The Experience of Children Who are Deaf and Hard of Hearing in Inclusive Schools: Teachers' Views

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Abstract: **This study explored the Saudi special education male teachers' views about the experience of their Deaf and Hard of Hearing children (DHH) in inclusive schools. The research questions guided the exploration. The first is what are the perceptions of teachers of children who are DHH of inclusive education? Second, what are the challenges and difficulties teachers of children who are DHH face daily? Third, what are the teacher's views, suggestions, and visions for improving the current inclusive education for children who are DHH? This qualitative interpretive study recruited twenty-one teachers of children who are DHH in general inclusive primary schools as participants who took part in semi-structured interviews. The researcher adopted the inductive analysis method to analyse the transcripts of the interviews. In addition, the study employed the thematic analysis approach suggested by Braun & Clarke (2006). Data analysis generated a main theme, that concluded three subthemes, that reflects how the teachers perceive children who are DHH's experience at inclusive schools. They suggested that the children's experiences were affected by language delay resulting from hearing impairment and the diagnostic process in Saudi Arabia that determines the educational placement. Teachers also suggested that public classrooms are the best placement for many children who are hard of hearing (HH).**

Keywords: **Deaf and Hard of Hearing, Saudi special education male teachers', educational placement.**

1. INTRODUCTION

This research aims to provide an exploration of the experiences of children who are DHH who receive education in inclusive settings in some schools in Saudi Arabia (SA) through the eyes of their teachers. That is because children are still the most important element of any mainstreaming program. Also, focusing on both teachers and children in one study, as this study, will make this study hard to manage and will require additional time especially in the context of Saudi Arabia (SA). Hence, it was essential during the interviews to ask the participants some questions about their students' experience in the inclusive programs they work in. For example, all participants were asked to explain how they make sure their students benefit from the inclusive environment and what actions they take to support them socially and academically.

During my early data analysis, some of the sub themes included in this research emerged initially as a challenge or barriers to inclusive education for students who are DHH. After some changes and revisions of my thesis structure and analyse, my supervisor and I agreed on having research that discussed and shed light on the experiences of children who are DHH in inclusive schools as the participants explained them and the factors that they believed affected them those children the most. For example, the first two subthemes in this research 'the impact of diagnosis' and 'the impact of language delay' were identified by many participants as challenges to work in the DHH inclusive programs for many teachers of DHH. At the same time, it was explained many times those challenges mentioned earlier also impact their students' experiences and limit their opportunities to benefit from inclusion. The third subtheme in this research 'the impact of partial inclusion on the experiences of HH children' was, in the in early analysis, identified as a main theme that named '*one way of inclusion'*. It meant that teachers thought there is a lack of diversity in the ways of practicing inclusion with those children. In other

words, many HH children are eligible for 'full' inclusion, as called by many of them, according to their communication and academic skills (spoken language). Therefore, explanations of the experiences of HH children during interviews included phrases such "he *can speak/communicate", or "they can benefit more from inclusion",* to justify why many of HH students who receive education in the attached classrooms should be more included in the general classroom and to explained that what is being practiced as inclusion is not enough. Further, the third theme showcases some of the unofficial attempts conducted by some participants to help their children who are DHH join the public classrooms. For example, there are some stories when some children who are HH were gradually promoted to a general classroom and finally left the special education classroom.

2. METHODOLOGY

This study aimed to answer three research questions, the first is what are the teachers' perceptions of DHH inclusion? The second is what are the difficulties and challenges teachers face in the inclusion environments? The third is what are the teachers' ideas and visions for the development of inclusion processes in SA. This study targeted teachers of the DHH in general inclusive schools as a primary source for collecting information through semi-structured l interviews. 21 DHH inclusive teachers participated in this study with an average of up to 40 minutes per interview, with one case of withdrawal from the research one day after his interview.

This study is a qualitative interpretive study in which the researcher makes interpretations of the data subjectively. Therefore, this study adopted the inductive analysis method to analyse the interview transcripts of the participants in their Arabic forms and then translate the quotations into English with a focus on the essential words in each extract.

3. ANALYSIS AND FINDINGS

The third theme in this research will be presented in three subthemes: first, Teachers' views of the impact of diagnosis on students' experiences in inclusive schools. Second, Teachers' views of the impact of language delay on DHH children's experiences in inclusive schools. Third Teachers' Views of the Impact of Partial Inclusion on the Experience of Children Who are HH (See figure 1-1 below).
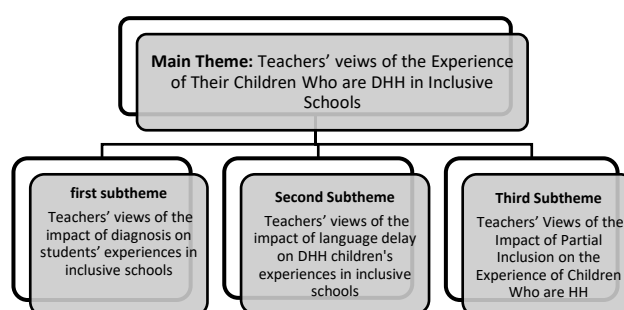

Figure 1- 1 The Third Main Theme and Related Subthemes

The Theme: Teachers' Perceptions of The Experience of Their Children Who are DHH in Inclusive Schools

In this third theme, the DHH children's experience in inclusive programs are explored from their teachers' point of views. This includes their learning experiences and their experiences of social inclusion This research serves to highlight DHH students' daily experience at the inclusive programs.

The First Subtheme: Teachers' Views of the Impact of Diagnosis on Children's Experiences in Inclusive School

This first sub theme emerged as a key factor that impacted DHH children's experiences in inclusive programs participated in this study. In each interview with teachers, there were different questions aiming to explore the participants' thoughts about their DHH students' experiences in inclusive settings. For example, teachers were asked what they would do or change to make sure their students benefit from inclusion. Many teachers agreed on changing the way children who are DHH are placed according to one criterion which is the degree of hearing loss. That is because teachers believe that diagnosis is the first and most important step that decides the future of their students' experiences in schools and they cannot tolerate any mistake or misdiagnosis. For example, a teacher said,

"We have lost many children who can speak and communicate just because of the result of their hearing loss exam. Mistakes in the diagnose do exist here in the school and in the educational system as a whole". (Asir)

In addition, many participants reported that children who are DHH and their teachers are the only ones who face the consequences of any mistaken decisions by the diagnosis protocol. A good example of those consequences when a child is diagnosed as Deaf because he does not show any verbal communication but from the perspective of many teachers that sign could be applied to other disabilities. Therefore, when a child is misdiagnosed and placed in DHH inclusive classrooms, teaching is interrupted as this participant explained.

