Effect of Nursing Intervention for Hearing Impairment Adolescent Students Regarding Bullying

[1]Samah Said Sabry, [2]Shimaa Gamal Eldein Ibraheim & [3]Huda Abdallah Moursi Afify

[1,2,3] Community Health Nursing Department, Faculty of Nursing, Benha University, Qaluobia, Egypt

Abstract

Background: Bullying victimization at school is an important concern in terms of social and mental health, particularly, for hearing impairment adolescent students who may be more vulnerable than hearing peers. **Aim** of the study was to evaluate effect of nursing intervention for hearing impairment adolescent students regarding bullying. **Design**: A quasi-experimental design was used. **Setting**: The current study was conducted at Al-Amal School for Mute and Deafness students at Benha City. Subjects: Purposive sample was used in this study, it includes 107 students, all of them were chosen from the mentioned setting. **Tools** of data collection: Five tools were used. I- A structured interviewing questionnaire; consisted of 2 parts to assess: 1) Demographic characteristics of hearing impairment adolescent students. 2) Questionnaire to assess student's previous exposure to bullying II- knowledge of hearing impairment adolescent students regarding bullying. III- opinions about deaf community. IV- Self-esteem scale. V- Adolescent Bullying scale. **Results**: This study showed;20.5% of studied students have poor knowledge pre intervention decreases to 1.8% post intervention, while 12.3% of studied students have good knowledge pre intervention increases to 84.1% post intervention. 78.5% of studied students with low self-esteem pre intervention decreases to 19.6% post intervention. While14% of studied students with high self-esteem pre intervention increases to 85.9% post intervention.56.8% of studied students with negative opinion about deaf community pre intervention decreases to 22.4% post intervention. While 44.2% of studied students with positive opinion about deaf community pre intervention increases to 77.96% post intervention. **Conclusion**: This study concluded that: The nursing intervention had a significant effect on the improvement of the hearing impairment adolescent students' knowledge, opinion and self-esteem. **Recommendations**: Further studies should be provided to assess factors that increase bullying behavior. Community support should be provided to hearing impairment adolescent students.

Key words: nursing intervention, hearing impairment, adolescent students, bullying.

***Corresponding author:** samahsaid662@yahoo.com

Introduction

Bullying is one of the most common phenomenon expressions of violence during school years in general. Research on bullying started more than forty years ago, when the phenomenon was defined as aggressive, intentional acts carried out by a group or an individual repeatedly and over time against a victim who cannot easily defend self. Children and adolescents with hearing loss experience higher rates of peer victimization, or bullying, than children with typical hearing. Very few studies have addressed bullying in students with hearing impairment

(Andrea & Warner et al., 2018). Bullying may be at both aggressive and passive form, including purposely excluding or ignoring someone in the office or educational setting. Schools and workplaces are meant to be inclusive, so ostracizing someone from the rest of the group can have a significant negative impact on their happiness and self-esteem **(Clason, 2020).**

The prevalence of bullying is common among children in school, with incidence rates ranging from 10% to 25%. Both the victim and the bully are likely to have mental health problems. Adolescents are more likely to encounter social problems like bullying, and communication challenges in particular raise this risk. Teenagers who are Deaf or Hard of Hearing (DHH) experience social isolation. Adolescents with hearing impairments have trouble regulating their emotions and communicating, which increases their vulnerability to bullying and other forms of victimization from the hearing population. Debilitating hearing loss affects 32 million children globally, according to the World Health Organization (WHO). Throughout Europe A hearing impairment ranging from moderate to severe affects one in a thousand kids and teenagers **(Broekhof et al., 2018; WHO, 2020).**

Bullying exposes victims to unfavorable situations that make them feel unsafe. Because of this, victims are mainly worried about feeling frightened about being subjected to bullying once more and about what the bullies may say or do the next time. Many bullied people, nevertheless, also experience increased levels of rage because they feel that the bullying is unjust. According to certain studies, such a visibly reactive reaction style might encourage bullying behavior since the bully may find it satisfying. This suggests that young people who are weaker are more prone to be victimized **(Kaynak, 2015).**

The community health nurse is crucial in reminding hearing-impaired adolescent pupils of the qualities of a good friend. Someone close to you might make jokes about your hearing loss or hearing aids. A student must be able to distinguish between a friendly and an aggressive voice. Furthermore, even if it is "friendly" teasing, the student should be free to respond with, "I don't like it when you tease me about my hearing loss, please stop doing it," if it bothers them or they just don't like it. Adolescents should be given the chance to deal with bullies on their own at first **(Biasotti, 2020).**

Community health nurse educating adolescents to accept differences in others without humiliating or blaming them, community health nurses assist teenage pupils in developing a stronger sense of self-esteem and self-assertiveness. The CHN should also keep bringing up violent bullying and establish a social skills program to aid adolescent pupils in developing social skills by giving kids a safe and open communication route for reporting bullying incidents. With a secure and open communication channel for reporting instances of bullying, CHN supports children in identifying bullying, reporting it, saying "no" to stop the situation, and asking for support from a dependable source **(Warner et al., 2018).**

Significance of the study:

The prevalence of hearing loss in Egypt, 16.02% of students suffering from hearing loss which is higher than many other countries, both developed countries like the United States 9.6% and developing countries like Indonesia were it is 4.6% and the prevalence of hearing loss in school students was almost 10% which is higher than rates reported in previous studies in the country **(Elbeltagy et al., 2019, WHO, 2020).**

Adolescent students with hearing loss experienced bullying at a rate that was much higher than that of the general population (50.0% vs.28.0%), especially when it came to exclusion (26.3% vs. 4.7%) and coercion (17.5% vs. 3.6%). Children less than 12 years with hearing loss reported lower rates of bullying (38.7%) than adolescents with hearing loss, but the differences were not statistically significant **(Warner et al., 2018).**

Aim of the study:

This study aimed to evaluate the effect of nursing intervention for hearing impairment adolescent students regarding bullying through:

1-Assessing hearing impairment students' knowledge regarding bullying and opinions about deaf community.

2-Assessing hearing impairment adolescent students' self-esteem.

3-Developing and implementing nursing intervention for hearing impairment adolescent students regarding bullying

4-Evaluating the effectiveness of the nursing intervention on knowledge, opinions about deaf community and self-esteem of hearing impairment adolescent students.

Hypothesis:

Hearing impairment adolescent students' knowledge regarding bullying. opinions about deaf community and self-esteem would improve after application nursing intervention.

Subjects and methods

Research design:

The research design was quasi-experimental which used in this study**.**

Setting:

The current study was conducted at Al-Amal School for Mute and Deafness students at Benha City, the only established place for the care of those students.

