

Attitudes and Practices of Parents toward their Children Suffering from Hearing Impairment, using Hearing Aids and Challenges Facing them

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Abstract

Background: Hearing impairment (HI) is the commonest birth defect and it is usually difficult to be detected due to its invisible nature. It causes significant adverse effects on acquisition of speech and language, academic achievement as well as social and emotional development. **Aim:** to assess attitudes and practices of parents with children suffering from hearing impairment, using hearing aids and challenges facing them. **Subjects and Method: Design:** A descriptive study design was used. **Setting:** This study was conducted at the Hearing and Phonetics Outpatient Clinic at El Aeada El Shamlia Tanta University Hospital. **Subjects:** A convenient sample of 350 parents (281 mother and 69 father) with children using hearing aid were attending the pervious setting and willing to participate in the study were included. **Tool:** A structured interview schedule was used to collect the needed data it included four parts **Part I:** Socio-demographic characteristics of parents and their children. **Part 2:** attitudes of parents. **Part 3:** Reported practical hearing aids skills of parents. **Part 4:** Challenges facing the parents. **Results:** the most of the studied parents were had negative attitudes and only less than one tenth of them were had positive attitudes toward their children suffering from hearing impairment and using hearing aids. About three quarters of the studied parents had reported in adequate practices related to hearing aids skills for their children hearing aids, while about one quarter of them had reported adequate practices. **Conclusion and recommendation;** There was statistically significant positive correlation between parent attitudes regarding their hearing impairment children, attitudes regarding use of their children for hearing aids and reported practical hearing aids skills with children using hearing aids. Psychosocial rehabilitation program should be held for parents with children suffering from hearing impairment, using hearing aids to meet the needs of their children and improve their quality of life in cooperation with school health nurse.

Keywords: Hearing impairment, Attitude, Practice, Challenges

Introduction

Hearing loss is one of the most prevalent preventable health issues in the world. According to World Health Organization (WHO) 2019, 466 million people worldwide (4.5% of the world's population) suffer from hearing loss, 432 million of whom are adults and 34 million of whom are children. The majority of them reside in nations with low and moderate income. Children's hearing loss is caused by preventable factors in 60% of cases ⁽¹⁾. Accurately estimating hearing loss in children in Egypt is difficult due to

the recently established national hearing screening program and the reliance on academic studies conducted at hospitals. The prevalence of hearing loss in youngsters was previously reported to be 20.9% in the Egyptian neighbourhood of Shebin El-Kom. In order to ascertain the prevalence and risk factors for hearing loss in 6 randomly selected governorates in Egypt (Alexandria, Marsa-Matrouh, Dakahlia, Minia, Luxor, and North Sinai), a nationwide household survey was carried out. A hearing loss screening of 4,000 participants found that

16.0% of Egyptians have hearing impairment. This corresponds to more than 13 million people across all age groups. A significant prevalence (22.4%) was seen in children under the age of 4. In 60% of cases, circumstances that may be avoided are the cause of children's hearing loss^(2,3).

Children hearing loss may be acquired or congenital in origin. Congenital hearing loss refers to a hearing loss that was present at birth. It can be caused by inherited hearing loss or hearing loss brought on by other factors that were present during pregnancy or at the time of delivery (perinatal). Over 50% of all congenital hearing loss cases in children are thought to be genetic in nature. Autosomal dominant, autosomal recessive or X-linked genetic hearing loss are all possible. Other causes of congenital hearing loss include maternal infections such German measles, Cyto Megalo Virus (CMV), or herpes simplex virus, premature birth traumas, toxins, and difficulties related to the Rhesus (Rh) factor in the blood, maternal diabetes, and toxemia during pregnancy, and anoxia. However, acquired hearing loss that manifested later in life may be caused by specific infectious diseases, persistent ear infections, the use of specific medicines, and excessive loud exposure⁽⁴⁻⁶⁾. Children with hearing loss are impacted in four main ways: first, they develop their receptive and expressive communication abilities later (speech and language).

Second, learning issues brought on by the language barrier lower academic attainment. Children who have difficulty communicating may feel isolated, lonely, and low in self-esteem. Finally, it might influence career decisions. According to research, these detrimental effects can be reduced or avoided by early detection and action⁽⁷⁻⁸⁾.

As a result, the Consensus Development Conference on Early Identification of

Hearing Loss at the National Institutes of Health recommended that all infants get hearing tests, preferably before being discharged from the hospital and recommended using hearing aids. Hearing aids are small electronic or battery-operated devices that can amplify and change sound. They are used by children with hearing loss. A hearing aid has a microphone that receives sound and changes it into sound waves. The sound waves are then changed into electrical signals. Hearing aids can help improve hearing and speech, especially for children with a type of hearing loss called nerve deafness. This type of hearing loss may be caused by damaged hair cells (sensory receptor cells) in the inner ear. Or it may be from a damaged hearing nerve⁽⁹⁾.

