

Educational Needs Assessment of Student with Hearing Impairment in Inclusive School

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Abstract

Developing appropriate curriculum for the education of hearing impairment student depends on identifying the needs of this group. The main purpose of the present study was to assess special needs for students with hearing impairment. The sample of the study consisted of 120 students enrolled at inclusive schools in Tehran, 65 males and 55 females. Who were selected randomly, according to a multistage Sampling method. A special needs scale was developed and used in assessing special needs for students. The investigator used the t-test to answer the research questions. The results indicated that the differences between all pairs of means for both male and female respondents were statistically non-significant. Differences between mean scores of students who used sign language and total communication were in favor of students who used total communication on the dimensions of communication needs, audiological rehabilitation needs, behavioral needs, and learning style needs.

Keywords: hearing impairment, needs assessment, special education, inclusive educational system.

Introduction

Based on the statistics published by Centers for Disease in the United States of America, hearing impairment is the most prevalent impairment for children at the time of birth, and among 1 to 3 newborns out of every 1000 live births are born with hearing impairment (Lynas, 2005, Scheetz, 2004). Hearing is one of the most important senses of the human. Being deprived of the sense of hearing is not only defined as not hearing the sounds, but it is defined

as the lack of access to many helpful and promising experiences of both individual and social life as well (Hallahan, Kauffman, & Pullen, 2012; Katz, 2010). This kind of damage causes remarkable malfunctions for children with hearing impairment and one of the most important children functioning domains which is the academic performance is also affected (Parhoon, 2013). Results of various studies indicate that hearing impaired students have an elementary level of social interactions and relationships and as a result of lack of required social skills for establishing an appropriate communication; they are at the risk of being both secluded and excluded from the society (Adams & Rohring, 2004) the issue of rehabilitation and education of hearing impaired students has been always a challenging issue in the area of rehabilitation of the disabled persons. In this regard, points of view, such as the provision of exceptional training in particular environment, integration in regular classes and inclusive education are discussed. Inclusive education is a model based on the equal exploitation of the rights and community facilities for each and every human being. In this approach, a broader range of formal education and training environments including home, community, and other opportunities for learning outside the school environment are included (Idol, 2006). On the word of the concept of inclusive education, all the students regardless of their differences and their needs are trained together in a class (Fewester, 2006). Given the importance and undeniable role of inclusive education in fulfilling educational equity in the community, one of the ways to reach this aim is educational need assessment together with identifying the gaps between existing and desired needs. In the domain of planning and training, need assessment as an essential component is considered as the backbone of the planning process (parhoon, 2013). Therefore, wherever the issue of codifying plans and adopting a set of educational policies are proposed, the need assessments are frequently mentioned (Fathi- Vajargah, 2010). Indeed, the need assessment is the infrastructure of planning, management and training, so the firmer the foundation is, the more invincible the structure is. Due to the fact that personalized education, as an area which seeks to provide a variety of educational services for individuals with disabilities, is explicitly intertwined with the concept of need assessment; it is obvious that need assessment in personalized education, which is related to special characteristics of students with special needs, has enjoyed a great position. Hence, the evaluation of hearing impaired students should be carried out based on their need assessment in the school curriculum (Gilbertson & Ferre, 2008). Due to the fact that technological advances have brought about many changes in the delivery of services to students with hearing impairment; the type of curriculum which suits the needs of these individuals has been challenged by these of changes (Lenihan, 2010). Hence, the purpose of training students is to help them to achieve self-sufficiency in finding occupations and enabling them for living a life in the future. This, without identifying their educational needs, never comes true. Because any in kind of programing having up-to-date information regarding the needs of hearing impaired students is both logical and necessary (Batler & Hool, 2007). Several researchers have attempted to assess the training needs of the hearing impaired students among which (Dimling, 2010) indicates that deaf and hearing impairment students may need special vocabulary intervention in order to improve their recognition, production, and comprehension of the words and phrases. It also (I. A. El-Zraigat, 2013) Show that hearing impairment students in Jordan exhibit needs on (Communication, Audiological rehabilitation, Social and emotional, Personal, Behavioral, Academic, learning style). Furthermore (Wolters, Knoors, Cillessen, & Verhoeven, 2011) show that hearing impairment students have severe

