

Effect of Nursing Intervention for Hearing Impairment Adolescent Students Regarding Bullying

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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. While 14% 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.

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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 can take many forms, both aggressive and passive, including

purposely excluding or ignoring someone in the office or classroom. School and work environments are meant to be inclusive, so ostracizing someone from the rest of the group can have a profound effect on their happiness and self-esteem (Clason, 2020).

The prevalence of bullying rates ranges from 10% to 25% in school-aged youth and are associated with mental health problems in both the victim and the bully. Adolescents are at higher risk for social problems such as bullying, and communication impairments especially pose a risk factor. Deaf or Hard of Hearing (DHH) adolescents are feeling less socially accepted. Hearing impairment adolescents also show impairments in their emotion regulation and communication, these factors make them more vulnerable to bullying and victimization in the hearing population. World Health Organization (WHO) estimates that 32 million children in the world have disabling hearing loss. One in a 1000 kids and adolescents in European countries are deaf or have a moderate/severe hearing impairment (Broekhof et al., 2018; WHO, 2020).

Exposure to bullying is a threatening experience, and causes victims to feel unsafe. Consequently, victims feel primarily anxious about being bullied again and about what the bullies may say or do the next time. However, many victims also have higher levels of anger because they consider the bullying to be unfair. Some studies have shown that such an overtly reactive response style can be rewarding for the bully, thus encouraging their bullying behaviors. This means that adolescents with higher emotional reactivity face higher risk for victimization (Kaynak, 2015).

Community health nurse plays an important role for helping hearing impairment adolescent students in reminding what a good friend acts like. Even a friend may tease about hearing loss or hearing aids. It is important that a student understands the difference between a friendly voice and an unfriendly voice. Also even if it is “friendly” teasing, if it makes the student uncomfortable or they just don’t like it they need to have the words to say, “I don’t like it when tease me about hearing loss, please stop doing it”. The student should be given a chance to deal with bullies on their own first. All students, with hearing loss or not, should also have a “safe” adult, a parent, teacher, aunt, uncle, grandparent, or anyone they feel that they can go to with any problem, no matter what (Biasotti, 2020).

Community health nurse fosters a healthier sense of self-esteem and self-assertiveness of students through accept differences in other people and accept self to be a deaf or hearing loss do not shame and blame others. Also the CHN should keep the discussion of bullying behavior alive and ongoing, organize a social skills group to help students develop social competencies in a supportive environment. CHN helps students to identify and report bullying, say “no” to stop the situation, and request assistance from a trusted source, by giving the students a safe and open communication pathway for reporting incidents of bullying (Warner et al., 2018).

Significance of the study:

In Egypt 16.02% suffering from hearing loss that is higher than many other countries, both developed countries such as the United States 9.6%

and developing countries such as Indonesia 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, World Health Organization, 2020).

Adolescents with hearing loss endured significantly higher incidence of bullying versus the general population (50.0% vs. 28.0%), particularly for exclusion (26.3% vs. 4.7%) and coercion (17.5% vs. 3.6%). Children younger than 12 years with hearing loss reported lower rates of bullying (38.7%) than adolescents with hearing loss, but rates did not differ significantly (Warner et al., 2018).

Aim of the study:

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

Hypothesis:

To fulfill the aim of this study the following research hypotheses formulated:

1-The nursing intervention will increase hearing impairment adolescent students' knowledge regarding bullying.

2-The nursing intervention will increase hearing impairment adolescent students' opinions about deaf community.

3-The nursing intervention will increase hearing impairment adolescent students' self-esteem by the end of the intervention.

Subjects and methods

Research design:

A quasi experimental research design was utilized.

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 by researchers to collect data:

Tool I- A structured interviewing questionnaire, developed by the researchers based on literature review. And written in simple clear Arabic language consisted of **two parts as the following:**

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

Part two: It was developed to assess hearing impairment adolescent students' previous exposure to bullying. The questions covered areas such as, (forms, places, frequency, common time, actual methods of dealing, and effects on them). These areas included 38 items.

Tool II- knowledge about bullying, it was designed 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: All knowledge variables were scored according to the items included in each question. A question which implies a 4 items answer would have a score of 4 and another that implies 5 items answer would have a score of 5 and so on and each item has answer with "unknown" that implies 0. Total knowledge score presented in three categories as, Good >75%, average 50 – 75%, and poor <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 summing the score of items, which ranged from 0-12 and presented as; never 0-4, sometimes 5-8, and always 9-12.

