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An Early Intervention Program to Improve Productive language Skills for Children with Hearing loss And Measuring Its Effectiveness

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Abstract

The current study aimed at constructing an early intervention program to improve the Productive language skills for children with hearing loss. The effectiveness of the new program was tested in the Hebron area, on children aged (3-6) years old, according to the five components of language , Phonology , morphology , syntax , semantic and pragmatics.

A quasi-experimental design was followed with a purposeful chosen sample (n=20 students) from Al Enjelia Al Arabia school in Hebron city. The students were randomly assigned to two groups: tu experimental group, (n=10, 6 M. & 4 F.)., and the control group (n=10, 6 M. & 4 F.).

The experimental group was exposed to (44) sessions of the constructed program during the second semester of the school year 2012/2013 , using one outcome indicator, expressive language skills as a measure of the program efficiency.

The pre-post test scores for both groups were analyzed using means, standard deviations as well as the statistical procedures :(ANCOVA) and

(MANCOVA) to test for any statistically significant differences.

The study results showed the presence of a positive impact of the early intervention program on improving expressive language skills for children with hearing loss. There were statistically significant differences at the level of ($\alpha \leq 0.05$) between the total test mean scores of the control and experimental groups in ($\alpha \leq 0.05$) between the overall mean scores of the control and experimental groups in total expressive language skills in favor of the experimental group, and There Were statistically significant differences ($\alpha = 0.05$) between the mean scores of the two groups on the components of expressive language (phonology, semantic, and pragmatic) in favor of the experimental group. While there were no statistically significant differences between the mean scores of the control and experimental groups in two components of the expressive language (morphology and syntax).

This clearly shows the positive impact of the intervention program used in the study, and the need for early screening and intervention in order to achieve better outcomes with the expressive language skills of the children with hearing loss, as well as the need for additional studies with different variables such as the age and gender.

Keywords: expressive language skills, hearing loss, early intervention

*** Introduction and rationale**

Caring for children with hearing loss is a basic need, and as a result of the clear development provided by some treatment and rehabilitative programs for this category, it was necessary to emerge strong factors that contribute to the revival of other programs and innovation, in order to make a qualitative change for these children, based on the belief in the abilities of this category of children. Children and the skills they acquire, when they are trained and treated at an early age, it was necessary to shed light on this type of research because of the results that it might bring about in building a better future for this group. Ahmed (2019) confirmed in his study, which aimed to build a training program using electronic language activities to improve expressive language among the hard of hearing, and the results of the study showed that there are statistically significant differences between the mean scores of the experimental group members in the tribal and remote performance on the

expressive language scale in favor of the post-performance Also, there are statistically significant differences between the mean scores of the experimental group members in the pre and post-performance on the social communication scale in favor of the post-performance.

The importance of early intervention for this group at an early age gives great opportunities to prevent the development of problems for them, hence the interest in therapeutic intervention, which also helps the family to overcome a wide range of problems that they will face due to the presence of a hearing-impaired child, and this in turn relieves the family of the heavy burden placed on their shoulders (Al-Azzali, 2011, Harring, 1982). (Abd al-Rahman 2018) conducted a study aimed to identifying the effectiveness of a program to improve expressive language skills for children with hearing impairments. The results showed that there were statistically significant differences between the results of the two measurements, the pre-test, which obtained an average of (2.40) and the post-test, which obtained an average of (50.00), with a difference Average (48.2) and there were no statistically significant differences between the two measurements, before and after, between males and females.

Most early intervention models emphasize the importance of establishing an interactive relationship between the family and professional specialists, and the main goal of the hearing-impaired child is to establish communication, including the development of hearing, speech and language, in addition to that the plan must deal with any of the secondary problems, which the child may show, and often Families are looking for professional help from early intervention programs in the areas of oral speech development and auditory training, so early intervention programs can take many forms such as home-based and community-based programs and others (Goldberg, 1996).

The following is an overview of these models:-

1- Home-Based Model: In these programs the specialist travels home regularly and observes interaction with the child and parents.