Subjects:

Purposive sample was used in this study. The total number of hearing impairment adolescent students attending to Al-Amal School for Mute and Deafness students is 107 students, who are aged from 13-18 years old with no other medical problems.

Data Collection Tools:

Five tools were used for collecting data:

Tool I- A structured interviewing questionnaire, based on a literature review and created by the researchers. And contained in straightforward, unambiguous Arabic writing of two parts as the following:

Part one: It was designed to gather data about the demographic characteristics of adolescent students with hearing impairment (age, sex, residence, work of father, work of mother, educational level of father, educational level of mother, family size, and family socio economic status).

Part two: It was developed to rate hearing impairment adolescent students' previous experience to bullying. The questions addressed areas such as, (forms, places, frequency, common time, actual methods of dealing, and effects on them). 38 items were present in this part.

Tool II- knowledge about bullying, it was developed to assess hearing impairment adolescent students' knowledge regarding bullying, and it consists of 28 closed ended questions about meaning, forms, causes, types, consequences, and measures for dealing with it.

Scoring system: The elements presented in each question were used to determine the scores for each knowledge variable. Each item has a "unknown" answer that indicates zero. A question that implies a 4 items answer would have a score of 4, a question that implies a 5 items answer would have a score of 5, and so on. Three categories are given for the total knowledge score: good >75%, moderate 50-75%, and low 50%.

Tool III- Opinion about deaf community: It was adapted from **(Ellemers et al., 1993)**, to assess hearing impairment adolescent student's opinion to be one of a deaf community. The questionnaire composed of 6 items. Indicates pleasant, belonging, and believes on a 3-point Likert scale from 0 (never) to 2 (always).

Scoring system: A total score is calculated by adding up the score of items, which ranged from 0-12 and stated as; never 0-4, sometimes 5-8, and always 9-12.

Tool IV- Rosenberg's global self-esteem scale: The scale was used to measure the overall negative and positive self-attitudes and was adopted from **(Rosenberg, 1965**). There are 10 statements in it (5 statement are phrased positively and 5 statements are phrased negatively).

Scoring system: Responses to statements on one's own self-worth were scored on a three-point scale: (2) for agree, (1) for neutral, and (0) for disagree. The scoring system for negative responses was flipped, i.e., (2) for disagree, (1) for neutral, and (0) for agree. The sum of the ratings for each of its statements was used to compute the overall self-esteem score. The total self-esteem score of the students was categorized as follows: Total self-esteem scores are 20 points, or 100%. High when the result was between 75% and 100% (over 15 points). Low if the final score was fewer than 75% (around 15 points).

Tool IV- Adolescent bullying scale: It was adapted from **(Strout, et al., 2018)**. Consists of 20 questions to identify adolescents' problems with bullying.

Scoring system: A total score is calculated by summing the score of items, which ranged from 0-40 and presented as; never 0-10, sometimes 11-20, and always 21-40.

Tools Validity and reliability:

Before the pilot study and the actual data collection, validity was checked by giving the tools to five experts in the study's field along with a covering letter and explanation sheet that explains the purpose of the study and other relevant information. This was done to make sure the tools were appropriate, relevant, clear, and comprehensive. Changes and

modifications were made when necessary. Cronbach's alpha was used to measure reliability, and the results showed that each of the four tools had a high level of reliability due to the generally homogeneous item composition of each one. Internal consistency for knowledge was 0.72, for total bullying was 0.90, for total self-esteem was 0.86, and for total opinion was 0.67.

Ethical Considerations:

Verbal approval was obtained from each student who agreed to participate before inclusion in the study. The students were informed about purpose of the study and its importance. They were offered the option to leave the study, and they received guarantees that their privacy and the confidentiality were assured through coding the data.

Pilot Study:

It was conducted for 10% of the overall study sample underwent a pilot study to gauge the tools' clarity and viability and determine how long it would take participants to complete the surveys. There were no ambiguous statements or questions. Later, pilot volunteers were included to the study because there was no need for any more tool development at this point.

Field work:

A written official approval was delivered from the Dean of the Faculty of Nursing; Benha University including the aim of the study was forwarded to the administrator of the Al-Amal School for Mute and Deaf Students in Benha City, to obtain the permission for conducting the study. The researchers interviewed the students then introduced themselves to them and explained the purpose of the study. The study was carried out through four phases: assessment, intervention development, implementation and evaluation. These phases were carried out from beginning of September 2019 to the end of March 2020, covering along a period of seven months. The previously mentioned settings were attended by the researchers three days/week.

1. Assessment phase:

This stage was designed to collect baseline data from adolescent students with hearing impairment. The researchers interviewed the students, greeted each student at the beginning of interview and explained the purpose of the study. Pre-test was done to assess students' demographic characteristics, knowledge regarding bullying, opinions about deaf community and self-esteem. The data obtained during this phase constituted the baseline for further comparisons to evaluate the effect of the intervention program, Average time for the completion of interviewing schedule 30-45 minutes. The phase of assessment takes first month.

2. Intervention development phase:

Based on the needs identified in the assessment phase from the pre-intervention evaluation and in view of the related literature, the researcher's experience, and the opinions of nursing experts the nursing intervention was developed by the researchers to satisfy the students' deficit. The general objective of the nursing intervention was to improve students' knowledge, opinion, and self-esteem.

Nursing intervention contents:

1- Meaning of bullying.
2- Forms of bullying.
3- Causes of bullying.
4- Types of bullying.
5- Consequences of bullying.
6- Measures of dealing with bullying.
7- The most effective ways to handle and confront this situation.
8- The physical strategies that can be used to fend off bullying.
9- Preventive measures against bullying.
10- How to improve one's self-esteem in various contexts.
11- How to strengthen their self-esteem so they can deal with the bullying phenomenon.
12- How to share care with people who are supported.
13- The best ways to link community services that offer assistance (medical, financial, social…. etc).

3. Intervention implementation phase:

The researchers attended the settings three days/week, the nursing intervention involved 5 scheduled sessions; lasted from half an hour to one hour including periods of discussion according to their achievement, progress and feedback. When necessary, the researchers use sign language to communicate with the student in their class with the help of the teacher; first & second session: meaning, forms, causes, types, consequences, and measures of dealing with bullying. Third & fours session: opinion about deaf community. Fives session: self-esteem. At the beginning of the first session an orientation to the educational program and its purpose took place. Feedback was given in the beginning of each session about the previous one. The educational methods used were discussion, demonstration and re-demonstration. The suitable educational media were used, included handouts and printed materials and posters were used to present the nursing intervention to the hearing impairment adolescent student. It has info graphics and colorful pictures to draw people in.

4. Intervention evaluation phase:

The efficacy of the nursing intervention was evaluated immediately after the implementation of the intervention using the same questionnaire for pretest and posttest.

