Proposal of a Sports Recreational Program to Increase Self-esteem among Hearing-impaired Adolescents (15-16) years old (Experimental study at the School of Deaf Children in the town of Batna for the academic year 2016/2017).

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Abstract
This study aims to determine the effectiveness of the proposed sports recreational program in raising self-esteem among hearing impaired adolescents (the deaf) (15-16) years. To study the effectiveness, the researcher conducted a field study at the School of Deaf Children located in the center of the midtown of Batna. The study sample included 24 individuals divided according to the sex (12 males and 12 females), and it was chosen by the intentional targeted method of 60% of the research community. The researcher adopted, in this study, the experimental method by conducting a pre-test in January 2017...
followed by the application of the recreational program on the sample and then by conducting a post-application in May 2017. The researcher also relied on the scale of Dr. Wahid Mustafa Kamel for self-esteem among the hearing-impaired adolescents as a tool to evaluate self-esteem, and the sports recreational program designed by the researcher and consists of 24 sports recreational classes was applied. The researcher’s findings show that there are differences of statistical significance at the level of 0.01 between the pre and post application in the self-esteem among the hearing impaired adolescents (males and females) in favor of the post-application.

The researcher's findings show the effectiveness of the proposed sports recreational program to increase self-esteem among hearing impaired adolescents for both sexes leading us to give great importance to sports recreational activity and adopt it as a means to help hearing impaired people to overcome the difficulties through minimizing the psychological problems experienced by them, as well as paying attention to the hearing-impaired females and highlighting them through conducting studies to find out why they have low self-esteem.

**Keywords:** sports recreational activity; self-esteem; hearing impaired people (people with hearing loss); adolescence.

**Introduction:**
The field of special education or disability in general is a modern field that has attracted increasing attention from specialists and practitioners.

The development of this field has witnessed a strong and rapid start as a result of many social factors and variables, including humanitarian, ethical and especially psychological factors.

Disability makes the person psychologically and physically disturbed, which further deteriorates his condition, and he acquires, over time, characteristics such as grief, inferiority complex, lack of self-confidence, which leads to a decline in his self-esteem and because of the difference from others in the environment in which he lives where he may feel undesirable in his family and teachers in the center, even if they do their best to make him happy, but he feels this as compassion.
Solving these psychological problems relieves or eliminates them completely. Among the solutions, the exercise of various recreational activities.

The participation of the disabled in sports recreational activities is beneficial. First, the benefits are reflected in the motor and physiological ability, which helps the disabled person to easily cope with life conditions, and gives the disabled a fair amount of self-confidence, depending on the type of the activity and the ability of the disabled to succeed in it. Therefore, it is important that the educator is aware of this point, as it is said in psychology: "Nothing succeeds like the success itself".

Therefore, the educator should give the disabled an amount of activity in which he can succeed.

The disabled person who believes in himself becomes an active member of the social circles surrounding him, including first the family, followed by the school, then the neighborhood and the society as a whole.

At present, experts and researchers in the field of sport, recreation and others have been providing us with the latest recreational methods and approaches, with reference to a set of sciences and field research on the individual practicing his activity, which made the developed countries witnessing remarkable development in the field of recreation. For this, recreation is valuable and important in modern societies and in their plans for a better future.

Physical sports recreational activity is a successful way of psychological recreation for the disabled person who gains experiences helping him enjoying life and getting rid of inferiority complex. The effect of recreational skills extends to the enjoyment of free time in developing self-confidence and relying on the same sportsmanship and work, and friendships removes him from his isolation and integrates him into society. Therefore, great importance must be given to sports physical recreational activity for the role it can play in overcoming psychological problems.

Convinced of the importance of this aspect, the researcher conducted this study about the effectiveness of a sports recreational program in raising self-esteem among hearing impaired adolescents (15-16 years), which is a very important subject, in order to give the disabled person
the right like other normal people, overcome his psychological problems, and thus gain self-confidence leading to rise self-esteem.