2- Community-Based Model: Community programs provide day-to-day care facilities that help parents in order to facilitate the learning of the hearing-impaired child. The work team

also works to ensure the safety and use of the hearing aid (Mckirdy & Kilmovitch, 1994).

3- The family-based model: Fathers are the first teachers of their children, and therefore the role of the family and parents with their hearing-impaired children is considered key, and parents play an important role in developing the linguistic development of their children. This model focuses on the role of those who provide direct services within the home in the family environment, and often the audiologist plays the role of a guide, teacher, and facilitator for the various resources, and since this age period is important in learning, family intervention programs are important.

4- The medical model: Programs based on the medical model are described as focusing on the child, where specialists focus on directing intervention programs. In this model, parents play the role of observers (Goldberg, 1996).

The senses are the source of knowledge for the external world, and the sense of hearing is one of the sources of knowledge acquisition, and is even more important because it is linked to speech in terms of perception and linguistic production. and receptive, and because communicative problems result from a deficiency in forming messages with understanding and expression, and hearing is clearly one of the most senses in the preservation and development of natural human functions (Al-Khatib, 2005, Al-Khasab and Al-Sartawi, 2000).

Hearing impaired is defined by Smith (Smith, 2007) as a person who has sufficient residual auditory capacity, which enables him, through the use of a stethoscope or sound amplifiers, to understand the speech of others and communicate with them orally, while Moores (2008) sees that a person with a hearing impairment is The amount of his hearing loss ranges between (35-69) decibels (the unit of sound measurement), and this range of hearing loss leads to difficulty, not a disability in understanding speech through the ear alone, and by using a stethoscope, he is able to process and understand information (Zureikat). (2009), that is, a partial or total loss of sound sensitivity, which is produced abnormally, in any part of the auditory system, where hearing is the main field in the exchange of oral communication (Martin & Clark, 2010).

In view of the dependence of language development on the sense of

hearing and its influence on it, it is important to study the acute or severe linguistic effects on language skills as one of the most prominent problems faced by people with hearing disabilities (Al-Beblawi and Suleiman, 2006).

The researcher believes that the language is a set of randomly agreed-upon symbols that aim to transform ideas into speech and transform speech into ideas through the linguistic code, including the sender, the receiver and the message.

As for language disorders, they are any difficulties in the production or reception of linguistic units regardless of the environment that may range in their range from the total absence of speech to the varying presence in the production of grammar and useful language, but little content, few vocabularies, specific verbal formation, omission of tools, prepositions, plural and adverbial signs (Rihani, Zureikat and Tannous, 2010).

It is also defined as any impairment in the ability to communicate effectively in any community according to the criteria of that community (Nicolosi, Harryman & Kreshechm, 1989). Language disorders are classified according to several criteria according to the American Speech, Language and Hearing Association (ASHA). This classification includes five levels of language:-

1- Phonology: represents the phonemic system of language and includes standards for the production of linguistic sounds. The disturbance here refers to articulation errors and the difficulty of imitating or producing sounds according to their different standards.

Saud (2019) conducted a study aimed at identifying the effectiveness of a computerized training program to develop phonemic awareness skills in reducing some language disorders among hearing-impaired children, the results of which resulted in the presence of statistically significant differences between the mean of the post-measurement ranks of the measures of phonemic awareness and language disorders in each of the two groups. Experimental and control in favor of the experimental group.

2- Morphology: It represents how the phonemic units are organized together to form words. The disorder here includes difficulties at the end of words and stressed words, especially when

using language for the purpose of explanation and description.

3- Syntax level: It relates to the way words are organized into sentences to convey meaning, like a subject. The disorder here is difficulties in learning and using grammar, as well as in the production of ideas.

4- Semantic level: This level refers to the meanings of words, linguistic units, and symbolic meanings. The disturbance here includes a delay in acquiring the meanings of words and interpreting sentences, and difficulties in classification and concepts.

