the autonomy of parents to make choices that they believe are in the best interest of their child, healthcare professionals can play a crucial role in supporting families on their journey towards embracing cochlear implant technology. However there remains a research gap from international and local literature alike on the possible attitude of parents towards the use of cochlear implant by their wards who are hearing impaired. Therefore, this study sought to investigate the attitude of parents towards the use of cochlear implant among students with hearing impairment special schools in Rivers-East Senatorial District, Rivers State.

Statement of the Problem

The researcher observes that students with hearing impairment face significant challenges in the classroom, as traditional teaching methods may not effectively accommodate their needs. Without proper intervention, these students may struggle to access and understand educational content, leading to academic difficulties, hindered quality interpersonal relationship and general poor communication. Cochlear implants have been identified as a potentially effective solution for improving hearing abilities in these students, yet there is a lack of awareness and accessibility to this technology for students who could benefit from it. This issue highlights the necessity of addressing the barriers that prevent students with hearing impairment from obtaining cochlear implants to ensure they have equal opportunities for learning, academic success, communication and quality intrapersonal relationship. The researcher observes that one of the key decision makers and stakeholders in the actualization of technological adaptation and use by students with hearing impairment is the parents.

Further observation by the researcher reveals that the emotional preparation for expectant parents is usually shaped by a glamorous image of the baby, a kind of ego ideal. The discrepancy between the perfect child of their fantasy and the real child may be the cause for negative attitudes and parenting choices. Often a range of emotions, such as denial, guilt, blame, frustration, anger and despair, sweep through the parents as they are confronted by their child with hearing impairment. Loss of hope for the 'perfect child' causes grief, and over time the feeling is heightened by loneliness, isolation, and exhaustion and may even lead to negative display of attitude towards issues relating to the child with hearing impairment which may include decision on the child's use of cochlear implant. The researcher further observes that many parents frequently over-protect their child and feel guilty that they are responsible for the child's hearing loss, many parents may have less interest in seeing their children make use of a cochlear implant which may significantly affects the children's communication, interpersonal relationship and educational progress. The feelings expressed by parents if not properly managed may result into a negative attitude towards the children with hearing impairment and their use of cochlear implant. Hence the study sought to investigate the attitude of parents towards the use of cochlear

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implant among students with hearing impairment special schools in Rivers-East Senatorial District, Rivers State.

Aim and Objectives of the Study

The aim of the study was to investigate the attitude of parents towards the use of cochlear implant among students with hearing impairment special schools in Rivers-East Senatorial District, Rivers State. Specifically, the study intended to:

1. find out the attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State based on gender
2. determine the attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State based on socioeconomic status
3. examine the attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State based on family size
4. ascertain the attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State based on marital status
5. determine the attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State based on educational qualifications

Research Questions

The following research questions guided the study.

1. What is the mean rating of the attitude of parents towards the use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State based on gender?
2. What is the mean rating of the attitude of parents towards the use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State based on socioeconomic status?
3. What is the mean rating of the attitude of parents towards the use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State based on family size?
4. What is the mean rating of the attitude of parents towards the use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State based on marital status?
5. What is the mean rating of the attitude of parents towards the use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State based on educational qualifications?

Hypotheses

The following null hypotheses were formulated to further guide the study.

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1. There is no significant difference in the mean rating on male and female parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State
2. There is no significant difference in the mean rating on high economic status and low socioeconomic status parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State
3. There is no significant difference in the mean rating on small family size and large family size parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State
4. There is no significant difference in the mean rating on married and single parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State
5. There is no significant difference in the mean rating on formally educated and informally educated parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State

Methodology

This study adopted descriptive survey design. The study was conducted in Rivers-East Senatorial District, Rivers State. The population of the study consisted of 130 parents of children with hearing impairment in special schools in Rivers-East Senatorial District, Rivers State. The sample size used for the study was 130 parents of children with hearing impairment in special schools in Rivers East Senatorial District. Census sampling technique was used to select the entire 130 parents of children with hearing impairment in Rivers East Senatorial District. The instrument for data collection was developed by the researcher titled "Parental Attitude towards use of Cochlear Implant Questionnaire" (PACIQ). The PACIQ contained two (2) sections. Section A; contained bio-data of the respondents such as parents gender, parents martial status, parents economic status, family size, parents educational qualification. Section B; contained items on attitude of parents towards use of cochlear implant. The "Parental Attitude towards use of Cochlear Implant Questionnaire" (PACIQ) had a total of 15 item statements. The "Parental Attitude towards use of Cochlear Implant Questionnaire" (PACIQ) was structured on a four point modified Likert Scale of Strongly Agree (SA) = 4, Agree (A) = 3, Disagree (D) = 2, and Strongly Disagree (SD) = 1. The reliability of the instrument (PACIQ) was determined using test re-test reliability method which yielded a reliability index of r=0.77. The data collected were analyzed using mean and standard deviation to answer the research questions and Independent t-test to test the null hypotheses at 0.05 level of significance. The data collected were analysed with the aid of Statistical Package for Social Science (SPSS) version 25.0.

