

Investigation of Distance Education Processes of Students with Hard of Hearing in Inclusive Education Practices*

Article Type	Received Date	Accepted Date
Research	3.10.2023	4.06.2024

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Abstract

The aim of this study is to examine the experiences of students with hard of hearing (HH) in inclusive education practices, their teachers and parents regarding the distance education process. This research was designed with the phenomenological approach from qualitative research methods. The participants consisted of five secondary school students with HH studying at general education schools, their five parents, and ten teachers teaching students with HH. The data was collected in the 2021-2022 academic year through semi-structured interviews. In the study, it was determined that students with HH show reluctant and irregular participation in online courses. On the other hand, it was concluded that online courses were not adapted to the special needs of students and they did not get support special education services. All parents of students with HH were unable to participate in the distance education process. Distance education could be used in only support education or not at all unless it is necessary. The anxiety disorder, anger control problems and behavioural disorders brought on by adolescence increased with the decrease in socialisation in COVID-19-related closures.

Keywords: Distance education, inclusive education practices, online courses, students with hard of hearing.

* This study was presented as an oral presentation at the EDU Congress held in Antalya between 17-19 November 2022.

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Kaynaştırma/Bütünleştirme Yoluyla Eğitim Uygulamalarındaki İşitme Kayıplı Öğrencilerin Uzaktan Eğitim Süreçlerinin İncelenmesi *

Makale Türü	Başvuru Tarihi	Kabul Tarihi
Araştırma	3.10.2023	4.06.2024

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Öz

Bu çalışmanın amacı, kaynaştırma/bütünleştirme yoluyla eğitim uygulamalarındaki işitme yetersizliği olan öğrencilerin, öğretmenlerinin ve ebeveynlerinin uzaktan eğitim sürecine ilişkin deneyimlerini incelemektir. Bu araştırma nitel araştırma yöntemlerinden fenomenolojik yaklaşım ile desenlenmiştir. Katılımcılar, genel eğitim okulunda öğrenim gören beş işitme kayıplı ortaokul öğrencisi, beş ebeveyni ve işitme kayıplı öğrencilere eğitim veren on öğretmenden oluşmaktadır. Veriler 2021-2022 eğitim öğretim yılında yarı yapılandırılmış görüşmeler yoluyla toplanmıştır. Araştırmada, işitme yetersizliği olan öğrencilerin çevrimiçi derslere isteksiz ve düzensiz katılım gösterdikleri tespit edilmiştir. Öte yandan, çevrimiçi derslerin öğrencilerin özel ihtiyaçlarına göre uyarlanmadığı ve destek özel eğitim hizmetleri almadıkları sonucuna ulaşılmıştır. İşitme yetersizliği olan öğrencilerin ebeveynlerinin tamamı uzaktan eğitim sürecine katılmamıştır. Uzaktan eğitim, gelecekte işitme yetersizliği olan öğrencilerin sadece destek eğitiminde ya da gerek olmadıkça hiç kullanılmaması gerektiği belirlenmiştir. COVID-19'a bağlı kapanmalarda sosyalleşmenin azalması ile ergenliğin getirdiği kaygı bozukluğu, öfke kontrol problemleri ve davranış bozuklukları artmıştır.

Anahtar Sözcükler: Çevrimiçi dersler, işitme yetersizliği olan öğrenciler, kaynaştırma/bütünleştirme yoluyla eğitim uygulamaları, uzaktan eğitim.

* Bu çalışma 17-19 Kasım 2022 tarihleri arasında Antalya'da düzenlenen EDU Congress'te sözlü bildiri olarak sunulmuştur.