1- The Problem:
In today’s world, societies have taken care of hearing-impaired people and helped them to alleviate their suffering. Humanitarian bodies and organizations have made intensive efforts to reduce disability and provide the healthiest conditions. There is no doubt that the disabled have moved from the dependency to the independency state. The civilized countries have been gradually developing this trend in order to reduce the hearing-impaired people’s problems and to correct their path to be useful society builders. Hearing loss causes, in the psychosocial context, negative impact because the hearing-impaired person lacks the ability to social communication with others. Moreover, the patterns of family upbringing may lead to social immaturity and dependency. It is also known that the hearing-impaired people tend to interact with each other because they have the same suffering, and they do this more than any other category of disability, perhaps because of their need for social interaction and acceptance of other people. Through our detection of many studies, most researchers and scholars agree that there are general characteristics prevailed over the deaf, mostly not positive, especially in terms of social culture and social maturity. However, in terms of psychological and emotional characteristics, no knowledgeable can deny the fact that hearing loss may directly and indirectly affect the overall psychological organization of the human being. These negative effects are determined by health awareness and efforts to qualify this category since disability may cause loss of self-confidence and self-sufficiency due to fear of the future and frustration, leading to decrease self-esteem. According to the survey of some schools for hearing impaired people, we noted the lack of ensuring sports recreational aspect by sports educators and the lack of interest in the emotional aspect that is a strong motivation, a state or internal physical or psychological force that stimulates and moves the behavior and directs it toward a specific objective, and an internal force not directly observed, but rather
deduced from the general trend of the behavior (Oussama Kamel, 2000, p. 122).

According to American scientist Rogers who acknowledges that there is one main motive called the tendency to self-realization, he classified all biological motivations under the tendency toward self-realization, and also recognized that the organism has one central tendency, i.e., struggling to self-realization, self-preservation and self-sufficiency (Hilmi El-Meliji, 2001, p. 164).

According to this theory and in order to highlight the effectiveness of the sports recreational program in raising self-esteem among hearing-impaired adolescents (15-16) years, I thought to ask the following question:

- Are there statistically significant differences between the mean score of the hearing-impaired adolescents in the pre and post evaluation at the level of self-esteem in favor of the post-evaluation?

The following sub-questions are derived from this question:

- Are there statistically significant differences between the mean score of the hearing-impaired male adolescents in the pre and post evaluation at the level of self-esteem in favor of the post-evaluation?
- Are there statistically significant differences between the mean score of the hearing-impaired female adolescents in the pre and post evaluation at the level of self-esteem in favor of the post-evaluation?
- Are there statistically significant differences between the mean score of the hearing-impaired male adolescents and the score of the hearing-impaired female adolescents in the pre and post evaluation at the level of self-esteem in favor of the males?

2- Hypotheses:

2-1 The General Hypothesis:
There are statistically significant differences between the mean score of the the hearing-impaired adolescents in the pre and post evaluation at the level of self-esteem in favor of the post-evaluation.

2-2 The Sub-hypotheses:

2-2-1 There are statistically significant differences between the mean score of the hearing-impaired male adolescents in the pre and post evaluation at the level of self-esteem in favor of the post-evaluation.
2-2-2 There are statistically significant differences between the mean score of the hearing-impaired female adolescents in the pre and post evaluation at the level of self-esteem in favor of the post-evaluation.  
2-2-3 There are statistically significant differences between the mean score of the hearing-impaired male adolescents and the score of the hearing-impaired female adolescents in the pre and post evaluation at the level of self-esteem in favor of the males.  

3- The Objectives:  
This research aims to develop a sports recreational program and to identify:  
- The effectiveness of the proposed sports recreational program in increasing the self-esteem among the hearing-impaired adolescents (15-16 years).  
- The effectiveness of the proposed sports recreational program in raising the self-esteem among the hearing-impaired male adolescents (15-16 years).  
- The effectiveness of the proposed sports recreational program in raising the self-esteem among the hearing-impaired female adolescents (15-16 years).  
- The existence of a difference between hearing-impaired males and females in self-esteem after the application of the sports recreational program.  