"I have two kids in my class (HH classroom) who use signs to communicate. It is hard to ignore them during instruction through spoken language as required by the system. So, I have to explain to them sometimes individually with sign language". (Yumba)

The impact of diagnosis on children's experience of school inclusion sub theme emerged from the frequent emphasis by participants on some phrases that represent the issue from a variety of different perspectives such as, educational placements, learning, or communication. For instance, the word 'diagnose', in its Arabic form, was usually included with other ones such as 'problem', negativity, or 'mistake' as shown in the below examples.

"Diagnostic mistakes are problematic" (Jizan).

"Wrong diagnosis is like a crime" (Najran)

"Diagnoses process is a main negativity of inclusion" (Taif).

Some other teachers tended to describe the situation of diagnoses from the aspect of labelling disability such as 'not Deaf', or 'other disability'. One teacher explained that diagnosing hearing impairment needs a complete review as this extract below shown.

"If I were in charge of the inclusive programs, I would have all children go through reassessment and new diagnosis procedures […] that is because there are many mistakes in those diagnose reports which we can see clearly". (Jeddah)

This quote implies the urgent need for reassessing 'all children' because of the frequent and 'clear' mistakes which happen when children are originally diagnosed. The teacher also referred to the need for change in the ways disability is assessed by the educational system "*If I were in charge*".

In research two of my thesis, I explained the main educational placement options for children who are DHH in SA, (a) the Deaf special schools (residential/institution), and (b) the inclusive programs, which is the focus of my study. In inclusive programmes children who are DHH are divided into two different classroom placements according to their hearing test measurement (see table 2-2 in literature review research for DHH classification according to the hearing loss), Deaf students (70 dB and above) attached classrooms within a public school, and hard of hearing students (69 dB and below) attached classrooms within the public school. This division means different educational needs and characteristics as well as differentiated instruction and communication methods.

The issue of misdiagnosis deafness is a serious one. Beyond educational borders, Stinson, and Antia (1999) pointed out that many misdiagnosed medical cases in the Deaf population happen because of communication difficulties. That confirms what the Deaf participants reported in the observation conducted by Lezzoni, O'Day, Killeen, and Harker (2004) to understand the experience of health care for Deaf individual that most issues in healthcare are attributed to the way of communication or as described as "the communication consequences" (p.365). In other words, the absence of sign language interpreters who are specialized in the medical fields, or the absence of medical staff who are capable of understanding the language of deaf people, often leads to a misdiagnosis. Similarly, teachers believe that diagnostic mistakes are extremely serious because they impact the way that they teach and negatively impact their students educationally. For example, the consequences of any misdiagnosis, especially for younger DHH children, lasts a lifetime and limit their educational opportunities. For instance, a participant explained how misdiagnosis for HH children could impact their way of communication and learning as well as the consequences might happen because of an action in this following statement.

"It is not fair to force a child who can hear to learn sign language and learn with Deaf students. He will, if it continues, neglect his residual hearing. I have seen these many times over the years". (Yumba)

By analysing this statement above, several important points can be deduced about the diagnostic mistakes pointed out by the participant. The phrase *"many times"* shows that such cases are not individual and accidental, rather they are systemic. Also, the beginning with the word "*not fair*" refers to such actions that may deprive some children from the appropriate educational opportunities and their educational rights to learn in less restrictive environments. For example, when a HH student was wrongly placed in the deaf classes, he must communicate and learn through sign language, even if he can communicate verbally. As a result, if that child does not know sign language, the educational environment will become more restrictive. The below story describes the situation more.

"I have a HH student in the sixth grade who is placed in the Deaf classroom but does know sign language as the rest in his class. I have seen him many times try to interact and play with students (hearing) from public classrooms. When I spoke with his father and explained to him these classes are not suitable for his son he said "neither the public classrooms" where each class has more than 40 children. He also added that as the curriculum is the same, the father prefers his son to stay in the Deaf classrooms. (Dawadmi)

In addition to what was previously mentioned about the impact of the diagnosis on the choice of educational place for DHH children, the story also emphasises that some children naturally tend to environments in which they can communicate and form social relationships that suit their communication or auditory skills. More than that, the story also referred to the role of parents in choosing the educational placement for their children. In this aspect, Singer, Cacciato, Kamenakis, and Shapiro (2020) stresses that most parents who have children who are DHH feel overwhelmed and confused regarding educational or communicative decisions for their children, especially in the early years of their education.

According to Branson and Miller (1993) one of the main reasons for the failure of mainstreaming children who are DHH is to rely on the medical model for diagnosing deafness, where deafness is always described as a disease, especially from the point of view of pathologist, in an explicit disregard of any cultural or linguistic considerations for the deaf. In addition, even on the psychological tests that used to decide the educational placements for DHH children, usually those children are misdiagnosed or mislabelled intellectually because of the linguistic barriers as those tests need spoken language skills (Miller, Corbett, & Moores, 2007).

In SA, children who are DHH are often diagnosed medically and educationally. The medical test is usually done after birth up until the school age through screening that is provided by the health officials to specify the appropriate hearing aids if a hearing loss was detected (Al-Rowaily, AlFayez, AlJomiey, AlBadr, & Abolfotouh, 2012; Osterling, 2008). The educational diagnosis procedure is an assessment carried out by SME, which includes screening, hearing measurement (hearing loss degree), and IQ testing, to decide the appropriate placement for DHH children.

According to many teachers in this study, misdiagnosis usually happens within procedures carried out by the local education authority in the city. Teachers suggested that local education authority procedures usually rely only on the results of measuring the hearing loss to decide on the educational placement for those children, rather than measuring the other abilities or skills such as communication, cognitive, or the psychological aspects. The following participants gave more insight concerning the diagnostic issues with some suggestions to improve this important procedure.