Statistical analysis

The Statistical Package for Social Science (SPSS) version 20 was used to conduct statistical analysis after the obtained data were checked before being entered into a computer. Utilizing the mean, standard deviation, number, percentage distribution, and Chi-Square, data were displayed in tables. The following values were used to determine statistical significance: P-Value 0.05 significant, P-Value 0.001 very significant.

Results

Table (1) Implies that; 30.8% of studied students aged from 14>16 years old, with Mean ±SD (15.12±2.08). 68.2% of them were male. 64.5 % of them live in urban, with 46.7. % 41.1% of them their father and mother have basic education respectively, and 68.2% of them have 5 ≥7 family members. 57.9% of them with insufficient family monthly income.

Table (2) Implies that; the most common forms of bullying in which studied students were exposed to it were 75.9% that the classmates or teacher ignored student or turned away from colleagues while the student

was studying, and the student have seen others being assaulted at the school location, while the lowest form 56.4% were the classmates or teacher have made statements that are insulting or offensive to student because of inability to listen well.

Figure (1) Illustrates that; the most common places of bullying among studied students 73.1% via internet, followed by 71.3% in street. While the lowest common places were 42.8% in transportation, followed by 33.3% at home within the family.

Figure (2) Illustrates that; 72.2 % of studied students sometimes exposed to bullying. While 25.1% of the studied students exposed to bullying rarely.

Figure (3) Displays that; 65.7% of studied students exposed to bullying at afternoon. While 59.3% of them exposed to bullying at any time.

Table (3) Shows that; there was highly significant difference between pre- and post-nursing intervention regarding methods of dealing with bullying. The most common reaction in pre intervention that 72% of studied students leave the place compared by 94.4% post intervention, and 64.5% of studied students view to the bully firm look in pre intervention compared by 83.2% post intervention.

Table (4) Shows that; there was highly significant difference between pre- and post-intervention regarding feelings when studied students exposed to bullying. The most common feelings in pre intervention were desirable feeling 60.7% and Disturbance (headache, insomnia and bad dreams) 61.7% compared by 23.4 %, 21.5% post intervention, anger and frustration 54.2% compared by 29.9% post intervention.

Table (5) demonstrates that; there were significant pre- and post-intervention differences in the studied pupils' knowledge of bullying. In terms of bullying types, 2.1% of the students were fully correct pre-intervention compared to 70.1% post-intervention; in terms of bullying prevention strategies, 17.8% were fully correct pre-intervention compared to 87.9% post-intervention.

Figure (4) Illustrates that; 20.5% of studied students have poor knowledge pre intervention lowered to 1.8% post intervention, while 12.3% of studied students have good knowledge pre intervention jumped to 84.1% post intervention.

Table (6) shows that; there were high statistically significant differences between pre- and post-intervention regarding studied students' self-esteem. 43% of studied students agree with feeling of acting a way that is typical of most people pre intervention compared with 90.7% post intervention, while 42.1% of them agree with there are times feeling of un benefit compared with 2.8% post intervention.

Figure (5) reveals that; 78.5% of studied students with low self-esteem pre intervention dropped to 19 % after intervention. While 21.5% of study participants with high self-esteem before intervention raised to 81 % after intervention.

Table (7) shows that; there were high statistically significant differences between pre- and post-intervention regarding studied students' opinion about deaf community. 52.3% of studied students agree with find it pleasant to be a member of the deaf community, opposed with 82.2% post intervention, additionally 31.8% of

them agree with considering self to be an integral part of the deaf community, compared with 72% post intervention.

Figure (6) reveals that; 56 % of studied students with negative opinions about deaf community before intervention felled to 22.4% after intervention. While 44 % of studied students with positive opinion about deaf community before intervention jumped to 77.6% after intervention.

Table (8) shows that; there were high statistically significant differences between pre- and post- intervention regarding bullying. 84.1% of studied students at school always Children try to influence others against me at my school opposed with 41.4% post intervention, while 80.4% of studied students at school always make fun of hearing impairment students to make feel bad opposed with 37.4% post intervention.

Table (9) shows that; there was statistically significant positive correlation linked between total knowledge and total self-esteem pre- and post-intervention ($P<0.05$) of adolescent students. This implies that as knowledge grows, so does self-esteem.

Table (10) demonstrates that; there was statistically significant positive correlation linked between total self-esteem and total bullying both before and after intervention ($P<0.05$).

Table (1) Frequency distribution of hearing impairment adolescent students regarding their demographic characteristics (n=107).

Socio-Demographic Characteristics	No.	%
Age / years:		
12>14	25	23.4
14>16	33	30.8
16>18	27	25.5
≥18	22	20.6
Mean ±SD 15.12±2.08		
Gender:		
Female	73	68.2
Male	34	31.8
Residence:		
Rural	38	35.5
Urban	69	64.5
Father education:		
Read and write	29	27.1
Basic education	50	46.7
High education	28	26.2
Mother education:		
Illiterate	20	18.7
Read and write	17	15.9
Basic education	44	41.1
High education	26	24.3
Father occupation:		
Work	104	97.2
Not work	3	2.8
Mother occupation:		
Work	23	21.5
Housewife	84	78.5
Family number:		
3≥5	14	13.1
5≥7	73	68.2
≥ 7	20	18.7
Family monthly income:		
Sufficient	45	42.1
Insufficient	62	57.9

Table (2): Frequency distribution of studied students regarding exposure to different forms of bullying (n=107).

Forms of bullying	No.	%
Classmates or teacher ignored or turned you away from colleagues while you were studying	82	75.9
Classmates or teacher have made statements that are insulting or offensive to you because of your inability to listen well	61	56.4
Classmates or teacher taunt you in a sharp manner, or even make you aim to drop his anger sometimes	60	55.6
Classmates or teacher have threatened you with violence or even physical abuse at you at school	79	73.1
Have you seen others being assaulted at your school location?	82	75.9

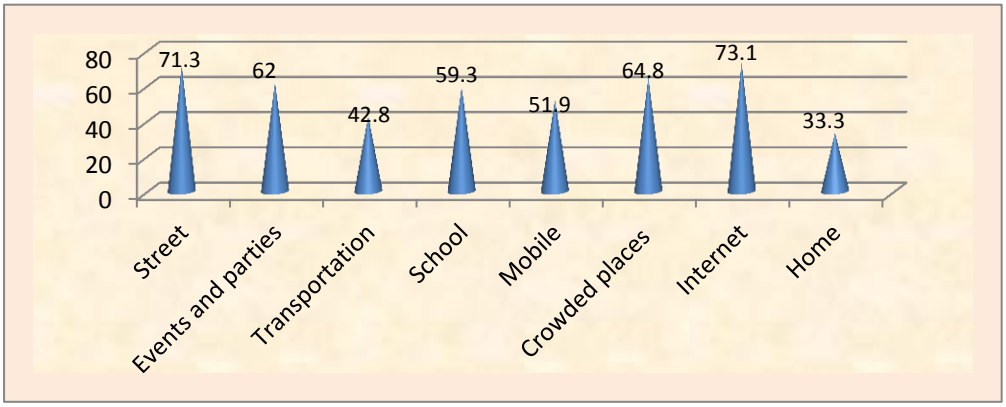


Figure (1): Percentage distribution of studied students regarding places of bullying (n=107).