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Introduction

Individuals with hard of hearing (HH) can have the opportunity for early diagnosis and early access to hearing assistive technologies with the development of technology from the recent past to the present (Cole & Flexer, 2007; Joint Committee on Infant Hearing [JCIH], 2019). Thanks to factors such as increased access to high-quality hearing assistive technology such as hearing aids, cochlear implants and personal FM systems, early diagnosis, early intervention and various teaching adaptations, many students with HH continue their education in inclusive education practices with their hearing peers (Luckner & Muir, 2001; Turnbull et al., 2013). In order for students with HH to be successful in inclusive education practices, various adaptations need to be made in the learning environment, such as the presentation of course content and the instructional technologies used in the classroom. Thanks to the arrangements made in the learning environment and materials, more language stimuli can be provided to children with HH. Thus, their language skills and academic skills can improve (Sarica, 2016; Sika et al., 2015). Reducing noise and creating a suitable acoustic environment in the classrooms significantly supports the listening and learning of children with HH (Sucuoğlu & Kargın, 2006; Temiz & Parlak-Rakap, 2018). In addition to these, examples of effective adaptations in the learning of students with HH include concretising the teaching content with visual stimuli or creating subtitles for the content by using digital technologies (Alsadoon & Turkestani, 2020; Borders et al., 2010; Sucuoğlu & Kargın, 2006; Taddei et al., 2021). On the other hand, thanks to the direct connection feature of smartphones or computers, which are the most common digital technology products today, to hearing aids/ cochlear implants, the speech sound reaches the listener's ear directly in a clear way and contributes significantly to speech intelligibility (Smith & Davis, 2014; Şenel et al., 2022). The mentioned features of digital technologies are a turning point for the quality educational experiences of students with HH. For example, subtitle support for content and remote video communication are important steps in terms of individualisation of learning paths in training environments for individuals with HH (Barak & Sadowsky, 2008).

Research shows that the distance education process for students with special education needs (SEN) differs from their peers with typical development (Sider et al., 2021; Şenol & Can Yasar, 2020). Especially for students with HH, significant difficulties arise in the distance education process (Aljedaani et al. 2022; Alqraini & Alasim, 2021; Taddei et al., 2021). In the studies conducted, it was revealed that students with HH could not get enough efficiency from the courses and adaptations were not made for the courses during the distance education process, and that they needed more parental and teacher support in the process (Aljedaani et al. 2022; Alqraini & Alasim, 2021; Madhesh, 2021). In addition, research results showed that students with HH participate irregularly in distance education (Alsadoon & Turkestani, 2020; Kritzer & Smith, 2020; Sani-Bozkurt et al., 2022) and their academic achievement decreased (Taddei et al., 2021). Besides, it was determined that the lessons were not supported with subtitles or visuals in the distance education process for students with HH and they had difficulty in following the lessons (Alshawabkeh et al., 2021; Schafer et al., 2020) and support education services were not provided (Yang et al., 2021). The research results revealed that the distance education process is not as efficient as face-to-face education for students with HH (Kritzer & Smith, 2020; Kruszewska et al., 2020; Markova, 2021). In addition to their academic achievements, Aljedaani et al. (2022) found that the interaction between students with HH and teachers was low in the distance education process. It has been revealed in studies that students with HH increased their social anxiety levels (Öz et al., 2022; Yang et al., 2021) and felt lonely (Swanwick et al., 2020; Viola & Nunes, 2022) during the distance education process. Parents, who are an important stakeholder in the education process, do not provide sufficient support to their children with HH in the distance education process (Aljedaani et al. 2022). Also parent-teacher cooperation was low (Mantzikos & Lappa, 2020; Smith, 2020).

There are studies in the literature that reveal the situations encountered by students with HH in the COVID-19 distance education process (Alshawabkeh et al., 2021; Cheng & Cheng, 2023; Kritzer & Smith, 2020; Madhesh, 2021; Mantzikos & Lappa, 2020; Öz et al., 2022; Sani-Bozkurt et al., 2022; Smith, 2020; Swanwick et al., 2020; Şahli, 2020; Tuz et al, 2023; Viola & Nunes, 2022). However, it is seen that there are limited studies (Alqraini & Alasim, 2021; Taddei et al., 2021) that reflect the views of students with HH, their teachers and parents in a holistic manner. Considering that the majority of students with HH are included in the inclusive education practices, it is thought that the

views of these students, their teachers and parents on the distance education process and the use of instructional technologies are important. The results obtained in this study will provide a basic framework for the learning needs of students with HH, distance education and the use of instructional technologies. After all, it can be said that the findings will guide awareness about the methods and approaches that will support the learning of these students. The aim of this study is to examine the experiences of students with HH who are in the inclusive education practices, their teachers and parents regarding the distance education process.