4- Determination of the Study Terminology:  
4-1- Hearing-impaired People: Mohammad Abdelhay (2001) shows that hearing-impairment is a term that means the situation experienced by the individual as a consequence of several factors: genetic, congenital or acquired environmental hearing impairment caused social, psychological effects, or both, preventing the person to learning and carrying-out some actions and social activities performed by the normal individuals with high skills. Hearing impairment may be partially or fully severe, moderate or weak, it also can be temporary or permanent, increased, decreased or interim (Mohammad Abdelhay, 2001, p. 31).  
4-2- Sports Recreational Activity: Petller sees that recreation is a kind of leisure-time activity selected by the individual for a personal motivation to practice it, in order to acquire several physical, congenital, social and cognitive values.
4-3- Adolescence: It is a descriptive term to express a certain growth stage, started from childhood’s end and ends at the beginning of maturity and adulthood.

4-4- Self-esteem: Cooper Smith (1967) defines it as the judgment of individual’s suitability through redressing trend toward the self in the social, personal and academic fields. It also expresses the self-esteem in Our study by the obtained score in the self-esteem scale of Doctor Wahid Mustafa Kamel (Ahmed Mohammed Hassen Salah, 1995, p. 215).

5- The Survey:
The researcher conducted a survey of the proposed sports recreational program in the period between (1/1/2017) to (5/1/2017) on a sample of (08) individuals from the study community, then outside the basic sample for one week at a rate of two recreational classes, in order to identify:
- The viability of the used tools and instruments in order to ensure the security and safety factors.
- The appropriateness of the proposed recreational sports program content for the study sample.
- The distribution of the ideal times for the parts of the training unit.
- The difficulties that may hinder the researchers during the program implementation.

The results of the survey concluded that the program content, tools and instruments used in its implementation are suitable for the individuals in the survey sample.

5-1- The Study Tools:
The researcher used three tools:
The preliminary data card, Doctor Wahid Mustafa’s self-esteem scale, and the sports recreational program. These tools and procedures are presented as follows:

5-1-1-The preliminary data card:
This card aims to identify the examined in its entire personal, social, cognitive and physical aspects by the response of the individuals requested in this card about the child care, or by filling in information through school registers.

The necessary variables were gathered in order to insert them in the card such as the name, date of birth (to know the age of the child), the
degree of hearing loss, address, the parent’s job, the educational level of the parents, the monthly family income, the number of family members, and the existence of other disabilities affecting the hearing-impaired person.

5-1-2- The self-esteem scale of the hearing-impaired people: It was designed by Dr. Wahid Mustafa Kamel, psychological health teacher at the faculty of qualitative education, in Banha, Zagazig University, wherein he designed this scale in 2003, on a sample containing 120 hearing-impaired persons. The scale consists of 20 positive and negative expressions, and the hearing-impaired person must put the mark (✓) before the box “always, sometimes or never. The scale is also divided into two dimensions; the first one is the self-respect scope, and the second one is the esteem from others, so that the expression of each scope are distributed as follows:

- The self-respect scope, the expressions number: (3, 6, 7, 9, 13, 14, 15, 18, 19, 20)
- The esteem from the others, the expressions number: (1, 2, 4, 5, 8, 10, 11, 12, 16, 17)

The rating is as follows:
- The response (always) gets 2 scores.
- The response (sometimes) gets 1 score.
- The response (never) gets zero.

Thus, the total score of the scale is 40 scores. This scale determines three levels of self-esteem as follows:
- Low self-esteem: from 0-12 scores.

5-1-3- The Proposed Sports Recreational Program (prepared by the researchers):

The content of the proposed sports recreational program is determined based on objectives identified and indicated as follows:
- The duration of applying the sports recreational program: (12) weeks.
- The proposed sports recreational program includes (24) recreational units.
- The number of recreational units per week: (02) units per week.
- Recreational unit’s time: (60) minutes.
- The total time of units per week: 60×02= 120 minutes.
The total time of units per month: 120×04= 480 minutes.
- The warm up time: 10 minutes per unit.
- The main part time: 45 minutes per unit.
- The final part time or warm down time: 05 minute per unit.