Parents have a critical role in hearing screening and intervention. The decisions they make surely are influenced by their knowledge and attitude. Their decisions about the infant's early detection and treatment of hearing loss could have a long-lasting effect. Parents of a child without disabilities have a duty to provide for their needs and create an environment that supports the child's typical growth. However, in addition to these obligations, parents of disadvantaged children are also in charge of imparting specific knowledge and carrying out rehabilitation strategies. As a result, parents of children with disabilities require more assistance⁽³⁾.

However, parents who actively participate in the practice process might need direction and support because they might lack experience and training with regard to activities like removing the hearing aid from the child's ear, opening the battery door, testing and replacing the hearing aid's battery, performing a listening test, placing the hearing aid in the child's ear, repositioning the hearing aid when it beeps,

and putting procedures for storing the chimes into practise. ⁽⁷⁾.

They frequently need further information and expert assistance from an audiologist, a physician, or other specialists. While some parents find the hearing aid information offered to be minimal, others find the medical information to be confusing. The diagnosis and rehabilitation procedure needs to be made more transparent. According to the literature, it is often advantageous for parents of disabled children to interact with other parents who share their circumstances ⁽¹⁰⁻¹³⁾.

The parents' opinions are impacted by a variety of challenges. In general, a person's attitude is influenced by a variety of characteristics, such as their age, education, marital status, occupation, the number of children they have at home, and the order in which they were born. Everyone wants their child to be physically and developmentally flawless, which should go without saying. When this is lacking, the stigmatization and prejudice the child encounters in their environment affects how they feel about the parent. According to studies, parents of disabled children may feel a variety of emotions after learning about their child's condition, such as denial, guilt, fury and loss of control, hatred, or emotional worries ⁽¹⁴⁻¹⁸⁾.

This has an effect on how important a part parents play in their children's growth and development. The attitudes and behaviours of parents directly affect the attitudes and behaviours of their children, and the opposite is equally true. Unfortunately, attitudes drive behaviour, and in this situation, individuals will act in a way that is consistent with their attitude towards the hearing-impaired youngster ^(19,20).

Significance of the study

A number of stakeholders, such as school administration and organisations that offer

special needs education, may find the study's findings to be significant. The study provides details on the various attitudes parents have towards their children who have hearing impairments and how those attitudes relate to other variables. Additionally, it is believed that the study's results may assist the school's administration in enhancing parent-teacher cooperation. Institutions that provide special needs education may use the study's results when developing or upgrading courses on how to help parents and teachers handle children with special needs, particularly parents' attitudes towards the child who is hearing impaired ⁽²¹⁾.

The research results can also have a big impact on the deaf community by helping parents get past the obstacles they encounter when raising kids with hearing impairments. Counselors may use the study's findings to guide parents with the challenges of raising children with hearing impairments. Not least of all, other researchers may find the study helpful when conducting their own research on perceptions of various specific sorts of impaired people. Consequently, a study was required to ascertain how parents felt about their hearing-impaired children ⁽²²⁾.

The community health nurse is essential in the primary healthcare system, where initial medical consultations are carried out at clinics that are predominately nurse-driven. The nurse observes the infant's health and growth when the kid is at the immunization and wellness clinics, gathers information about the child's past, and should be aware of risk factors. She was therefore in a good position to impart knowledge and provide parents with access to trustworthy referral services. The nurse is also essential for planning first-level detection and intervention. Because any intervention that might be connected to social stigmatization or that violates cultural norms could result

in parents missing appointments or cancelling intervention services, community health nurses are frequently the best people to use communication and language to make parents feel at ease, confident, and respected for their choices ^(23,24).

Aim of the study

Assess attitudes and practices of parents with children suffering from hearing impairment, using hearing aids and challenges facing them.

Research question

- 1-What are the attitudes of parents toward hearing impairment?
- 2- What are the attitudes of parents regarding use of their children for hearing aids?
- 3- What is the level of practical hearing aids skills of parents with children using hearing aids?
- 4-what are the challenges that facing parents with children using hearing aids?

Subjects and method

Study design: -

In this research, a descriptive study design was employed.

Setting:-

This research was done in the Hearing and Phonetics Outpatient Clinic at El Aaida El Shamla Tanta University Hospital.

Subjects:-

A convenient sample of 350 parents (281 mother and 69father) with children using hearing aid were attending the pervious setting and willing to participate in the study were included.