"One thing we commonly see here is when children are diagnosed according to one criterion, that is the degree of their hearing loss. It should not be like this. What should be done is to examine everything, including linguistic and psychological areas. This could lead to a better diagnosis. They know (system) there is some much overlap between our students and autistic ones especially in terms of language". (Aqiq)

The above teacher suggests that the process of diagnosis is too narrow in focusing only on hearing loss, relying on a single standard "*degree of their hearing loss*" to determine the educational needs and placements for those children. It was clear from the use of the phrases "*including linguistic or in terms of language"* that instruments used in diagnosis don't consider the similarity of symptoms for many disabilities, especially those that have linguistic or communicative signs such as deafness and autism. This teacher stresses once again what he sees as the importance of the linguistic and psychological aspect of children when conducting these diagnostic tests, which may affect the results and decisions. This teacher's view is reflected in a previous study conducted in the Saudi context on the diagnosis of disability by Abdul Wahab (2015), to investigate the quality of diagnostic programs for disabled people. The study concluded four main findings, (1) deficiencies in the diagnostic processes and most stages of the diagnosis were not completed, (2) deficiencies of tests instruments used

in terms of the nature of the test and the method of application, (3) lack of competences and expertise for the specialist and (4) inappropriate environment for successful diagnosis process.

Some of the stories received from the participants during the interviews also confirmed the validity of what the previous participant stated that sometimes diagnostic mistakes may include autistic children and their classification as Deaf or hard of hearing based on the linguistic aspect. In other words, diagnostic mistakes do not affect hearing-impaired children and place them in deaf classes only, as mentioned at the beginning of this sub-theme, but may occur with all children with SEN.

"We also have many diagnostic problems. I mean, we have some kids here who have signs of other disabilities like autism but not hearing one. We are tired of dealing with this issue. The real problem is the first step of diagnosis; when kids do not interact verbally on the test, specialists assume that they are deaf or hard of hearing. He might have something else". (Hail)

What is clear from this story is that the diagnostic procedure, according to the participant's opinion, appears as a routine and superficial action that does not include or consider any second thoughts *"might have something else"*. It was also asserted that the level of communication and verbal interaction during diagnostic tests is not conclusive evidence of a hearing impairment "*not interacting verbally"*. The story also confirms what was previously mentioned that teachers believe that diagnostic mistakes are not rare cases, but rather frequent *"tired of dealing with this"*.

 In regard to diagnosing DHH individual generally, Glickman (2007) assured that considering the language delay that many DHH patients have; therefore, clinics or diagnose centres should be extra careful to not draw conclusions based on patients' communication alone; otherwise, the possibility of misjudgement will be very high. Also, as children with hearing loss should be tested for learning disabilities, some combinations of tests considered lacking in adequate assessment and correction methods may be useful in educational and vocational counselling as well as psychiatric counselling. Therefore, neuropsychiatric examinations for those children should be only conducted professionally by people who have enough experience about deafness, sign language, and Deaf culture to reduce the diagnostic mistake as possible (Osterling, 2008).

On the other hand, a teacher clarifies that some of the HH children have clear indications and apparent language abilities that may not need a diagnosis to know that they are HH, still they are placed in the deaf classrooms, within the public school, based on the diagnosis report. In other words, some inclusive school's administration cannot distinguish the difference between deafness and hard of hearing but rely on official reports received from the educational authority in the city without consulting special education teachers as listed in the following quote.

"Imagine you place a deaf student in the general classroom, he will be lost. I have seen things like that. Here (Deaf inclusive classroom), we have a student who speaks very properly!!! That means he was mistakenly placed here. Diagnostic mistakes exist. I am sure this child's diagnosis is wrong; he can hear me and carry the conversation with me; he is not deaf at all. The problem is that no one wants to admit this mistake or talks about it". (Asir)

One of the important indications included in this quote is that the system often does not admit the existence of those misdiagnosed actions even though many teachers reported that they always inform school administrations at least once. That was clear from the language used in the above description such as "*mistakes exist*" or "*no one wants to admit*". It was also explained that clear signs of a student's abilities to speak and hear or "*carry the conversation*", are ignored or not questioned by school officials. The opinion of the above participant supports what he emphasized by Remine, Care, and Grbic (2009) that one of the most important roles of teachers of the DHH in mainstreaming programs is to provide support and advice related to their students and discuss them with the school administration. That role includes reviewing the "audiological, educational, cognitive, linguistic and social characteristics" (p.120).

What confirms the importance of involving teachers of the DHH in reviewing the records of their students, especially in the inclusive schools, is what some participants in this study mentioned of discovering cases of wrong assessment or misdiagnosis of some children, which sometimes result in radical changes such as the educational placement. For example, another story was mentioned about a student who was mistakenly diagnosed as deaf. A participant explained that it took him and other teachers of the DHH in their inclusive school more than two years to get approval for a reassessment.

"I think placing children who are DHH by hearing measurements is not accurate. I had a student here in the sixth grade with almost normal speaking and hearing abilities and was, according to the official report, identified as deaf. We (DHH teachers) have known this child since he was in the fourth grader. Therefore, we had to be Insisting about his measurement

to be done again, so we spoke with people in charge in the school to contact the authority. After many attempts, they did it again, and we were right. Fortunately, the student was moved to the general classroom". (Riyadh)

This story emphasizes some points that were previously mentioned by other participants who highlighted this issue. For instance, the weakness of diagnostic tools and the reliance in some cases on a single criterion to determine the appropriate educational placement for children who are DHH "*hearing measurements is not accurate*". Further, it was also clear that there is no official way for reviewing students' cases or records, but rather they are individual initiatives by some teachers "*we had to be Insisting*". As mentioned previously in some sub-themes, most of these individual initiatives do not continue or may cause problems for some teachers with the local educational authority. Therefore, it may be understood from the above that there must be periodic reviews of student records by a team of which involves DHH teachers.

Through the data, several reasons were implicitly presented through the participants' comments about the diagnosis issue. Interestingly, one of the participants noted that he has a student who was placed in the HH program because it might be the nearest program (graphically) from where he lives, even though the program is officially for Deaf students and cannot serve other students with a different disability.