Tool IV- Rosenberg's global self-esteem scale: (The scale was adopted from (Rosenberg, 1965), to measure the global negative and positive self-attitudes. It consists of 10 statements (5 statement are phrased positively and 5 statements are phrased negatively).

Scoring system: Statements of self-esteem were rated on 3 point scale, which are; (2) for agree response, while (1) for neutral response, and (0) for disagree response. Scoring for negative answers was reversed, i.e., (2) for disagree response, while (1) for neutral response, and (0) for agree response. The total score of self-esteem was calculated by summation of the scores of its statements. Student's total self-esteem score was classified as the following: Total scores of self-esteem = 20 point =100%. High when total score was 75% to 100% (> 15 point). Low when the total score was less than 75% (<15 point).

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.

Validity and reliability of tools:

Validity was checked before the pilot study and the actual data collection, through distribution of tools to five experts in the field of the study, with a covering letter and explanation sheet that explains study purpose and other related information to ensure appropriateness, relevancy, clarity and completeness of tools. Modifications and changes were done as required. Reliability was measured by using cronbach, alpha test which revealed that each of the four tools consisted of relatively homogenous items as

indicated high reliability of each tool. The internal consistency of knowledge was 0.72, total self-esteem was 0.86, total opinion 0.67, and 0.90 for total bullying.

Pilot Study:

A pilot study was carried out on 10% of the total study sample to evaluate the clarity and practicability of the tools and estimate time required to fill the questionnaires. There were no unclear questions, or statements. Pilot subjects were later included in the study as no further modifications were required at this stage of tools development.

Ethical Considerations:

The purpose of the study was explained to deaf or hard hearing adolescent students, informed consent was obtained from them to participate in the study. They were given an opportunity to withdraw from the study, they were assured that anonymity and confidentiality of information was protected. Ethics, values, culture, and beliefs were respected.

Field work:

- Official letter from Faculty of Nursing - Benha University to the administrative director of Al-Amal School for Mute and Deafness students at Benha City.

- Permission from administration was obtained to interviewing Each hearing impairment adolescent students was interviewed after illustrating the aim of the study to obtain his / her informed consent to participate in the study.

- Nursing intervention were constructed by the researchers after reviewing of related literature, then revised and modified according to the expertise comments, it was written in clear, Arabic language.

- A pilot study was carried out to test clarity and simplicity of questions.

- Data collection was carried out in the period from beginning of September 2019 to the end of March 2020, three days weekly for three hours/daily.

Intervention construction:

The current study was carried out on four phases, assessment phase, development phase, implementation phase and evaluation phase:

1. Intervention assessment phase: A pre assessment was done, using the previous interviewing questionnaires. This phase aimed at collecting data from hearing impairment adolescent students.

2. Intervention development phase:

- The nursing intervention was developed based on the actual results that were obtained from pre-intervention assessment, literature review, researchers experience and opinions of nursing expertise.

General objective of the nursing intervention was to improve knowledge, opinion, and self-esteem of hearing impairment adolescent students.

Intervention contents: The content of the nursing intervention was designed to improve knowledge, and self-esteem of hearing impairment adolescent students. These contents were:

- **Knowledge about bullying**

- Meaning.
- forms
- Causes.
- Types.
- Consequences.
- measures of dealing.

- **Intervention to improve hearing impairment adolescent students' self-esteem.**

- Learn the students the best methods to address and face this phenomenon.

- Demonstrate physical techniques that can help for protection from bullying.

- Train hearing impairment adolescent students on methods of self-protection against bullying by showing videos to them.

- The students encouraged to discuss some situations exposed to bullying and how react when exposed.

- Demonstrate steps and strategies of improving self-esteem in different situations.

- Train the students how to

develop and strength their self-esteem to be able to face the phenomena of bullying by watching on videos about ways of self-esteem improvement.

- **How to share care with supported persons.**

- **How to connect community resources that provide support (medical, financial, social.... etc).**

I. Nursing intervention implementation phase:

- The nursing intervention was discussed with hearing impairment adolescent students through 5 sessions, the duration of each session were 30 minutes. The researchers meet students in their class with the assistance of the teacher for any clarification using sign language.

- The first session included an orientation about the nursing intervention and its purpose, also the study tools were filled by hearing impairment adolescent student. Student were interviewed in the first session to obtain demographic data and assess their knowledge.

- The nursing intervention was presented to hearing impairment adolescent student in the form of handouts and printed material. It included diagrams, pictures with colors for attracting.

- Each session started by a summary about what has been discussed in the previous session.