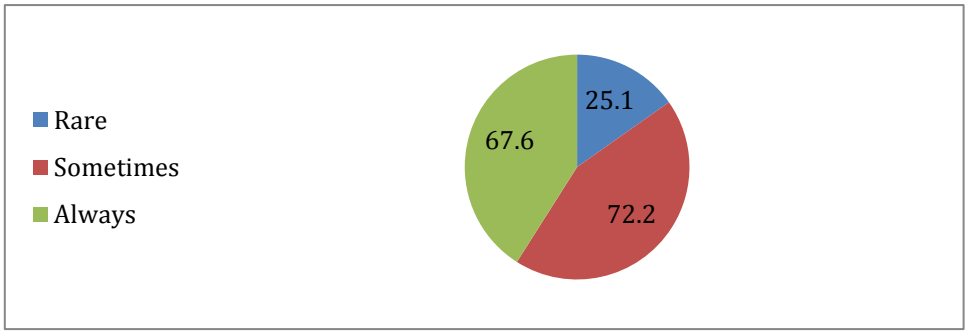
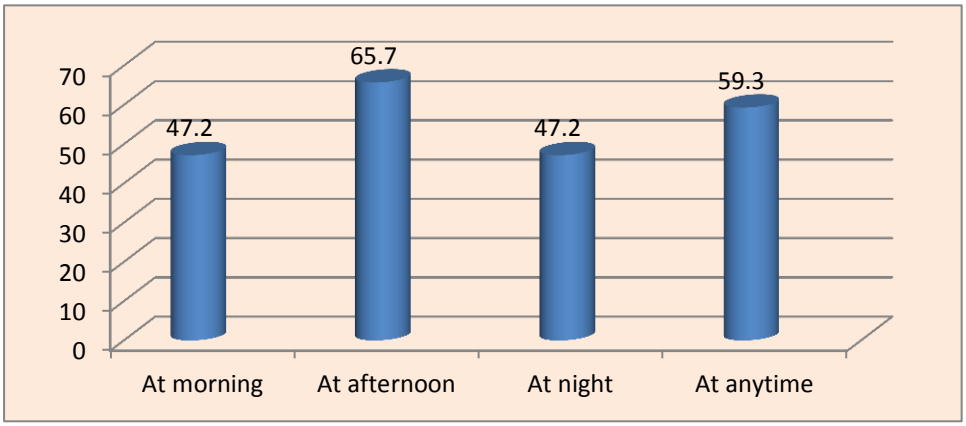


Figure (2): Percentage distribution of studied students regarding frequency of exposure to bullying (n=107).



***The results not mutually exclusive.**

Figure (3): Percentage distribution of studied students regarding time of exposure to bullying (n=107).

Table (3): Statistically difference of studied students regarding methods of dealing with bullying pre and post nursing intervention (n=107).

Methods of dealing with bullying	Pre intervention		Post intervention		X^2	P-value
	No.	%	No.	%		
Responded to the bully with hardly words	45	42.1	84	78.5	29.6	0.000*
Requested assistance from family or friends	58	54.2	74	69.2	5.06	0.024
Escaped from the bully	59	55.1	57	53.3	0.075	0.78
Did not do anything	42	39.3	29	27.1	3.56	0.05
Confusion and inability to act	66	61.7	44	41.1	9.05	0.003
Asked for help from responsible person	72	67.3	97	90.7	17.5	0.000*
Leave the place	77	72.0	101	94.4	19.2	0.000*
Smile to the bully	16	15.0	11	10.2	1.06	0.303
View to the bully firm look	69	64.5	89	83.2	9.67	0.002
Used self-defense tools such as using a pin or any machine brushes or spray powder of spices	57	53.3	69	64.5	2.77	0.09
Asked help from police person	52	48.6	82	76.6	17.9	0.000*

***Statistically significant difference (P<0.05).** ****High statistically significant difference (P<0.001)**.

Table (4): Statistically difference of studied students regarding feelings when exposed to bullying pre and post nursing intervention (n=107).

Feelings when exposed to bullying	Pre intervention		Post intervention		X^2	P-value
	No.	%	No.	%		
Disturbance (headache, insomnia and bad dreams)	66	61.7	23	21.5	35.5	0.000*
Fear and terror	45	42.4	27	25.2	6.78	0.009
Symptoms of depression and anxiety	50	46.7	24	22.4	13.9	0.000*
Loss of self-esteem and assertiveness	58	54.2	30	28.0	15.1	0.000*
Not feel love and happiness	50	46.7	13	12.1	30.3	0.000*
Feeling of guilt	60	56.1	24	22.4	25.3	0.000*
Anger and frustration	58	54.2	32	29.9	12.9	0.000*
Desirable feeling	65	60.7	25	23.4	30.6	0.000*
Ignoring it	64	59.8	52	48.6	2.71	0.100

***Statistically significant difference (P<0.05).** ****High statistically significant difference (P<0.001).**

Table (5): Statistically difference of studied students regarding their knowledge about bullying pre and post nursing intervention (n=107).

Knowledge about bullying	Pre intervention						Post intervention						X^2	P-value
	Complete correct answer		Incomplete correct answer		Don't know		Complete correct answer		Incomplete correct answer		Don't know			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Meaning	27	25.2	72	67.3	8	7.5	80	74.8	24	22.4	3	2.8	52.5	0.000*
Forms	13	2.1	54	50.5	40	37.4	75	70.1	23	21.5	9	8.4	75.7	0.000*
Causes	31	29.0	35	32.7	41	38.3	81	75.7	23	21.5	3	2.8	57.6	0.000*
Types	18	16.8	35	32.7	54	50.5	84	78.5	14	13.1	9	8.4	83.8	0.000*
Consequences	69	64.5	18	16.8	20	18.7	91	85	9	8.4	7	6.5	12.2	0.02
Measures of dealing	19	17.8	76	71.0	12	11.2	94	87.9	9	8.4	4	3.7	106.5	0.000*