"I would love to show you one of my students. He does not wear any hearing aids, and no matter how low you speak, he can still hear you. It looks like he is a slow learner but not HH for sure. I do not know how they decided to place him here; maybe this school is the nearest school for him as a SEN child!! all kids here should be HH." (Dammam)

This teacher spoke with much confidence "*to show you one of my students*" indicating that the abilities of one of his students do not indicate a hearing disability. That was clear, to the teacher, through the ability of that child to communicate and speak properly. The teacher implicitly indicates that there are other environmental factors that may lead to placing students in an educationally unsuitable placement. For example, the long distance between the student's place of residence and the appropriate educational school or (the nearest) as it was described. This may be explained by the fact that there are sometimes concessions by some families or the educational system about the most appropriate placement for the child due to circumstances other than misdiagnosis of a disability. However, it is not possible to exclude the possibility of diagnostic mistake also in this case, as there is always a difficulty, that is outside the control of specialists or the tools used, to assess sensory disabilities (Carvill, 2001; Rosenhall, Nordin, Sandström, Ahlsen, & Gillberg, 1999). For instance, in a study that reviewed the diagnosis records of 1150 of hearing-impaired children in the USA by Jure, Rapin, and Tuchman (1991) found that 4 % of them met the criteria to be identified as autistic.

To summarize this issue discussed under this subtheme, it was clear that how the hearing impairment is being assessed needs a complete review in terms of the instruments, staff, and process. According to many participants' opinions, there is a deficit in many diagnostic reports produced by the educational authority which decide the students' placement, needs, and educational future according to some teachers

"This is not fair. It should not be only the hearing measurement that makes us decide the students' future" (Baha).

In addition, it appears that diagnosis is carried out once or twice before the age of starting school to determine the appropriate educational placement for the HDD student. Therefore, it is imperative to make a periodic diagnosis before each academic year by a specialized team that includes teachers of the DHH and sign language interpreters to ensure better communication during the diagnosis.

On the other hand, it was reported that such diagnostic mistakes may force teachers of the DHH to perform additional work outside the boundaries, which causes some teachers to clash with the authority and educational decision-makers, which might lead to some legal issues. For instance, in Saudi Deaf schools (special schools) that provide a diagnostic service, some psychologists and social workers cannot communicate with Deaf children through sign language while conducting tests for students. As a result, some teachers of the DHH, in their spare time, are assigned to help during the assessment process by translating through sign language interpreting.

It was asserted many times that there is a weakness in the way in which students are eligible for inclusive programs. One of the critical issues was highlighted is that placing a child by misdiagnosing or week eligibility system within DHH classes, while he is not DHH, causes them a lot of trouble and increases the disruption of the learning process and most teachers of the DHH are not trained or prepared to deal with other disabilities appropriately in most cases.

The Second Subtheme: Teachers' Views of the Impact of Language Delay on Children's Experiences in Inclusive Schools

This sub-theme reflects the second element impacting students' experiences at the DHH inclusive programs. Before going further, it is important to understand what language delays mean in this case. Delays in the language development happens when children don't show an appropriate age language in terms of the number of words, correct linguistic construction, or and the application of those skills due to the lack of language experiences or their late acquisition (Dostal, Gabriel, & Weir, 2017; Moores & Martin, 2006). Hence, most of the interviews referred to the language delay as one of the most significant obstacles that prevent students from benefiting from the inclusive environment as they should be. Moreover, many participants also confirmed that the impact of the language delay reaches all educational, social, and psychological aspects of their students. For example, the language delay was discussed as the main cause for their students' lower performance in the curricula, while some discussed it as a reason for isolation and lack of interaction with the school community.

"My students don't feel confident to interact with their hearing peers. They tend to be on their own during mealtime because no one understands them but me" (Yumba).

"It is hard to keep in track with the curricula because of the language gap for my students" (Abha).

From the early stages of data analysis, the language delay of children who are DHH appeared as one of the most important factors impacting many children who are DHH at inclusive programs. Therefore, this subtheme went through many stages of analysis and overlapped with other themes. Hence, I will explain how this sum themes were developed during analysis. It was first classified as a main theme under the second research question (challenges of DHH inclusion). Then it was merged under another theme concerned with the general curriculum in inclusion. However, revisions and reviews of all themes and transcripts revealed that the impact of language delay was beyond just learning. It impacts children's who are DHH experiences in all aspects of the school such as communicating and plying. Therefore, this sub theme emerged form used many linguistic signs that formed the codes to build this sub-theme later, to describe that impact socially and academically, such as 'the mother or natural language, neither sign language nor speech, linguistic, vocabulary, interaction, or early language intervention.

Language delay has always been identified as a cumulative effect that embodies many difficulties for children who are DHH in many aspects of their lives (Dostal, Gabriel, & Weir, 2017; Moores & Martin, 2006). In research three of my thesis, I highlighted the hearing impairment's impact on language acquisition for young DHH children. Hence, before going any further in this section, I would like to briefly root the reasons behind this delay again here for more clarity.

DHH language delay is generally attributed to two main reasons. First, the majority of children who are DHH are born in hearing families, which means almost no exposure to a fluent language (spoken nor signed) at an early age. Even if some parents have signing skills or start to learn some to raise their DHH child, those skills are still not fluent (Schick, De Villiers, De Villiers, & Hoffmeister, 2007). Second, when children who are DHH reach school age, they have been already at, or near to, the end of the appropriate age (critical period 2-5/7 years) of language acquisition, which means acquiring the language becomes a bit slower (Brennan, 2003; Easterbrooks & Baker, 2002; Moores, 2001). Consequently, learning over the following years for those children became much harder (Dockrell & Lindsay, 1998). In other words, many children who are DHH are left behind educationally, even those who receive full access to curriculum later through sign language interpretation when they start school (Schick, Williams, & Kupermintz, 2006). That is because "children who are DHH who enter school without fluency to express and comprehend complex grammatical structures typical of their peers are unlikely ever to catch up. That subsequently limits their access to the general academic curriculum with long-term and often lifelong impacts" (Luft, 2017, p. 33).

In this study, language delay was repeatedly identified as a factor influencing children's school experiences in terms of learning and social interaction. In addition, during the analysis, participants provided some specific language struggles that appeared around the national curriculum requirements in the classroom. Others tended to describe it from the social aspect of communication and interaction within the rest of the school.

For instance, some teachers explained the difficulty of the instruction process with their students, who they considered to be without an authentic and natural language. Many times, it was explained that most Children who are DHH had not accomplished the age-appropriate literacy skills presented in the general curriculum, even in the high-grade levels, as shown in the following statement.