The table (6) shows the temporal distribution of the recreational unit parts of the proposed sports program expressed in minutes.

5-2- The Scientific Basis of the Study Tools:
5-2-1-The Scale’s Validity: The researcher adopted the trustees’ validity and the discrimination validity.

»Trustees’ Validity: After the presentation of Dr. Wahid Mustafa Kamel’s self-esteem test of the hearing-impaired persons, to 9 teachers of psychology, educational sciences, and sports sciences, we got from them 7 answers that were 90% and over agreed.

»Terminal Comparison Validity (discrimination validity): The researcher ranked codification sample scores (16 individuals from the research community but not from its sample) in descending order, in each dimension of the scale, as well as to the scale’s total score, then, then he divided the scores into upper and lower terminals, after that, he calculated the arithmetic mean and the standard deviation of the two levels, and the T value between the two levels. The following table (1) shows that:

Table (01): The validity of the scale’s dimensions and the scale’s total score using the terminal comparison

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Statistical indicators of the upper field level</th>
<th>Statistical indicators of the lower field level</th>
<th>T Value</th>
<th>Significance level</th>
</tr>
</thead>
</table>
| Self-respect scope         | n=16  
\bar{X} =20  
\sigma=2,06  
\sigma^2=4,25 | n=16  
\bar{X} =9,94  
\sigma=0,66  
\sigma^2=0,43 | 18,01   | 0,01              |
| The esteem from the others scope | n=16  
\bar{X} =39,69  
\sigma=3,06  
\sigma^2=9,34 | n=16  
\bar{X} =11  
\sigma=2,12  
\sigma^2=4,5 | 15,81   | 0,01              |
The table (1) shows that scale’s dimensions and the scale as a whole are able to discriminate between the strong and the weak levels, meaning that the scale is highly valid.

5-2-2- The Validity of the Sports Recreational Program Content:
The proposed sports recreational program was presented in its initial form to 7 expert doctors specialists in the domains of: adapted physical activity, psychological, educational, social and sports sciences, physical and sports theories and approaches, wherein, they were asked to express their opinions on the sports recreational program in terms of: its duration, the number of the training classes, their timelines, techniques, activities and tools and appropriateness for the program’s objectives. Experts were unanimous about the appropriateness of the content of this sports recreational program and the procedures of its implementation.

5-2-3- The scale’s consistency: In order to calculate the consistency of the self-esteem scale of the hearing-impaired persons designed by Dr. Wahid Mustafa Kamel, the retest method was adopted, as well as the split-half method.

- Re-test Method: The researcher applied the scale to the individuals in the codification sample, then he retested the same sample after ten days. This test is one of the heterogeneous tests that measure the personality characteristics that are expected to stability (don’t change quickly and profoundly over time), after that, he calculated the correlation coefficient among the scores of the individuals in the sample in both applications for each dimension of the scale and the scale’s total score by Pearson’s correlation coefficient because the data are raw scores and they are on the categories and not on the ranks. The table (2) shows that:

Table (02): Correlation coefficients of the scale’s dimensions and the total score in both tests
This table shows that the correlation coefficients between each dimension and itself and between the scale’s total score and itself, all are significant at the level 0,01 meaning that the scale is highly consistent.

- The Split-half method: The researcher divided each dimension of the scale and the total scale into two equal parts; the first consists of the odd scores and the second part consists of the even scores. The correlation coefficient between the scores in both parts and the consistency coefficient were calculated. The following table (3) explains that:

Table (03): The correlation and consistency coefficients of both dimensions of the scale and the scale as a whole by the split-half method.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Correlation coefficient</th>
<th>Consistency coefficient</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-respect scope</td>
<td>0,91</td>
<td>0,76</td>
<td>0,01</td>
</tr>
<tr>
<td>The esteem from the others scope</td>
<td>0,85</td>
<td>0,75</td>
<td>0,01</td>
</tr>
<tr>
<td>The scale as a whole</td>
<td>0,93</td>
<td>0,86</td>
<td>0,01</td>
</tr>
</tbody>
</table>

The table (3) shows that all of the consistency coefficients are significant at the level 0,01 meaning that the scale is highly consistent.