***Statistically significant difference (P<0.05).** ****High statistically significant difference (P<0.001).**

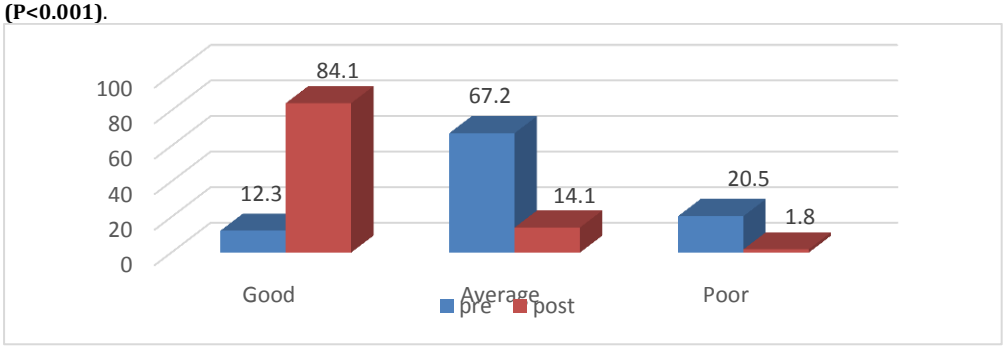


Figure (4): Percentage distribution of studied students' regarding their total knowledge score pre and post nursing intervention (n=107).

Table (6): Statistically difference of studied students' self-esteem pre and post nursing intervention (n=107).

Self esteem	Pre intervention						Post intervention						X^2	P-value
	Agree		Neutral		Disagree		Agree		Neutral		Disagree			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Feeling of parity value with others.	21	19.6	53	49.5	33	30.8	101	94.4	3	2.8	3	2.8	139.5	0.000*
Feeling of have a number of positive traits.	37	34.6	55	51.4	15	14.0	95	88.8	9	8.4	3	2.8	79.13	0.000*
Feeling of acting a way that is typical of mostpeople.	46	43.0	46	43.0	15	14.0	97	90.7	7	6.5	3	2.8	54.8	0.000*
adopting an optimistic outlook on oneself.	37	34.6	40	37.4	30	28.0	95	88.8	7	6.5	5	4.7	95.4	0.000*
Generally feeling satisfied with self.	31	29.0	49	45.8	27	25.2	100	93.5	3	2.8	4	3.7	94.1	0.000*
Wishing one had more esteem for self.	30	28.0	43	40.2	34	31.8	69	64.5	28	26.2	10	9.3	38.9	0.000*
Generally feeling like a failure.	15	14.0	69	64.5	23	21.5	4	3.7	9	8.4	94	87.9	116.7	0.000*
Feeling of not have any thing for which to be proud.	15	14.0	86	80.4	6	5.6	0	0.0	17	15.9	90	84.1	105.7	0.000*
Certainly, feeling useless at times.	43	40.2	56	52.3	8	7.3	1	0.9	20	18.7	86	80.4	36.8	0.000*
There are times feeling of un benefit.	45	42.1	43	40.2	19	17.8	3	2.8	17	15.9	87	81.3	36.2	0.000*

****High statistically significant difference (P<0.001).**

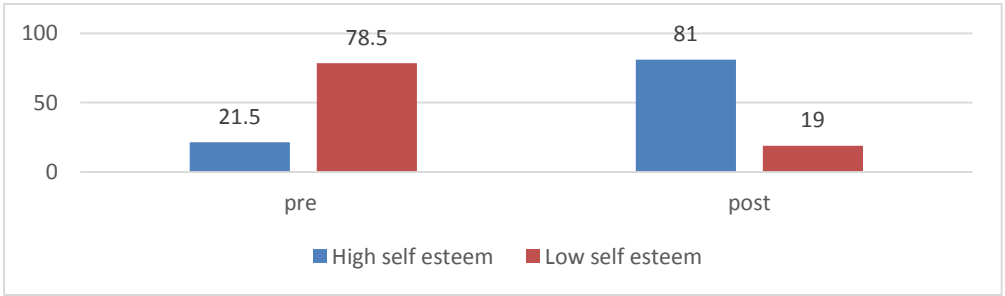


Figure (5): Percentage distribution of studied students' levels of self-esteem pre and post nursing intervention (n=107).

Table (7): Statistically difference of studied students regarding opinion about deaf community pre and post nursing intervention (n=107).

Opinion about deaf community	Pre intervention						Post intervention						X^2	P-value
	Agree		Neutral		Disagree		Agree		Neutral		Disagree			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Find it pleasant to be a member of the deaf community	56	52.3	43	40.2	8	7.5	88	82.2	17	15.9	2	1.9	21.9	0.000*
Think that, generally speaking, I have more in common with members of the deaf community than with any other groups.	54	50.5	42	39.3	11	10.3	83	77.6	19	17.8	5	4.7	17.06	0.000*
Would rather belong to the hearing world than the deaf community.	48	44.9	45	42.1	14	13.1	81	75.7	16	15.0	10	9.3	22.8	0.000*
Value my friendships with other deaf people.	49	45.8	46	43.0	12	11.2	81	75.7	18	17.8	8	7.5	20.9	0.000*
Consider myself to be an integral part of the deaf community.	34	31.8	64	59.8	9	8.4	77	72.0	24	22.4	6	5.6	35.4	0.000*
Think that the deaf community is very similar to one another.	46	43.0	50	46.7	11	10.3	82	76.6	19	17.8	6	5.6	25.5	0.000*

****High statistically significant difference (P<0.001).**

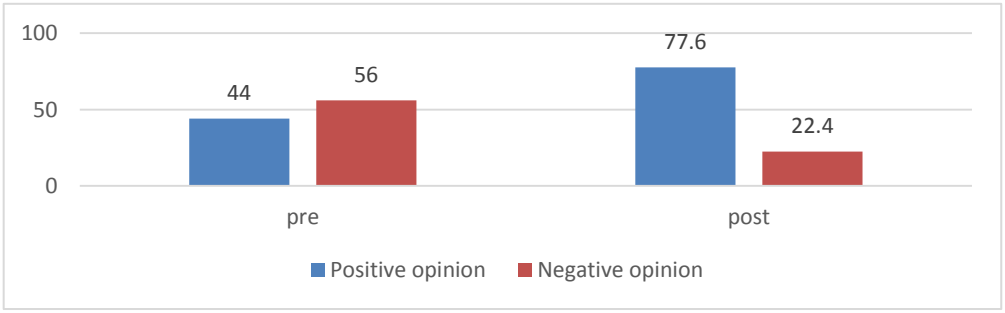


Figure (6): Percentage distribution of studied students' levels of opinion about deaf community pre and post nursing intervention (n=107).

Table (8): Statistically difference of studied students regarding bullying pre and post nursing intervention (n=107).