I. Nursing intervention evaluation phase:

Immediate posttest was done after nursing intervention implementation using the same data collection tools to evaluate the effectiveness of the nursing intervention.

Statistical analysis

The collected data were verified prior to computerized entry; statistical analysis was done by using the Statistical Package for Social Science (SPSS) version 20. Data were presented in tables by using mean, standard deviation, number, percentage distribution, and Chi- Square. Statistical significance was considered at: P-Value

> 0.05 insignificant-Value < 0.05 significant, P-Value < 0.001 highly

significant.

Results

Table (1) Shows that; 30.8% of studied students aged from 14>16 years old, with Mean \pm SD (15.12 \pm 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 \geq 7 family members. 57.9% of them with insufficient family monthly income.

Table (2) shows 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) reveals 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) reveals 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) shows that; there were high statistically significant differences between pre- and post-intervention regarding studied students' knowledge about bullying. Regarding forms of bullying 2.1% of studied students had complete correct answer pre intervention compared to 70.1% post intervention; while 17.8% of them had complete correct answer regarding measures of dealing with bullying pre intervention compared to 87.9% post intervention.

Figure (4) reveals that; 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.

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 doing things like most other people pre intervention compared with 90.7% post intervention, while 42.1% of them agree with there are times feeling of not benefit compared with 2.8% post intervention.

Figure (5) reveals that; 78.5% of studied students with low self-esteem pre intervention decreases to 19 % post intervention. While 21.5% of studied students with high self-esteem pre intervention increases to 81 % post 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, compared with 82.2% post intervention, while 31.8% of them agree with believe that they have a full-fledged member of the deaf community, compared with 72% post intervention.

Figure (6) reveals that; 56 % of

studied students with negative opinions about deaf community pre intervention decreases to 22.4% post intervention. While 44 % of studied students with positive opinion about deaf community pre intervention increases to 77.6% post intervention.

Table (8) shows that; there were high statistically significant differences between pre- and post- intervention regarding bullying. 52.3% of studied students at school always try to turn others against hearing impairment students compared with 41.4% post intervention, while 80.4% of studied students at school always make fun of hearing impairment students to make feel bad compared with 37.4% post intervention.

Table (9) shows that; there was statistically significant positive correlation between total knowledge and total self-esteem pre- and post-intervention ($P<0.05$) of studied students. This means that when knowledge increases self- esteem increase.

Table (10) shows that; there was statistically significant positive correlation between total self-esteem and total bullying pre- and post-intervention ($P<0.05$) of studied students.

Table (1) Distribution of hearing impairment adolescent students regarding

| 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 |

their demographic characteristics (n=107).

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

| Forms of bullying | No. | % |
|---|-----|------|
| Your classmates or teacher ignored you or turned you away from colleagues while you were studying | 82 | 75.9 |
| Your classmates or teacher have made statements that are insulting or offensive to you because of your inability to listen well | 61 | 56.4 |
| Your classmates or teacher taunt you in a sharp manner, or even make you aim to drop his anger sometimes | 60 | 55.6 |
| Your 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 |

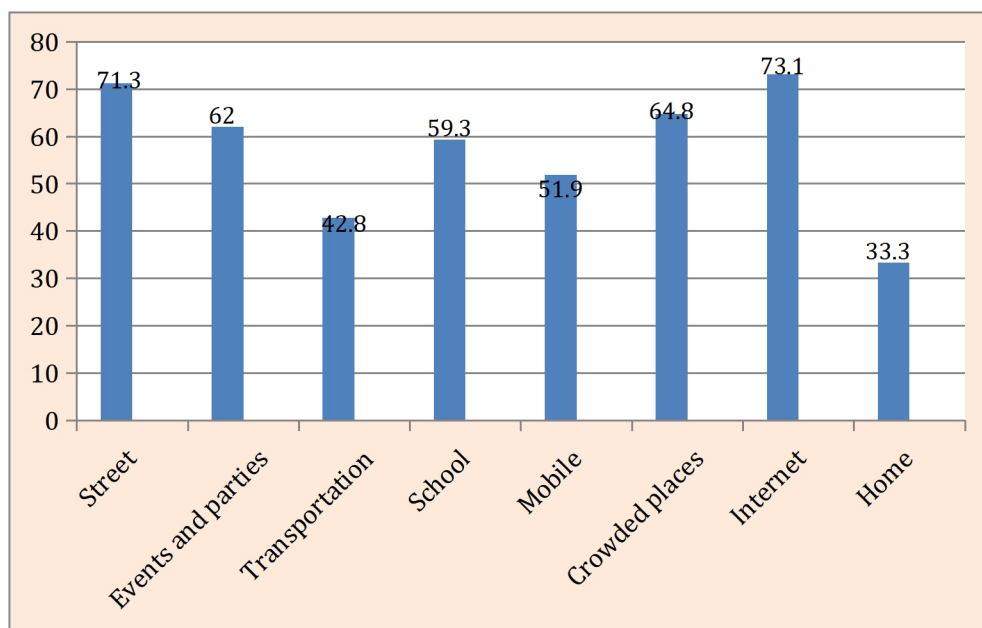


Figure (1): Percentage distribution of studied students regarding places of bullying (n=107).