Study tool

A structured interview schedule questioner was used to collect the needed data. it developed and used by the researcher. It included four parts as follow:

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Part I: - Socio-demographic characteristics of parents and their children:

A-Socio-demographic characteristics of parents: -

which include data, related to relation to the child, age, level of education, marital status, occupation, residence, family income, number of children, number of children with hearing impairment, family member using hiring aid and degree of relation.

A-Characteristics of the child and history of using hearing aid:

which include data, related to age, sex, degree of hearing impairment, duration of using hearing aid, amplification, and way of communication.

Part (2):- Attitudes of parents with children suffering from hearing impairment and using hearing aids:-

A-Attitudes of parents regarding their hearing impairment children: It was developed by/ Wanjiru, T. N (2014) ⁽²⁵⁾ It consists of 30 statement that was adapted by researcher to 25 positive and negative statement which covering **cognitive or belief, feelings and possible behaviors attitudes of parents regarding their hearing impairment children**

Scoring system of attitude scale: -

Three-point Likert scale was used to given response as agree take 3-point, uncertain take 2 point & disagree take 1 point. in positive statement and agree take 1-point, uncertain take 2 point & disagree take 3 points. In negative statement. Total scale score ranges from 1 to 75 points

Total attitude score was classified as follow

-Positive attitude > 70% of total attitude score.

-Negative attitude < 70% of total attitude score

B-Attitudes of parents regarding use of their children for hearing aids. It consists of 5 negative statements.

Scoring system of attitude scale: -

Three-point Likert scale was used to given response as agree take 1-point, uncertain take 2 point & disagree take 3 points. Total scale score ranges from 1 to 15 points

Total attitudes score was classified as follow

-Positive attitude > 70% of total attitude score.

-Negative attitude < 70% of total attitude score

Part (3): - Reported practical hearing aids skills of parents with children using hearing aids: -

It consists of 8 statements related to practical hearing aids skills of parents.

Scoring system

Done procedures take one point, whereas incomplete ones earn zero. The total score for the practices ranged from 0 to 8.

Total practices score was classified as follow

Adequate practices > 60% of total practices score.

In adequate practices < 60% of total practices score

Part (4): - Challenges facing the parents with children suffering from hearing impairment and using hearing aids: -

It consists of 26 statements covering challenges facing the parents as lack of information, lack of family and social support, lack of child care and community services, financial problems and difficulty of using child hearing aids.

Method

The operation of this study was carried out as follows:

1-Obtaining approvals: --Before beginning the study, the ethics committee of Tanta University's nursing department gave its official consent to the project .

-The management of El Aeiada El Shamla, an outpatient clinic connected to Tanta University Hospital, was granted official authorization to perform the study by the dean of the nursing faculty.

2-Ethical and legal considerations

-were taken into account throughout all study phases as follows:

-Informed consent was gained from each study participant after a thorough description of the investigation's goals .

Every participant was made aware of his ability to leave the study whenever he desired .

-The complete sample did not experience any pain or harm as a result of the study's nature.

-Reassured the individuals that the information they provided would be kept private and confidential and indicated that it would only be utilized for research purposes

1-Developing of the tools

-The researcher created the study tool (parts one, three, and four) after reviewing pertinent literature ⁽⁶⁻¹⁰⁾.

Five professionals in the fields of public health & community medicine and community health nursing evaluated the study tool to assess its face and content validity. It was calculated and determined that the validity of the interview sheet based on expert opinions was 97%. The prior tool was subjected to the reliability test using the Cronbach's Alpha test.:

-For **the sheet in total it was 0.951** which indicates high reliability of the study tools.

4-The pilot study

-To ensure the tools' clarity, applicability, and comprehension, identify potential roadblocks during data collection, and gauge the time required to collect the data, the researcher conducted a pilot study on 35 parents, or 10% of the study subjects .

Those parents were left out of the study's sample.-Data was collected over six months starting from 1st July 2022 to 31st December 2022.

-Statistical analysis:

The collected data were organized, tabulated and statistically analyzed using SPSS

software (Statistical Package for the Social Sciences, version 26, SPSS Inc. Chicago, IL, USA). For quantitative data, the range, mean and standard deviation were calculated. For qualitative data, which describe a categorical set of data by frequency, percentage, or proportion of each category. For comparison between means of two groups of parametric data of independent samples, t-test was used. For comparison between more than two means of parametric data, F value of ANOVA test was calculated. For correlation between variables was evaluated using Pearson's correlation coefficient (r). Significance was adopted at $P < 0.05$ for interpretation of results of tests of significance, highly significance was adopted at $P < 0.001$ for interpretation of results of tests of significance (26).