Bullying scale	Pre intervention						Post intervention						X^2	P-value
	Always		Sometimes		Never		Always		Sometimes		Never			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Children deliberately try to make me feel horrible.	79	73.8	17	15.9	11	10.3	30	28.0	19	17.8	58	54.2	54.1	0.000*
Some of the students at my school are cruel to me.	65	60.7	31	29.0	11	10.3	31	29.0	30	28.0	46	43.0	33.5	0.000*
Children at my school make fun of me to make me feel bad	86	80.4	14	13.1	7	6.5	40	37.4	30	28.0	37	34.6	43.0	0.000*
Children try to influence others against me at my school.	90	84.1	14	13.1	3	2.8	44	41.1	29	27.1	34	3.8	46.9	0.000*
have been intentionally harmed by another pupil.	57	53.3	34	31.8	16	15.0	37	34.6	20	18.7	50	46.7	7.74	0.21
Children have attempted to disturb me.	65	60.7	22	20.6	20	18.7	37	34.6	33	30.8	37	34.6	14.9	0.001
Get abused at school	82	76.6	17	15.9	8	7.5	30	28.0	38	35.5	39	36.4	52.6	0.000*
I've had items intentionally removed from me or damaged by other students.	47	43.9	23	21.5	37	34.6	24	22.4	27	25.2	56	52.3	11.6	0.003
have received a rude or insulting threat from another student	64	59.8	30	28.0	13	12.1	37	34.6	24	22.4	46	43.0	13.8	0.001
There are times that I do not want to go to school because I am being bullied	43	40.2	40	37.4	24	22.4	26	24.3	34	31.8	47	43.9	12.1	0.002
Children at my school make offensive jokes or tease me in a way that bothers me	42	39.3	41	38.3	24	22.4	32	29.9	34	31.8	41	38.3	6.45	0.040
Wish I could transfer to another school because I am being bullied	62	57.9	32	29.9	13	12.1	38	35.5	26	24.3	43	40.2	22.4	0.000*
concerned about bullying so much that cannot concentrate at class	48	44.9	35	32.7	24	22.4	23	21.5	36	33.6	48	44.9	16.8	0.000*
Kids at school speak behind my back, disclose my secrets, or spread false information about me	39	36.4	36	33.6	32	29.9	17	15.9	36	33.6	54	50.5	14.2	0.001
Extremely distressing recollections of bullying	69	64.5	28	26.2	10	9.3	42	39.3	23	21.5	42	39.3	26.7	0.000*
Have lied to be sick so avoid going to school because I am being bullied	52	48.6	40	37.4	15	14.0	27	25.5	20	18.7	60	56.1	41.5	0.000*
children at my school purposively ignore me on purpose	79	73.3	17	15.9	11	10.3	38	35.5	18	16.8	51	47.7	40.2	000*
Children online harass me with cruel or abusive texts, comments, or images.	62	57.9	19	17.8	26	24.3	38	35.5	23	21.5	46	43.0	11.6	0.003
I am annoyed when children at my school tease me	77	72.0	13	12.1	17	15.9	43	40.2	16	15.0	48	40.9	24.7	0.000*
children avoid me or treat me rudely because I am different	55	51.4	23	21.5	29	27.1	31	29.0	24	22.4	52	48.6	13.2	0.001

****High statistically significant difference (P<0.001).**

Table (9): Correlation between studied students' knowledge and self-esteem pre and post nursing intervention (n=107).

	Total knowledge			
	Pre intervention		Post intervention	
Self-esteem	R	P- value	R	P-value
	0.120	0.02*	0.443	0.000*

***Statistically significant difference (P<0.05).**

Table (10): Correlation between studied students' self-esteem and bullying pre and post nursing intervention (n=107).

	Self-esteem			
	Pre intervention		Post intervention	
Bullying	R	P- value	R	P- value
	0.091	0.03*	0.498	0.000*

***Statistically significant difference (P<0.05).**

Discussion

Due to the dearth of studies on bullying and the methodological flaws in those studies, the review of the present literature on bullying for hearing impaired adolescent students cannot give us conclusive data concerning those difficulties. Deafness is characterized by the inability to speak. Deaf mutes are a distinct population with a serious disability. Technology advancements have altered how deaf mutes are evaluated and treated, but they have not yet reached rural areas or people who belong to lower socioeconomic strata. With the National Programme for Prevention and Control of Hearing Impairment and Deafness, coordinated efforts to evaluate these issues are intensifying in Egypt **(Woolf, 2019).**

Bullying is defined as systematic and recurring power abuse, unpleasant conduct that occasionally takes place, and it can affect both children and adolescents. Bullying and victimisation among adolescents are common occurrences and can take many different forms. Bullying is still a serious issue in modern society. Bullying happens from the preschool grades up through college. Bullying victims may feel alone, find it difficult to adjust, uneasy, have low self-esteem, experience despair, or even worse, commit suicide **(WHO, 2020).**

Concerning demographic characteristics of hearing impairment adolescent students table 1. The finding of the present study showed that, proximally one third of studied students aged from 14>16 years old, with Mean ±SD (15.12±2.08). This result supported by **Rosa and Angulo, (2019)** who studied "Attitude of children with hearing loss towards public inclusive education" Canary Islands. Spain, and found that, more than one third of studied students aged 35% from 14>16 years old or secondary education. This may be because children can benefit most from rehabilitation if it is started when hearing loss is first detected, which is between 0 and 2 years of age. On the basis of societal norms of ignoring

delayed speech, a lack of social awareness, and in part due to the absence of any active health surveillance in this area, a delayed diagnosis of hearing loss can be explained. It is important to emphasise the multi-step hearing assessment methodology as well as parental education regarding rehabilitation facilities and service accessibility.

Concerning demographic characteristics of hearing impairment adolescent students table 1. The finding of the present study showed that, more than two thirds of studied students were male. This result supported by **Pawde, (2017)** who studied " A cross sectional study of clinical profile of deaf mute children at tertiary care center " Akola, Maharashtra, India, and found that, There were 70% males compared to 30% females. Male: female ratio was 2.33: 1. This may be because males are more likely to be deaf than females, which may be a result of heredity or discriminatory treatment of female children. Some families are still more worried about raising male children. The male youngster expresses genes in a dominant, recessive, and sex-related manner. Students' self-reported victimization decreased with age, girls were less likely to bully than boys, and bullies were no more likely than others to lack social skills and have low self-esteem.

