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Parents' Perceptions and Needs for their Children who are Deaf or Hard of Hearing in the Kingdom of Saudi Arabia

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Abstract

This study was conducted to investigate the perceptions of parents of children who are deaf or hard of hearing (DHH) in the Kingdom of Saudi Arabia (KSA) regarding the support and services provided to them and their children. One hundred fifty-eight parents of children who are DHH were surveyed. The survey questions focused on five areas: early identification, hearing technology, communication, education, and social support. The results indicated that (a) a variety of services are available and have been received by some parents, (b) parents reported an average level of satisfaction towards the services and supports received, and (c) all services listed are needed. Additionally, parents identified problems and offered solutions to improve the services and support for their children. The need for more research in the KSA is noted in order to obtain a more in-depth understanding of parents' perceptions and needs.

Key Words: Parents, Deaf, Hard of hearing, Services, Saudi Arabia

Parents play an important role in children's growth and development. Research has demonstrated the significant role that parents have in facilitating communication (Hadjikakou & Nikoklaraizi, 2008; Mitchell & Karchmer, 2004), promoting interaction (Berke, 2013; Cramer-Wolrath, 2011), and fostering language development (Bailes, Erting, Erting, & Thumann-Preziosco, 2009; Holt & Svirsky, 2008; Niparko et al., 2010) in children who are deaf or hard of hearing (DHH). Therefore, parents are considered the most important factor in the development of children who are DHH (Geers, Tobey, Moog, & Brenner, 2008; Moeller, 2000).

Parents' perceptions regarding the services and programs for their children who are DHH are of primary importance within the field of deaf education due to the critical role they play in their child's development and in the service provision process (Levesque, Brown, & Wigglesworth, 2014; Sarant & Garrard, 2013). Not surprisingly, parental support of a child's needs and education is a critical factor in a child's success (Albritton, Klotz, & Roberson, 2003; Epstein, 2005). Furthermore, parental perceptions are an important outcome issue and one way of evaluating the quality of services (Haines & Childs, 2005). In addition, parental input about services and programs allows professionals to better understand parents' needs for services and to ensure that service delivery with children who are DHH and their parents is effective. This information can be useful for professionals in making improvements to existing services and/or developing and expanding the services they offer (Joint Committee on Infant Hearing, 2000).

DISABILITY AND PARENTS' CULTURE IN SAUDI ARABIA

Awareness and understanding of the society and culture where people with disabilities live is the key to the successful development of their needs and services. In Saudi Arabia, families' culture is mixed between Islamic culture and Arabic culture. Both cultures strongly recognize the rights of individuals with disabilities, including people who are DHH. For example, Islamic culture, in which KSA people and society believe, has called for protecting the rights of individuals with disabilities for more than 14 centuries (Fahmy, 1998). Individuals with disabilities are human beings first. They have rights as well as responsibilities, similar to any other member of the community (Al-Musa, 2010).

The Kingdom of Saudi Arabia culture has made positive strides in recognizing the rights of individuals with disabilities. In 2008, the KSA government signed the United Nations Convention on the Rights of Persons with Disabilities. Then in 2014, the KSA developed a policy that defines an individual with a disability as one who is partially or totally disabled with respect to her/his bodily, mental, communicative, material, psychological or academic capabilities, to the extent that it compromises the ability of that individual to meet her/his needs as equally as a non-disabled person (King Salman Centre of Disability Research, 2014). This policy states that individuals with a disability have equal rights to social, medical, educational, and professional services to enable them to achieve their maximum potential as well as to develop their capabilities to attain independence and be productive members of society.

Although the rights of individuals with disabilities are recognized, this does not mean that they obtain their full rights. Unfortunately, the lack of disability rights is still evident in Saudi Arabia (Al-Gain & Al-Abdulwahab, 2002; Al-Jadid, 2013). This is not due to inherent negative attitudes toward individuals with disabilities, but more directly as a result of a lack of basic knowledge about people with special needs, including individuals who are DHH (Alomary, 2014; Gertz & Boudreault, 2016). Therefore, investigating the perceptions of KSA parents is important and necessary in order to gather information that can be used to improve the quantity and quality of services provided for children who are DHH and their parents. This study was designed to address the following research questions:

Q1 What types of services are being received and would like to be received by parents of children who are DHH in the KSA?
Q2 How satisfied are the KSA parents of children who are DHH regarding the services received?
Q3 What are the most needed services perceived by parents with children who are DHH in the KSA?