Results

Table (1) represents the distribution of the studied subjects according to their socio demographic characteristics. The table revealed that the majority (80.3%) of the studied parents were mothers, less than one quarter (19.7%) of them were fathers. About half (47.7% and 48.3%) of the studied parent's age their age ranged from 20-29 years old, and their income was not enough. Only 12.3% of them their ages were 40 years or more. As regards to level of education, it was found that only 10.5% of the studied parents were illustrated or just read and write, more than half (60%) of them were primary or secondary educated. More than quarter (26.9%) of them were university educated. In relation to the marital status, the majority (86.3%) of them were married and only 7.7% of them were widow. the table also illustrated that nearly one third (30.9%) of the studied parents were craft worked. In terms of where they lived, it was discovered that nearly a third of the parents surveyed (30.9%) lived in urban

regions, compared to more than half (69.1%) who resided in rural areas .

Table (1): Continuo. This table represented that more than half (50.6%) of the studied parents have three children and only 2.0% of them had four children while, more than half (54.0%) of them have one child with hearing impairment and only 7.7% of them had three or more children with hearing impairment. The table also showed that more than half (56.3%) of the studied parents had other family member or relative uses hearing aid. As regards to the relation to the child, it was found that less than half (45.2%) of the studied parents were fathers and less than one third of them (27.9%) were grandmothers while, only 7.1% of them were mothers and uncle

Table (2) represents the characteristics of the studied children and their history of using hearing aid. The table revealed that their mean age ranged from 1 – 16 years old, with Mean \pm SD 6.967 years \pm 3.53. Of them, more than half (60.9%) were women and more than a third (39.1%) were men. Regarding the degree of hearing impairment and the duration of using it, it was found that more than half (56.0% and 53.1% respectively) of the studied children had moderate degree of hearing impairment and used the hearing aid more than 3 years. Also, it was found that more than three quarters (77.7%) of the studied children use hearing aids and less than one quarter (22.3%) of them have cochlear implant. As regards to their method of communication, the table revealed that more than half (61.7%) of them use the spoken and sign language. Only 17.7% of them use sign language and less than quarter (20.6%) of them use a spoken language

Table (3): Distribution of attitudes of parents with children suffering from hearing impairment and using hearing aids. It showed that the most (92.0%) of the studied

parents were had negative attitudes and only 8.0 % of them were had positive attitudes toward their children suffering from hearing impairment and using hearing aids Table (4): It presents distribution of the challenges facing the parents with children suffering from hearing impairment and using hearing aids. The table showed that more than half (62.00% and 57.4%) of the studied parents faced challenges related to lack of information regarding how to use hearing aids and lack of family & social support related to not accepting their hearing impairment child by their families. Nearly three quarters (74.6%) of the studied parents reported that they faced with challenges related to Lack of childcare and community services as difficulty in transportation. While the majority (83.1% and 82.0%) of them suffer from financial challenges as more money needed for paying hearing aids and from difficulty of using child hearing aids as falling of the device from their child head / ear

Figure (1): distribution of total score of reported practical hearing aids skills of parents with children using hearing aids. It showed that about three quarters (74.00%) of the studied parents were had in adequate practices while, only about one quarter of them (26.00%) were had adequate practices related to hearing aids skills for their children using hearing aids .

Table (5): Represent the correlation between parent attitudes regarding their

hearing impairment children, attitudes regarding use of their children for hearing aids and reported practical hearing aids skills with children using hearing aids. It illustrates that there was a significant positive correlation between parent attitudes regarding their hearing impairment children, attitudes regarding use of their children for hearing aids and reported practical hearing aids skills with children using hearing aids

Table (6): Correlation between socio-demographic data for parent, their attitudes regarding their hearing impairment children, and reported practical hearing aids skills with children using hearing aids. It demonstrated that there was a highly statistically significant positive correlation between parents' perceptions of their hearing-impaired children and their socio demographic characteristics, including their relationship to the child, child's age, place of residence, family income, and the number of their children who have hearing impairment. ($P < 0.05$) . Additionally, there was a highly statistically significant positive association between the parents' reported socio demographic traits and their children's reported parents' practical hearing aids skills. regarding (the relation to the child, and the number of their children having hearing impairment and if there was any other family member or relative uses any hearing aid) ($P < 0.05$)

Part I: Socio demographic characteristics of the studied parents with children suffering from hearing impairment and using hearing aids

Table (1): Distribution of the studied parents according to their socio demographic characteristics.