language problems compared to their hearing classmates. To address increasing needs of students who are hearing impairment for speech and language services, Houston and Perigoe (2010) report that this group of students needs access to skilled professionals who can improve receptive and expressive language throughout planned programs can improve receptive and expressive language throughout planned programs. Furthermore, (Gilbertson & Ferre, 2008) present major difficulties when making educational decisions regarding students who are hearing impairment. Among of these challenges are reading difficulties, language acquisition skills, and school learning activities. Schick, Williams, and Kupermintz (2006) highlight the educational needs of hearing impairment students. They maintain that among educational needs of this group of students are learning environment, educational interpreters, communication, using visual approach, and applying evidence based practices in instruction. (Whyte & Guiffrida, 2008). Further, Wolters et al. (2011) indicate that hearing impairment students who have some problems with their social behavior that affect negatively their social acceptance. They also find that hearing impairment girls show lower level of antisocial behavior than hearing impairment boys. Reviewing related literature of the special needs of students who are hearing impairment indicates that these needs differ according to educational environment, curriculum, grade level, and severity of hearing loss of the student. (Donne & Zigmond, 2008). Results of the study shows that need assessment of the students with special needs; facilitates the planning and evaluation of their academic training needs. It also makes the training in accordance with their needs possible (Lloyd, Irwin, & Hertzman, 2009). Based on the educational needs of students with hearing impairment, it is essential to evaluate their capabilities to design and implement the curriculum. In this regard, (Dalzell, Nelson, Haigh, Williams, & Montis, 2007). Stressed that the needs of hearing impaired students are in connection with their parent's needs. Therefore, providing services for their needs; their parents' needs should also be taken into consideration. According to this issue the importance of need assessment for children with hearing impairment can include: determination of various priorities for the needs of these students, verification of variety in both social and educational interventions available to them, the necessity of finding balance between the strategies for effective planning and fulfilling the needs, facilitation of required financial support, and allocation of necessary financial resources that are among the choices available to them. In this regard, notifying the need assessment in the domain of education is counted as of the most important components of the planning process and planning for these students. Therefore, wherever the issue of codifying plans and adopting a set of educational policies are proposed, the need assessments are frequently mentioned. Despite the importance of educational need assessment in teaching students with hearing impairment, few studies in this area, have been carried out by Iranian Ministry of Exceptional Education. According to these evidence the hearing impaired students comprise the largest group of students who are currently attending Iranian inclusive schools. (Report of Exceptional Diseases Organization 1391), and there are many problems with their both adaptation and education in inclusive schools. The present study aiming at need assessment of children with hearing impairment, in inclusive schools in the city of Tehran, is seeking to answer the following questions

Questions of the Study

1. *What are the Special Needs of Students who are hearing impairment in general education school (regular schools) in Tehran, Iran?*
2. Do the special needs of students who are hearing impairment in general education school (regular schools) in Tehran, significantly differ compared hearing impairment in general education school (regular schools) in Tehran, to their communication methods.
3. Do the special needs of students who are hearing impairment in general education school (regular schools) in Tehran; significantly differ compare to their gender?

Methodology

The study adopts a pure descriptive approach. The total of the sample reached 120 subjects, 65 males and 55 females distributed among these schools. In Tehran, Iran. Participants were recruited using Cluster sampling and. The researcher asked participants to complete the surveys and identify others to become members of the sample. There are no gatekeepers to this population given the method of recruitment. All participants were given informed consent prior to completing the surveys. They understood the purpose and any risks that were associated with the study. They were also advised of the benefits of participating in the study and that the information they provided about the attitudes of including students with hearing impairment will benefit the teaching community. They understood that they were free to withdraw at any time and that refusal to participate would have no effect on future services from the involved university. They were told that their names would not be associated with the research findings in any way, their identity will remain anonymous, and the answers they gave could not be linked to the participant. The consent stated that the data would be stored in a secure location so that only the researcher will have access study. Finally, they were given the contact information of the researcher if they have any questions or concerns. To study the needs assessment of students who are hearing impairment in general education school (regular schools) in Tehran, a Special Needs of Students who are hearing impairment Scale has been developed. The needs assessment Scale was developed through four steps: the first step of preparing the needs assessment Scale was the pilot study which focuses on obtaining information about students who are hearing impairment in general education school (regular schools) in Tehran,. The second step consisted of reviewing the related literature of special needs of students who are hearing impairment. In the third step, the investigator prepared the needs assessment Scale. The last step, distributing the needs assessment Scale of assessing the needs of students hearing impairment among the experts (judges) in order to achieve the content validity. The content validity was based on asking 8 experts to evaluate the needs assessment Scale with specific directions to make their judgments depending on two major questions: are the dimensions related to special needs of students who are hearing impairment? Are the items of the dimensions related to section they put in? The items were accepted by the experts and were used in the present study. This process produced a Special Needs of Students who are hearing impairment Scale in Tehran. The needs assessment Scale is consisting of 74 sub-items divided within seven core dimensions. The items of (needs assessment questionnaire) were included of four-grade Likert Scale items ranging from strongly disagree to strongly agree to reflect the level of the needs were assigned with statements as

follows: 1= strongly disagree, 2= disagree, 3= agree, and 4= strongly agree. After completing data collection, the data was analyzed according to SPSS program. Descriptive statistics, Independent sample test, were used in analyzing the data.