METHOD

Participants

The selection of participants was based on convenience sampling. Participants were KSA citizens who had children who are DHH. The age of the children ranged from 5 to 21 years. The children's degree of hearing loss ranged from mild to profound.

In order to determine the appropriate sample size, the G-power statistical software analysis was used. G-Power software is a useful power analysis used to determine how many participants are needed in order to obtain significant results. The alpha (p-value) was set at .05 and the effect size was at set at the .80 power level in accordance with Cohen's (1988) standard. Accordingly, at least 102 parents with children who are DHH were needed.

One hundred seventy-six surveys were collected. Nineteen surveys were eliminated during the analysis because many responses were incomplete. Surveys from 158 parents (i.e., one respondent from each family) of children who are DHH were analyzed. Seventeen parents responded through a printed survey. One hundred forty-one parents completed an electronic survey that was made available via the Qualtrics website. Parents were recruited from 12 deaf organizations, clubs, and social media such as Twitter and Facebook.

Materials and Procedure

A survey was used to gather quantitative data from parents of children who are DHH in the KSA. This survey was named the Survey of Saudi Arabian Parents and Their Needs in Deaf Education and Services (SAPNDES). Most of the items (n = 31) were adopted from other surveys developed and used by other researchers (e.g., Brown, Bakar, Rickards, & Griffin, 2006; Dalzell, Nelson, Haigh, Williams, & Monti, 2007; Jabery, Arabiat, Khamra, Betawi, & Jabbar, 2014; Jackson, 2011; Young, Gascon-Ramos, Campbell, & Bamford, 2009). However, some items (n = 10) were developed by the first author on the basis of a review of the literature in deaf education (e.g., Hardonk et al., 2011; Hyde & Punch, 2011; Jamieson, Zaidman, & Poon, 2011; Mueller & Sepulveda, 2014).

The SAPNDES survey consisted of three sections. The first section asked demographic information about parents such as gender, age, economic level, and educational level. The second section asked for demographic information about the child who is DHH, degree of hearing loss, grade, communication methods used, sensory device use, and age at identification. The third section focused on five types of services provided for children who are DHH and their family - early identification, hearing technology, communication, educational options, and social support. This section also included three columns. The first column used a 3-point Likert scale that ranged from "Yes," "No," and

"Do not know/Not sure" that asked parents to rate the services they received. The second column used a 5-point Likert scale that ranged from "Very Dissatisfied" to "Very Satisfied" that asked parents to rate their satisfaction with received services. The third column used a 5-point Likert scale that ranged from "Very Important" to "Unimportant" that asked parents to indicate the importance of specific aspects of services. There were 15 items in this section taken and reframed from reviewing relevant studies (e.g., Brown, Baker, Rickards, & Griffin, 2006; Dalzell et al., 2007; Jabery et al., 2014; Jackson, 2011; Young et al., 2009). The last section of the survey provided an open-ended question asking parents to add comments as desired. The Arabic version of the survey was estimated to take around 15 minutes to complete.

Translation of the instrument. Since this study took place in the KSA, the survey was translated from English into Arabic by the first author. Two types of translation methods were used: (a) forward translation, and (b) focus group translation.

For the forward translation two individuals who are bilingual speakers (i.e., Arabic and English) translated the instrument independently. Their charge was to produce a translated version in the target language (Acquadro, Conway, Hareendran, & Aaronson, 2008). The first individual was "native" Arabian and his task was to produce a translation that reflects language used by layman, less influenced by an academic objective. The second individual has a background in the area of special education and his task was to produce a translation providing equivalence from a measurement perspective (Acquadro et al., 2008). After completing the translation, each individual was required to submit a written report summarizing all choices made and identifying any remaining uncertainties.