"If you look at our students' performance records in sixth grade, they cannot read and write properly. I do not know how they were labelled or classified as hard of hearing (eligible for HH inclusive education). They have no way of communication, either by speaking or signing. Even if they try to communicate with me, I cannot sometimes understand them clearly". (Madinah)

This participant refers to the low level of reading and writing skills for his students at the higher levels of the primary stage, which explains that the effect of language delay extends if there is no early intervention. Furthermore, there is another indication of how difficult teachers believe it is for such children to learn without a solid or natural language that teachers can develop or enrich during the six years of learning in the primary stage *"either by speaking or signing"*. Also, it was highlighted that the communication between teachers and students seemed interrupted during learning because of that language delay *"I cannot understand them clearly"*.

The difficulty of accessing the general curriculum for most children who are DHH because of the language delay is not surprising as it has been addressed many times in the literature. For example, a study to investigate the provision of children with cochlear implants in some mainstream schools in Manchester, UK by Bennett and Lynas (2001) concluded with two main points. First, mainstreaming, or full inclusion is not enough for those children to access the general curriculum which means the need for a comprehensive support program. Second, linguistic intervention must be also provided through the support system to help children maximize their linguistic skills.

For some other teachers of the DHH in my study, they believe that the language delay of their students affects their ability to assimilate any new concepts presented in the curriculum. This is often attributed to their students' severe lack of linguistic experience and educational experience in the preschool age through the family and the surrounding environment. For example, most hearing children go through gradual stages of language acquisition from parents and siblings continuously and with continuous feedback (Gertz & Boudreault, 2016). In contrast, most children who are DHH are not exposed to sufficient language experiences at preschool age, which affects learning new language experiences later in school age (Dostal, Gabriel, & Weir, 2017) as this teacher shows in the following illustration.

"Usually, I have to explain some new abstract concepts with each lesson, like 'physical changes' to my students whose word bank is limited. Not only it is very challenging for them and hard to comprehend or articulate, but they also don't have any previous experience to build on or start from". (Namas)

It was implied in this quote that as most of the students depend on their visual sense to receive information and acquire educational and linguistic experiences. In most cases, these concepts are presented in the curricula to simulate the hearing students "*articulate*". In other words, hearing children learn new ideas first through hearing, then articulation until they get a simplified understanding. Then this understanding is developed until reaching the abstract meaning in the following years. However, as for children who are DHH, many do not go through this sequence of acquiring language experiences. The above situation confirmed what was found by Doherty (2012) in a study that compared the experience of some children who are DHH in some inclusive schools in Northern Ireland and Sweden. Northern Irish children's who are DHH answers revealed "unsupportive experiences at home due to unenthusiastic parents or a less than effective peripatetic service. Their parents had not known how to cope with deafness, so communication or interaction with family members was very limited" (p. 797).

During the data analysis in this study, it was clear that most of the teachers often associated their explanation of the language delay for their students with the importance of having an early intervention program to support their language and communication skills in any inclusive school. Many of them provided detailed views on why and how this language intervention and support should be done. For example, it was stated many times that children who are DHH must be linguistically supported early and before the age of entering school, especially for those who will join the DHH inclusive programs. At other occasions, consequences of the absence of language support were described to draw the necessity of this issue.

"The inclusion environment is not an obstacle to enriching the language output of our students. The problem is that there is no way to support children linguistically. Also, there is no full-time person or specialist to provide that support in the inclusive program. So, we need a decision in which there is a full-time teacher or trainer to enrich the language output of our students before the first grade". (Najran)

One of the most interesting and important points mentioned is that the need for some children who are DHH to communicate with their teachers and peers lead some to create their own way/system that cannot be relied upon or generalized in education or communication with others, as this participant explains in the following quote.

"We have many students who have a cochlear implant, and sadly it seems they don't receive the appropriate language intervention after surgery. Many of them reached 3rd grade without understanding speech even though they hear. I have seen many of them who started to develop their unique sign language, which is wrong". (Jeddah)

This teacher used *"cochlear implant students"* who were enrolled in the inclusive program as an example to illustrate the importance of language support even when the sense of hearing has been changed. That could mean even in such cases, those students still cannot develop their spoken language by relying on their corrected hearing alone. That also can be explained by the fact that even in the best cases, the sense of hearing resulting from a medical intervention or treatment cannot be compared with the normal hearing ability. In addition, the appropriate age of learning language was referred to as "*reached 3rd grade without*" as another matter of the need of language support. This quotation could also indicate the lack of language rehabilitation for many cochlear implant children, which would exacerbate the problem for many DHH inclusive programs, as it is the only educational option for them according to the Saudi education system. Therefore, there must be continuous intervention and language rehabilitation programs in any inclusive school that serves children who are DHH.

In this respect, Dostal et al. (2017) asserted that when some children who are DHH develop a unique way of communication on their own, such as gestures or signs, that cannot work as a natural language. In addition, a child who is DHH cannot develop a cognitive language to learn through such a system. The reason for this may be that the special language or gestures that children develop themselves cannot be understood by other people, or in other words, it cannot be agreed upon between a group of individuals if we take into account that language is defined as an agreed set of symbols among a group of people (Gertz & Boudreault, 2016).

Therefore, it may be necessary for most teachers of the DHH in inclusion programs to rely on visual thinking techniques to represent information from the content of the subjects as described in this following quote.

"Teaching children who are DHH cannot be done without pictures or visual aids, especially for me as science teachers. But the problem is that the environment here is not visually supportive and the technology here (in the school) is old" (Hail)

That is because "comprehensive access to academic content through a complete linguistic system is able to engage in meaningful communication with peers and instructors allowing them to mediate the process of conceptual development with others, rather than doing so alone" (Standley, 2005, p. 2182). Also, the teachers views described in the statements presented so far are consistent with what was revealed by Dammeyer (2014) that regardless of the child was deaf, hard of hearing, or cochlear implant, the same impact on language in general and literacy, in particular, was similar for all children who are DHH in elementary school.

Some teachers in this study were not satisfied with presenting the problem only or presenting their opinions, but some of them had personal initiatives and attempts with the school administrations in which they work to provide linguistic support to their students or to intervene in cooperation with the language training specialist in the school. Through this, many of them appear once again, as appeared in some of the previous sub-themes, a high level of interest and a strong desire to change the reality of DHH inclusion for the better, even if it is through individual efforts and within their limited work environment. This participant explained that there are some attempts with the school administration to design a language intervention program in the following story.