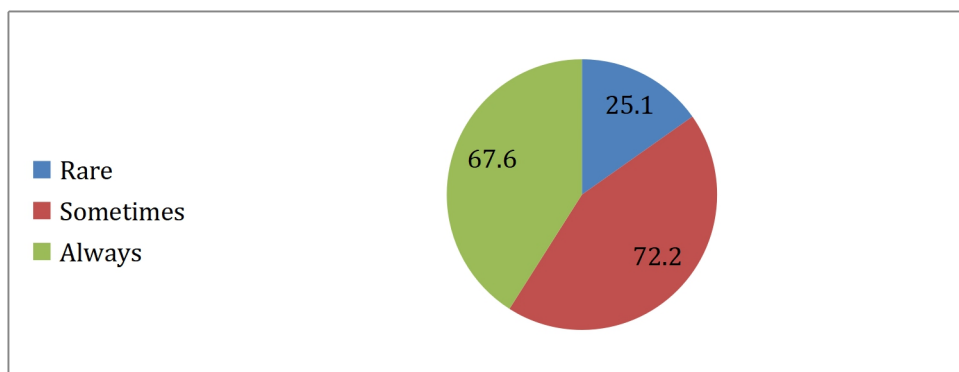
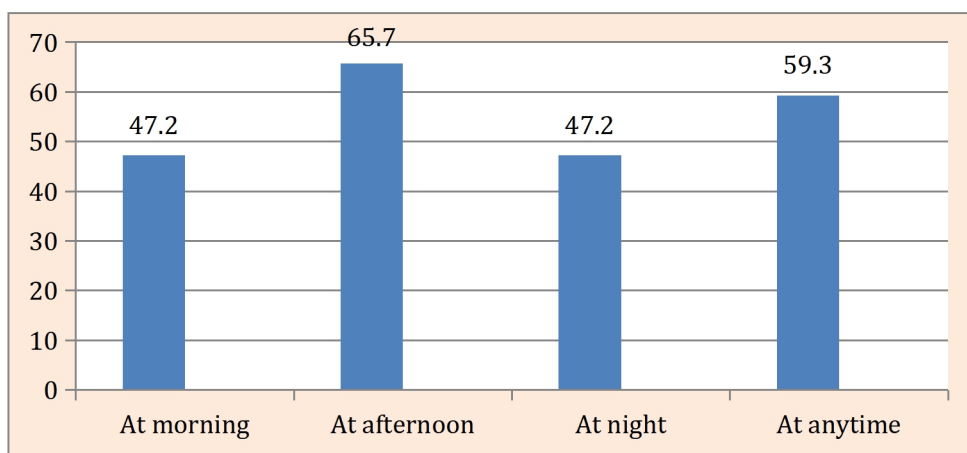


Figure (2): Percentage distribution of studied students regarding frequency of exposure to bullying (n=107).



***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).

Part II: Knowledge about bullying of the Studied Sample.

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 | | | |
| | N | % | 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* |

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

***According to hypothesis 1:** Hearing impairment adolescent students who receive the nursing intervention will have better knowledge about bullying in post-test than in pre-test (Figure 4).