Next, a focus group translation method was used. The goal was to ensure the quality of the survey translation. This method consisted of multiple translators (n = 3) who were bilingual speakers in Arabic and English. Their role was to identify and resolve any discrepancies between the forward translation and the original questionnaire. For example, a focus group was conducted to gauge the survey's readability level by discussing the meaning of some words and questions in the survey, such as cochlear implant, auditory, mild-moderate, and sensory device. This process took several iterations but resulted in a complete translated version of the questionnaire. After considering the suggestions of the focus group members, changes were made in the final draft of the Arabic translated survey that was made available to the target population of the study.

Content validity. In order to check the accuracy of the survey prior to distribution, it was sent to a pilot group of KSA parents (n = 3) after the survey was translated into Arabic. Parents were asked for feedback about the items on the survey. This process helped to ensure that the participants understood the survey items.

Data collection. Copies of the survey were personally and electronically delivered to the administrators of each Saudi deaf organization (Saudi Association for the Hearing Impaired and Saudi Deaf Club) and social media. The first author sent a letter to the organization and club administrators via email asking them to distribute the survey and letter to all parents who met the qualifications for participation in the study. This letter described the purpose and the importance of the study. The first author asked the organizations and clubs for individuals who are deaf to send the printed surveys with cover letters explaining the purpose and the importance of the study to potential participants. The first author also provided the organizations and clubs with pre-stamped envelopes for sending the printed surveys and for the parents to return the completed survey to the deaf organizations and clubs. Parents were also provided with the first author's cell phone number and email in the cover letter in case immediate help was needed. Two weeks after distributing the survey, each organization and club administrator received a phone call from the first author to remind and encourage parents to send back the completed surveys as well as to follow up with organizations and club administrators about the collection process. Three weeks later, the first author collected all completed surveys.

Data analysis. In order to answer the three research questions, data were analyzed using the Statistical Package for the Social Sciences (SPSS version 22.0) program (Pallant, 2013). Descriptive statistics on all demographic data were computed. Then the frequency, percentage, and rating averages for the participants' level of satisfaction towards the services received using a 5-point Likert-scale (1 = very dissatisfied to 5 = very satisfied) as well as for responses about services needed using a 5-point Likert scale (1 = unimportant to 5= very important) were calculated. The final section of the survey, an open-ended question asking parents to add comments, was analyzed using thematic analysis (Creswell, 2007).

RESULTS

Demographic characteristics of respondents are provided in Table 1. One hundred fifty-eight parents of children who are DHH throughout the KSA responded. Ninety (57%) surveys were completed by fathers, and 68 (43%) surveys were completed by mothers. The majority of respondents (81%, n = 126) were hearing and 19% (n = 30) were DHH. Additionally, most parents (64%) had one child who is DHH and (36%) had more than one child who is DHH.

More than half of parents (69%) reported living in a large city. Other parents lived in small cities (26%), villages (5%), and suburban areas (1%). Parents' educational levels were as follows: 40% (n = 60) had a bachelor's degree, 26%

Table 1
Demographic Characteristics of Parent Respondents

Characteristic	Number and percentage
Number of parent respondents (N = 158)	
Father	90 (56.96%)
Mother	68 (43.04%)
Parents' age (N = 157)	
Less than 25	11 (7.00%)
26-35	55 (35.03%)
36-45	61 (38.85%)
46 or more	30 (19.12%)
Number of children who are DHH (N = 148)	
1	95 (64.18%)
2	34 (22.97%)
3	17 (11.48%)
4	2 (1.37%)
Region (living) (N = 156)	
Large city	107 (68.58%)
Small city	40 (25.64%)
Suburban	1 (0.65%)
Village	8 (5.13%)
Parent's education level (N = 151)	
PhD	3 (1.98%)
Master	15 (9.93%)
Bachelor	60 (39.73%)
Some college	24 (15.89%)
High school	40 (26.49%)
Did not complete high school	9 (5.98%)
Employment status (N = 156)	
Yes	114 (73.07%)
No	42 (26.93%)
Economic status (N = 155)	
Upper class	7 (4.52%)
Middle class	124 (80.00%)
Lower class	24 (15.48%)
Parent's hearing status (N = 156)	
Deaf	13 (8.33%)
Hard of hearing	17 (10.89%)
Hearing	126 (80.78%)