Concerning demographic characteristics of hearing impairment adolescent students table 1. The finding of the present study showed that, more than half of studied students with insufficient family monthly income. This result supported by **Tom Humphries et al., (2019**) who studied " Support for parents of deaf children: Common questions and informed, evidence-based answers. Several studies from Europe and the US have shown that the relationship between socioeconomic status and health follows a common pattern, with people in the lower socioeconomic status having a poorer state of health, according to researchers from the Department of Communication and Education Studies at the University of California at San Diego in La Jolla, California. The association between socioeconomic status and health seen in studies from multiple countries demonstrates that this association is true despite differences in cultural backgrounds or economic growth. Socioeconomic status is established by similar results obtained in other countries that demonstrate this association is true.

Concerning demographic characteristics of hearing impairment adolescent udents table 1. The finding of the present study showed that less of half of studied students their father and mother have basic education respectively, This result supported by **Pawde, (2017)** who studied " A cross sectional study of clinical profile of deaf mute children at tertiary care center " Akola, Maharashtra, India, and found that, Majority of children were from poor uneducated family involved in manual occupation.

The result of the present study revealed that, the most common forms of bullying in which studied students were exposed to it were more than three quarters of them that, the classmates or teacher ignored student or turned away from colleagues while the student were studying, and the student have seen others being assaulted at the school location, while the lowest form more than half of them

were the classmates or teacher have made statements that are insulting or offensive to student because of inability to listen well. (table 2). Also, the previous findings agreed with **Shahid, (2017)** who studied "Adolescents with deafness: a review of self-esteem and its components in Iranian. And found that, bullying in which their participants students were exposed to it were 80% that the classmates or teacher ignored their student or turned away from colleagues while their student were studying, and seen others being assaulted at the school location, while the lowest form 60%were the classmates or teacher have made statements that are insulting or offensive to their participants student because of inability to listen well. While, this results disagreed with Based on research conducted by **Yoselisa et al (2011)** who studied " Hubungan Kecerdasan Emosional dengan Perilaku Bullying". Skripsi Universitas Negeri Padang. They discovered that bullying occurred most frequently in classrooms when teachers are not present (45.1%), followed by field schools (24.2%) and cafeterias (16.1%). Instances of waiting for public transportation or school (8.1%) and school hallways (6.5%) still proved the incident happened.

Furthermore, these results support by **Modecki, et al., (2014)**. Who studied " Bullying prevalence across contexts: A meta-analysis measuring cyber and traditional bullying. Journal of Adolescent Health, discovered that, on average, 35% of students engage in traditional forms of bullying and 15% engage in cyberbullying, according to research based on 80 foreign studies. Long-term and short-term effects of persistent bullying on children's wellbeing have been well-documented. This can be the result of geographic and cultural differences.

The result of the present study revealed that; the most common places of bullying among studied students less than three quarters via internet, followed by in street. While the lowest common places were more than one third at home within the family and less than half of in transportation, (figure 1). These findings agreed with **Aulia, (2016)** who studied "Bullying experience in school. Schoulid: Indonesian, and revealed that the majority of kids experience bullying at school in a variety of ways, including physical, verbal, and relational abuse from peers and street harassment. Students made about 75 percent of the participants. It's possible that this is the fault of teenagers who don't "fit in." For instance, peer victimisation or bullying affects Deaf or Hard of Hearing teens twice as frequently as it does the general population, and rates increase with ongoing or obvious disorders.

The result of the present study revealed that there was highly significant difference between studied students pre and post nursing intervention regarding methods of dealing with bullying. The most common reaction in pre intervention that less than three quarters of studied students leave the place compared by majority of them post intervention, and two thirds of studied students view to the bully firm look in pre intervention compared by most of them post intervention, (table 3). This finding agreed with **Andrea and Warner-CZYZ (2018)** who studied "Peers victimization of children with hearing loss", discovered that there were very noticeable differences in the participant students' pre- and post-nursing intervention bullying management strategies. Pre-intervention, more than two-thirds of

the study participants leave the area, whereas following the intervention, three-quarters of them do. In order to improve the quality of life for teenagers with hearing loss, greater awareness and frequent screening will promote the identification of risk and protective factors for bullying or victimisation. Parents and medical professionals should pay attention to this nurse intervention for ways to deal with bullying of teenagers who are deaf or hard of hearing.

The result of the present study revealed that, there was highly significant difference between pre and post intervention regarding feelings when studied students exposed to bullying. The most common feelings in pre intervention were desirable feeling and disturbance such as headache, insomnia and bad dreams in less than two thirds compared by less than one forth post intervention, while anger and frustration more than half of studied students compared by less than one third post intervention (table 4).The previous findings were in the same line with **Wolke et al., (2014)** who studied " Bullying in elementary school and psychotic experiences at 18 years: a longitudinal, population-based cohort study. Psychological Medicine, peer's victimization of children with hearing loss", and researchers discovered a highly significant change in participant pupils' sentiments following exposure to bullying between pre- and post-intervention. The most common kind of bullying is physical, followed by verbal forms of insult, derision of the friends, and calling a friend by a particular name or title. Continuous bullying can have psychological impacts in addition to the physical ones, including feelings of loneliness, headaches, sleeplessness, bad nightmares, problems adjusting, low self-esteem, and worse situations that can result in depression and suicide. This may be because future study has to focus on exploring the experiences of bullying on both victims and perpetrators through interviews and psychological testing. Finding effective anti-bullying therapies that are suitable for their age and stage of development is one of the difficulties for additional research.

The result of the present study revealed that, less than three quarters of studied students sometimes exposed to bullying. While one fourth of the studied students exposed to bullying rarely and more than two thirds of studied students exposed to bullying at afternoon. While more than half of them exposed to bullying at any time (figure 2, 3). These findings agreed with **Adib-Hajbaghery and Rezaei-Shahsavarloo(2015)** who studied "Nursing students knowledge of and performance in communicating with patients with hearing impairments. Japan Journals, and founded that, 70.% of studied sample sometimes exposed to bullying. 30% of the studied students exposed to bullying rarely and more than 31% of studied sample exposed to bullying at afternoon. While 59% of them exposed to bullying at any time. Also, the previous findings supported by the **Pigozi and Bartoli (2015)** who studied" School nurses' experiences in dealing with bullying situations among students. East Sussex in the South of England. and stated that, one such study carried out in the United States assessed the perceptions of elementary SNs (n ¼ 404) about bullying in the school setting, related to adolescent dating violence, carried out with 404 SNs, showed that participants lack of time and training of the

participants to be able to take action and deal with this type of violence at school as a real obstacle to intervening successfully.