5-2-4- The Scale’s Objectivity: the scale used in this study is clear, easy to understand, not open to interpretation and far from self-assessment, and its registration is done using scores. Therefore, the used scale is objective.

6- Basic Study:

6-1- The Scientific Method:

According to the problem at hand, the experimental method was used to study the research variables and detect the effectiveness of the
sports recreational program in increasing self-esteem among hearing-impaired adolescents.

6-2 -The Study Community:
The study community consisted of all hearing-impaired children (15-16) years old, 40 male and female pupils in the School of Deaf Children in the town of Batna who are enrolled for the academic year 2016/2017.

6-3- The Study Sample:
The study sample consisted of (24) hearing-impaired male and female pupils divided equally to 12 males and 12 females (15-16 years old) with an average age of 15.75 years old. They are enrolled in the first middle year, and they are internal pupils who stay with each other in the dorm of the school. These children were intentionally selected to form the experimental group after excluding 9 that are not internal pupils and 7 who have not achieve the first middle year level according to the recorded data. The children of this school were selected to form the experimental group for the following considerations:
- The school offers ready-made sports facilities (handball field, basketball and volleyball court, long jump basin) as well as several sports equipment.
- The institution’s management provides full cooperation with the researchers.
- The school provides the internal system, which facilitates the control of the random variables and the application of the program beyond class hours.

6-3-1- The Sample’s Characteristics:
- By sex: The sample consists of 12 females and 12 males.
By age: The sample consists of 06 individuals aged 15 years and 18 individuals aged 16 years. The table below shows the distribution of the individuals in the sample by the age and the sex variable.

Table (04): The distribution of the individuals in the sample by age and sex

<table>
<thead>
<tr>
<th>Age</th>
<th>Sex</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 years old</td>
<td></td>
<td>02</td>
<td>04</td>
</tr>
<tr>
<td>16 years old</td>
<td></td>
<td>10</td>
<td>08</td>
</tr>
</tbody>
</table>

6-4 The Study Limits:
6-4-1- Space Limits: Since the individuals in the sample are pupils at the School of Deaf Children, the field study was conducted at this school located in the province of Batna, which was established on March 3rd, 1980 by Decree number 80/59, and it proved its worth in several regional and national participations of hearing-impaired persons school games, and it get good results. This school includes 216 hearing-impaired children, and it provides remarkable sports facilities such as a handball field, a basketball and volleyball court, a jump basin, and a place for shot put, as well as other important means such as basketballs, footballs, volleyballs, handballs, shot put balls, Swedish seat, barriers etc.

6-4-2- Time Limits: The work was started with the theory, and then followed by practice.
Theory work began in September 2016.
Practice work began in January 2017.

6-5 - Implementation of the Program Content: The implementation of the proposed sports recreational program was preceded by some preliminary steps, namely, several meetings between the researchers and the individuals in the experimental sample, aimed at providing opportunities for rapprochement and acceptance among them - Creating a climate of confidence - Before starting to implement the sport recreational program, and after ascertaining the validity of the program to application, the proposed sports recreational program was implemented on the basic study sample according to three stages:

6-5-1- Pre-evaluation Stage: The pre-evaluation of the experimental group on Tuesday (10/01/2017) using self-esteem scale of hearing-impaired people designed by Doctor Wahid Mustafa Kamel.

6-5-2- The Proposed Sports Program Application Stage: The researcher applied the units of the proposed sports recreational program to the experimental group for a period from (17/01/2017) until (01/05/2017), informed that the application days are Tuesdays and Thursdays for a period of (12) weeks, thus the number of the effectively applied recreational units is 24 recreational units.