Table 2
Demographic Characteristics of Children

Characteristic	Number and percentage
Child's hearing status (N = 154)	
Deaf	64 (41.56%)
Hard of hearing	90 (58.44%)
Child's gender (N = 153)	
Male	96 (62.75%)
Female	57 (37.25%)
Child's age when identified as deaf or hard of hearing (N = 151)	
Birth to 6 months	53 (35.09%)
7-18 months	49 (32.45%)
19-48 months	37 (24.5%)
>48 months	12 (7.96%)
Degree of hearing loss of children (N = 153)	
Mild (20-40dBHL)	10 (6.53%)
Moderate (40-70dBHL)	17 (11.11%)
Severe (70-90dBHL)	47 (30.71%)
Profound (90+dBHL)	60 (39.21%)
Do not know	19 (12.44%)
Hearing device (N = 153)	
Hearing aids	54 (35.29%)
Cochlear implant	73 (47.71%)
No use of hearing device	26 (17%)
Child's communication way at home (N = 154)	
Sign language	20 (12.98%)
Spoken language	59 (38.31%)
Sign and spoken language	61 (39.61%)
Other	14 (9.10%)
Child's grade (N = 154)	
Kindergarten	40 (25.97%)
Elementary school	53 (34.41%)
Middle school	8 (5.19%)
High school	15 (9.74%)
University	15 (9.74%)
Other	23 (14.95%)

(n = 40) had a high school education, 16% (n = 24) had some college, 10% (n = 15) had a master's degree, 2% (n = 3) had a PhD, and 6% (n = 9) did not complete high school. With regard to economic level, the majority (80%) were in the middle-income level. Additionally, 114 (73%) were employed, and 42 parents (27%) reported being unemployed.

Characteristics of the children are provided in Table 2. Sixty-three percent were male and 37% were female. Approximately 35% of children had been identified with hearing loss before the age of six months old; 32% of children were identified prior to the age of 18 months; and 25% of children had been identified no later than the age of 48 months. Few children (8%) were identified later than the age of 48 months. The majority of children (70%) were reported to have either a profound or severe degree of hearing loss. Some participants (12%) reported the degree

Table 3
Types of Services Provided

Type of services provided for child who is DHH	Is/was this service available?	Frequency	Percent
Early identification services	Yes	72	45.6%
	No	81	51.3%
	Don't know/not sure	0	0%
	Total	153	96.8%
	Missing	5	3.2%
	Total	158	100%
Hearing technology services	Yes	94	59.5%
	No	59	37.3%
	Don't know/not sure	0	0%
	Total	153	96.8%
	Missing	5	3.2%
	Total	158	100%
Communication services	Yes	52	32.9%
	No	98	62%
	Don't know/not sure	1	0.6%
	Total	151	95.6%
	Missing	7	4.4%
	Total	158	100%
Educational options services	Yes	45	28.5%
	No	106	67.1%
	Don't know/not sure	0	0%
	Total	151	95.6%
	Missing	7	4.4%
	Total	158	100%
Social support services	Yes	40	25.3%
	No	113	71.5%
	Don't know/not sure	1	0.6%
	Total	154	97.5%
	Missing	4	2.5%
	Total	158	100%

of hearing loss of their children as unknown. Among the variety of hearing devices that the children were reported using, cochlear implants were the most common (48%). Some children (17%) were reported as non-users of a hearing device. Children's primary method of communication at home was reported as sign language (13%), spoken language (38%), both sign and spoken language (40%), and other (9%). Eighty-five percent of the children were attending school at the time the parents completed the survey and 15% were non-school age.

Research Question 1. What types of services are being received and would like to be received by parents of children who are DHH in the KSA?

Table 3 shows that 46% of parents reported receiving early identification services for their children. However, 51% of parents said that they did not receive early identification services for their children. The majority of parents (60%) reported that hearing technology services were available for their children. However, more than one-third of parents (37%) reported that they did not receive hearing technology services for their children. In addition, most parents indicated that they did not receive communication services (62%), educational services (67%) or social support services (72%) for themselves or for their children. Overall, responses to research question one indicates that all five types of services for children who are DHH and their parents were available in the KSA, but that these services were not available for more than half of the participants.