5- The social use of language (pragmatic): It deals with the social use of language in different social contexts, and the disorder here includes difficulties in using the appropriate language in different contexts, and difficulties in conveying meaning and taking the role and returning to the broken topic and the way of talking with adults and children and the use of the sign (Al-Rihani, Zureikat and Tannous, 2010).

Hamdan (2020) also mentioned in his study, which aimed to develop the pragmatic language among hearing-impaired children, and the results indicated that the program was effective, and this appeared to improve the pragmatic language of the experimental group after the application of the program.

Language as a very complex system can be best illustrated by breaking it down into its functional components, and language can be divided into three mains, albeit not necessarily equal, components: form, content, and use (1978Bloom & Lahey,).

The form includes the structural system, the morphological system, and the phonemic system, which are the components that bring together sounds and symbols in order. As for the content, it includes the meaning or the semantic system, while the usage refers to the deliberative system, and these five components - the syntactic system, the morphological system, the phonetic system, the semantic system, and the deliberative system.

Estabrooks (2006a) indicated that it is likely that structured and intensive training in the early life period has the greatest impact on the development of language skills (receptive and expressive) and associated abilities. It was stated in Nicola's study (2018), which aimed to reveal the effectiveness of the story in improving expressive language among

students with hearing disabilities from the age of (5-6) years. The student learns the skill from a gesture to a sentence, and a sentence or more after applying the story

The researcher drew on the construction of the early intervention program, in the light of his review of many previous studies and research and their recommendations, such as the Al-Ahmad study (2008), the Abd al-Rahman study (2007), and the Malkawi study (2006), which recommended building early intervention programs to improve receptive and expressive language skills, As the study (Sharet and Muhammad, 2005) recommended, it is necessary to develop special programs for early intervention to teach communication skills for the hard of hearing child, and what helped the researcher in choosing language skills with its five components is what Bernstein and Tigerman indicated in their book (Language and Communication Disorders in Children) that language It is a complex of several components, laws and regulations, and that there are five components of language, which are easy to acquire through natural sequencing (Bernstein & Tiegerman, 2009).

And since the researcher specializes in the field of special education and language, speech and audio rehabilitation, he found that the effectiveness of the rehabilitation of hearing-impaired children requires focusing on language skills according to their components, in light of the lack of specialized programs to improve language skills according to their components, and verbally training children with hearing loss through a program In response to the recommendations of previous research and studies, the researcher saw the need to build a program in early intervention to develop and improve the language skills of hearing-impaired children based on the hierarchy of auditory and verbal skills, Through the use of (Residual Hearing), the philosophy of this audio-verbal training comes as a basic human right, which states that children of different degrees of hearing impairment have the right to the opportunity to develop the ability to listen and use verbal communication.

*** The purpose of this study is to build a program in early intervention to improve expressive language skills of hearing-impaired children and to measure its effectiveness**

*** Elements of the study problem**

This study sought to answer the following questions:-

The first question: Are there statistically significant differences in the averages of the total score of the expressive language skills scale in the post-measurement between the experimental group that was subjected to the training program and the control group that did not?

second question:Are there statistically significant differences between the mean scores of the expressive language skills components (phonetic, morphological, grammatical, semantic, and descriptive components) in the dimensional measurement between the experimental group that was subjected to the program and the control group that was not?

*** Study hypotheses**

The study problem was identified and formulated in the form of the following hypotheses:-

First hypothesis: There are no statistically significant differences at the significance level ($\alpha \leq 0.05$) in the total score averages of the expressive language skills scale in the post-measurement between the experimental group that underwent the training program and the control group that did not.

The second hypothesis: There are no statistically significant differences at the significance level ($\alpha \leq 0.05$) in the mean scores of the components of expressive language skills (phonetic, morphological, grammatical, semantic, and descriptive components) in the post-measurement between the experimental group that was subjected to the program and the control group that was not.

*** Study Approach**

This study relied on the quasi-experimental approach, which aims to identify the impact of an independent experimental variable, the early intervention program, in improving expressive language skills, on a dependent variable, the language and expressive skills of hearing-impaired children at the pre-school stage.