Socio-demographic Information of the Respondents

Variable	N	%	Mean	Standard Deviation
Male	56	43.1		
Female	74	56.9	1.44	.402
Total	130	100.0		

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The table shows gender distribution of the respondents. It shows that 130 respondents participated in the study. There were 74 female representing 56.9% and 56 male representing 43.1% in the study. The mean of the distribution is 1.44 while the standard deviation is .402. The data shows that there were more female than male respondents in the study.

Research Question One: What is the mean rating of the attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State based on gender?

Table 1: Mean and Standard Deviation Showing Mean Rating of the Attitude of Parents towards Use of Cochlear Implant among Students with Hearing Impairment in Rivers-East Senatorial District, Rivers State based on Gender

S/N	Items	Male N=56		Female N=74	
		$\bar{X}$	SD	$\bar{X}$	SD
1	As a parent one way I can help my child maintain quality interpersonal relationship is through providing the child cochlear implant	3.99	0.66	2.86	0.47
2	As a parent, I am willing to help my child overcome communication difficulties through the use of cochlear implant	2.85	0.33	3.38	0.79
3	The use of cochlear implant may cause further hearing difficulty for my child	2.90	0.87	3.08	0.95
4	I am worried the use of cochlear implant may negatively affect the health of my child	2.82	0.88	3.24	0.85
5	I am willing to encourage other parents during PTA meetings to adopt the use of cochlear implant for their children with hearing difficulty	3.09	0.98	3.08	0.82
6	I would feel guilty and blame myself if I do not assist my child get a cochlear implant	2.71	0.56	2.90	0.85
7	Accepting a special teacher and special learning aid such as cochlear implant is necessary for helping my child	3.74	0.37	2.92	0.66
8	Having a child with hearing impairment is not a curse and am willing to help the child use cochlear implant	2.88	0.10	2.81	0.89
9	I feel the best way to help my child adjust socially is through the use of cochlear implant	2.50	0.40	3.65	0.85
10	To help my child succeed academically I am willing to aid his use cochlear implant	3.57	0.45	2.85	0.73
	Grand Mean/SD	**3.10**	**0.63**	**3.00**	**0.55**

(Criterion Mean=2.50)

Table 1 shows the mean rating of the attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State based on gender. Specifically the result indicates that the grand mean for male parents as $(\bar{X} = 3.10; \mathrm{SD} = 0.63)$, female parents as $(\bar{X} = 3.00; \mathrm{SD} = 0.55)$ which is higher than the criterion mean of (>2.50). This further indicates that there is positive attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State irrespective of gender.

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Research Question Two: What is the mean rating of the attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State based on socioeconomic status?

Table 2: Mean and Standard Deviation Showing Mean Rating of the Attitude of Parents towards Use of Cochlear Implant among Students with Hearing Impairment in Rivers-East Senatorial District, Rivers State based on Socioeconomic Status

S/N	Items	High N=86		Low N=44	
		$\bar{X}$	SD	$\bar{X}$	SD
1	As a parent one way I can help my child maintain quality interpersonal relationship is through providing the child cochlear implant	2.90	0.64	3.61	0.88
2	As a parent, I am willing to help my child overcome communication difficulties through the use of cochlear implant	3.10	0.33	3.17	0.61
3	The use of cochlear implant may cause further hearing difficulty for my child	3.71	0.65	2.66	0.73
4	I am worried the use of cochlear implant may negatively affect the health of my child	3.04	0.72	3.10	0.42
5	I am willing to encourage other parents during PTA meetings to adopt the use of cochlear implant for their children with hearing difficulty	2.90	0.85	2.84	0.55
6	I would feel guilty and blame myself if I do not assist my child get a cochlear implant	2.92	0.76	2.53	0.74
7	Accepting a special teacher and special learning aid such as cochlear implant is necessary for helping my child	2.81	0.89	2.99	0.70
8	Having a child with hearing impairment is not a curse and am willing to help the child use cochlear implant	3.00	0.85	2.72	0.91
9	I feel the best way to help my child adjust socially is through the use of cochlear implant	2.60	0.85	2.84	0.55
10	To help my child succeed academically I am willing to aid his use cochlear implant	2.52	0.76	2.53	0.74
	Grand Mean/SD	**3.06**	**0.26**	**3.12**	**0.88**