Research Question 2. How satisfied are the KSA parents of children who are DHH regarding the services received?

The satisfaction section in the survey included 25 items. Parents' satisfaction was divided into three levels: (a) high satisfaction - ranging from 3.67-5.00; (b) average satisfaction - ranging from 2.34 -3.66; and (c) low satisfaction - ranging from 1-2.33 (Jabery et al., 2014). The mean score for parents' satisfaction with early identification service items was 3.19 (SD = 1.27; range 3.01-3.36), reflecting an average degree of satisfaction. The mean score for parents' satisfaction with hearing technology service items was 3.27 (SD = 1.30; range 2.97-3.66), reflecting an average degree of satisfaction. The mean score for parents' satisfaction with communication service items was 3.32 (SD = 1.37; range 3.10-3.52), reflecting an average degree of satisfaction. The mean score for parents' satisfaction with educational options service items was 2.94 (SD = 1.43; range 2.74-3.05), reflecting an average degree of satisfaction. The mean score for parents' satisfaction with social support services items was 3.01(SD = 1.36; range 2.84-3.24), reflecting an average degree of satisfaction. Finally, the overall mean score for parents' satisfaction with all services items was 3.14 (SD = 1.34; range 2.74-3.66), reflecting an average degree of satisfaction. Please see table 4.

Research Question 3. What are the most needed services perceived by parents with children who are DHH in the KSA?

All services, including early identification services, hearing technology services, communication services, educational services, and social support services were rated as very important or important by 75% or more of the parents, with little variation in the distribution of ratings. All of the average rating scores were high, with average numeric ratings from 3.64 to 4.36 on the 5-point scale. Parents expressed their most needed services were for early identification service (60%), hearing technology service (60%), and educational services (51%). Communication (42%) and social support services (39%) obtained the lowest ratings.

On the section of the survey that focused on early identification services, 60% of parents believed that the process of hearing diagnosis is the most needed service. On the section addressing hearing technology services, approximately 60% of parents reported that providing them with choices of hearing technology devices and training them on how to manage the child's device at home is the most important service needed. In the section centered on educational services, approximately half of the parents responded that (a) information about the availability of programs and services (50%); (b) guiding families about the availability of educational options locally (50%); and (c) decision-making services regarding the education placement for children who are DHH (51%) were needed. On the section addressing communication, 40% of parents considered two communication services important: (a) training services in communication with a child who is DHH, and (b) allowing parents to make decisions regarding communication. Three aspects of social support services that 39% of parents rated very important were (a) emotional support from service professionals, (b) professionals provide resources and information regarding our needs, and (c) professionals cooperate effectively with the family.

In the final section of the survey requesting participants' written comments, parents complained about the lack of services. For example, parents commented that there was "not enough support for DHH children after identification" and "no accurate diagnosis for children who are hard of hearing." Parents also wanted a "cochlear implant association that involves professionals and parents," "more support and training on how to convince our child to keep wearing his hearing aids," and "more support in school for children who have a cochlear implant." They also expressed the need for "hearing centers with adequate professionals," "more professionals in speech pathology" and "flexible schedule with speech pathologists."

Comments about educational services included, "parents do not have support in education and services," "educational services are still weak," and "need more information and guidelines for appropriate education placement for our child." Finally, parents' general comments indicated that there is "no support for children who are hard of hearing and their parents," and that they "need more support in all the aspects of services."

DISCUSSION

Parents play a critical role in the development of their child. This is especially true for parents of a child who is DHH (Moeller, 2000). Also, parents' perceptions regarding the services and programs for their children who are DHH is considered beneficial since parents are capable of determining the effectiveness and the suitability of the services and programs for their children who are DHH (Jamieson, Zaidman, & Poon, 2011). Consequently, this study was undertaken to investigate the needs and perceptions of parents of children who are DHH in regard to the support and services provided in the KSA.