Method

Research Design

This research, which was carried out to examine the distance education process of students with HH in inclusive education practices, was designed with the phenomenological approach from qualitative research methods (Bogdan & Biklen, 2007; Creswell, 2007). Since the phenomenological approach is aimed at understanding and making sense of the experiences of individuals regarding a phenomenon, this study focused on the experiences of participants regarding the distance education process.

Participants

The participants of this study were determined by criterion sampling, one of the purposeful sampling types (Miles & Huberman, 1994). In this context, the participants of the study include students with HH in inclusive education practices, their parents, and teachers who teach students with HH in the COVID-19 distance education process. Data triangulation was employed to gain a comprehensive understanding of the research phenomenon and to gather in-depth data (Bogdan & Biklen, 2007; Denzin, 1978). Details about the participants are provided in Table 1, Table 2, and Table 3, using codes such as Student-1,2..., Teacher-1, 2..., and Parent-1,2....

Table 1. *Information on students with hard of hearing*

Code Names	Gender	Age	Reason for occurrence	Age of hearing aid fitting	Current hearing aid devices	Status of receiving special education support services
Student-1	Female	13	Congenital	6th month - behind the ear hearing aid	Single behind the ear hearing aid	From 9th month onwards, from private education institution
Student-2	Female	13	Congenital	6th month- behind the ear hearing aid 3 years old- cochlear implant 11 years old- cochlear implant	Both ear cochlear implants	From 9th month onwards, from private education institution
Student-3	Male	13	Congenital	3 years two behind the ear hearing aids	Hearing aids behind both ears	From the age of 3, from a private education institution
Student-4	Female	13	Congenital	6th month behind the ear hearing aid 2,5 years cochlear implant	Single behind-the-ear hearing aid + Single ear cochlear implant	From 9th month onwards, from private education institution
Student-5	Male	13	Congenital	3 years old hearing aids behind both ears	Hearing aids behind both ears	From the age of 4, from a private education institution

As seen in Table 1, it is understood that all five participating students with HH benefit from hearing assistive technology. All of these students are studying in different regular secondary schools in Bursa, one of the largest cities in Turkey. In addition, all students received support for spoken language development in special education support institutes. These students continued to receive support education from private education institution until the pandemic started. Closures during the pandemic have also disrupted the services of private education institutions.

Table 2. *Information about parents*

Code names	Parent of Student	Age	Graduation degree	Occupation	Number of children	Number of children with SEN
Parent-1	Mother	47	Bachelor	Civil servant	1	1
Parent-2	Mother	34	High School	Housewife	2	1
Parent -3	Father	42	High School	Labourer	2	1
Parent -4	Mother	39	High School	Housewife	2	1
Parent -5	Father	42	High School	Labourer	2	1

As seen in Table 2, parents have one child with HH. It is also known that all participant parents and the other parent are hearing individuals.

Table 3. *Information about teachers*

Code Names	Gender	Professional Seniority (Years)	Branch	Experience with Students with SEN (Years)	Experience with Students with hard of hearing (Number of Students)
Teacher-1	Male	19	Turkish	15	1
Teacher-2	Female	29	Science	9	1
Teacher-3	Male	13	Turkish	7	2
Teacher-4	Male	10	Maths	10	1
Teacher-5	Male	15	Social Studies	15	1
Teacher-6	Female	16	English	16	2
Teacher-7	Female	17	Maths	17	2
Teacher-8	Male	20	Social Studies	15	1
Teacher-9	Female	21	Turkish	20	2
Teacher-10	Female	11	Science	11	1

As seen in Table 3, it is understood that teachers have very little experience with students with HH. Two teachers of each student were interviewed. Accordingly, teachers were listed according to the student sorting in the tables.