(Criterion Mean=2.50)

Table 2 shows the mean rating of the attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State based on socioeconomic status. Specifically the result indicates that the grand mean for parents with high SES as ($\bar{X} = 3.06; \mathrm{SD} = 0.26$), parents with low SES as ($\bar{X} = 3.12; \mathrm{SD} = 0.88$) which is higher than the criterion mean of (*>2.50*). This further indicates that there is positive attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State irrespective of socioeconomic status.

Research Question Three: What is the mean rating of the attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State based on family size?

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Table 3: Mean and Standard Deviation Showing Mean Rating of the Attitude of Parents towards Use of Cochlear Implant among Students with Hearing Impairment in Rivers-East Senatorial District, Rivers State based on Family Size

S/N	Items	1-3 N=56		4-Above N=74	
		$\bar{X}$	SD	$\bar{X}$	SD
1	As a parent one way I can help my child maintain quality interpersonal relationship is through providing the child cochlear implant	2.61	0.75	3.08	0.21
2	As a parent, I am willing to help my child overcome communication difficulties through the use of cochlear implant	2.67	0.99	3.88	0.64
3	The use of cochlear implant may cause further hearing difficulty for my child	3.66	0.58	3.00	0.57
4	I am worried the use of cochlear implant may negatively affect the health of my child	2.80	0.31	2.99	0.86
5	I am willing to encourage other parents during PTA meetings to adopt the use of cochlear implant for their children with hearing difficulty	3.84	0.84	3.08	0.21
6	I would feel guilty and blame myself if I do not assist my child get a cochlear implant	3.53	0.73	3.88	0.64
7	Accepting a special teacher and special learning aid such as cochlear implant is necessary for helping my child	2.69	0.76	3.08	0.21
8	Having a child with hearing impairment is not a curse and am willing to help the child use cochlear implant	3.72	0.41	3.88	0.64
9	I feel the best way to help my child adjust socially is through the use of cochlear implant	3.84	0.63	3.00	0.57
10	To help my child succeed academically I am willing to aid his use cochlear implant	3.53	0.41	2.99	0.86
	Grand Mean/SD	**3.46**	**0.90**	**2.71**	**0.56**

(Criterion Mean=2.50)

Table 3 shows the mean rating of the attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State based on family size. Specifically the result indicates that the grand mean for parents with small family size as ($\bar{X} = 3.46; \mathrm{SD} = 0.90$), parents with large family size as ($\bar{X} = 2.71; \mathrm{SD} = 0.56$) which is higher than the criterion mean of (>2.50). This further indicates that there is positive attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State irrespective of family size.

Research Question Four: What is the mean rating of the attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State based on marital status?

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Table 4: Mean and Standard Deviation Showing Mean Rating of the Attitude of Parents towards Use of Cochlear Implant among Students with Hearing Impairment in Rivers-East Senatorial District, Rivers State based on Marital Status

S/N	Items	Single N=23		Married N=107	
		$\bar{X}$	SD	$\bar{X}$	SD
1	As a parent one way I can help my child maintain quality interpersonal relationship is through providing the child cochlear implant	2.85	0.43	2.86	0.91
2	As a parent, I am willing to help my child overcome communication difficulties through the use of cochlear implant	2.90	0.87	2.35	0.12
3	The use of cochlear implant may cause further hearing difficulty for my child	2.82	0.48	3.16	0.91
4	I am worried the use of cochlear implant may negatively affect the health of my child	3.09	0.98	3.31	0.70
5	I am willing to encourage other parents during PTA meetings to adopt the use of cochlear implant for their children with hearing difficulty	2.85	0.43	3.31	0.36
6	I would feel guilty and blame myself if I do not assist my child get a cochlear implant	2.90	0.87	3.05	0.73
7	Accepting a special teacher and special learning aid such as cochlear implant is necessary for helping my child	2.85	0.43	3.01	0.70
8	Having a child with hearing impairment is not a curse and am willing to help the child use cochlear implant	2.90	0.87	3.26	0.97
9	I feel the best way to help my child adjust socially is through the use of cochlear implant	2.82	0.48	3.00	0.45
10	To help my child succeed academically I am willing to aid his use cochlear implant	3.09	0.98	3.16	0.95
	Grand Mean/SD	**2.99**	**0.66**	**3.00**	**0.43**