Socio-demographic characteristic	The studied parents (n=350)	
	No.	%
Relation to the child		
Mother	281	80.3
Father	69	19.7
Age		
Less than 20 years	48	13.7
20 – 29	167	47.7
30 – 39	92	26.3
40 years and above	43	12.3
Level of education		
Illiterates / read and write	37	10.5
Primary	110	31.4
Secondary	100	28.6
University	94	26.9
Postgraduates	9	2.6
Marital status		
Married	302	86.3
Divorced	21	6.0
Widow	27	7.7
Occupation		
Professional work	98	28.0
Craft work	108	30.9
Manual work	61	17.4
Private work	83	23.7
Residence		
Rural	242	69.1
Urban	108	30.9
Family income		
Enough	147	42.0
Enough and saving	34	9.7
Not enough	169	48.3

Table (1): Continuo

Socio-demographic characteristic	The studied parents (n=350)	
	No.	%
Number of children		
One	53	15.1
Two	113	32.3
Three	177	50.6
Four	7	2.0
Number of children with hearing impairment		
One	189	54.0
Two	134	38.3
Three or more	27	7.7
Other family member or relative uses any hearing aid (Excluding relatives with hearing loss due to old age)		
Yes	197	56.3
No	153	43.7
If yes, (Relation to the child) #	(n=197)	%
Father	89	45.2
Mother	14	7.1
Uncle	14	7.1
Aunt	20	10.2
Grandmother	19	9.6
Grandfather	55	27.9

More than one answer

Table (2): Distribution of characteristics of the child and history of using hearing aid.

Characteristics of the child and history of using hearing aid	The studied parents (n=350)	
	No.	%
Child age (years)		
< 5	101	28.9
5 - < 10	175	50.0
10 - < 15	62	17.7
≥ 15	12	3.4
Range	1 - 16	
Mean ± SD	6.967 ± 3.53	
Gender		
Male	137	39.1
Female	213	60.9
Degree of hearing impairment		
Mild	25	7.1
Moderate	196	56.0
Severe	118	33.7
Profound	11	3.2

Duration of using hearing aid		
6 months to one year	90	25.7
One year to ≤ 3 years	73	20.9
More than 3 years	186	53.1
Other	1	0.3
Amplification		
Hearing aids	272	77.7
Cochlear implant	78	22.3
Communication		
Spoken	72	20.6
Spoken & signs	216	61.7
Signs only	62	17.7

Part (2): - Attitudes and practices of parents with children suffering from hearing impairment and using hearing aids

Table (3): distribution of attitudes of parents with children suffering from hearing impairment and using hearing aids

Attitudes of parents with children suffering from hearing impairment and using hearing aids	The studied parents (n=350)	
	No.	%
A- Attitudes of parents regarding their hearing impairment children		
Levels of attitudes of parents related to cognitive or belief		
Positive attitude > 70% (15 – 21)	86	24.5
Negative attitude < 70% (7 - 14)	264	75.5
Levels of attitudes of parents related to feelings		
Positive attitude > 70% (19 – 27)	40	11.4
Negative attitude < 70% (9 - 18)	310	88.6
Levels of attitudes of parents related to possible behaviors		
Positive attitude > 70% (19 – 27)	53	15.1
Negative attitude < 70% (9 - 18)	297	84.9
Levels of total attitudes of parents regarding their hearing impairment children		
Positive attitude > 70% (53 – 75)	35	10.0
Negative attitude < 70% (25 - 52)	315	90.0
B-Attitudes of parents regarding use of their children for hearing aids		
Levels of total attitudes of parents regarding use of their children for hearing aids		
Positive attitude > 70% (11 – 15)	39	11.1
Negative attitude < 70% (5 - 10)	311	88.9
Levels of total attitudes of parents with children suffering from hearing impairment and using hearing aids		
Positive attitude > 70% (63 – 90)	28	8.0
Negative attitude < 70% (30 - 62)	322	92.0