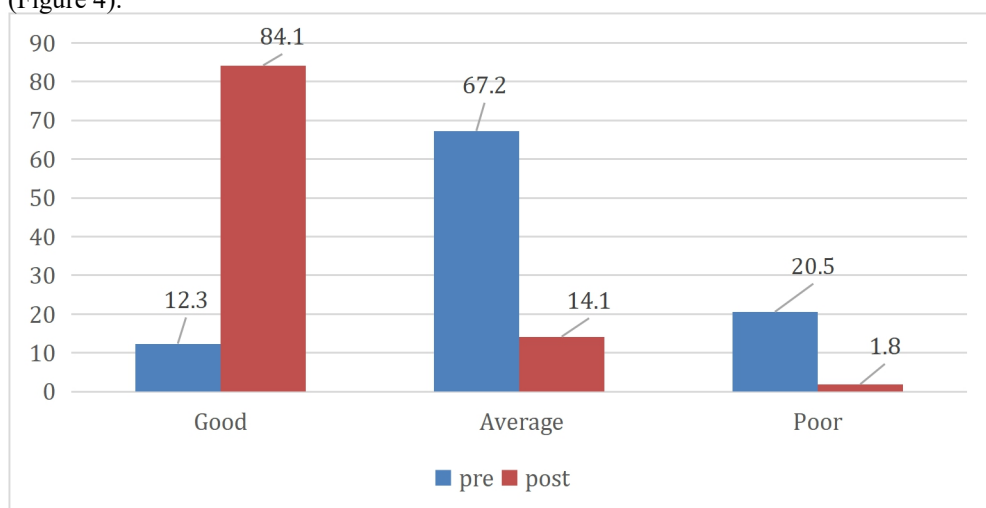


Figure (4): Percentage distribution of studied students' regarding their total knowledge score pre and post nursing intervention (n=107).

Part III: Level of self-esteem among the Studied Sample.

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

| Self esteem | Pre intervention | | | | | | Post intervention | | | | | | X2 | P-value |
|--|------------------|------|---------|------|----------|------|-------------------|------|---------|------|----------|------|-------|---------|
| | Agree | | Neutral | | Disagree | | Agree | | Neutral | | Disagree | | | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | | |
| Feeling of equal 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 good qualities | 37 | 34.6 | 55 | 51.4 | 15 | 14.0 | 95 | 88.8 | 9 | 8.4 | 3 | 2.8 | 79.13 | 0.000* |
| Feeling of doing things like most other people | 46 | 43.0 | 46 | 43.0 | 15 | 14.0 | 97 | 90.7 | 7 | 6.5 | 3 | 2.8 | 54.8 | 0.000* |
| Taking positive attitude towards self | 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 had more respect 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 tend to feel 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 much to be proud of | 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 not 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 ($P < 0.001$).**

***According to hypothesis 2:** Hearing impairment adolescent students who receive the nursing intervention will have higher self-esteem by the end of the nursing intervention (Figure 5).

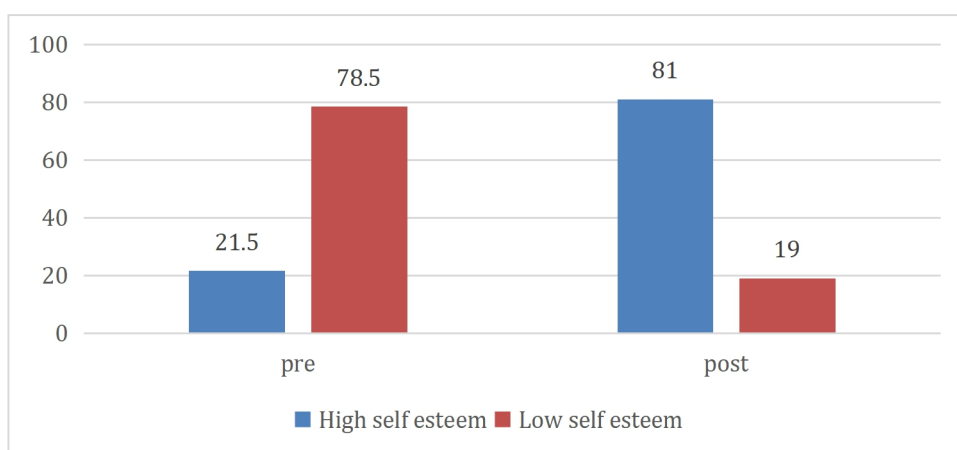


Figure (5): Percentage distribution of studied students' levels of self-esteem pre and post nursing intervention (n=107).

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. | % | | |
| I 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* |
| I believe 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* |
| I 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* |
| Relationships with other deaf people are important to me. | 49 | 45.8 | 46 | 43.0 | 12 | 11.2 | 81 | 75.7 | 18 | 17.8 | 8 | 7.5 | 20.9 | 0.000* |
| I believe that I am a full-fledged member 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* |
| I believe that members of the deaf community are a lot like 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).**

***According to hypothesis 3:** Hearing impairment adolescent students who receive the nursing intervention will have positive opinion about deaf community by the end of the nursing intervention (Figure 6).