(Criterion Mean=2.50)

Table 4 shows the mean rating of the attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State based on marital status. Specifically the result indicates that the grand mean for single parents as ($\bar{X} = 2.99; \mathrm{SD} = 0.66$), married parents as ($\bar{X} = 3.00; \mathrm{SD} = 0.43$) which is higher than the criterion mean of *(>2.50)*. This further indicates that there is positive attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State irrespective of marital status.

Research Question Five: What is the mean rating of the attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State based on educational qualifications?

Table 5: Mean and Standard Deviation Showing Mean Rating of the Attitude of Parents towards Use of Cochlear Implant among Students with Hearing Impairment in Rivers-East Senatorial District, Rivers State based on Educational Qualifications

S/N	Items	Primary N=14		Secondary N=54		Tertiary N=62	
		$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
1	As a parent one way I can help my child maintain quality interpersonal relationship is through providing the child cochlear implant	2.75	0.43	3.14	0.55	3.00	0.91
2	As a parent, I am willing to help my child overcome communication difficulties through the use of cochlear implant	3.00	0.69	2.53	0.74	3.35	0.12

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S/N	Items	Primary N=14		Secondary N=54		Tertiary N=62	
		$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
3	The use of cochlear implant may cause further hearing difficulty for my child	3.10	0.82	2.99	0.70	3.14	0.91
4	I am worried the use of cochlear implant may negatively affect the health of my child	3.11	1.08	2.72	0.91	3.31	0.70
5	I am willing to encourage other parents during PTA meetings to adopt the use of cochlear implant for their children with hearing difficulty	3.08	1.01	2.85	0.63	2.71	0.46
6	I would feel guilty and blame myself if I do not assist my child get a cochlear implant	2.88	0.64	2.90	0.87	3.05	0.73
7	Accepting a special teacher and special learning aid such as cochlear implant is necessary for helping my child	3.00	0.57	2.82	0.38	3.01	0.70
8	Having a child with hearing impairment is not a curse and am willing to help the child use cochlear implant	3.19	0.86	3.09	0.98	3.16	0.97
9	I feel the best way to help my child adjust socially is through the use of cochlear implant	2.94	0.93	3.01	0.55	2.99	0.61
10	To help my child succeed academically I am willing to aid his use cochlear implant	2.54	0.95	3.00	0.56	2.96	0.95
	Grand Mean/SD	**3.55**	**0.64**	**3.19**	**0.33**	**3.10**	**0.82**

(Criterion Mean=2.50)

Table 5 shows the mean rating of the attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State based on educational qualifications. Specifically the result indicates that the grand mean for parents with only primary education as ($\bar{X} = 3.55; \mathrm{SD} = 0.264$), parents with secondary education as ($\bar{X} = 3.19; \mathrm{SD} = 0.33$), parents with tertiary education as $\bar{X} = 3.10; \mathrm{SD} = 0.82$) which is higher than the criterion mean of *(*>2.50). This further indicates that there is positive attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State irrespective of educational qualifications.

Test of Hypotheses

Hypothesis One: There is no significant difference in the mean rating of male and female parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State

Table 6: T-Test Analysis showing Significant Difference in the Mean Rating of Male and Female Parents towards Use of Cochlear Implant among Students with Hearing Impairment in Rivers-East Senatorial District, Rivers State

Gender	N	Mean	Standard deviation	Df	t-cal	P-value	Sig.	Remark
Male	56	10.33	0.86	128	.058	.070	0.05	Ho is Accepted
Female	74	11.62	0.53					

(Survey Data, 2025)

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From the results in table 6, it can be observed that at 0.05 level of significance and 128 degrees of freedom, t-cal =.058 and p-value = .070 >0.05 level of significance. Since the p-value = .070 >0.05 level of significance, the null hypothesis that there is no significant difference in the mean rating of male and female parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State is ***accepted.*** This means that, parents accepted the use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State irrespective of their gender.