*** Study population and sample**

The study population consists of hearing-impaired children from the Arab Evangelical School in Hebron, Palestine. The school includes ordinary

children from kindergarten to the sixth grade, and four special education classes, including one class for learning difficulties and three classes for hearing loss, and the number of hearing loss children is (28) students, including (17) males and (11) females, and their ages range from (3-8) years distributed over three classes and (5) children are integrated into the kindergarten with normal children for about half a school day, and their degrees of hearing loss range from what Between (35dB and more than 90dB) decibels, i.e. from simple to moderate, and from severe to very severe, the study sample was chosen intentionally, which amounted to (20) male and female students, and their ages ranged from (3-6) years, and they were divided into two classes, with an average My age was (5.1) years, with a standard deviation of (1.197), in the second semester of the year (2021-2022), of whom (12) were males and (8) were females. The study members were randomly distributed into two groups, an experimental group and a control group. Where they meet the required specifications and are diagnosed by the Rehabilitation Association Yall Al-Arabiya and Dar Al-Kalima in Bethlehem, which are licensed by the Palestinian Ministry of Health, and the school follows the instructions of the Ministry of Education, with regard to their enrollment in kindergarten and school, after excluding children over the age of (6) years, who are not diagnosed with hearing aid, and who do not wear hearing aids, nor They have no associated disabilities. As shown in Table (1).

Table No. (1) Distribution of study members by group and gender

GENDER/GROUP	CONTROL GROUP	EXPERIMENTAL GROUP	Total
males	6	6	12
female	4	4	8
total	10	10	20

*** Study tools**

In this study, the researcher used the expressive language skills scale:-

This scale was built by the researcher with the aim of measuring the degrees of Hebrew language skills among hearing-impaired children of the age group (3-6) years, in proportion to the nature of the loss and the characteristics of these children, and the scale consisted of (42) items divided into five components to measure expressive language It includes (the phonetic component), (the morphological component), (the grammatical component) and (the semantic component) (and the

component of social use of language or maqam), so that each component includes a set of descriptive phrases that represent each component, and the child's response to each phrase Of the true or false statements represented by (0-1), where a score of zero is given for the false response, and one score for the correct response, and the success of each child is determined by calculating the averages of his scores for the paragraphs of each of the five components.

Indicators of validity and reliability of the scale were extracted for the purposes of the current study as follows:-

Table (2) Calculation of the stability coefficient by re-application method, Cronbach's alpha stability coefficient on the five components of expressive language and the total score

language components	THE NUMBER OF PARAGRAPHS	THE VALUE OF THE PEARSON CORRELATION COEFFICIENT	THE CRONBACH'S COEFFICIENT
phonology	14	0.78	0.91
morphology	8	0.90	0.81
syntax	8	0.82	0.85
semantic	8	0.88	0.75
pragmatic	7	0.91	0.79
Total score	45	0.84	0.85

The data presented in Table No. (9) indicate that the expressive language skills tool with its various dimensions has a high degree of stability and satisfies the purposes of the study.

*** Training program for children with hearing loss**

This program is designed to develop and improve expressive language skills for children with hearing loss. This program consists of expressive language skills, and they were chosen according to the five basic language components, which are the phonology system, the morphology system, and the grammatical system (Syntax). And the semantic system of concepts and meanings (Semantics), and the social use of language (Pragmatic), which is presented in educational training methods aimed at improving the expressive language skills (Productive Language Skills), of the hearing-impaired child to be able to improve verbal communication skills and help him communicate with The program was divided into (44) sessions, commensurate with the number of skills for each component of the language presented in the program, and the duration of each session was (40) minutes, and a preparatory form (individual training plan) was prepared for each session were distributed according to language components as follows:-

First Phonology component: (14) sessions, second morphology

component (5 sessions, third syntax component): (6) sessions, fourth semantics component: (10) sessions the fifth pragmatic component: (9 sessions).