Results

Data on the demographic information of the study sample indicate that 65 males and 55 females.

The breakdown of the sample can be found in table 1 below.

Table 1: Demographic Data of Participants (N = 120)

Variable		N	%
Gender	Male	65	65
	Female	55	120
Level of teaching	Primary level	52	52
	Secondary level	38	90
	High school	30	120
Age	7-10	52	52
	10-16	38	90
	16-19	30	120

What are the Special Needs of Students who are hearing impairment in general education school (regular schools) in Tehran, Iran? This question has been answered by calculating the means and standard deviation of the participants as showed in

The following table.

Table 2. The means and standard deviations of the dimensions of the needs

dimensions	M	SD
Communication needs	3/89	/54
Audio logical rehabilitation needs	3/70	/60
Social and emotional needs	4/05	/56
Personal needs	3/08	/53
Academic needs	4/03	/55
Learning style needs	2/87	/63
Behavioral needs	3./87	/59

To the means. The data in the table indicates that hearing-impaired students are affected by the dependent variables according. *Do the Special Needs of Student who are hearing impairment Significantly Differ Compared to Their Gender?*

This question has been answered by using independent samples t-test. The summary of independent samples T-test of the special needs comparing gender is shown in Table 3.

Table 3. The means and results of independent samples t-test of the dependent variables comparing gender

dimensions	Gender	N	M	SD	t	Sig
Communication needs	Male	55	3/88	/66	/15	/91
	Female	65	3/87	/70		
Audiological rehabilitation needs	Male	55	3/67	/60	/26	/90
	Female	65	3/68	/61		
Social and emotional needs	Male	55	3/98	/60	/79	/33
	Female	65	3/11	/60		
Personal needs	Male	55	3/29	/51	/04	/13
	Female	65	3/07	/52		
Behavioral needs	Male	55	3/75	/53	/236	/68
	Female	65	3/85	/52		
Academic needs	Male	55	3/79	/62	/19	/68
	Female	65	3/69	/64		
Learning style needs	Male	55	2/89	/54	/10	/15
	Female	65	3/03	/55		

* $P < .05$

The data in the table indicates that both male and female hearing-impaired students are not affected by the Dependent variables according to the means; it indicates that the differences between all pairs of means for both Male and female respondents are statistically non-significant. *Do the Special Needs of Students who are hearing impairment Significantly Differ?* This question has been answered by using independent samples t-test. Table 4. Shows the means and standard deviation, and summary of independent samples t-test of the special needs comparing communication methods of hearing-impaired students. The summary of independent samples t-test of the special needs comparing communication methods is shown in Table 4.

Table 4. The means and results of independent samples t-test of the dependent variables comparing Communication methods

dimensions	communication methods	N	M	SD	t	Sig
Communication needs	Sign language	45	2/64	/55	1/25	/04
	Total communication	75	3/89	/65		
Audiological rehabilitation needs	Sign language	45	4/75	/61	2/72	/00
	Total communication	75	3/03	/44		

Social and emotional needs	Sign language	45	3/28	/57		
	Total communication	75	2/12	/39	1/16	/13
Personal needs	Sign language	45	3/08	/55		
	Total communication	75	4/63	/69	1/64	/05
Behavioral needs	Sign language	45	3/67	/55		
	Total communication	75	3/16	/49	1/51	/04
Academic needs	Sign language	45	2/97	/62		
	Total communication	75	2/79	/64	/19	/96
Learning style needs	Sign language	45	2/93	/56		
	Total communication	75	3/23	/51	2/60	/001

* $P < .05$

The data in the table indicates that hearing-impaired students are affected by the dependent variables according to the means. Also, the findings indicate that the differences between pairs of means of students who used sign language and total communication are in favour of students who used total communication for the dependent variables: communication needs, audiological rehabilitation needs, behavioral needs, and learning style needs.