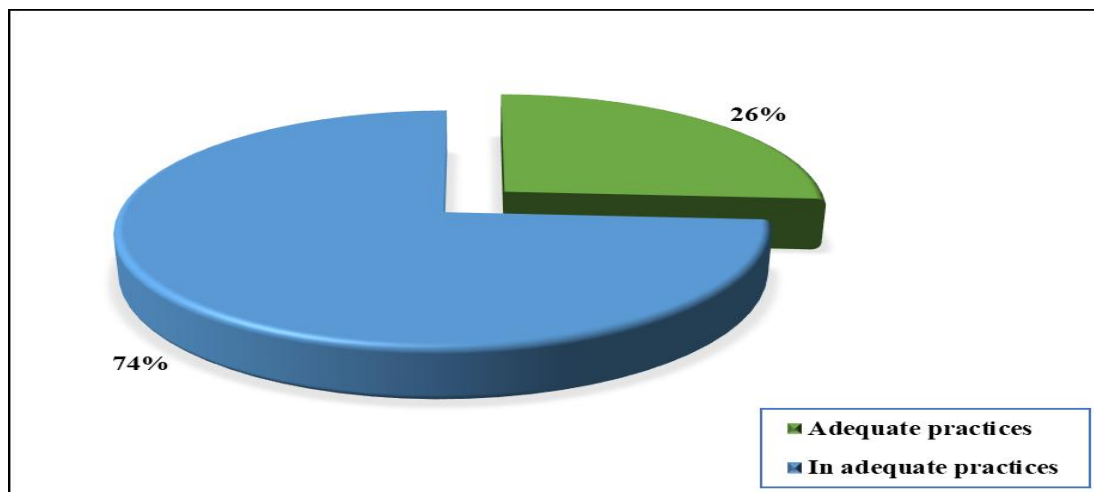


Figure (1): distribution of total score of reported practical hearing aids skills of parents with children using hearing aids.

Part (III): - Challenges facing the parents with children suffering from hearing impairment and using hearing aids: -

Table (4): Distribution of the challenges facing the parents with children suffering from hearing impairment and using hearing aids

The challenges Items	The studied parents (n=350)			
	Yes		No	
	No.	%	No.	%
Lack of information about:				
1. How child growth and develop	201	57.4	149	42.6
2. How to play or talk with my child	212	60.6	138	39.4
3. How to handle by child's behavior	187	53.4	163	46.6
4. Parent support groups	163	46.6	187	53.4
5. Other conditions my child may have	204	58.3	146	41.7
6. How using hearing aids.	217	62.0	133	38.0
Lack of family and social support as:				
1. Inability talking with someone in my family, or a friend, about my concerns	197	56.3	153	43.7
2. Lack of opportunities to meet with other parents of children who are using hearing aids.	150	42.9	200	57.1
3. Lack of more time for myself	172	49.1	178	50.9
4. The family not accept my hearing impairment child	201	57.4	149	42.6
Lack of child care and community services as:				
1. Difficulty in found good baby-sitters for my child	168	48.0	182	52.0
2. Difficulty in found a day-care program for my child	156	44.6	194	55.4
3. Difficulty in meeting with a counselor who specializes in hearing loss issues	200	57.1	150	42.9

4. Difficulty in transportations	261	74.6	89	25.4
Financial problems as:				
1. More money needed for paying hearing aids	291	83.1	59	16.9
2. Too expensive to pay for batteries, ear molds and device repair	273	78.0	77	22.0
3. More money needed for therapy	271	77.4	79	22.6
4. More money needed for child care/respite care	223	63.7	127	36.3
5. More money needed for other special equipment my child needs	232	66.3	118	33.7
Difficulty of using child hearing aids as:				
1- How to keep it on	284	81.1	66	18.9
2- Falling off of the device from my child head / ear	287	82.0	63	18.0
3- Fear of losing or damaging of the device	257	73.4	93	26.5
4- Rejection of the child to put the device on	271	77.4	79	22.6
5- Device is not work	254	72.6	96	27.4
6- Fear of my child being harmed by the device as: Putting it in his / her mouth	216	61.7	134	38.3

Table (5): Correlation between parent attitudes regarding their hearing impairment children, and reported practical hearing aids skills with children using hearing aids (n=350)

Variables	The studied parents (n=350)					
	Parent attitudes regarding their hearing impairment children					
	Attitudes regarding their hearing impairment children		Attitudes regarding use of their children for hearing aids		Total attitude score	
	R	P	r	P	R	P
Reported practical hearing aids skills with children using hearing aids.	0.233	0.0001**	0.413	0.0001**	0.312	0.0001**

**** Highly Statistically significant difference at (P<0.001)**

Table (6): Correlation between socio-demographic data for parent, their attitudes regarding their hearing impairment children, and reported practical hearing aids skills with children using hearing aids

Socio-demographic characteristic	The studied parents (n=350)							
	Parent attitudes regarding their hearing impairment children						Reported practical hearing aids skills with children using hearing aids	
	Attitudes regarding their hearing impairment children		Attitudes regarding use of their children for hearing aids		Total attitude score			
	r	P	r	P	r	P	r	P
Relation to the child	0.208	0.0001**	0.109	0.041*	0.217	0.0001**	0.353	0.0001*
Age	0.145	0.007**	0.024	0.661	0.140	0.009*	0.117	0.029*
Level of education	0.097	0.071	0.218	0.0001**	0.133	0.013*	0.122	0.031*