The findings of this study indicated that all five types of services - early identification, hearing technology, communication, education, and social support - were reported as being received by some parents of children who are DHH in KSA. However, many parents reported that they did not

Table 4

Parent's Level of Satisfaction Regarding Services Received (Ranked by Means: Highest-Lowest)

Survey item	Mean	SD
Early identification services:		
Early access to hearing diagnosis service	3.32	1.25
Process of the hearing of diagnosis	3.36	1.22
Follow- up services with professionals as needed	3.12	1.26
Communication regarding services	3.25	1.27
Written information provided by the provider	3.08	1.27
Flexibility in terms of time for meeting with professionals	3.01	1.37
Hearing technology services:		
Hearing aids	3.25	1.21
Cochlear implant	3.66	1.41
The professional allowed me to make my own decisions regarding the type of hearing technology that would like for my child.	3.23	1.24
Training you on how to manage the child's device at home	2.97	1.34
Communication services:		
Information service about different communication methods for children who are DHH	3.40	1.33
The professionals allowed me to make decisions regarding the communication method for my child	3.52	1.26
The professionals give advice on the communication method that I chose for my child	3.40	1.42
Training service on communication with child who is DHH	3.20	1.47
Training service on sign language	3.10	1.41
Educational services:		
Information about the availability of programs and services	3.02	1.35
Guiding family about availability of educational options locally	2.74	1.46
Information service about eligibility for programs and services	3.05	1.51
Decision-making service regarding my education placement	2.98	1.38
Emotional services:		
Emotional support from service Professionals	2.91	1.31
Listen to your needs and challenges of my Child	2.91	1.35
Professionals provide resources and information regarding our needs.	2.97	1.42
The professionals cooperate effectively with family	2.84	1.29
Introducing you to other family with children who are DHH	3.23	1.40
Provide access to adults who are DHH for mentoring	3.24	1.39

Note: Likert ratings were given values ranging from 1 to 5 corresponding to "not very satisfied" to "very satisfied," respectively; means are based on these values.

receive some of these services. For example, half of the parents (51%) said that they did not receive early identification services for their child. Similarly, more than one-third of parents (37%) reported that they did not receive hearing technology services for their child. More concerning was the majority of parents stated they did not receive communication services (62%), educational services (67%) or social support (72%). These results indicate that many essential services are still not provided for all parents of children who are DHH in the KSA.

Two possible explanations might be assumed regarding the absence of these services for many children who are DHH and their parents in the KSA. First, because these services are limited to certain regions and medical cities such as King Faisal Medical City in Riyadh, King Fahd Medical City in Jeddah (western region), and Al-Kober Hospitals and Al-Dammam Hospital (eastern region), this

Table 5
Parents' Ratings of Most Needed (Distribution, Percentages)

	Rating				
Service	Very important	Important	Somewhat important	Somewhat unimportant	Unimportant
Early identification service					
Early access to early identification	45(58.9%)	17(23.3%)	6(8.2%)	4(5.5%)	3(4.1%)
Process of the hearing diagnosis	44(60.3%)	16(21.9%)	5(3.2%)	4(5.5%)	4(5.5%)
Follow-up services	43(58.9%)	17(23.3%)	7(9.6%)	3(4.1%)	3(4.1%)
Communication regarding services	39(53.4%)	24(32.9%)	5(6.8%)	3(4.1%)	2(2.7%)
Written information	35(47.9%)	26(35.6%)	8(11.0%)	2(2.7%)	2(2.7%)
Flexibility for meeting with professionals	42(57.5%)	21(28.8%)	6(8.2%)	2(2.7%)	2(2.7%)
Hearing technology service					
Hearing aids	42(54.5%)	23(29.9%)	6(7.8%)	2(2.6%)	4(5.2%)
Cochlear implant	44(58.7%)	17(22.7%)	7(9.3%)	2(2.7%)	5(6.7%)
Make my own decisions regarding the type of hearing technology that I would like for my child	52(59.1%)	22(25.0%)	8(9.1%)	3(3.4%)	3(3.4%)
Training you on how to manage the child's device at home	18(20.5%)	8(9.1%)	3(3.4%)	6(6.8%)	70(44.3%)
Communication services					
Information service about different communication methods for children who are DHH	18(36.7%)	21(42.9%)	5(10.2%)	2(4.1%)	3(6.1%)
Make decisions regarding the communication method for my child	20(41.7%)	16(33.3%)	6(12.5%)	2(4.2%)	4(8.3%)
The professionals give advice on the communication method that I chose for my child	18(37.5%)	19(39.6%)	4(8.3%)	5(10.4%)	2(4.2%)
Training service on communication with child who is DHH	19(40.4%)	16(34.0%)	5(10.6%)	4(8.5%)	3(6.4%)
Training service on sign language	16(34.0%)	15(31.9%)	7(14.9%)	1(2.1%)	8(17.0%)
Educational services					
Information about the availability of programs and services	23(50.0%)	12(26.1%)	7(15.2%)	1(2.2%)	3(6.5%)
Guiding family about availability of educational options locally	22(50.0%)	13(29.5%)	6(13.6%)	3(6.8%)	0(0%)
Information service about eligibility for programs and services	21(48.8%)	12(27.9%)	6(14.0%)	3(7.0%)	1(2.3%)
Decision-making service regarding education placement	23(51.1%)	12(26.7%)	6(13.3%)	3(6.7%)	1(2.2%)