The result of the present study revealed that, there were high statistically significant differences between pre and post intervention regarding studied students' knowledge about bullying. Forms of bullying 2.1% of studied students had complete correct answer pre intervention compared to less than three quarters of them post intervention; while less than one fourth of them had complete correct answer regarding measures of dealing with bullying pre intervention compared to most of them post intervention (table 5). This may be because key topics like bullying are discussed with parents, educators, and students. They can also promote the use of various activities like reading, theatre, debates, and instructional audiovisual resources regarding violence and bullying at school and in collages. Additionally, they could assist the students once the bullying has occurred or is still occurring by encouraging restorative strategies, such as groups, in order to mend the healthy relationship amongst peers in addition to the communication they already have with the students. Giving nurses ample time to listen and plan their reaction to this problem is equally essential; otherwise, the time invested on bullying training would be for naught. otherwise, any time spent on bullying training would be in vain. Consequently, they must be supported by a large enough appropriate staff numbers to be able to offer proper and effective mental health care to the students at school.

Additionally, the deaf community is better able to comprehend the reasons behind deaf minority kids' perceived lower self-esteem. The effects of greater self-esteem on other significant outcomes, such as academic achievement, would be a key area of research. While some research claim that self-esteem and academic success are positively correlated. Some contend that the link is too flimsy and muddled to be taken as causative. Studies of underrepresented populations, such African Americans, show no link between achievement and high self-esteem. implies that obstacles to achievement, whether they be real or perceived, can still be a problem regardless of one's level of self-worth.

The result of the present study revealed that, the studied students with negative opinions about deaf community pre intervention in more than half of studied students' decreases to less than one fourth of them post intervention. While the studied students with positive opinion about deaf community pre intervention in less than half of studied students' increases to more than three quarters of them post intervention (figure 6). These findings agreed with **Mofadeke et al., (2018).** Who studied "Quality of life of deaf and hard of hearing students in Ibadan metropolis, Nigeria, and founded that, the percentage of their participating students who had negative attitudes of the deaf population before the intervention fell from 50% to 14% after the intervention. While just 50% of their participant pupils had a favourable attitude of the deaf community before intervention, that number rose to 75% after intervention. Along with the Deaf community, the special school seems to shield against stigma and discrimination while also encouraging social contacts between deaf and hard of hearing teenagers. This may be because there are conflicting views on

which sort of school system—the exclusion or inclusion systems—is best for a Deaf and Hard of Hearing (DHH) child's cognitive development. As part of the exclusion system, DHH students are taught in special classrooms and schools by specialists who use specialized techniques and equipment. These schools are only open to the Deaf community and offer a wide range of specialized services, including sign language instructors, counsellors, psychologists, and audiologists, but they are typically small. How can I, as a parent, go about learning sign language? This may also be because the parent must learn it. How can I expose my deaf child to the local deaf community and get to know them in order to raise their deaf children, parents will need assistance learning sign language and navigating the numerous new challenges they will encounter. comparable to other illnesses (such as autism, ADHD, learning disabilities), parents should use all available resources, including doctors, local and national deaf community centers, deaf education services, articles, and books.

The result of the present study revealed that, there were high statistical significant differences between pre and post intervention regarding studied students' opinion about deaf community. More than half of studied students agree with find it pleasant to be a member of the deaf community, compared with most of them post intervention, while about one third of them agree with considering self to be an integral part of the deaf community, compared with less than three quarters post intervention (table 7). This finding supported by Jian **Hao and Chunsha, (2019)** who studied " Positive Psychology in Research with the Deaf Community: An Idea Whose Time Has Come The Journal of Deaf Studies and Deaf Education, and found that,

The result of the present study revealed that, there were high statistically significant differences between pre and post nursing intervention regarding bullying. More than half of studied students always at school try to turn others against deaf or hard hearing students compared with less than half of them post intervention, while most of studied students at school always make fun of deaf or hard hearing students to make feel bad compared with more than one third of them post intervention, table (8). This finding agreed with **Paulina, et al., (2016)** who studied "Bullying, Understanding the social engagement of a select group pf deaf indivduals University of Santo Tomas College of Nursing, Esapna, Manila, Philippines. And found that, statistical significant differences between pre and post nursing intervention regarding bullying. This might be due to differentiation in place and culture.

The result of the present study revealed that, there was statistically significant positive correlation between total knowledge and total self-esteem pre and post intervention ($P<0.05$) of studied students Table (9). This means that when knowledge increases self- esteem increase. In deaf people, self-concept and self-esteem (confidence in their abilities and sense of personal value) are initially shaped in the context of families and follow the same pattern. This finding supported by **Demehri et al., (2015)** who studied " study of relationship between early maladaptive schemas self-concept and behavioral problems among deaf adolescences and adolescences with visual impairment in Yazd city and declared that deaf

persons with higher self-esteem have higher goals for themselves in life and are more independent, imaginative, and productive than deaf people with lower self-esteem. They are less susceptible to stress, worry, and helplessness; they are also less sensitive to criticism and failure. They place a focus on their strengths and are more prone to taking on challenges. They therefore have a positive outlook on themselves and their capabilities, which keeps them from withdrawing from society and enables them to succeed better in their academic and professional endeavors. An external motivation transforms into an internal one, increasing their sense of self-worth and self-reliance. This is extremely important for someone who is deaf since it ensures independence, emotional stability, and growth in all areas of their life.

Concerning correlation between the studied students' self-esteem and bullying pre and post nursing intervention, there were statistically significant positive correlation between total self-esteem and total bullying pre and post intervention ($P<0.05$) (table 10). This finding agreed with **Nare,et al., (2017)** who studied "Adolescents' with deafness, a review of self-sesteem and its components in Iran", revealed that, before and after the intervention, there was a statistically significant positive link between the participants' overall self-esteem and the overall bullying. This may be because examining social, temperamental, and self-esteem components simultaneously with demographic traits and communication outcomes will enable doctors to spot hearing-impaired children who are at risk for having poor self-esteem. When children with considerable hearing loss are identified, referrals to mental health providers can be made to improve their quality of life beyond communication abilities.

Conclusion

According to the findings of this study, the nursing intervention significantly improved the awareness of bullying among adolescent students with hearing impairment. The difference between the post-total knowledge score and the pre-total knowledge score was statistically very significant. The nursing intervention also made a significant difference in the pupils with hearing impairments' self-esteem. In comparison to the pre total self-esteem score, there was a highly statistically significant improvement. In terms of the study students' perceptions of the deaf community, there were also substantial statistically high variations between pre- and post-intervention. Additionally, there was an association between the entire knowledge of the students under study and their overall self-esteem following nursing intervention that was statistically significant $p<0.05$. There was statistically significant positive correlation between studied students' total self-esteem and their total bullying pre & post nursing intervention $p<0.05$.

Recommendations

1. More research ought to be done to determine what contributes to bullying's rise.
2. This nursing intervention should be used in many different situations.
3- In order to support young people with hearing impairments in feeling good about themselves and leading fulfilling lives, more research is

required to better understand the nature of their unique requirements.

Conflict of interest:

There is no conflict of interest and no fund from any institution.

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