Hypothesis Two: There is no significant difference in the mean rating of high economic status and low socioeconomic status parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State

Table 7: T-Test Analysis showing Significant Difference in the Mean Rating of High Economic Status and Low Socioeconomic Status Parents towards Use of Cochlear Implant among Students with Hearing Impairment in Rivers-East Senatorial District, Rivers State

Socioeconomic Status	N	Mean	Standard deviation	Df	t-cal	P-value	Sig.	Remark
High	86	12.73	0.79	128	.078	.060	0.05	Ho is Accepted
Low	44	14.34	0.42					

(Survey Data, 2025)

From the results in table 7, it can be observed that at 0.05 level of significance and 128 degrees of freedom, t-cal =.078 and p-value = .060 >0.05 level of significance. Since the p-value = .060 >0.05 level of significance, the null hypothesis that there is no significant difference in the mean rating of high economic status and low socioeconomic status parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State is ***accepted.*** This means that, parents accepted the use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State irrespective of their socioeconomic status.

Hypothesis Three: There is no significant difference in the mean rating of small family size and large family size parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State

Table 8: T-Test Analysis showing Significant Difference in the Mean Rating of Small Family Size and Large Family Size Parents towards Use of Cochlear Implant among Students with Hearing Impairment in Rivers-East Senatorial District, Rivers State

Family Size	N	Mean	Standard deviation	Df	t-cal	P-value	Sig.	Remark
1-3	56	12.01	0.83	128	.069	.080	0.05	Ho is Accepted
4-Above	54	15.11	0.92					

(Survey Data, 2025)

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From the results in table 8, it can be observed that at 0.05 level of significance and 128 degrees of freedom, t-cal =.069 and p-value = .080 >0.05 level of significance. Since the p-value = .080 >0.05 level of significance, the null hypothesis that there is no significant difference in the mean rating of small family size and large family size parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State is ***accepted.*** This means that, parents accepted the use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State irrespective of their family size.

Hypothesis Four: There is no significant difference in the mean rating of married and single parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State

Table 9: T-Test Analysis showing Significant Difference in the Mean Rating of Married and Single Parents towards Use of Cochlear Implant among Students with Hearing Impairment in Rivers-East Senatorial District, Rivers State

Marital Status	N	Mean	Standard deviation	Df	t-cal	P-value	Sig.	Remark
Married	107	13.84	0.29	128	.083	.070	0.05	Ho is Accepted
Single	23	15.25	0.28					

(Survey Data, 2025)

From the results in table 9, it can be observed that at 0.05 level of significance and 128 degrees of freedom, t-cal =.083 and p-value = .070 >0.05 level of significance. Since the p-value = .070 >0.05 level of significance, the null hypothesis that there is no significant difference in the mean rating of married and single parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State is ***accepted.*** This means that, parents accepted the use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State irrespective of their marital status.

Hypothesis Five: There is no significant difference in the mean rating of formally educated and informally educated parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State

Table 10: T-Test Analysis showing Significant Difference in the Mean Rating of Formally Educated and Informally Educated Parents towards Use of Cochlear Implant among Students with Hearing Impairment in Rivers-East Senatorial District, Rivers State

Educational Background	N	Mean	Standard deviation	Df	t-cal	P-value	Sig.	Remark
Formally Educated	98	10.33	0.78	128	.071	.060	0.05	Ho is Accepted
Informally Educated	23	12.45	0.95					

(Survey Data, 2025)

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From the results in table 10, it can be observed that at 0.05 level of significance and 128 degrees of freedom, t-cal =.071 and p-value = .060 >0.05 level of significance. Since the p-value = .060 >0.05 level of significance, the null hypothesis that there is no significant difference in the mean rating of formally educated and informally educated parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State is ***accepted.*** This means that, parents accepted the use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State irrespective of their educational background.

Discussion of the Findings

Attitude of Parents towards Use of Cochlear Implant among Students with Hearing Impairment in Rivers-East Senatorial District, Rivers State Based on Gender

The finding of research question one (Table 1) revealed that there was positive attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State irrespective of gender. Hypothesis one (Table 6) revealed that there was no significant difference in the mean rating of male and female parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State. The finding is in line with the study of Thakome (2020) who revealed that parents irrespective of gender had positive attitude towards the use of cochlear implant as they observed that children with cochlear implants demonstrated higher vocabulary knowledge than children without cochlear implant. The finding is not surprising to the researcher as most parents are often interested in and encourages technologies that would enhance the learning of their wards which may have been the reason for their positive attitude towards the children's use of cochlear implant.