Data Collection Techniques

Semi-structured interview technique was utilised to understand and make sense of the experiences of individuals through spoken language about the phenomenon of this research (Creswell, 2007; Seidman, 2006). While preparing the semi-structured interview questions, it was paid attention to be simple and comprehensible so that students with HH, parents and teachers can easily understand. To ensure the content validity of the semi-structured interview questions, the opinions of two special education and one qualitative research expert were consulted. In line with the expert opinions and then the pilot interviews, the semi-structured interview questions were finalised. Pilot interviews were excluded from the findings of this study. The interviews were conducted at the participants' schools between September 27 and November 25, 2021. The duration of the interviews varied between 23 minutes and 48 minutes. During the interviews with students with HH, the researcher had to repeat the questions several times. In addition, the research questions were given to the students in printed form. When the student had difficulty understanding the question, for example, the researcher presented non verbal cues by pointing to the paper and showing three fingers while saying that she was asking the third question.

Data Analysis

The data of the research were analysed based on the inductive approach. Audio recordings or written notes of the interviews were recorded in digital media. Then, written transcripts of the audio recordings in the digital environment were made. The researchers worked independently of each other and coded the transcripts (Bogdan & Biklen, 2007; Creswell, 2007; Miles & Huberman, 1994). The resulting codes reached a theme and sub-themes (see Figure 1).

Credibility and Trustworthiness and Ethical Procedures

In this study, various measures were taken for credibility and trustworthiness. In this context, data triangulation was achieved through interviews with students, parents and teachers who were selected using the purposeful sampling method (Bogdan & Biklen, 2007; Denzin, 1978). At the same time, detailed descriptions were included in the research findings through direct quotations from the participants' views. The results were supported by similar research findings (Creswell, 2007; Miles & Huberman, 1994). Necessary permissions and approvals were obtained from the participants following research ethics. At the same time, it was stated that they had the right to withdraw from the research at any time. Code names were given to protect the confidentiality of the participants' personal information.

Findings

The analysis of the research data collected through semi-structured interviews to examine the views of students with HH, their parents and teachers on distance education revealed six themes (Figure 1).

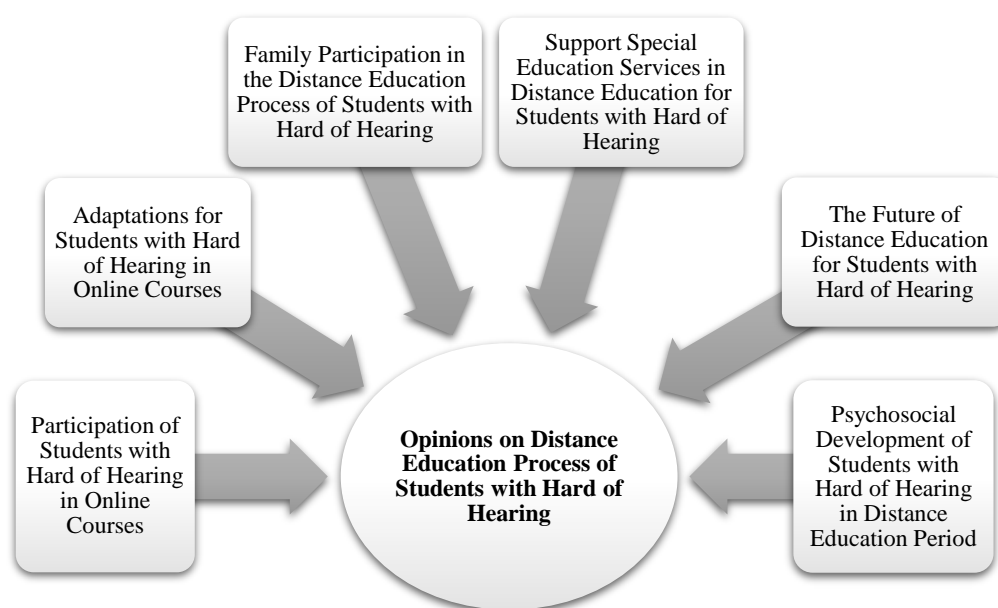


Figure 1. Themes of opinions on distance education process of students with hard of hearing