"Because of that almost all DHH kids start school without any language basics. Therefore, we have suggested to the school administration here many times that all new children who are DHH should be in a preparation linguistic session before they start at the first grade. Unfortunately, no one supported this idea especially from the higher level". (Taif)

This story could explain several things related to the educational system of inclusive education and the severe shortage of support services needed by teachers of the DHH and their students. However, it clearly confirms what was mentioned in the first sub-theme in the previous research "frustration" due to the exclusion of the role of teachers in developing inclusion and taking their opinions and visions as valuable sources for assessing the inclusion process. This is evidenced by the

teachers' use of the phrase "*many times*" to indicate the level of unsuccessful attempts to support students linguistically formally and professionally by the educational system.

According to Doherty (2012) when inclusive schools are linguistically supportive for DHHs, the level of awareness about deafness and the sense of equality can reach a higher level that help most of them to succeed academically and socially. Further, Hopwood and Gallaway (1999) argued that children who are DHH in mainstreaming environments are likely to be even more left behind their peers than they were already without individual linguistic intervention and support.

The importance of language support was also clarified through some comparisons between the students' performance in children who are DHH in inclusive environments and the private schools by some participants in this study. Some teachers believe that the rich language environment in private schools for the Deaf (the extensive use of sign language by teachers, students, and staff), is the main reason for students' sense of belonging and participation, and consequently their higher academic performance compared to students in inclusive programs. Also, the language delay of children who are DHH in private schools does not constitute a challenge for many teachers, especially in teaching the general curriculum, as they can reduce or shorten the curriculum to suit their students and by translating important concepts from the written text into sign language. In some cases, the experiences of older deaf students can be used in delivering new concepts to younger ones through sign language or what is called 'peer teaching', as this teacher explains in the following answer.

"Unlike here, when I was working at the special DHH school, the DHH kids' language (sign language) there is much better because they all learn from each other. We had no problem dealing with the general curriculum because we know what our students can or cannot do. There was so much understanding". (Jazan)

This teacher implicitly referred "*so much understanding*" to the extent to which the linguistic delay of most children who are DHH affects the evaluation of the performance of inclusion teachers from the point of view of the educational system, as they must deal with the general curricula, that are directed mainly to the hearing students, in the same way as the evaluation of public classrooms teachers. The reason for this may be because most of the DHH inclusive programs, especially in the city of this research, provide service to HH students which means that they rely entirely on spoken language and do not allow the use of sign language.

It is not surprising that many teachers of the DHH often report the language delay in association with curriculum because it is tough to keep up with what is required to achieve by the educational system with such a challenge, especially in inclusive schools. Indeed, in DHH inclusive programs, monitoring curriculum progress by local education authorities is much more restrictive than in DHH special schools. In addition, curriculum standards, contents, and materials (subjects' books) are centralized by the ministry of education. All national schools must follow what is provided in the same guidelines regardless. As a result, for almost all participants in this study, the national curriculum fails to give any socio-cultural way of learning, especially for DHH pupils (Bjørnsrud & Nilsen, 2011).

Some participants also highlighted the importance of adding and technology in helping children who are DHH accessing and developing their language skills. In other words, visual learning would help children who are DHH engage with written texts and give them more access to the curriculum. A teacher had explicitly mentioned that in this following quote.

"I teach 2nd graders, and their language is still weak to the extent that they cannot understand most of what is being taught or provided. Therefore, there has to be a way to increase their language such as an intervention or aiding technology especially in inclusive schools". (Tabuk)

From this quote, the importance of language support was assured again especially for those in an inclusive environment, but more importantly it showed that teachers of the DHH are aware of the appropriate time and time for children to acquire any language (critical period that was described at the beginning) by the phrases "*2nd grade, still weak*". That may be interpreted as it is crucial to expose and support children who are DHH to the appropriate language (sign or spoken language) early and visually. This view appeared similar to what Bauman and Murray (2010) have articulated as the futuristic visual learning of DHH individuals. This idea is derived from the belief that sign language can convey complex conceptions like those in medical and science fields. Still, it can also help improve literacy for DHH individuals without written form. In other words, "evolving definitions of literacy are happening in tandem with emerging video technologies that allow greater ease of producing academic texts" using sign language (Bauman & Murray, 2010, p. 249). Moreover, early language

intervention must be a priority in deaf education and under the responsibility of a team that consists of teachers of the DHH and language specialists in the school (Standley, 2005).

However, this sounds impossible unless a higher level of educational authority carries it out because of many reasons. First "special education teachers can no longer afford to work solely on remediating skill deficits while important instructional content is lost or passed over" (Abell, Bauder, & Simmons, 2005, p. 84). Further, visual learning and language support through sign language seems easier for those children communicating through sign language but not for those who are labelled as HH in inclusive schools (Lynas, 1999). Also, Powers (2001) highlighted that some children who are DHH may feel that early intervention programs or language support sessions are an extra thing that can be abandoned and unimportant, and therefore many of them do not show enough interest and enthusiasm that helps them succeed in such programs.

To summarize, because of the language delay, the educational experiences, and outcomes of most children who are DHH in inclusive school settings vary significantly from those in public schools and disabled peers. They do not benefit from the climate of inclusion or access to the general curriculum in the same manner as other learners do. In fact, teachers of the DHH and their students are facing obstacles to the general education atmosphere and traditional discourse habits that cannot be changed by assistive technology or staff. Those DHH inclusive programs have access to information, but they are unable to resolve linguistic and socio-cultural deficits arising from hearing loss (Luft, 2017).

The Third Subtheme: Teachers' Views of the Impact of Partial Inclusion on the Experience of Children Who have Hard of Hearing

This sub-theme represents the third factor that appeared, during the data analysis, directly related to DHH students' experience in inclusive programs. However, this sub-theme emerged especially concerning the experience of HH students, who represent the largest number of the total students in all-inclusive programs in the study area. A possible reason for this special sub theme is that many inclusive programs in the city of this study are classified as HH inclusive programs. The total number of HH students' programs participated was five compared to only one program for deaf students. In other words, many of the deaf students in the city of this study are still receiving education in private deaf schools at the primary stage.

This sub-theme specifically revolves around how inclusion is practiced with HH students, who are considered by many of the teachers participating in this study to be completely different from the deaf in characteristics, communication and individual abilities. HH students are often referred to during interviews as being closer to their hearing peers. That means many of them are more likely to receive education in general education classrooms than what is currently practiced in inclusion programs. To do this appropriately and successfully, many teachers believe in the importance of applying 'total inclusion' with the HH children under the supervision of special education teachers and providing support services in terms of language, communication and auditory training.