Attitude of Parents towards Use of Cochlear Implant among Students with Hearing Impairment in Rivers-East Senatorial District, Rivers State Based on Socioeconomic Status

The finding of research question two (Table 2) revealed that there was positive attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State irrespective of socioeconomic status. Hypothesis two (Table 7) revealed that there was no significant difference in the mean rating of high economic status and low socioeconomic status parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State. The finding collaborates with the study of Abasi (2021) who revealed that parents despite differences in economic status acknowledged the use of cochlear implants after observed the challenges facing students with hearing loss without using assistive technology which included poor vocabulary in school, difficulty in understanding classroom instructions, difficulty of expression in a class by students with hearing loss, poor academic performance, and poor participation and engagement with their hearing counterparts in school activities among others. The similarities in the both finding may be due to the level of concern parents have towards their children either those with or without special needs as parents irrespective of the socioeconomic status are concerned about the welfare of their children and would go extra mile to purchase assistive technologies to assist their children cope with school and life generally.

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Attitude of Parents towards Use of Cochlear Implant among Students with Hearing Impairment in Rivers-East Senatorial District, Rivers State Based on Family Size

The finding of research question three (Table 3) revealed that there was positive attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State irrespective of family size. Hypothesis three (Table 8) revealed that there was no significant difference in the mean rating of small family size and large family size parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State. The finding is in agreement with the study of Hassan (2020); Sanikpege and Holydom (2025) who revealed that family size had no impact on parental attitude to the adoption of assistive aids for children with multiple disability and hearing problems as parents adopted the use of assistive technologies bas on their perception that cognitive effort of learners with cochlear implants influenced their capabilities to multitask and retain information, despite the effort they have to put into listening. The finding is however shocking to the researcher as the researcher expected that ordinarily, the cost of cochlear implant and related maintenance are high and most families with large family size may have developed negative attitude towards its usage in order to cost low on cost and channel the resource into training other hearing children.

Attitude of Parents towards Use of Cochlear Implant among Students with Hearing Impairment in Rivers-East Senatorial District, Rivers State Based on Marital Status

The finding of research question four (Table 4) revealed that there was positive attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State irrespective of marital status. Hypothesis four (Table 9) revealed that there was no significant difference in the mean rating of married and single parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State. The finding is in tandem with the study of Mustapha (2022); who revealed that parents income and marital stability positively influenced adoption of assistive aids to a great extent. The finding is not in any way surprising to the researcher as marital stability and marital status both share similar role in children's development as parents would be able to jointly provide the needed aids (cochlear implant) for students with hearing impairment.

Attitude of Parents towards Use of Cochlear Implant among Students with Hearing Impairment in Rivers-East Senatorial District, Rivers State Based on Educational Qualification

The finding of research question six (Table 6) revealed that there was positive attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State irrespective of educational qualification. Hypothesis six (Table 10) revealed that there was no significant difference in the mean rating of formally educated and informally educated parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State. The finding is in line with the study of Adebanju (2021) who revealed that parental occupation and parental education were facilitating factors to students use of assistive devices. The finding also aligns with the study of Niede (2017) who revealed that parental educational qualification and health statuses of the students were identified to have statistical significant effect on the use of assistive aids such as cochlear implant of the students.

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Conclusion

Based on the results of the study, the researcher concluded that there was positive attitude of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State irrespective of gender, economic status, family size, marital status and educational qualifications. The study further revealed that there was no significant difference in the mean rating of parents towards use of cochlear implant among students with hearing impairment in Rivers-East Senatorial District, Rivers State irrespective of gender, economic status, family size, marital status and educational qualifications.

Recommendations

Based on the findings of the study the researcher made the following recommendations:

1. Government should collaborate with international and private organizations to provide cochlear implants for low socioeconomic status families who are desirous to see their children make use of cochlear implant;
2. Members of the Parent Teachers Association (PTA) irrespective of their marital status should be adequately informed of the benefits associated with students use of cochlear implant;
3. It is further recommended that Government in collaboration with the Counselling Association of Nigeria (CASSON) should set-up counselling units in all public and private special schools in the state to help provide counselling to parents irrespective of their family size to understand the need for providing learning aids (cochlear implant) for their children especially those with hearing impairment
4. Since the study has revealed that educational qualification and gender relates to the positive attitude towards use of cochlear implant, Government at all levels in collaboration with World Health Organization (WHO) should intensify the campaign gender equality and education for all; as this would continue to promote positive attitude among parents towards the use of cochlear implant.

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