*** Study results**

First: the results related to the answer to the first question, which is "Are there statistically significant differences ($\alpha \leq 0.05$) between the total mean score of the expressive language skills scale between the experimental group that was subjected to the training program and the control group that was not subject to the program?

To answer this question, the pre and post means, standard deviations, adjusted means and standard error of the two experimental and control groups were extracted, and Table (3) illustrates this.

Table (3) Pre and post means, standard deviations, adjusted means and standard error of the two experimental and control groups on the expressive language skills scale

the group	mean- pre	standard deviation pre-	post mean	standard deviation	Adjusted mean	standard error
Empirical	17.80	8.244	30.00	10.414	25.928	0.905
Control	10.40	4.971	10.80	4.131	14.872	0.905
Average	14.10	2.636	20.4	12.509	19.149	0.593

It is noticeable from Table (3) that there are apparent differences between the averages of the total score of the expressive language skills scale between the two experimental and control groups, and the adjusted arithmetic mean of the experimental group was (25.928) and standard error (0.905), higher than the arithmetic average adjusted for the control group which is (14.872) and standard error (0.905), and to find out the level of significance of these differences, one-way covariance analysis (ANCOVA) was used, and Table (4) illustrates this.

Table (4) The results of the one-way covariance analysis of the total mean scores on the expressive language skills scale for the experimental and control groups

Source of variance	sum of squares	degrees of freedom	mean of squares	value of F	significance level
Companion (tribal)	1010.020	1	1010.020	143.589	0.000
Group	460.157	1	460.157	65.418	0.000
Error	119.580	17	7.034		
Corrected total	1.589.757	19			

It is noticed from Table (4) that there are statistically significant differences at the level ($\alpha \leq 0.05$) between the average total score in expressive language skills on the dimensional scale between the two experimental and control groups, as the value of F was (65.418) and at the level of significance (0.000), and with reference to Table No. (3) It turns out that the adjusted averages of the experimental group were (25.928), which is higher than the averages of the control group, which are (14,872),

meaning that the differences are in favor of the experimental group that was subjected to the training program, and this indicates the effectiveness of the early intervention program in improving expressive language skills, and based on Therefore, the third null hypothesis is invalid.

The researcher sees the importance of the linguistic training sequence, focusing on expressive language skills, the effectiveness of the exercises and activities that led to the acquisition of expressive language skills, and the fact that the training program is effective, comprehensive and suitable for hearing-impaired children aged (3-6) years, as well as the inclusion of expression training after understanding the required skill. This supports what was stated in the theoretical literature that "the long-term goal of the language skills series is for the child to understand what is being said to him, and to be able to express himself so that others can understand it," in addition to constantly monitoring the work of the hearing aids, which made auditory discrimination among the members of the experimental group. appropriate, as well as adopting the exercises on the sessions facing the child face to face, and on the side sessions, so that the trainer places a sheet with which he blocks his mouth from the trainee, and once he is next to the child to enable him to rely on hearing, thus achieving the training objectives set for the child and creating a comfortable and noise-free environment, And the use of the language close to the child, giving him an opportunity to answer and simplifying the language for the child in the event he does not understand it, as well as various methods of reinforcement and development. The model and formation that were used by the researcher and the two trainers played an important role in achieving many of the training objectives that were planned and implemented, especially the diversification of verbal and physical reinforcement methods that were used in an organized manner and according to the situation, and the integration of five hearing-impaired children with ordinary children in an early age contributed to the success of the program.

Second: The results related to the answer to the second question, which is "Are there statistically significant differences ($\alpha \leq 0.05$) between the mean scores of expressive language skills (phonology, morphology,

syntax, semantic, and pragmatic components) between the group that was subjected to the program and the control group that was not" ?

To answer the second question, the arithmetic mean, Pre and post, standard deviations, adjusted means and standard error of the two experimental and control groups were extracted, and Table (5) illustrates this.