Participation of Students with Hard of Hearing in Online Courses

In the findings obtained regarding the participation of students with HH in online courses, the participants stated that children with HH showed reluctant participation and did not participate regularly. In this regard, Parent-2 briefly expressed her opinion: "*The distance education process was disjointed. He did not want to attend the lessons*". Student-1, on the other hand, explained that he did not actively participate in the lessons with the words "*I did not want to listen to the lesson because I did not understand the lesson or I was eating. It was open on one side, I was interested in something else. When the teacher asked something, I could not answer.*" At the beginning of the reasons for the reluctant participation of students with HH in online courses, the opinions that the student

characteristics were not taken into consideration because the course teachers did not have information about the student due to the transfer or the branch change of the course they were conducting were explained as follows:

"I had just taken the seventh grade at that time. I didn't know that the child had hearing loss. Of course, he was informed, but I didn't know much about the pandemic and so on. He didn't attend the classes much, I mean, he attended some classes and some classes he didn't" Teacher-4

In addition to these, Teacher-8 stated that the decrease in the participation of the student with HH in online courses was more intense after it was announced that the students would not be evaluated by exams or grades like their other hearing peers:

"Actually, we were doing well at first, but when it was said that last year's grades would be valid and there was no criterion after that, the students let themselves go. He adapted to the social environment and started not attending classes. It is difficult to do activities with these students or other mainstreamed students." Teacher-8

Adaptations for Students with Hard of Hearing in Online Courses

Almost all of the participants in this study stated that no special adaptation was made for students with HH. Most of the participants stated that no adaptation was made because the homes of students with HH were far away from the noise in the classroom environment and they had hearing aids. The opinions on this subject are as follows:

"The lessons always continued in the same way. He participated in the lesson in the same way as the whole class." Parent-2

"Everyone's voices were mingling. It sounded like the voice was coming from far away. Even if the computer sound was 100 per cent, I couldn't hear it." Student-1

"Our student could already hear because he had hearing aids. There are problems if there is no hearing aid." Teacher-1

In addition, Teacher-5 stated that there should be an adaptation for the use of sign language, which is a visual language:

"The sign language used for the students with hard of hearing should have been used in the distance education process. Since we do not have such a skill, we did it by speaking normally and solving activities." Teacher-5

Family Participation in the Distance Education Process of Students with Hard of Hearing

In this study, almost all participants, except for one (Parent-2), stated that the families of students with HH were almost unable to participate in the distance education process due to their work life. The opinions on this issue are as follows:

"We did our best Sometimes I sat next to him, and sometimes his mother sat next to him so that he would not fall behind in his lessons. Since it was a long time, we didn't sit all the time. I went to work; I don't know, her mother had some chores" Parent-3

"My brother was helping me. Sometimes I could not go in when he went to work." Student-5

"I met his father a lot during this process. But his father and mother were working. Her brother and herself were at home." Teacher-5

Support Special Education Services in Distance Education for Students with Hard of Hearing

All of the participants in this study stated that students with HH did not receive support education services in the distance education process, but that it was an important need and that it would be very beneficial for the student. The opinions on this subject are as follows:

"I think in distance education, one-to-one lessons would be useful." Student-1

"Actually, it would be different if we had one-to-one lessons with them. Like in support of education. There was no support for education." Teacher-6

"It would be very good if there were only one-to-one lessons with the teacher. Both we would have been comfortable, and he would have learnt better." Parent-2

The Future of Distance Education for Students with Hard of Hearing

As a result of the analyses of the interviews, it was understood that most of the participants stated that distance education could be partially included in the education of students with HH in the form of support education but that students should also be in the classroom environment in terms of learning efficiency and socialisation (Parent-1, Parent-4, Student-1, Student-4, Student-5, Teacher-1, Teacher-2, Teacher-3, Teacher-4, Teacher-5, Teacher-6, Teacher-10). The opinions on this subject are as follows:

"If possible, but we need to get used to it; I actually understand when I listen to lecture videos on Youtube. One-to-one lessons in distance education would have helped." Student-I

"I don't think it's all of them, but both of them together would be good. Otherwise they will be asocial. Perhaps they could attend school in person for specific hours and participate remotely for the rest of the school day. For example, in full-day schools, face-to-face instruction could take place until noon, with distance education in a supportive style during the afternoon. Especially in classes where socialization is possible, such as music, art, and physical education, students should be together at school." Teacher-6

Conversely, some participants expressed that distance education should not be part of the educational process for students with HH (Student-2, Student-3, Teacher-7, Teacher-8, Teacher-9, Parent-2, Parent-3, Parent-5). Teacher-8 *"I do not recommend distance education; they need to be dealt with face to face. Now, with distance education, it is like the student has built a wall."* expressed by using the metaphor of *building a wall* for distance education in the education of students with HH.