may deprive many children and their parents of the potential benefits of these services in Saudi Arabia if the families live far away from where the services are provided. Secondly, KSA parents with children who are DHH may not know about the existence of services because parents left the hospital without any resources or information regarding these services (Alqahtani, 2015). As a result, more research investigating the appropriateness and availability of these services for parents and children who are DHH must be conducted within the field of deaf education in the KSA.

Overall, parents reported an "average" level of satisfaction with the services and support they received for their children who are DHH. In addition, the majority of parents rated most of the items that focused on the five areas - early identification services, hearing technology services, communication services, educational services, and social support services - as very important or important. This suggests that parents value these services for their child and their family. The quantitative ratings were reinforced in the open-ended section of the survey where parents frequently asked for more support in each area, specifically asking for more information, guidelines, educational services as well as more qualified specialists. And, parents expressed a desire for establishing a cochlear implant association that involves professionals and parents. This finding highlights the parents' need for representation of their voices and opinions in the planning and provision of these services for their children. Similarly, it indicates the willingness of parents to collaborate and work with professionals in developing the service delivery system for their children who are DHH.

Limitations

The first limitation of this study relates to sampling. The deaf organizations and centers that helped distribute the survey may not have been known by many parents of children who are DHH in the KSA. Second, the design of the survey did not provide space for participants to add suggestions for improving each service or for adding new services that were not listed on the survey because the survey did not provide an exhaustive list of all possible aspects of parents' needs and support. In addition, the survey focused only on the parents' perceptions, while other family members' perceptions were not solicited; therefore, it cannot be supposed that other family members would have perceptions like those of the study sample.

Future Research

The results of this study provide useful information about the needs and perceptions of parents of children who are DHH in regard to the support and services provided in the KSA. However, more research is needed in order to obtain a better understanding of parents' needs and perceptions about what services they would like for themselves and their children who are DHH in the KSA. Parents of children who are DHH in the KSA who participated in this study indicated that they did not receive some important services. Hence, a qualitative study may be needed to investigate in greater detail parents' perceptions of, and degree of satisfaction with, current services. In addition, the results of this study underscore the need for national documentation of the number of students, specialists, specialist centers, and the qualifications of specialists in deaf education in the KSA.

CONCLUSION

This study investigated the perceptions of parents of children who are DHH regarding the support and services provided in the KSA. The findings indicate that many important services are available and being received by some parents of children who are DHH. However, the results also indicate that these important services are not provided for all parents of children who are DHH in the KSA. Furthermore, the results suggest that parents had an "average" level of satisfaction towards the services and support they received for their children who are DHH. Finally, parents reported that all five aspects of services - early identification, hearing technology, communication, education, and social support – are needed for them and their children.

Overall, this study provides the field of deaf education in the KSA with essential information about what parent's value, what services they are receiving, and what services they are not receiving. The results can be used to guide administrators and educators to better serve the parents and their children who are DHH. Hopefully, it will result in increased awareness of the needs of parents and their children who are DHH and provide new resources for professionals, parents, and children in the KSA with the long-term goal of improving educational and occupational outcomes for individuals who are DHH.

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