Marital status	0.099	0.064	0.060	0.165	0.104	0.051	-0.053	0.322
Occupation	-0.083	0.119	0.087	0.104	0.061	0.254	-0.005	0.928
Residence	0.126	0.018*	0.187	0.0001**	0.155	0.004* *	0.098	0.068
Family income	-0.171	0.001**	-0.119	0.0001**	-0.199	0.0001**	-0.067	0.214
No. of children	0.018	0.737	-0.048	0.367	0.007	0.890	0.015	0.782
No. of children with hearing impairment	-0.149	0.005**	-0.256	0.0001**	-0.190	0.0001**	-0.206	0.0001* *
If there is any other family member or relative uses any hearing aid.	-0.021	0.056	0.024	0.656	-0.091	0.089	0.143	0.007**

*Statistically significant difference at (P<0.05)

** Highly Statistically significant difference at (P<0.001)

Discussion

Deafness or hearing loss is a serious handicap that affects millions of people globally. Positive parental attitudes lead to the child's impairment being accepted and enable treatment development. Families, the general public, and people with disabilities themselves all have attitudes that help turn deficiencies into disabilities. This study revealed that parents' attitudes and feelings towards raising a kid with hearing loss varied. Being hard of hearing, this was not unexpected. Children that have developmental delays in several areas are viewed as abnormal because of this. Children who have hearing loss may face stigma and social exclusion. Therefore, it is not unusual for parents of children who have this severe disability to have sentiments of despair, self-blame, and other behavioural attitudes. Other authors have reported similar results. (27,28). So the aim of this study was to assess attitudes and practices of parents with children suffering from hearing impairment, using hearing aids and challenges facing them.

According to the results of the current study, moms made up the majority of the investigated parents, which makes sense

given that mothers spend more time caring for their children than fathers. Fewer than a fifth of them had children. In terms of age, the current survey showed that around half of the parents were between the ages of 20 and 29. Less than 25% of them were 40 years of age or older. (Table 1). The results of Frank-Briggs A.'s (2012) study, "Childhood Hearing Impairment: How do Parents Feel about It?" are similar to these findings. thirty-seven parents were examined in Nigeria, and it was discovered that the gender ratio was 0.6:1, with 23 (62.16%) females and 14 (37.84%) males. Participants ranged in age from 24 to 53, with a mean age of 33 5.2 years (29).

The results of this study were inconsistent with Wanjiru T.'s (2014) study, "Parental Attitudes Towards Children with Hearing Impairment and Academic Performance: A Case of Kambui School for the Deaf, Githunguri District, Kiambu County, in Kenya," which found that of the 65 parents who filled out the questionnaire, 34 were between 30 and 39 years old, accounting for more than half of all respondents, 16 were between 20 and 29, and those who were 40 years old made up the remaining. The outcome suggests that

most of the parents were older than 30.⁽³⁰⁾

The current study demonstrated that almost half of the investigated parents' income was insufficient and that they were engaging in craft labor based on the family income and occupation of the study participants (table 1). This finding was consistent with research conducted by Frank-Briggs A (2013) in Nigeria on the topic of "Childhood hearing impairment: How do parents feel about it," which discovered that the majority (67.57%) of parents whose children were affected have low socioeconomic level and unskilled jobs. Poor socioeconomic conditions in a family are viewed as contributing to the late detection and correction of hearing loss⁽²⁹⁾.

The majority (67.57%) of the parents whose children were affected were from low socioeconomic class and had unskilled jobs, according to a study by Frank-Briggs A., (2013). According to the researcher, those who are less fortunate have more hearing loss because they cannot afford the preventive and routine care required to stop hearing loss due to infections and other causes, as well as the hearing aids needed to manage the handicap.

As regards to level of education of the studied group, the current study found that less than one quarter of the studied parents were educated or just read and write, more than half of them were primary or secondary educated. More than quarters of them were university educated. This finding was in contrast with the study done by Al Khaier (2008) entitled (Quality of life among deaf and hearing impaired school students in Alexandria) who reported that nearly half of mothers were illiterate or just read and write⁽³¹⁾. According to this perspective, the

educational level of the parents has a significant impact on the family's level of commitment to the child's educational model, their level of involvement in their child's education, and their capacity to assign roles in advancing their goals for the child related to outcomes for children with hearing loss. This might influence the way they seek care.

The results of this study concurred with those of Wanjiru T. (2014), who noted that out of 65 respondents, 35.38 percent of the parents had a primary certificate of education, 27.69 percent had a secondary education certificate, 18.46% had a college-level certificate, 10.77 percent had no primary certificate, and only 7.69 percent had a university degree. The findings show that the majority of respondents had only pursued primary-level schooling⁽³⁰⁾.