Psychosocial Development of Students with Hard of Hearing in Distance Education Period

This study revealed findings regarding the psychosocial development of secondary school students in the distance education process. Accordingly, Parent-2 explained that in this process, in addition to health problems, the problems caused by adolescence also emerged with the statement:

"We always recommend him to read books, but with adolescence, the pandemic and his own health problems...Of course, adolescence became more of a problem; he made more problems for himself." Parent-2

In addition to the problems related to adolescence, opinions were reported that behavioural problems in students increased with the transition from face-to-face education to distance education during the pandemic period and the decrease in socialisation due to lockdowns (Student-1, Teacher-5, Teacher-7, Parent-1, Parent-2) and that these problems continued after the pandemic when they switched to face-to-face education (Teacher-5). The opinions on this subject are as follows:

"The other children couldn't see him. He stayed at home and became more withdrawn; he was already receiving treatment for anxiety disorder. This issue was present before and persisted during the pandemic." Parent-1

"Psychologically, I felt very bad. We couldn't socialise. I like talking a lot" Student-1

"Distance education did not benefit this student. Being already at a disadvantage, the student struggled even more when they weren't given emphasis. After distance education, when the child returned to school, behavioral issues arose. The student also received psychological support." Teacher-5

Discussion, Conclusion and Recommendations

In this study, semi-structured interviews were conducted to examine the views of students with HH in the inclusive education practices, teachers and parents of students on distance education in the COVID-19 pandemic process. It was concluded that students with HH who continue their distance education with their hearing peers showed reluctant and irregular participation in online courses. Research supporting this research result shows that students with HH who continue their distance education with their hearing peers show irregular participation in the lessons in this process, and their desire and motivation towards the lessons are low (Alsadoon & Turkistani, 2020; Kritzer & Smith, 2020; Sani-Bozkurt et al., 2022; Smith, 2020). Aljedaani et al. (2022) stated that the physical attention

given by the teacher to the student with HH in distance education is not as common as in face-to-face education, the student with HH in distance group education is deprived of the individual attention of the teacher, and there are communication gaps between the teacher and the student. When the results of this study and the findings in the literature are considered together, it is thought that in addition to the difficulties arising from the disabilities of students with HH in this process, multiple situations that need to be adapted, such as the transfer of the student to another school or the change of teacher, are effective in decreasing the motivation of the students towards the lessons. In addition to these, it is thought that the fact that teachers do not know that the student has hearing loss may have caused reluctance to participate in the lessons due to not making arrangements according to the student.

Another important result of this research is the inadequacy of adaptations suitable for student characteristics. It was concluded that no adaptation was made for students with HH who continue their education in online courses with their hearing peers. Similarly, research results are reflecting that adaptations were not made in online courses for students with HH in this process (Aljedaani et al. 2022; Alsadoon & Turkestani 2020; Alshawabkeh et al., 2021; Madhesh, 2021; Sani-Bozkurt et al., 2022; Schafer et al., 2020; Viola & Nunes, 2022). Schafer et al. (2020) revealed the necessity of adaptations such as enriching visual cues for students with HH in the distance education process, providing subtitle support for videos, and including sign language interpreters in the process. In this context, for a high-quality instructional design, it is essential to consider adaptations such as providing concrete course content with visual materials for students with HH, adjusting the lecture speed to accommodate these students, offering subtitle support for videos, incorporating sign language interpretation, and granting additional time for both distance and face-to-face education processes. However, some important issues need to be taken into account when it comes to sign language support. Considering the participants of this study, it is known that all students with HH use hearing-assistive technology and receive education for spoken language development from early ages. In addition, all of their parents are hearing individuals. Therefore, it is thought that sign language interpreting support, as suggested in the findings of this study, will only contribute to students who have sign language competence. In the case of students with HH who are the children of deaf adults (CODA) and they know sign language, it is thought that providing sign language interpretation will both support the participation of parents in education and be an effective support for students in distance education.