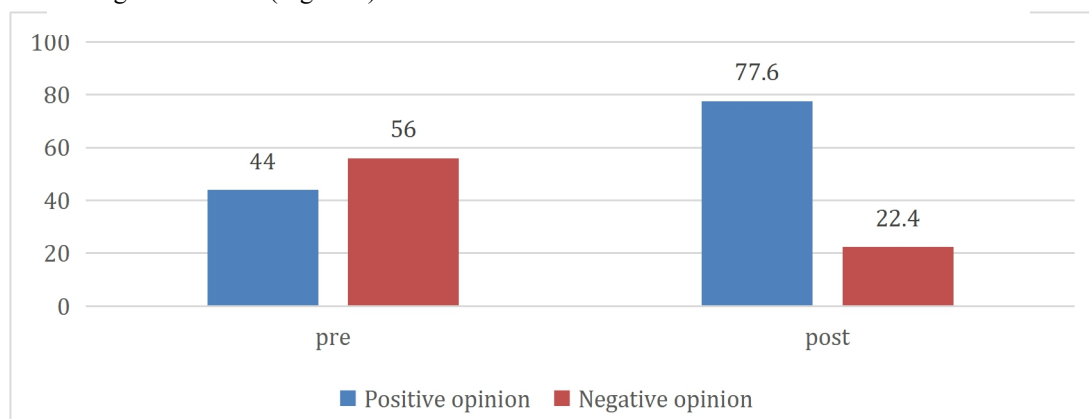
**Figure (6): Percentage distribution of studied students' levels of opinion about deaf community pre and post nursing intervention (n=107).**

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

| Bullying scale | Always | | Sometimes | | Never | | Always | | Sometimes | | Never | | | |
|---|--------|------|-----------|------|-------|------|--------|------|-----------|------|-------|------|------|--------|
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | | |
| | | | | | | | | | | | | | | |
| Kids try to make me feel bad on purpose | 79 | 73.8 | 17 | 15.9 | 11 | 10.3 | 30 | 28.0 | 19 | 17.8 | 58 | 54.2 | 54.1 | 0.000* |
| One or more kids at my school are mean to me | 65 | 60.7 | 31 | 29.0 | 11 | 10.3 | 31 | 29.0 | 30 | 28.0 | 46 | 43.0 | 33.5 | 0.000* |
| Kids 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* |
| Kids at my school try to turn others against me | 90 | 84.1 | 14 | 13.1 | 3 | 2.8 | 44 | 41.1 | 29 | 27.1 | 34 | 3.8 | 46.9 | 0.000* |
| Have been hurt by another student on purpose | 57 | 53.3 | 34 | 31.8 | 16 | 15.0 | 37 | 34.6 | 20 | 18.7 | 50 | 46.7 | 7.74 | 0.21 |
| Kids have tried to get me in trouble | 65 | 60.7 | 22 | 20.6 | 20 | 18.7 | 37 | 34.6 | 33 | 30.8 | 37 | 34.6 | 14.9 | 0.001 |
| Get bullied at school | 82 | 76.6 | 17 | 15.9 | 8 | 7.5 | 30 | 28.0 | 38 | 35.5 | 39 | 36.4 | 52.6 | 0.000* |
| Have had my stuff taken or damaged on purpose by another student | 47 | 43.9 | 23 | 21.5 | 37 | 34.6 | 24 | 22.4 | 27 | 25.2 | 56 | 52.3 | 11.6 | 0.003 |
| Have been threatened by another student in a mean or hurtful way | 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 |
| Kids at my school joke 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 go 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* |
| Worry about bullying so much that cannot pay attention at school | 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 talk behind my back, share my secrets, or spread rumors about me | 39 | 36.4 | 36 | 33.6 | 32 | 29.9 | 17 | 15.9 | 36 | 33.6 | 54 | 50.5 | 14.2 | 0.001 |
| Have had upsetting memories of being bullied | 69 | 64.5 | 28 | 26.2 | 10 | 9.3 | 42 | 39.3 | 23 | 21.5 | 42 | 39.3 | 26.7 | 0.000* |
| Have pretended to be sick so I could stay home from 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* |
| Kids at my school ignore me on purpose | 79 | 73.3 | 17 | 15.9 | 11 | 10.3 | 38 | 35.5 | 18 | 16.8 | 51 | 47.7 | 40.2 | 0.000* |
| Kids post or text mean or hurtful messages, comments, or photos about me online | 62 | 57.9 | 19 | 17.8 | 26 | 24.3 | 38 | 35.5 | 23 | 21.5 | 46 | 43.0 | 11.6 | 0.003 |
| I am bothered when kids 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* |
| Kids leave me out or ignore me 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).

| Self-esteem | Total knowledge | | | |
|-------------|------------------|----------|-------------------|----------|
| | Pre intervention | | Post intervention | |
| | 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).