Discussion

The present study was to assess special needs for students with hearing impairment in general education school (regular schools) in Tehran. Communication needs, Audiological rehabilitation needs, Social and emotional needs, Personal needs, Behavioral needs, Academic needs, learning style need. The results of the main question about the special needs of students who are hearing impairment in general education school (regular schools) in Tehran, Iran, indicated that this group of students exhibit needs on all dimensions of the scale. Correct perception of the conditions of children with hearing impairment in inclusive schools of the city of Tehran, holistic perception of inclusive issues of personalized education about these students, and efforts made to prepare them and also provide them with appropriate cultural context for their acceptance; can be very helpful. The results of the study clearly indicated that hearing-impaired students need special services to be offered to them by well-trained teachers and schools fitted with the equipment needed in order to meet their unique needs For example, they need special curricula that meet their developmental tasks. These results agreed with the findings of the studies by Johnson and Seaton (2012),, and El-Zraigat and Smadi (2012).Their content of curricula and the instructive facilities are those of facilities that hearing impaired students

utilize without hearing damage, so this leads to hearing impaired students' academic failures and that they cannot achieve higher level education. The trainers, who are served as instructors of hearing impaired students, are not only incapable of understanding them, but they don't possess the required knowledge and performance to teach them as well. Thus, this results in their academic failures. The results of the present study clearly indicated that hearing impaired students require particular services which are tantamount to their own needs, the services that should be provided by trained instructors in equipped schools. For instance, they require a personalized curriculum that is consistent with their needs both to grow and change. These results agreed with the findings of the studies by (Dimling, 2010; I. El-Zraigat & Smadi, 2012; Johnson & Seaton, 2011; Wolters et al., 2011).

Moore (2001) indicates that there are differences between hearing-impaired students and hearing students in how they are taught, in what they are taught, and in where they should be taught. As I have mentioned before, hearing-impaired students need special educational services to be offered to them, such as, speech and language therapy, audio logical rehabilitation, professional educational interpreters, modified curricula, adjusted special instructional materials, and special teaching methods. Facilities needed by hearing-impaired students that are delivered by schools for children with hearing impairment in general education school (regular schools) in Tehran are not enough because of limited financial support of these schools in Iran. Therefore, hearing-impaired students need special services, for example, speech and language therapy, audio logical rehabilitation, professional educational interpreters and so forth. We should take into consideration that the lack of services offered will negatively impact the development of hearing-impaired students. Consequently, this will lead to cognitive, speech and language, social and emotional, academic difficulties. The required facilities of hearing impaired students in Tehran's inclusive schools are very small in number and they are inappropriate as well. Since the issue of the expanding it worldwide and the needs of hearing impaired students are not sufficiently supported. In fact, hearing impaired students in Tehran inclusive schools require an expertise program in proportion to their educational needs, so that they can show their own potential in order to have productive individual and social life. In fact, according to the various needs of hearing impaired students in inclusive schools in the city of Tehran, kind of the content that is offered in the curriculum should be consistent with transformational and cognitive growth and in harmony with their interest of these students. This result agreed with the finding of the studies by (Dornan, Hickson, Murdoch, Houston, & Constantinescu, 2010; Gibbs, 2011; Hyde & Power, 2003; Vermeulen, Denessen, & Knoors, 2012). In relation to the first question: Do the special needs of students who are hearing impairment in general education school (regular schools) in Tehran significantly differ compared to their genders? The result indicates that the differences between all pairs of means for both male and female respondents are statistically non-significant, that is, both male and female have the same needs and they need special services. This result agreed with the finding of the study by El-Zraigat (2012), Furthermore this result disagreed with the finding of the study by Wolters et al. (2011) which indicated that hearing impairment students who have some problems with their social behavior affected negatively their social acceptance. They also find that deaf girls showed lower level of antisocial behavior than deaf boys. Regarding the second question: Do the special needs of students who are hearing impairment in general education school (regular schools) in Tehran significantly differ

compared to their communication methods? The findings indicate that students who used total communication exhibit strong needs on communication, audiological rehabilitation, behavioral, and learning style needs than students who use sign language. Therefore, students who use total communication need more hearing services and academic counseling or services in order to meet their unique needs

Limitations: The findings of this study could have implications for the successful implementation of inclusive education, student with hearing impairment, but there are some limitations that must be considered. Firstly, only a small number of participants were chosen for the study. Furthermore the lack of standardized needs assessment scale to assess the special needs of students who are hearing impairment in general education school (regular schools) in Tehran.

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