As a result of the research, it was determined that almost all of the parents of students with HH could not participate in the distance education process due to their professional life and household chores. Depending on the lack of parental participation in the process, it was concluded that students with HH did not follow the lessons systematically and regularly. In support of this research result, other studies have also revealed that parents of students with HH who are in inclusive education practices cannot support their children in the distance education process (Akçakaya & Baş, 2022; Cheng & Cheng, 2023; Madhesh, 2021; Sani-Bozkurt et al., 2022). Aljedaani et al. (2022) found that to ensure a consistent learning process for students with HH in distance education, parental involvement is necessary; otherwise, children may exhibit disorganization towards lessons when removed from parental authority. Based on the results of this study and others in the literature, it can be inferred that teachers and parents should collaborate for an effective and high-quality distance education experience for students with HH.

The study concluded that students with HH do not receive any support special education services during the COVID-19 distance education process. In this process, it was also determined that although all participants knew that support education is an important need for students with special education needs, there was no formal or informal effort. Similar to this research result, Yang et al. (2021) stated that students with HH who continue their education with their hearing peers in the distance education process do not receive one-to-one support education services. According to the results of this research, it is thought that the provision of support special education services to students could not be included in the planning due to the urgent and sudden transition to the process in the changes in education during the COVID-19 distance education process. However, it is important to emphasize in this research that even in extraordinary situations, special education services, which are crucial and necessary for students with special educational needs, should not be disrupted and should be prioritized as the first services that come to mind.

As a result of the research, diverse opinions have emerged regarding the inclusion of distance education into some or all aspects of education for students with HH in the future. It was concluded that some of the participants expressed the opinion that distance education could be included in support of special education services in the education of students with HH. However, they also added that students with HH should be in the classroom environment more with their hearing peers, taking into account learning efficiency and socialization factors. On the other hand, it was also concluded that distance education should not be included in the education of students with HH because it significantly limits student and teacher communication. In the literature, there are results that distance education should not be used in the education of not only students with HH but also other disabilities (Kritzer & Smith, 2020; Ünay et al., 2021). Considering the results of this study and other studies in the literature, in the education of students with HH, they have difficulty in following the teacher due to the appearance of many faces on the screen, lack of subtitles in lessons or videos. It is believed that distance education should be avoided except in mandatory situations, due to factors such as background noise and the teacher's rapid speech (Kritzer & Smith 2020). On the other hand, it can be utilized to supplement special education services after face-to-face lessons, considering learning efficiency and socialization factors.

According to the research, it was concluded that anxiety disorder, anger control problems and behavioural disorders brought on by adolescence in students increased with the decrease in socialization in COVID-19 -related closures. Similarly, Aljedaani et al. (2022) revealed that students with HH experienced psychosocial health problems during COVID-19 distance education. These problems date back to before the COVID-19 period, but increased in this period due to the lack of social interaction. Alshawabkeh et al. (2021) stated that due to the Covid-19 period and the restrictions that followed, mental health problems started not only in students with HH but also in students in general, students' stress was high, and psychosocial conditions such as anxiety disorder and lack of peer contact emerged. In this study, it is thought that behavioural problems emerged in students due to the lack of social interaction caused by the closure of schools within the scope of isolation rules during the COVID-19 pandemic, as well as the anxiety caused by the fear of disease in the process. At the same time, it is thought that the psychosocial developmental periods of the participants of this study are in adolescence, the changes in students who are trying to gain identity in terms of psychosocial aspects of adolescence are intense (Erikson, 1959), and the anxiety and stress in students are thought to increase with the addition of the changes in the COVID-19 period to these changes.

Considering all these results, although many students have met with the distance education process due to a pandemic, it is thought that distance education will take more place in our lives thanks to the rapidly developing technology today. In this context, depending on the developing technology, both face-to-face classroom education and online or offline distance education processes can be designed for students with HH, by taking into account the advantages and limitations of hearing aids. Teachers of students with HH in inclusive education should be provided with in-service training to make adaptations appropriate to student characteristics and to use educational technologies to ensure the effective participation of all students in the learning process.

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