Through the literature on the education of the hard of hearing, there is significant controversy about this group of children, which may often be independent and rejected by the Deaf community and the hearing community alike. In other words, the HH individuals see themselves as belonging to the hearing population more; however, the problem is that they do not usually possess a fluent spoken language that enables them to integrate fully into the community. At the same time, they do not prefer to use sign language or classify themselves as deaf people. Therefore, many of them feel confused to have a clear identity (Deaf or hearing) in many cases, which is considered one of the most critical challenges (Michael, Cinamon, & Most, 2015).

From an educational point of view, there has been an increase in the number of Children who are DHH who receive education in inclusive environments. Still, they often face two main types of problems. The first is that education in these schools is provided verbally through speech, which is considered difficult to access and understand information or communicate with teachers and other students. Second, most teachers in general education classrooms do not have sufficient experience and training to deal with hearing problems in a way that ensures the provision of appropriate educational service for those students (Luckner, 1991).

Most teachers in this study agreed that their HH students should not be included in the same way as their deaf peers (classes attached to public schools with limited social and educational interaction). Instead, they need to be included more in the general education classrooms, as this teacher explains.

"From my point of view, HH students are entirely different from their deaf peers, so they should not be included in the same ways (self-contained classrooms); instead, they should be included with their hearing peers. I have seen many successful examples of this. Some of them need supportive services such as auditory training and language intervention to be fully included in public classrooms". (Tabuk)

It is noticeable from the participant's use of the words (*entirely different*) that he supports the view that separates the hard of hearing from the deaf in terms of labelling, communication, and thus in the instructional methods. That can also be explained by the fact that the educational system treats all students with hearing problems in the same way regarding inclusion, which is not suitable according to many DHH inclusive teachers. This view was confirmed by Stinson and Lang (1994), who pointed out that many studies suggest HH children who have some relative hearing and speaking abilities and rely on the oral way of communication may gain more educational benefits when placed in public classrooms. However, educating children who are HH in general classrooms is challenging for most teachers and supportive services providers in inclusive schools. One of the most common challenges "lies in the fact that they do not hear normally, and yet they are not deaf. A matter which further complicates the education of these children is the vast range of hearing abilities within the hard-of-hearing population itself" (Martin, Bernstein, Daly, & Cody, 1988, p. 83).

Many of the teachers participating in this study indicated that the inclusion of HH students in general education classrooms must be based on standards and with the participation of all supportive services in the school to help them integrate and succeed appropriately. For example, some teachers referred to the main criteria they believe must be met by the HH student to enrol in education classes. First, that the degree of hearing loss should be at a moderate level where hearing aids can be used, secondly, an appropriate level of communication through speaking language. One teacher referred to these criteria in the following quote.

"I think only kids whose hearing loss is above 60 or 70 Db should be placed in special classes in any mainstream school. Many of our HH students can rely on speaking; they need to be placed in the general classrooms with some support from the resources room and articulating training" (Asir).

It is noted that this teacher relied mainly on the degree of the hearing loss, which is based on the medical classification of hearing impairment. According to this medical classification, a person who has a hearing loss of 59Db or less on the hearing measurement scale (see the medical category of hearing impairment in the research of literature review) is classified as hard of hearing. However, it is clear from what he added that the degree of hearing loss is not enough for any HH student to be qualified to receive education in public classes, but that support services and continuous intervention must be available to support that kind of student in such educational environments. Similarly, a study by Michael and Zidan (2018) aimed to assess the self-advocacy for HH children in an inclusive setting in Israel implied that intervention for HH children in oral learning environments should "focus on intensifying their self-esteem as well as their syntactic and pragmatic abilities" (p. 125).

In many cases, teachers' attitudes towards including HH students appeared similar to what was discussed in research 7, which they expressed as 'full' or 'relative' inclusion in the general education classrooms. During the interviews, there were many questions about the best ways to include children with SEN in general and students in particular. The answers to those questions can be summarized, as most teachers in this study believed the 'partial inclusion' is suitable with children who are deaf. At the same time, HH students should be included entirely or relatively in general classrooms on many occasions as this participant said.

"What we apply now in SA for DHH is what is known as partial inclusion. There is no full inclusion educationally for our students except for some informal activities in school". (Abha)

Participants who referred to this type of inclusion as 'total inclusion' with a consideration of the student's hearing and language abilities, the extent to which he benefits from them in receiving education, and the continuous use of hearing aids during the school day as well as the provision of support services. To ensure the success of this type of inclusion with the HH children, Reed, Antia, and Kreimeyer (2008) found that family support for children who are DHH to receive education into public classrooms with their hearing peers is one of the most influential factors for their success. In the same vein, in a study by Luckner and Muir (2001) to explore factors related to successful full inclusion for Children who are DHH in some schools in Northern Colorado, US, four elements were identified to play the most critical role. (a) The role of the family in supporting the student in these educational environments. (b) The student's characteristics include self-determination and social, cognitive, and linguistic skills. (c) Communication and cooperation between special education teachers and general education teachers. (c) The level of support services and early intervention at the school.

In this study, most teachers of the DHH have pointed out similar elements to those found by Luckner and Muir of successful full inclusion for HH students into the general classrooms under this subtheme. For example, most teachers pointed to the importance of language intervention in helping their students engage more in the public classrooms on more than one occasion. At the same time, some of them indicated the absence of a positive role for the family in supporting the school's decisions regarding full inclusion for their children. For example, this participant emphasized the importance of having language intervention services as part of the full inclusion of HH students in the following answer.

"Usually, HH students have fewer words than their hearing peers; therefore, more inclusion in general classrooms can help them develop their speaking skills and communicate more. It could also be as part of language intervention for them". (Madinah)

Many interpretations and indications can be deduced from the above answer about what this teacher meant by *"language intervention"* for HH students. For instance, the use of the phrase *"could also be as part of language intervention"* indicates that the teacher refers to an intervention program in which students have greater involvement with their peers in general education to develop their spoken language skills in the absence of full inclusion practices by the educational system. In other words, a language intervention program can be the only way to achieve the full inclusion of HH students into public classrooms.