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

*Statistically significant difference (P<0.05).

Discussion

The review of the current literature on bullying for hearing impairment adolescent students cannot provide us with conclusive evidence about those issues, mainly due to the limited number of studies on bullying and to their methodological shortcomings. Deaf is defined as inability to speak as a result of deafness. Deaf mutes are a separate group into themselves with a severe handicap. Advances in technology have changed the perceptive of evaluation and rehabilitation of deaf mutes however these advances do not reach the rural areas and population belonging to low socio-economic classes. Concerted efforts to assess these problems are strengthening in Egypt with the National programme for prevention and control of hearing impairment and deafness (Woolf, 2019).

Bullying is defined as the abuse of power that is systematic and repetitive, unpleasant behavior that occurs from time to time, which can occur in children and adolescent. Bullying and victimization are widespread phenomena in adolescent and can take several forms. Bullying is still a significant problem today. Bullying occurs starting from the primary level up to college. The impact of the bullying on victims can be a lonely, difficult to adjust, insecurity, low self-esteem, depression and the worst is 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 \pm SD (15.12 \pm 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 might be due to the age at detection of hearing loss is 0-2 yrs age at which if rehabilitation is done can benefit the child to the maximum. Delayed diagnosis of hearing loss can be explained on basis of community practices of neglecting delayed speech, lack of social awareness and partly due to absence of any active health surveillance in this aspect. Multistep protocol for hearing assessment and parental awareness about facilities of rehabilitation and accessibility of services should be emphasized.

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 might be due to the reason of this male preponderance in deaf might be related to genetics or biased care towards girl child. Some family still more concern about the care of male child. The male child is express or of genes in dominant, recessive as well as sex linked transmission. Male children are also more susceptible to adverse factors acting in prenatal, natal, postnatal life, though the reason for this has not been identified, Self-reported victimization of students declined with age, whether girls were less likely to be bullies than boys, and whether bullies were no more likely than others to be

low in self-esteem and lacking in social skills.

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. Education Studies and Department of Communication, University of California at San Diego, La Jolla, CA, USA and found that, Several studies from Europe and US have shown that the association between socioeconomic status and health follows a common pattern in which individuals in the lower socioeconomic status have a poorer state of health, Similar results obtained in other countries demonstrates that this association is true in spite of differences in cultural backgrounds or economic growth, the association between socioeconomic status and health seen in studies from several countries establishes socioeconomic status

Concerning demographic characteristics of hearing impairment adolescent students 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). These 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 found that, bullying occurs most in the classroom when the teacher is not there (45.1%), while in the field school (24.2%) and in the school cafeteria (16.1%). A small percentage but still showed the incident occurred is in place waiting for public transport/school (8.1%) and the corridors of the school (6.5%).

Also, 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, and found that,

research based on 80 studies conducted internationally suggests that, on average, 35% of students are involved in traditional forms of bullying and 15% in cyberbullying. The harm to the well-being of children associated with sustained bullying, both short- and long-term, has been widely documented. This might be due to difference in culture and place.

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 found that, the most common places of bullying among three quarters from their participants students via interne, and most children experience bullying at school with a variety of forms, ranging from physical, verbal and relational from peers at school and in street respectively. This might be due to adolescents who do not "fit in" due to cognitive, developmental, emotional, physical, and/or sensory differences such as Deaf or Hard Hearing adolescent experience twice the rate of peer victimization or bullying than the general population, and rates increase with chronic or observable condition.

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". and found that, there were highly significant difference between their participants students pre and post nursing intervention regarding methods of dealing with bullying. The most common reaction in pre intervention that more than two quarters of their participants students leave the place compared by three quarters of them post intervention. This might be the nursing intervention regarding methods of dealing with bullying of adolescents with deaf or hearing loss demands attention from both parents and health professionals, increased awareness and routine screening will help identify risk and protective factors for bullying or victimization, there by supporting the development of effective therapeutic intervention to minimize the quality of life of adolescents with hearing loss.

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). These 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 found that, highly significant difference between pre and post intervention regarding feelings when their participants students exposed to bullying. bullying is the most widely performed in the form of bullying is physical, and then the verbal form of insult, ridicule the friends and called a friend with the title or a specific nickname. In addition to the physical pain, suffered continuous bullying can cause psychological effects such as feelings of loneliness, headache, insomnia and bad dreams, trouble adjusting, self-esteem and wellbeing is low and worse conditions can lead to depression and suicide. This might be due to researchers' next need to consider digging deeper experiences related to bullying both on victims and perpetrators through interviews and psychological scale. One of the challenges for further research is finding effective anti-bullying interventions appropriate to their age and stage of development.