Table (5) Pre and post arithmetic means, standard deviations, adjusted averages, and standard error of the components of the expressive language skills scale for the experimental and control groups

Th component	group	Mean -pre	standard deviation-pre	Mean -post	standard deviation-post	Adjusted mean	standard error
Phonology	experimental	7.40	3.836	9.90	2.025	8.832	0.464
	control	3.40	2.675	3.50	2.550	4.568	0.464
morphology	experimental	2.40	1.506	4.70	2.751	3.770	0.495
	control	1.00	0.943	1.20	0.919	2.130	0.495
Syntax	experimental	1.20	0.789	3.30	2.751	2.512	0.439
	control	0.90	0.738	1.00	0.667	1.788	0.439
semantic	experimental	3.20	2.530	6.10	3.213	5.002	0.442
	control	1.90	1.853	1.90	1.853	2.998	0.442
Pragmatic	experimental	3.60	1.776	6.00	1.054	5.527	0.245
	control	3.20	1.229	3.20	1.229	3.673	0.245

It is noted from Table (5) that there are apparent differences between the averages of the components of expressive language skills for the two experimental and control groups. And standard error (0.439), and to find out the level of significance of these differences, a multivariate covariance analysis (MANCOVA) was extracted, according to the Hoteling method. Table (6) shows these results.

Table (6) Hoteling's value, f-value, hypothetical degrees of freedom, error and level of significance for the results of the multivariate covariance analysis for the averages of expressive language components in the light of the group variable

Hoteling value	Value f	degree of freedom assumption	Degree of freedom of error	Level of significance
7,138	12,848	5	9	0,001

It is clear from Table (6) that the statistical significance of the calculated f value (0.015) and to determine any or all of the components of expressive language skills has contributed to the overall statistically significant differences, and also to reveal the sources of these differences, followed by the analysis of variance (Univariate F-Test) to compare the arithmetic averages of each component of the five expressive language skills separately, and Table (7) shows these results.

Table (7) results of the dependent multivariate covariance analysis

Source of variance	Components of the dependent variable	Sum of squares	Degrees of freedom	Means of squares	F Value	Significance level
Group	phonology	59.436	1	59.436	34.860	0.000
	morphology	8.788	1	8.788	4.531	0.053
	syntax	1.715	1	1.715	1.125	0.308
	semantic	13.122	1	13.122	8.487	0.012
	pragmatic	11.224	1	11.224	23.619	0.000
Accompaniment (pre) phonology	phonology	49.210	1	49.210	28.862	0.000
	morphology	4.543	1	4.543	2.342	0.150
	syntax	3.042	1	3.042	1.996	0.181
	semantic	4.603	1	4.603	2.977	0.108
	pragmatic	1.221	1	1.221	2.569	0.133
Error		22.165	13	1.705		
Total		1198	20			
Accompanying (pre) morphological	phonology	0.191	1	0.191	0.112	0.743
	morphology	2.601	1	2.601	1.341	0.268
	syntax	1.421	1	1.421	0.932	0.352
	semantic	1.131	1	1.131	0.732	0.408
	pragmatic	0.571	1	0.571	1.201	0.293
Error		25.215	13	1.94		
Total		31.1255	20			
Accompanying (pre) Syntax	phonology	6.284	1	6.284	3.686	0.077
	morphology	1.868	1	1.868	0.963	0.344
	syntax	22.493	1	22.493	14.756	0.002
	semantic	0.363	1	0.363	0.235	0.636
	pragmatic	1.076	1	1.076	2.265	0.156
Error		19.816	13	1.524		
Total		51.9	20			
Accompanying (pre) Semantic	phonology	0.288	1	0.288	0.169	0.688
	morphology	3.539	1	3.539	1.825	0.200
	syntax	0.043	1	0.043	0.028	0.869
	semantic	26.083	1	26.083	16.871	0.001
	pragmatic	0.054	1	0.054	0.114	0.741
Error		20.098	13	1.546		
Total		532	20			
Accompanying (pre) Pragmatic	phonology	1.929	1	1.929	1.132	0.307
	morphology	0.073	1	0.073	0.083	0.849
	syntax	1.707	1	1.707	1.120	0.309
	semantic	0.300	1	0.300	0.194	0.667
	pragmatic	1.726	1	1.726	3.632	0.079
Error		6.178	13	0.475		
Total		486	20			