6-5-3- Post-evaluation Stage: After the completion of the proposed sports recreational program, the researcher carried out, on (08/05/2017), the post-evaluations of the study variables on the experimental group, in the same way, in the same conditions and
potentials, and in the order of the post-evaluation in order to obtain the most accurate results.

7- Presentation and Interpretation of the Results according the Research Hypotheses:

7-1- The First Partial Hypothesis:

There are statistically significant differences between the mean score of the hearing-impaired male adolescents in the pre and post evaluation at the level of self-esteem in favor of the post-evaluation. To confirm this, we used the T test to calculate the differences between the pre and post application and we obtained the following results:

Table (05): The T value significance of the differences between the mean score of the hearing-impaired male pupils for self-esteem in the pre-application and the post-application

<table>
<thead>
<tr>
<th>Test</th>
<th>Males N=12</th>
<th>Mean</th>
<th>Lower score</th>
<th>Higher score</th>
<th>Standard deviation</th>
<th>T value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>24,75</td>
<td>20</td>
<td>30</td>
<td>1,60</td>
<td>2,70</td>
<td>Significant at 0,02</td>
<td></td>
</tr>
<tr>
<td>Post-test</td>
<td>26,00</td>
<td>21</td>
<td>29</td>
<td>2,70</td>
<td>1,60</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to the table, we find that the T value, which is 2,70, is statistically significant at the level of 0,02. Therefore, it can be said that the group changed to the best (Self-esteem increased) after the introduction of the experimental therapy (sports recreational program), where the mean score increased from 24,75 in the pre-application to 26,00 in the post-application.

The results of this hypothesis is consistent with the majority of similar studies. The researcher explains the obtained result by reducing the pressure that was imposed on the disabled and the exit from the daily routine by including sports recreational games, which led to a sense of self and increased the self-confidence leading to a sense of independence and a sense of psychological security resulting in increasing self-esteem. This is the conclusion of the Hussein’s study (1987) in the Kingdom of Saudi Arabia, where he explained that self-esteem increases with a higher degree of the feelings of security and psychological tranquility, and decreases with a higher degree of the feelings of danger, threat and anxiety among individuals. Doctor Rabah Turki explained that the adolescent feels a strong and great need to
independency, in reflection and action, from family and older people (Rabah Turki, 1990, p. 244).

7-2- The Second Partial Hypothesis:
There are statistically significant differences between the mean score of the hearing-impaired female adolescents in the pre and post evaluation at the level of self-esteem in favor of the post-evaluation?
To confirm this, we used the T test to calculate the differences between the pre and post application and we obtained the following results:

Table (06): The T value significance of the differences between the mean score of the hearing-impaired female pupils for self-esteem in the first application and the second application

<table>
<thead>
<tr>
<th>Test</th>
<th>Females N=12</th>
<th>Mean</th>
<th>Lower score</th>
<th>Higher score</th>
<th>Standard deviation</th>
<th>T value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>23,41</td>
<td>17</td>
<td>29</td>
<td>1,08</td>
<td>4,78</td>
<td>Significant at 0,01</td>
<td></td>
</tr>
<tr>
<td>Post-test</td>
<td>24,91</td>
<td>19</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to the table, we find that the T value, which is 4.78, is statistically significant at the level of 0.01. Therefore, it can be said that the group changed to the best (Self-esteem increased) after the introduction of the experimental therapy (sports recreational program), where the mean score increased from 23.41 in the pre-application to 24.91 in the post-application.

This result is consistent with the majority of similar studies. The researcher explains the obtained result by eliminating the shyness of the females, which may be a psychological condition due to physical changes or because of the girl's relationship with the father, which is characterized by severe punishment, feelings of guilt, feeling of otherness, and the control of the girl’s freedom, especially that the Algerian people are conservative in their commitment to their customs and traditions, which explains the source of shyness. The application of the sports recreational program has led to the integration and interaction of the hearing impaired females within the group, resulting in the elimination of shyness. According to Chek Buss study, who proved that there is a statistically significant negative correlation between shyness and self-esteem, and the strict pedantic education on the girl in our society overemphasizes on shyness, causing suffocation to spontaneity and crushing the personality. According to
Bassima Kial: shy women live in a family conditions where the father is authoritarian on the universal will and blames and disgruntles the mother, which generates, among girls, a kind of fear and lack of self-esteem (Bassima Kial, 1992, p. 8). In his theory on self-esteem, Cooper Smith points out that there are three cases of the parental care associated with the development of higher levels of self-esteem: acceptance of children by parents, reinforcement of positive child behavior by parents, respect for children's initiative and their expression freedom (Salah Ahmed Ali Abu Jado, 2000, p. 153).