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, these 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, demonstrated 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 impediment 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 might be due to discuss important issues such as bullying with parents, schools, students; and they can also encourage the use of different activities such as literature, drama, debates, and educational audiovisual materials about violence and bullying at school and collages. Additionally, they could support the students once the bullying has happened or is happening, through a dialogue, which they already do, and by promoting restorative approaches, like groups, to repair the healthy relationship between peers. It is also necessary to give to nurses enough time to listen and organize their response to this issue; otherwise, any time spent on bullying training would be

in vain. Therefore, they need to be supported by sufficient staff numbers to be able to offer proper and effective mental health care to the students at school.

Additionally, deaf community better understand why deaf minority students appear to have lower self-esteem. Another important line of research would address the consequences of higher self-esteem for other important outcomes such as academic achievement. While some studies report a positive relationship between self-esteem and academic achievement. Others claim that the association is too weak and confounded to be interpreted as causal. Studies of minority groups such as African Americans do not indicate a positive association between self-esteem and achievement. Suggesting that other factors such as perceived or real barriers to success are a hindrance regardless of self-esteem.

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, their participants students with negative opinions about deaf community pre intervention in half of them decreases to one fourth of them post intervention. While their participants' students with positive opinion about deaf community

pre intervention in half of their participants' students increases to three quarters of them post intervention. In addition to the Deaf community available in the special school appeared to protect against stigma and discrimination, while also promoting social interactions between deaf and hard of hearing adolescents'. This might be due to there are differing opinions on which type of school system—the inclusion and the exclusion systems is more suitable for better cognitive development of a Deaf and Hard of Hearing (DHH) child. In the exclusion system, DHH students are taught in special schools and classrooms using special techniques and equipment by specialist personnel these schools cater for the Deaf community only, providing a wide range of special services such as sign language teachers, counselors, psychologists, and audiologists but they are typically small. Also, this might be due to the parent should be learn how do I, as a parent, go about learning a sign language? How do I meet the local deaf community and introduce my deaf child into it? Parents need support in learning a sign language and in dealing with many new issues they will face as they raise their deaf children. Akin to other conditions. that might place children at developmental risks (e.g., 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 I 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 believe that they have a full-fledged member 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 individuals 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 stated that, with no doubt, deaf people who have grown self-esteem choose higher goals for themselves in life and are more self-sufficient, more creative, and more productive than that of deaf people with less grown self-esteem. They experience less anxiety and stress; they are less sensitive to failure and criticism and suffer less from the feelings of helplessness. They emphasize on their strong points and are more willing to face problems. Therefore, they have a positive attitude about themselves and their abilities; this prevents them from being withdrawn from society and helps them to achieve more success in their education and career. An external motivation changes into an internal one and makes them feel more self-worth and have self-reliance, which is very crucial for a deaf person and guarantees independence, emotional stability, and growth in all aspects 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-esteem and its components in Iran. " and found that, there were statistically significant positive correlation between their participants total self-esteem and total bullying pre and post intervention. This might be due to, simultaneous examination of not only demographic

characteristics and communication outcomes, but also social, temperament, and self-esteem factors will help clinicians identify children with hearing loss at risk for low self-esteem. Such identification will help generate referrals to mental health professionals to enhance quality of life beyond communication skills in children with significant hearing loss.

Conclusion

According to results this study concluded that: the nursing intervention had a significant effect on the improvement of the hearing impairment adolescent students' knowledge about bullying. There was highly statistically significant improvement in post total knowledge score than that pre total knowledge score. Also, the nursing intervention had a significant effect on the improvement of the hearing impairment adolescent students' self-esteem. There was highly statistically significant improvement in post total self-esteem score than that pre total self-esteem score. Also, there were high statistically significant differences between pre- and post-intervention regarding studied students' opinions about deaf community. Furthermore, there was a positive statistically significant correlation between studied students' total knowledge and their total self-esteem post nursing intervention $p < 0.05$. 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- Further studies should be provided to assess factors that increase bullying.

2- This nursing intervention should be applied on a wide range.

3- Continuing research is needed to explore the nature of differential needs of hearing impairment adolescent students in the interest of helping to feel good about self and enjoy high-quality lives.

Conflict of interest:

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

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