Additionally, the current survey found that the majority of the parents were married, with only 7.7% being widowed and 6.0% divorcing. This outcome was consistent with Wanjiru T.'s (2014) study, which found that of 65 respondents, 67.7% (44 parents) were married, 13.8% (9 parents) were not married, 7.7% (5 parents) were widowed, 6.2% (4 parents) were separated, and 4.6% (3 parents) were divorced⁽³⁰⁾.

As regards to parental attitudes towards hearing impairment, the current study revealed that most of the studied parents were had negative attitudes and only 8.0 % of them were had positive attitudes toward their children suffering from hearing impairment and using hearing aids.

Additionally, there was a strong positive link between the examined parents' entire attitudes concerning hearing loss and their educational degrees. This finding contrasted with that of a study by Frank

Briggs A. (2013), which indicated that most of the parents under study had both positive and negative attitudes towards the handicap, and that two (5.40%) of them had no opinion. In contrast, Ouda W.'s (2016) assessment of mothers' knowledge and attitudes towards their children with hearing impairment revealed that nearly two-thirds of the mothers under study (65.5%) have neutral attitudes towards their children with hearing impairment, while 14.5% of them have negative attitudes⁽³²⁾.

Wanjiru T. (2014) also noted that. Across all educational levels, there was no discernible difference in parents' attitudes concerning hearing loss⁽³⁰⁾. According to the study, these variations may result from the parents' lack of social and community support.

Regarding the parents' reported practical hearing aid skills when their kids wear hearing aids. According to the current study, just around one-fourth of the parents with children who were being studied had sufficient hearing aid practises, while roughly three-quarters lacked such practises. According to the study, adherence to proper practises by parents can depend on a number of variables, including parental levels of dedication, access to and proximity to support services, educational attainment, and financial means.

According to this study's findings, more than half of the parents of children who use hearing aids and have hearing impairments face difficulties related to a lack of knowledge about how to use them as well as issues with a lack of family and social support because their hearing-impaired child is not accepted by their families.

Almost three quarters of the parents who participated in the study said they had

trouble getting to community services and childcare centres. While the majority of them experience financial difficulties due to the increased cost of hearing aids as well as the difficulty of wearing child hearing aids due to the device sliding off the child's head or ear. From the perspective of all these difficulties, particularly among mothers, causes a delay in the detection and management of hearing loss in addition to appropriate health-seeking behaviour.

The results of the current study are in line with earlier research by Dhanshre R., et al. (2022), who examined the daily interactions between parents and children who have hearing loss. They discovered that there were practical issues with parents' communication challenges, as well as their lack of knowledge, information, and support. The current study also describes the kind of support that parents would like to get when raising a child who has hearing loss⁽³³⁾.

The results are also in line with those reported by Marschark M. (2012), who studied (Educating Deaf Children: Language, Cognition, and Learning), as he shows parents having difficulty picking up sign language in order to improve communication with their child who has a hearing loss. This could help parents feel less guilty and ashamed about their child's hearing loss. From the perspective of the researcher, feelings of guilt and shame may lead to feelings of insecurity about their inability to interact with their child properly, which may have significant effects on effective parenting⁽³⁴⁾.

Regarding the correlation between the socio-demographic information of the parents, their attitudes towards the use of hearing aids on their children, and the overall attitude score. The current study showed that, with the exception of marital

status and parents' occupation, there was a substantial positive association between the participants' overall attitude score and all of their socio demographic factors. This result was consistent with Marc M's (2006) findings that the demographic variable and the studied subject's attitude were somewhat positively correlated and that there was a significant association with posttest score at the 0.01 level ⁽³⁵⁾.

Conclusion

Based on the finding of our study, it can be concluded that the most of the studied parents were had negative attitudes and only less than one tenth of them were had positive attitudes toward their children suffering from hearing impairment and using hearing aids. About three quarters of the studied parents had reported in adequate practices related to hearing aids skills for their children hearing aids, while about one quarter of them had reported adequate practices. There was statistically significant positive correlation between parent attitudes regarding their hearing impairment children, attitudes regarding use of their children for hearing aids and reported practical hearing aids skills with children using hearing aids.

Recommendations.

- 1- Early intervention programs for infants. Babies who are evaluated within the first few months of life and whose parents participate in successful early intervention programs for children with hearing impairment are off to a good start with hearing aids.
- 2- In collaboration with the school nurse, a psychosocial rehabilitation program should be held to satisfy the requirements of the kids who are deaf or have hearing loss and to enhance their quality of life.
- 3- To improve their knowledge, practices, attitudes, and quality of life, parents of

children with hearing loss and deafness should continue to receive health education.

- 4- More study on hearing loss and deafness is required, particularly in the areas of psychological, social, and long-term perspectives on their lives.

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