It is noticeable from Table (7) that there are statistically significant differences at the level ($\alpha = 0.05$) between the mean score components of the expressive language skills scale (phonology, morphological, syntax, semantic, and pragmatic) due to the group variable, where the values of F respectively amounted to 34,860, 4.531, 1.125, 8.487, 23.619 with a significance level of (0.001), which indicates that the components of the expressive language skills scale (phonology, semantic, and pragmatic) have contributed to the significance of the overall differences, and by referring to Table (5) it appears that the modified averages in the components The expressive language skills of the experimental group are higher than the adjusted averages of the components of the expressive language skills of the control group, that is, the differences are in favor of the experimental group in the language components (phonology, semantic, and pragmatic), while there are no differences between the control and experimental group in the expressive language components (morphology and syntax). Thus, these two dimensions did not contribute to the significance of the overall differences, which indicates the effectiveness of the early intervention program in improving expressive language skills in the language components (phonology, semantic, and pragmatic), and accordingly, the second null hypothesis is invalid.

The researcher explains this result that the early intervention program had an impact on improving expressive language skills and their acquisition, and in this regard, the researcher sees the importance of focusing on the training sequence of the phonemic component - taking into

account the place of articulation of the sound such as the alveolar (s) sound, and then the manner of articulation How it comes out, such as the fricative (s) sound, and in terms of voiced and voiceless, such as the voiceless (s) sound and the voiced (z) sound, as it affects the understanding of the child's speech, then gradually moves to the morphology - syntax - semantic - and pragmatic components, and the importance of integrating Linguistic skills in its receptive and expressive sections, and focusing on each of them during training in one session and directly, as it included the ability to express the skill after understanding it, as Ling (1989) saw ("that speech acquisition is a brain cognitive process, and perception is seen as a process included in the process of Communication", which is consistent with the natural language development of the child and the logical and Chronology sequence in the training process that was followed, and the efficacy of diversification in the exercises and activities that led to the acquisition of expressive language skills. A group of hearing-impaired and normal children from the age of (3) contributed to improving expressive language skills, and this is consistent with what was stated in Stone (Stone, 1997) "that the integration situations in the pre-school stage, or in the primary education stage are educational options The task, which must be adequately provided to ensure the continued success of the implementation of the audio-oral approach."

As for the absence of differences in the expressive language components (morphological and grammatical), it requires a longer period of time related to the abilities to form generalizations, and is also related to linguistic practices and transferring the effect of learning, and this supports what was stated in Al-Khatib and Al-Hadidi (2011).That one of the effective strategies for transferring the effect of training is to teach the student the skill in the largest number of situations in which the training is carried out, which increases the possibilities of generalization, and that children of language disorders may show grammatical problems in the spoken language, and extensive practice is necessary to correct errors.

*** Results summary**

1- There is a statistically significant effect of the early intervention program in improving the expressive language skills of hearing-impaired children

from the age of (3-6) years, and that early language intervention contributes to the advancement of the expressive language skills of hearing-impaired children.

2- There are statistically significant differences between the mean scores of the students of the two experimental and control groups on the expressive language skills scale in favor of the experimental group.

3- There are statistically significant differences between the mean scores of the students of the two experimental and control groups on the components of the expressive language skills scale (phonology, semantic, and pragmatic) in favor of the experimental group, while there are no statistically significant differences in the expressive language components (morphological and syntax).

*** Recommendations**

1- Applying the proposed early intervention program in different cultural environments and knowing its effectiveness.

2- Conducting more studies and research that focus on the five components of language (phonology, morphology, syntax, semantic, and pragmatic) in the receptive and expressive aspects of language.

3- Conducting similar studies to the current study on other groups of people with language delay and language disorders

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