8-3 The Third Partial Hypothesis:

There are statistically significant differences between the mean score of the hearing-impaired male adolescents and the score of the hearing-impaired female adolescents in the pre and post evaluation at the level of self-esteem in favor of the males.

To confirm this, we used the T test to calculate the differences between males and females in the post-test and we obtained the following results:

**Table (07):** The T value significance of the differences between the mean score of the hearing-impaired male pupils and the score of the hearing-impaired female pupils for self-esteem in the post-test.

<table>
<thead>
<tr>
<th>Sex</th>
<th>Mean</th>
<th>Lower score</th>
<th>Higher score</th>
<th>Standard deviation</th>
<th>T value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>26,00</td>
<td>21</td>
<td>29</td>
<td>3,37</td>
<td>1.11</td>
<td>Not significant</td>
</tr>
<tr>
<td>Females</td>
<td>24,91</td>
<td>19</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to the table (07), we find that the T value, which is 1,11, is not statistically significant, which indicates that there are no differences between hearing-impaired males and females in self-esteem, despite the difference in the mean score, which is, for males, 26,00, while, for females, it is 24,91 in the post-test, as it did not reach the level of significance.

The T test shown in the table (07) indicates that there are no statistically significant differences between the score of the hearing-impaired males and females in the post-evaluation, which negates the validity of the hypothesis stating that there are statistically significant differences between the mean score of the hearing-impaired males and the score of the hearing-impaired females in the post-evaluation.
of self-esteem in favor of males. These results are contrary to the majority of similar studies.

The researcher explains the obtained result, despite the existence of small differences between the male performance and the female performance in the self-esteem test of the hearing-impaired pupils in favor of males, by the improvement in male performance due to exposure to the program, which is not different from the improvement in female performance as a result of exposure to the program as it does not include activities, attitudes, tools or stimulations that may be considered to be related to the sex of the adolescent. Recreational activities were suitable for both sexes, of a general nature and far from being stereotyped in the use of their tools, where tools and instruments were appropriate for both sexes, or tolls were equally put between according to the concerns of both sexes, such as (loops, barriers, balls, Swedish seat...). Therefore, they expect that these activities will not lead to disparities in the adolescent's psychological or personal processes. Moreover, the activities of this program were presented in the same manner for both sexes, leading to the agreement of their performance.

7-4- General Hypothesis:
There are statistically significant differences between the mean score of the hearing-impaired adolescents (males and females) in the pre and post evaluation at the level of self-esteem in favor of the post-evaluation.

To confirm the validity of this hypothesis, we used the T test to calculate the differences between the pre-application and the post-application and we obtained the following results:

Table (08): The T value significance of the differences between the mean score of the hearing-impaired pupils (males and females) for self-esteem in the pre-test and the post-test.