One of the essential elements that some teachers have pointed out to the success of children who are HH in public classrooms is the role of family support. However, it was clear from the data that the role of the family was minimal about inclusion and services for their children. There were not enough indications to explain the importance of this critical aspect; instead, some stories just clarified the negative role, according to participants, of some families who refuse for their children to engage and learn more with their hearing peers. One of the teachers mentioned that some HH students could learn better in public classrooms than in the special education section and thought that was unfair and wasted great educational opportunities. Therefore, some teachers take improvised measures and decisions with the school administration to encourage HH students to be alongside their hearing peers. Still, such decisions are often met with rejection from the family for reasons about the high number of students in public classes or fear of failure, as reported by this participant in the following story.

"I have a HH student here who was very good at speaking and communicating through spoken language. So, I had to inform the school administration about that, and he should be promoted to general classrooms based on his abilities. Unfortunately, his parents were not supportive of the school decision and refused to promote him because of the high number of students in general classrooms. Also, this kid was terrified to join those large classrooms". (Buraidah)

It can be clearly understood that such decisions are made at the individual discretion of teachers looking for better opportunities for their students to benefit significantly from the inclusive environment. Further, the above story about HH students' inclusion within the public classrooms implied that the participants believed that including children who are HH fully needs to come from the education system itself and according to professional standards. That will help to limit any improvised decisions or wasting opportunities for students. Therefore, this teacher seemed to understand the family's refusal and believed that the family had convincing justifications for not accepting the school administration's decision.

In a study conducted by Danermark, Ström-Sjölund, and Borg (1996) in Sweden to explore HH students' experiences in mainstream programmes, two main issues were found. First, many students reported their experiences with some additional health problems, a sense of loneliness, a reasonable level of anxiety and fear of the future, and poor social relationships. Second, on the other hand, many of them expressed that education in integrated schools requires a high level of commitment in an academically stressful manner. These findings may explain the fear of some hard-of-hearing students and their families about the idea of full inclusion into general education classes.

The data for this study showed that participants were highly interested in the level of their students' inclusion with their peers in public school on more than one occasion. For example, in Research Five, the level of social interaction was mentioned and how the inclusion environment has sometimes become more isolated than in special education schools. It was also pointed out that inclusive education is done in only two subjects under more than one sub-theme in the sixth research. In this research, the participants again emphasize the importance of social and academic inclusive practices among all students, especially HH students, in any inclusive school. The teachers in this study discussed the issue superficially. Still, many of them provided some suggestions, and precise details that they believe will help raise interaction between

students. DHH teachers' ideas came in two main aspects: the involvement of special education teachers in an auxiliary role for general education teachers and the extension of interaction between all students to cover more subject areas than the only two subjects (physical & art education) required by the education system. One teacher explained why this should be done with HH students in this quote.

"From my experience, HH students are nearly close to their hearing peers, and many of them have an acceptable ability to communicate with speech and residual hearing ability. They can learn in public classrooms with the help of their special education teachers. In other words, they should be fully included". (Jazan)

This teacher refers to the 'teacher assistant' strategy by using the phrase "*with the help of their teachers*", where both teachers (general education teacher and the special education teacher) work together in the same classroom. However, even though the idea of a teacher assistant is a great strategy to increase inclusive education practices," barriers can exist, which may lead to exclusion rather than inclusion" (Moran & Abbott, 2002, pp. 169-170).

One of the strategies and methods that have been repeated during interviews and will increase the level of social and academic interaction of the HH students is to increase the number of subjects they share with their hearing peers. As mentioned previously, the education system for inclusive schools in SA integrates children SEN with their peers entirely in only two subjects. According to many participants, that way of practicing inclusion does not achieve the possible academic and social benefits for their students, especially HHs. Therefore, as this quote shows, many of them recommended the importance of including them in more subjects, especially those with a communicative, linguistic, and academic nature, such as Arabic language and Islamic studies subjects.

"Inclusion for HH children as is now not enough. I am sure they could benefit more from inclusive schools in different ways or strategies. For example, we can place them in more subjects other than physical and art education, such as the Arabic language, Islamic studies, or even mathematics. It does not have to be the whole day but more than what is being practiced right now" (Hail).

This participant emphasized once again that inclusion in its current state does not achieve even the minimum "*not enough*" academic and social inclusion goals for HH students. It was also apparent through the use of the phrase "*It does not have to be the whole day*" that this teacher is not asking for what was previously referred to as 'full inclusion' but to increase interaction through more study materials with students staying in their assigned classes within the school. This view confirms the systematic review carried out by Alshutwi, Ahmad, and Lee (2020) to investigate the impact of inclusion setting on academic performance, social interaction, and DHH students' self-esteem. It was concluded that inclusive placements help improve most DHH students' performance academically and socially and their self-esteem. In addition, most of them will develop their language skills when they take part in a "good inclusion setting" (p.261).

In all cases, it can be said that most of the teachers in this study have a genuine desire to change the inclusion strategies in a way that achieves social and academic benefits for their students. It was also clear from the suggestions from many that they had a strong desire to participate in developing current inclusion practices.

4. CONCLUSION

This research discussed one main theme which revolves around the most important impressions, perceptions, and viewpoints of the participants on the performance of their students who are DHH in inclusion programs. This research mainly aimed to explore the experiences of children who are DHH who receive education in inclusion schools through the opinions of their teachers. The research also tried to shed light on the most important factors that limit children from benefiting from the inclusive environments in the possible way. The theme was presented through three sub-themes where the focus of each one was the children who are DHH themselves.

First, diagnosis and the educational placement sub theme emerged based on many opinions that confirm the existence, form their views, of clear and explicit mistakes in the diagnosis reports for many DHH students. reconsider some diagnostic reports for their students, as a result of which the student's educational placement was corrected. It has been shown through the data that diagnosis is one of the most important challenges faced by teachers of the DHH and their students in the inclusive schools took part in this study, which needs a full review in terms of training the people responsible for diagnosis and the instruments used.

Secondly, teachers believe language delay is one of the most important effects that result from hearing impairment, which affects their linguistic, social and psychological development.

Thirdly, the impact of partial inclusion on the experience of children who are HH. This sub theme appeared specifically about the methods that the participants deem appropriate to hearing-impaired children. This study has shown the importance of raising the level of inclusion of hearing-impaired students with their peers in public classes and not being satisfied with the current methods imposed by the educational system.

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