<table>
<thead>
<tr>
<th>Test</th>
<th>Males and females N=24</th>
<th>Mean</th>
<th>Lower score</th>
<th>Higher score</th>
<th>Standard deviation</th>
<th>T value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>24.08</td>
<td>17</td>
<td>30</td>
<td>1.34</td>
<td>5.01</td>
<td>Significant at 0.01</td>
<td></td>
</tr>
<tr>
<td>Post-test</td>
<td>25.45</td>
<td>19</td>
<td>30</td>
<td>1.34</td>
<td>5.01</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to the table (08), we find that the T value, which is 5.01, is statistically significant at the level 0.01. Therefore, it can be said that the group changed to the best (Self-esteem increased) after the
introduction of the experimental therapy (sports recreational program), where the mean score increased from 24.08 in the pre-test to 25.45 in the post-test. This result is consistent with the majority of similar studies. According to the researcher’s point of view, can be explained by that the sports recreational program and its opportunities for social interaction and personal experience contribute to increase self-esteem. This result is supported by psychological and educational literature. The high self-esteem is based on the effectiveness and achievement of individuals in the fields of life. Paralebas classifies sport as a kind of distinctive play that unites the body with the mind, and sees sport as a psycho-social dynamism (Ossama Ratib Kamel, 1999, p. 40). Zeller’s theory states that self-esteem is a social self-actualization and emphasizes that self-assessment does not occur in most cases only in the social frame of reference (Omar Ahmed Hamshari, 2003, p. 245). Rosenberg and Schutz conclude that individuals with low self-esteem prefer to move away from social activities, do not hold leading positions, are sometimes subordinates and managed, and are characterized by shyness, hypersensitivity, loneliness and isolation. Erikson addresses adolescence from the point of identity crisis focusing on the seriousness of what he calls the role and defining identity as impressions of ourselves and others, as it depends on the sense of belonging to a group. Abdelghani El-Daidi affirms that the hearing-impaired person, in this stage, needs social contact through the increasing tendency to engage with individuals of both sexes at the expense of family members, and this is what we find in sport recreational activity in order to independency from parents and non-dependency and obedience to them (Abdelghani El-Daidi, 1995, p. 80).

**General Conclusion:**
- After presenting and discussing the obtained results for the hearing-impaired category, we find, through the results of the first partial hypothesis, that there are statistically significant differences between the pre and post tests at the level of self-esteem among the hearing-impaired males in favor of the post-test where the sports recreational program and its positive aspects contributed to helping hearing-impaired pupils in the positive esteem. This confirms the validity of the first partial hypothesis.
The results of the second partial hypothesis showed that there are statistically significant differences between the pre and post tests at the level of self-esteem among the hearing-impaired females, which indicates that the sports recreational program plays an effective role in the advancement of the hearing-impaired pupils themselves, which is manifested by increasing the size of the social relations and exploiting the recreational aspect resulting from the practice. This confirms the validity of the second partial hypothesis.

The results of the third partial hypothesis show that there are no statistically significant differences between the hearing-impaired males and the hearing-impaired females at the level of self-esteem in the post-test, which shows that the exercise of the sports recreational program does not lead to a difference in the level of self-esteem by sex as a result of the fact that the program does not include activities, attitudes, tools or stimulations that may be considered to be related to the sex of the adolescent. This negates the validity of the third partial hypothesis.

From the foregoing and after verifying the validity of the proposed partial hypotheses except the third partial hypothesis at the beginning of the study, we can say that the general hypothesis is realized, which states that there are statistically significant differences between the mean score of hearing-impaired adolescents in the pre and post evaluations at the level of self-esteem in favor of the post-evaluation, where the hearing-impaired adolescents, after applying the sports recreational program, have a high level of self-esteem compared to the application of the sports recreational program.

**Recommendations:**

- The effective ensuring of the hearing-impaired adolescents taking into consideration his real socio-psychological condition.
- Making sports recreational activity a rehabilitation material for effective treatment of all the problems experienced by the disabled adolescent, and this is in coordination between the educator and the psychologist.
- The effective participation of disabled pupils in the recreational sports class by including some recreational games under the supervision of the educator who plays the leader and guide.
- Reinforcing the means of recreational activity exercise in order to avoid boredom, and developing the discoveries of disabled pupils to the world.
- Not discrimination between children, males and females, not making the disabled person feeling his disability, and encouraging the proper mingle between both sexes within the limits of friendship, fellowship and respect for the personality of the other.
All of these recommendations aim to make the disabled adolescent in an environment that enables him to increase his self-esteem by highlighting his personality, including gaining access to self-confidence and decreasing conflicts that he lives inside and outside himself.

References: