

## Effect of audio- drama nursing intervention on bullying among adolescent girls with visual impairment

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### Abstract

**Back ground:** Bullying is commonplace among students with disabilities. Children with special needs expose to peer victimization twice to three times frequently more than the general population, and the rate of bullying increases for those with observable disabilities. Adolescent girls with visual impairment become frequently the targets of bullying. **Aim to** evaluate the effect of audio- drama nursing intervention on bullying among adolescent girls with visual impairment. **Design:** A quasi experimental design (pre/post-test) was utilized. **Setting:** Al Nour School for visual impairment children, Shebin El-kom, Menoufia, Egypt. **Sample:** A purposive sample of forty visually impaired adolescent girls. **Instruments:** Four tools were used for data collection; I: Structured interviewing questionnaire which consisted of two parts; first part to assess socio-demographic data; second part to assess previous exposure to bullying. II: Adolescent girl's knowledge about bullying III: Adolescent bullying scale: IV: Rosenberg's global self-esteem scale. **Results:** the findings of current study showed that 70% of adolescent girls had good knowledge on post intervention compared to 70% of them had poor knowledge on pre intervention. Mean of total score of adolescent girls' problems with bullying was decreased on post intervention ( $16.47 \pm 4.90$ ) compared to ( $27.40 \pm 4.33$ ) on pre intervention. Also, mean total score of methods of dealing with bullying was improved on post intervention ( $8.025 \pm 1.48$ ) compared to pre intervention ( $4.600 \pm 2.39$ ). In addition, 77.5% of the studied students had high self-esteem on post intervention compared to 20.0% on pre intervention. **Conclusion:** The audio- drama nursing interventions were successful in improving the visually impaired adolescent girls' knowledge and dealing effectively regarding bullying. They also have significant effect on self-esteem. **Recommendation:** Raising awareness of visually impaired adolescent girls regarding bullying in various settings by further educational programs particularly for school girls with visual impairments.

**Keywords:** Adolescent Girls, Audio- drama Nursing Intervention, Bullying, Visual Impairment.

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### Introduction

Bullying is known as one of the major social health problems affecting children and adolescents in the school setting. It is well-defined as 'repeated and intended aiming of harm to a person who has less power or has difficulty defending themselves' (Olweus, 2018). Bullying is a complicated and multi-determined phenomenon that includes many acts of aggression towards a victim on the physical, verbal, and relationally aggressive behaviors that occur repeatedly over an extended period against a victim (Fleming & Jacobsen, 2017). It can range from pushing, hitting, name-calling, threats, and mocking to extorting money and possessions (Juvonen & Graham, 2017).

Bullying prevalence are rises among students with apparent disabilities, especially girls with special needs who may face peer

victimization two to three times more frequently than the general population (Rose et al., 2015 & Blake et al., 2016). World Health Organization defined the visual impairment individuals that those who are suffer from inherited or accidental eye conditions that impede their ability to see. The students with visual impairments are less likely to bully others and are more likely to be the victims of bullying from their sighted peers. This might be as a result of the difficulties they encounter in interpreting both visual cues and others' nonverbal cues (Celeste, 2016 & WHO a, 2019).

The impact of bullying behavior on visually impaired adolescent girls has short- and long-term effects on their self-esteem and emotional well-being. Therefore, the girl who bullied is at a greater risk for developing mental health problems, headaches and difficulties of adjusting to school. Also, bullying can cause long-term damage to self-esteem and feeling of

inferiority (Stan & Beldean, 2018). Additionally, it might cause death or even suicidal thoughts (Mishra, et al., 2018). There are very few studies that they addressed bullying in student girls with visual impairment (Davis et al., 2015). Recently, bullying has gained a growing interest in public health providers, catalyzing many efforts both in research and in action (Rosenblum 2018).

Adolescent student girls with visual impairment have faced with more challenges due to restrictions of mobility and orientation. So, they faced more stress in their personal and social development regarding bullying (Stan & Beldean, 2018). Also, they are less sociable and more egocentric. So, they have low self-esteem in comparison to sighted children. Self-esteem defined as "individuals feeling about themselves that affect the way of viewing themselves, as self-observations, self-knowledge, and perceived feelings". Self-esteem plays a very important role in development of relationships others (WHO, 2019).

Visually impairment children rely on sound, speech and touch to learn and understand situation. Audio drama of normal format is art that tells a story solely through sound without need for visual elements. It is 80 % effective than other mode of teaching (El-Kurdy 2020). Audio drama can provide the audience with visual impairment children with the same level of presence as an audiovisual stimulus does among sighted individual. (Fryer, 2018).

Audio drama known as auditory performance providing a series of actions and education that are dramatized and organized. It's valuable in saving time and can be played repetitively to attain appropriate outcomes (Catherine 2017). Audio drama is a procedure of telling information through sound. It is purely sound performance broadcast on audio media, for example CD without visual component or tape. Audio-drama is rest on data flow, sound effects and music. It is auditory dimension but has equal outcome of visual force in the psychological dimension (Madden 2020). As one Visual impaired person expressed it, "rather than just listening to the information, audio drama makes it sense more real" (Fryer, 2018).

The National Association of School Nurses (NASN) claims that school nurses play a key role in creation of programs that combat bullying and other forms of school violence. As a result, there will be fewer instances of bullying, early detection of bullies and victims, and a safe learning environment (Tolsma et al., 2017). School nurses have a duty to protect adolescent's health safety and to recognize cases of bullying. The role of the school nurse in regard to bullying includes advocate, educating students and staff, promoting equal access for students and identifying at-risk students (Humphrecht, 2019).

Nurses are extremely helpful in creating and executing anti-bullying programs in schools to avoiding bullying. They improve children's quality of life by educating, fostering autonomy, promoting health, assisting in living with differences, and detecting risk factors, of bullying problems. The school nurse can stand along with helping and encouraging schools to implement violence prevention and reduction strategies against bullying (Mendes, 2015; Salimi et al., 2019). Efforts of the government, teachers, health workers (as counselors) and collaboration of various parties are requires to prevent bullying incidents. So the social support and self-confidence are very important ability to improve the self-esteem (Panday et al., 2018). School nurses have an active role in providing visual impairment adolescent students with knowledge and methods regarding dealing with bullying to improve their self-esteem. It is a elementary requirement for promoting self-esteem and a satisfied life in visual impairment adolescent students (Kvarme et al., 2019).

### **Significance of the study**

Bullying affects up to 50% of children and adolescents globally, and the frequency varies significantly among nations. It is a widespread issue in primary and secondary schools. According to data from the United Nations Children's Fund (UNICEF) published in 2017, 67% of the 100,000 children in 18 countries have experienced bullying: Children were bullied for a variety of reasons, including their gender, race or ethnicity, physical appearance, and other factors (Haraldstad, et al., 2019).

The Egypt's National Center for Social and Criminal Research conducted a survey about bullying among students in primary and secondary school, discovered that 69% of students being bullied or experiencing hostility from other students (Centers for disease control and prevention, 2017). In addition, the U.S. Department of Education estimated that 21.5% of school-age children experience traditional peer victimization, but rates across studies span from 8% to over 70% (DeVoe& Murphy, 2018).

Adolescent girls with visual impairment endured significantly higher incidence of bullying versus the general population. The increasing needs for bullying management for visual impairment adolescent students constantly a challenge (Galal et al., 2019). Egyptian studies which investigated effect of audio-educational sessions on the visual impairment adolescent students' knowledge, self-esteem and dealing effectively regarding bullying are so limited. Therefore, this study was conducted to evaluate the impact of audio-drama nursing intervention on bullying among adolescent girls with visual impairment.

### **Operational definition:**

**Audio dramanursing intervention;** Refers to auditory devices for adolescent girl who is blind or visually impaired to access print and information, which are dramatized, audio performance is played on conversation, sound effects and music with no visual aids. It designed by the researchers in a simple Arabic language to improve knowledge, forms, feelings, appropriate dealing methods regarding bullying and improving the students' self-esteem (Galal et al., 2019).

**Bullying;** is an aggressive behavior to visually impaired adolescent girl that is intentionally and repeatedly in the form of physical or verbal abuse that causes the girl to feel uncomfortable. Bullying can take multiple forms, including spreading rumors, threatening, physical or verbal assault, engaging in insidious practices such as excluding a child from a group to hurt her, or any other gestures or actions that occur in a less visible manner(Olweus, 2018).

**Visual impairment** is a term experts use to describe any kind of vision loss, whether it's someone who cannot see at all or someone who has partial vision loss.

**Visual impairment adolescent girl:** WHO defines an adolescent as any person between ages 12 and 18. In our study is adolescent girl who had visual impairment which mean that her visual acuity is less than or equal 6/24 or these who is blind either congenital or by any other acquired cause (El-Kurdy 2020).

### **Aim**

Evaluate the effect of audio- drama nursing intervention on bullying among adolescent girls with visual impairment.

### **Methods**

#### **Hypothesis:**

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

- 1- The visual impairment adolescent girls will have improvement in knowledge regarding bullying after receiving of audio- drama nursing intervention.
- 2- The visual impairment adolescent girls will be able to deal effectively with bullying after receiving of audio- drama nursing intervention.
- 3- The visual impairment adolescent girls' problems with bullying will be decreased after receiving of audio- drama nursing intervention.
- 4- The visual impairment adolescent girls ' self-esteem will be improved after receiving of audio- drama nursing intervention

**Research design:** To achieve the study's goal, a quasi-experimental approach was used in the research (one group pre-posttest).

**Setting:** This study conducted at Al Nour school for visually impaired students which is located at the Prison Street behind Abdel Moneim Riad Secondary School for Boys, beside the school of Intellectual Education, Shebin El-kom City in Menoufia governorate, Egypt. Al Nour School consists of 2 floors with 13 classes which contain 158 students: 79 primary students, 37 preparatory students and 45 secondary students.

**Subjects:** A purposive sample of 40 visual impairment adolescent girls was selected from the previously mentioned setting. The researchers divided the sample into 5 groups randomly. Each group involved of 8 visually impaired adolescent girls. These criteria were used to select the study sample:

#### Inclusion criteria:

Visual impairment adolescent girls who:-

1. Aged 12-18 years and available during the study period.
2. Accepting to share in the study and follow the instructions.
3. Have no hearing or verbal defects.

#### Exclusion criteria

Visual impairment adolescent students who:-

1. Not accepting to participate in the study.
2. Aged less than 12 years olds.
3. Have hearing or verbal defect problems

#### Subjects' size:

Total of (40) visual impairment adolescent girls were selected from the above chosen setting based on this formula:

$$n = \frac{z^2 \times p(1-p)}{\epsilon^2}$$

#### Where

$p$  for the population proportion is 0.026,  $z$  for a 95% confidence level is 1.96.  $\epsilon$  for the margin of error is 0.05.

$$n = \frac{1.96^2 \times 0.026(1-0.026)}{0.05^2} = 39 \text{ girls}$$

Thus, a sample size of **40 girls** would be necessary for conducting the study.

#### Tools of Data Collection

Researchers utilized the following four tools to gather data:

**Instrument I:** A structured interviewing questionnaire developed by the researchers and consisted of two parts:

- a. **Part one:** It was designed to gather information on the demographic characteristics of visual impairment adolescent girls (age, sex, residence,

occupation of father, occupation of mother, educational level of father & mother, family monthly income).

- b. **Part two:** It was developed to assess visual impairment adolescent girls' previous exposure to bullying. The questions covered areas such as forms of bullying that the girl exposed to, places of bullying, frequency of exposure to bullying, feelings when exposed to bullying and methods of dealing with bullying.

**Instrument II:** Adolescent girl's knowledge about bullying, it was developed by the researcher. It designed to assess visual impairment adolescent girls' knowledge regarding bullying and it consists of questions about meaning, forms, causes, types, consequences, and measures for dealing with it.

#### Scoring system:

Each item with the response "don't know" received a score of 0, while questions with an implied complete correct answer received a score of 2, and questions with an implied incomplete correct answer received a score of 1. Total knowledge score presented in three categories as, good knowledge  $\geq 75\%$ , fair knowledge 51 – 75%, and poor  $\leq 50\%$ .

#### Reliability

Reliability of the instrument II (knowledge about bullying) was estimated among 10 participants by using test-retest method with two weeks apart between them. Between the two scores, Cronbach's alpha was then determined. It was 0.78, indicating that the tool was trust worthy for achieving the study's goals.

**Instrument III:** Adolescent bullying scale: It is an adaptation of (Strout, et al., 2018). It comprises of 20 questions to determine adolescent girl problems with bullying. Items included such as "Kids try to make me feel bad on purpose, Have had upsetting memories of being bullied, I am bothered when kids at my school tease me, Kids have tried to get me at trouble, Have had my stuff taken or damaged on purpose by another student, Have been threatened by other student in a mean or hurtful way". Each questioned scored as; never = 0, sometimes =1, and always =2.

**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).

### Reliability

Reliability of the instrument III (Adolescent bullying scale) was estimated among 10 participants by using test-retest method with two weeks apart between them. Then Cronbach' alpha was calculated between the two scores. It was 0.821 which indicates that the instrument was reliable to meet the objectives of the study.

**Instrument IV:** Rosenberg's global self-esteem scale: The scale was adopted from (Rosenberg, 1965), to measure the global negative and positive self-esteem. It consists of 10 statements (6 statements are phrased positively and 4 statements are phrased negatively).

**Scoring system:** Statements of self-esteem were rated on 3 point scale. Scoring for positive answers are (2) for agree response, while (1) for neutral response, and (0) for disagree response. Positive items include such as "*Feeling of equal value with other, Feeling of have number of good qualities and Taking positive attitude towards self*". Scoring for negative answers were reversed, i.e., (2) for disagree response, while (1) for neutral response, and (0) for agree response. Negative items such as "*Feeling of not have much to be proud of, Certainly feeling useless at time and There are times feeling of not benefit*". 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 points =100%. High self-esteem when total score was 75% to 100% ( $\geq 15$  point). Low self-esteem when the total score was less than 75%. ( $< 15$  point).

### Reliability

Reliability of the instrument IV (Rosenberg's global self-esteem scale) were estimated among 10 participants by using test-retest method with two weeks apart between

them. Then Cronbach' alpha was calculated between the two scores. It was 0.793 which indicates that the instrument was reliable to meet the objectives of the study.

### Validity of the tools:

The instruments used in this study was reviewed for the content and face validity by a group of five experts (from community health nursing and pediatric health nursing). The tools were considered supportive, valuable and valid from the experts' perspective.

### Ethical Considerations:

The official approval to conduct the study was obtained from the research and ethics committee of the Faculty of Nursing - Menoufia University. Permission from administrative director of Al Nour school for visually impaired students at Shebin El-kom City in Menoufia governorate, Egypt was obtained to conduct the study. Informed consent was obtained from visually impairment adolescent girls after conducting interviews with each adolescent girl with vision impairment describing the purpose, importance and procedures of the current study.

### Pilot Study:

Prior to starting the real data collection, a pilot study was conducted on 10% of the study sample to assess the usability and clarity of the tools and determine the time needed to complete the questionnaires. There were no ambiguous statements or questions. Later, after the tools had reached this stage of development, pilot subjects were included to the study because no additional changes were needed.

### Procedure:

1- Data collection was carried out from the beginning of September 2019 to the end of January 2020. The selection of subjects and baseline data (pretest) was collected and the audio drama nursing intervention was provided over a period of one month. Then the post test was taken after finishing the intervention and the follow up were taken after three months of the audio drama nursing intervention. The subjects were divided into 4 groups and each group received three sessions, 1 session per week for period of 30 minutes. The current study

was conducted in four phases, including assessment, development, implementation, and evaluation phase:

- a. **Assessment phase:** A pre assessment was done using the previous interviewing questionnaires. The researchers started by introducing themselves to the adolescent girls, gave a concise idea, aims, and predictable outcomes of the study to them. After explanation, began to fill pretest by reading the questions to each student and then their responses were recorded in the questionnaires by the researchers.

The researchers told visual impairment adolescent girls that there has [immediate posttest](#) after explaining educational sessions and [follow up](#) assessment after 3 months from the end of audio drama nursing intervention.

b. **Development phase:**

- The researchers were developed audio-drama nursing intervention based on the results of pre intervention assessment, literature review, researchers experience and opinions of nursing expertise. The audio-drama nursing intervention includes knowledge about bullying, measures of dealing with bullying, problems with bullying and improving self-esteem of visually impairment adolescent girls
- The researchers recorded the audio drama nursing intervention in the development phase. The audio drama nursing intervention includes recorded conversation about knowledge, forms, feelings, problems with bullying, appropriate dealing methods regarding bullying and improving the students' self-esteem. Audio drama is a purely dramatized audio performance which is played on conversation, sound effects and music with no visual aids to help visually impaired adolescent girls to know all information about bullying. For visually impaired adolescent girls, audio drama substitutes absent visual material with a sound explanation. Audio drama is more efficient and effective way to promote wellbeing and health by using drama to develop information and practices of visually impaired adolescent students through their aids.

c. **Implementation phase:**

• **First session:**

- The researchers meet girls in their class with the assistance of their teachers for any clarification. The researchers started to aid the visually impaired adolescent girls to sit comfortably in the class, connected the laptop & speakers correctly and instructed them to maintain calm to hear clearly.
- Then the audio drama was played for 30 minutes explaining knowledge about bullying: as meaning, forms, causes, types and consequences of bullying on the students.
- After the audio drama ended, the researchers questioned the girls if they want to repeat conversation, make a discussion with them, answer questions and make them clear in all parts of the audio drama session.

• **Second session:**

- In the second session, first step as in 1<sup>st</sup> session.
- Then the audio drama was played for 30 minutes duration, explaining problems with bullying and measures of dealing with bullying through using audio drama nursing intervention. It includes giving very specific instructions that are tailored to them that affect how they identify bullying's problems, think, learn, or interact with others.
- The researchers encouraged them to follow one or more way of the following measures including always stay calm, respond to the bully with hardly words, clear voice, request assistance from family or friends, asked for help from responsible person, used self-defense tools such as using a pin or any machine brushes or spray powder of spices and finally you can ask help from police man person.
- After the end of the audio dram session, the researchers asked the girls if they want to repeat the audio dram, discuss with the students, answer all enquiries and make them clear in all aspects of the audio drama.

• **Third session:**

- In the third session first step as in 1<sup>st</sup> session.
- Then the audio drama was played for duration of 30 minutes explaining how to improve their self-steam includes teach

them the best methods of self- protection against bullying, how to face this phenomenon, and demonstrate physical actions that can help for protection from bullying.

- Following that, the researcher showed the adolescent girls how to strengthen and improve their self-esteem in a variety of scenarios, including; the adolescent girls were asked to describe specific instances in which they had been subjected to bullying and how they responded to it. Communicate with supported persons how to connect community, remind yourself that you are enough when you are feeling low, hang out with people who make you feel happy and always celebrate your achievements when you setting goals and achieving them.
- After the audio dram end, the researchers asked the adolescents if they need to repeat the audio dram, made a discussion with the adolescents, answer all questions and make them clear in all aspects of the audio drama.

#### d. Evaluation phase:

- **Immediate posttest:** Immediate posttest at the end of last session was done by the researchers to assess level of knowledge about bullying immediately after audio drama nursing intervention implementation phase. The researchers were using the same data collection tools by reading the questions individually to each student and then their answers were documented in the tools. It took about 10 minutes
- **Follow up assessment:** Follow up assessment after 3 months from the end of audio drama nursing intervention, the researchers followed the studied visual impairment adolescent girls in order to reassess the effect of audio drama nursing intervention on knowledge about bullying, bullying scale, bullying feelings & measures of dealing and adolescents' self-esteem.

#### Statistical analysis

The collected data were coded and transformed into specially designed form to be suitable for computer entry process. Statistical analysis was done by using the Statistical Package for Social Science (SPSS) version 22. Graphics were done using Excel program.

Quantitative data were presented by mean ( $\bar{x}$ ) and standard deviation (SD). And it was analyzed using paired t-test for comparison between two pre and post intervention' means. Qualitative data were presented in the form of frequency distribution tables, number and percentage. It was analyzed by chi-square ( $\chi^2$ ) test. Statistical significance was considered at: P-Value > 0.05 insignificant-Value < 0.05 significant, P-Value < 0.001 highly significant.

#### Results:

**Table 1** shows demographic characteristics of studied students. It was obvious that 57.5% of studied students were between 12-15 years with mean of  $14.12 \pm 2.58$ . In relation to residence, 57.5 % of studied students lived in rural areas. Concerning to father's and mother's education, 42.5% and 47.5% had secondary education respectively. Regarding parents' occupation, 70.0% of fathers and 35.0% of mothers have work. 55.0 % of them had insufficient family monthly income.

**Figure (1):** Distribution of studied students regarding places of bullying. It shows that; the most common places of bullying among studied students were the crowded places (45%), followed by 40.0% via mobile and internet. While the lowest common places were in transportation (25.0%), followed by 17.5% at home.

**Figure (2):** Distribution of studied students regarding frequency of exposure to bullying. It illustrates that; half of studied students (50.0 %) sometimes exposed to bullying. Meanwhile 17.0% of the studied students rarely exposed to bullying.

**Table 2** clarifies means of total score of adolescent girls' knowledge about bullying on pre, post and follow-up nursing intervention. It demonstrates that there was a greater improvement in adolescent girls' knowledge of bullying after intervention than before. It illustrates the mean total score of adolescent girls' knowledge about bullying at the beginning of the intervention was ( $4.92 \pm 1.52$ ) which improved after intervention ( $10.17 \pm 1.55$ ) and ( $9.25 \pm 1.45$ ). As a result, there was a highly significant difference in understanding of bullying between the pre, post and follow-up.

**Figure (3):** Level of adolescent girls' knowledge about bullying on pre and post nursing intervention. It states that 70.0% of the studied girls have poor knowledge on pre intervention. meanwhile, on post intervention 70.0% of them have good knowledge.

**Table 3** represents means of total score of problems with bullying on pre and post nursing intervention (after 3 months). It was obvious that total mean score of problems with bullying was decreased on post intervention ( $16.47 \pm 4.90$ ) compared to pre intervention ( $27.40 \pm 4.33$ ). Therefore, there was highly significant difference between pre and post intervention regarding bullying at 1% level of significance.

**Figure (4):** Adolescents girls' problems with bullying on pre intervention and post intervention (after 3 months). It illustrates that, 97.5% of visual impairment adolescents girls always have bullying problems. on pre intervention which decreased to 25.0% on post intervention

**Table 4** displays distribution of studied students regarding feelings when exposed to bullying on pre and post nursing intervention (after 3 months). The findings revealed that the most common feelings on pre intervention were Loss of self-esteem and assertiveness (90.0%), Anger and frustration (80.0%) and Symptoms of depression and anxiety (75.0%) compared to 27.5% on post intervention. It was obvious that, there were improvement in the feeling when the students exposed to bullying post intervention than on pre intervention. Therefore, the mean total score of feelings when exposed to bullying has been decreased on post intervention ( $2.30 \pm 1.30$ ) than on pre intervention ( $6.30 \pm 1.22$ ). So, there was highly significant difference between pre and post intervention regarding feelings when studied students exposed to bullying.

**Table (1):** Demographic characteristics of studied students (n=40).

Demographic characteristics	No.	%
Age / years		
12-<15	23	57.5
15≤18	17	42.5
Age Mean ±SD	14.12±2.58	
Residence		
Rural	23	57.5
Urban	17	42.5
Father education		

**Table 5** shows distribution of studied students regarding methods of dealing with bullying on pre and post nursing intervention (after 3 months). It was clearly that 72.5% of studied students had reaction of *confusion and inability to act* in pre intervention compared to less than one third (27.5%) in post intervention. Also, more than half (57.5%) of them *leave the place* on pre intervention compared to the majority (90%) on post intervention. In addition, the majority of the studied students (85.0%, 82.5% & 80.0%) *asked for help from responsible person, responded to the bully with hardly words and asked help from police person* respectively on post intervention. Therefore, there was highly significant difference between pre and post intervention regarding methods of dealing with bullying. Also, mean total score of methods of dealing with bullying was improved on post intervention ( $8.025 \pm 1.48$ ) compared to pre intervention ( $4.600 \pm 2.39$ ).

**Table 6** displays distribution of studied students' self-esteem on pre and post nursing intervention (after 3 months). It illustrates that the total mean score of the students' self-esteem on post intervention ( $27.35 \pm 3.11$ ) was increased compared to pre intervention ( $19.95 \pm 2.06$ ). Therefore, there was highly significant difference between pre and post intervention regarding students' self-esteem.

**Figure (5):** Level of students' self-esteem on pre and post nursing intervention (after 3 months) (n=40). It illustrates that, 77.5% of the studied students has high self-esteem on post intervention compared to 20.0% on pre intervention. so there was a highly statistical significance differences between students' self-esteem on pre and post nursing intervention.

<b>Illiterate</b>	5	12.5
<b>Read and write</b>	9	22.5
<b>Secondary education</b>	17	42.5
<b>High education</b>	9	22.5
<b>Mother education</b>		
<b>Illiterate</b>	5	12.5
<b>Read and write</b>	8	20.0
<b>Secondary education</b>	19	47.5
<b>High education</b>	8	20.0
<b>Father occupation</b>		
<b>Work</b>	28	70.0
<b>Not work</b>	12	30.0
<b>Mather occupation</b>		
<b>Work</b>	14	35.0
<b>Not work</b>	26	65.0
<b>Family monthly income</b>		
<b>Sufficient</b>	18	45.0
<b>Insufficient</b>	22	55.0
<b>Total</b>	40	100

Figure (1):Distribution of studied students regarding places of bullying.

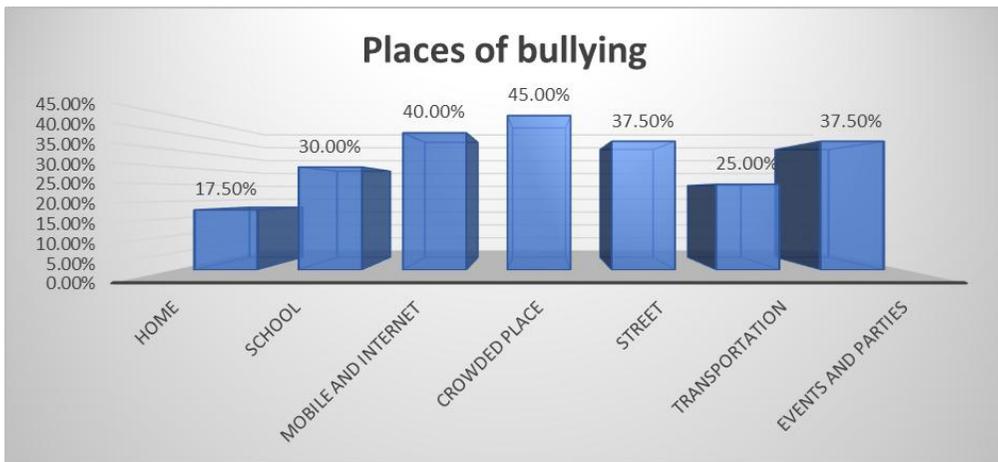


Figure (2): Distribution of studied students regarding frequency of exposure to bullying

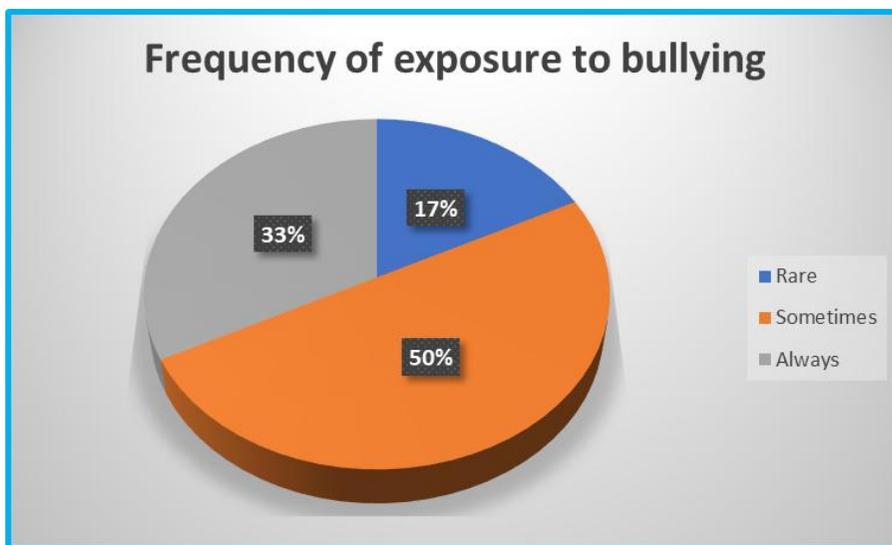
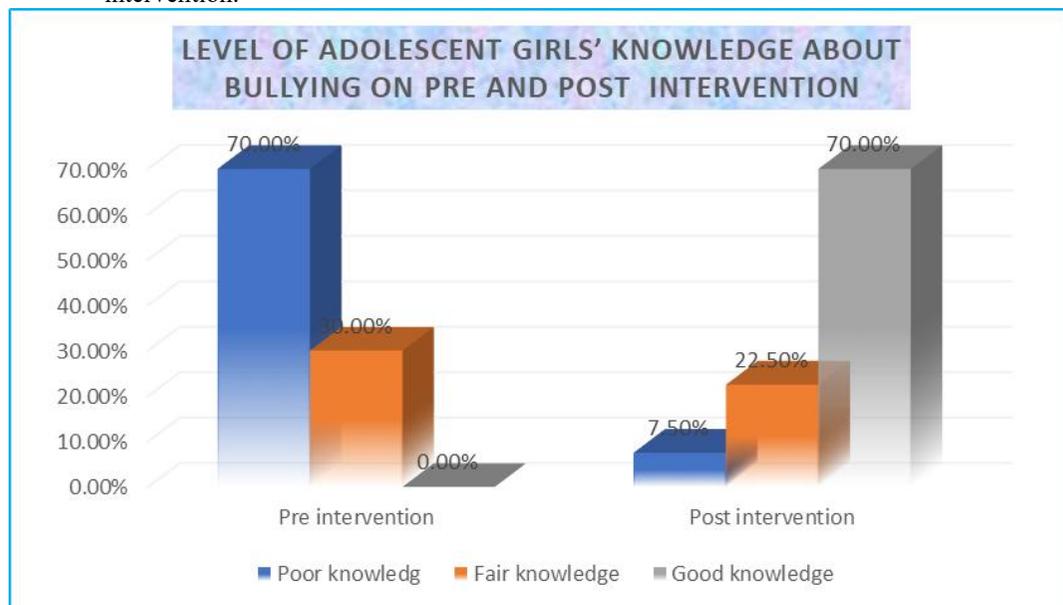


Table (2): Means of total score of adolescent girls’ knowledge about bullying on pre, post and follow-up nursing intervention.

Knowledge about bullying	Pre intervention	Post intervention	Follow up	Anova test	P -value
Mean total score	4.92 ± 1.52	10.17 ± 1.55	9.25 ± 1.45	-25.10 <sup>HS</sup>	.000

NB.<sup>HS</sup>: High significance (p<.001)

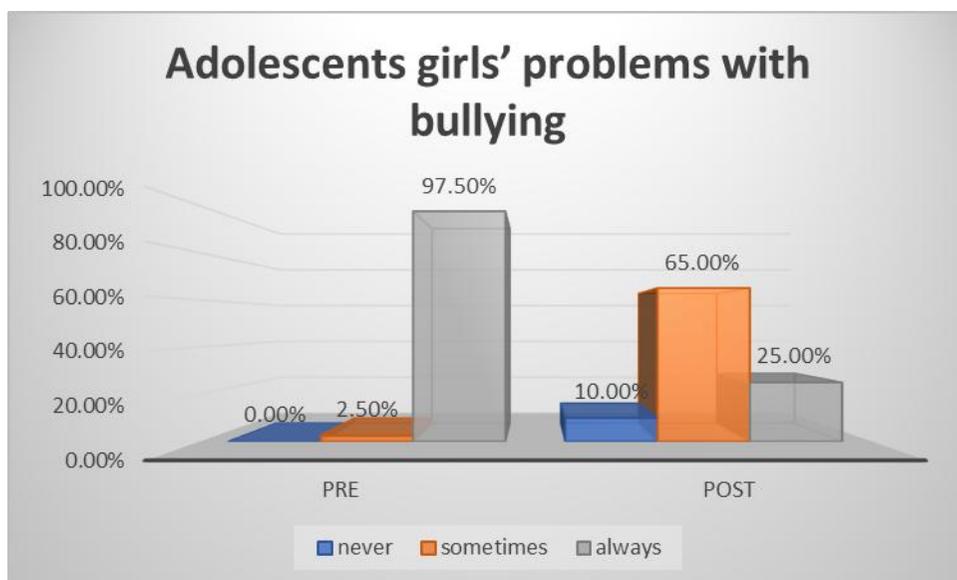
Figure (3): Level of adolescent girls’ knowledge about bullying on pre and post nursing intervention.



**Table (3):** Means of total score of adolescents' problems with bullying on pre and post nursing intervention (after 3 months).

Items	Pre intervention	Post intervention	t test	P -value
Mean total score of adolescents' problems with bullying	27.40 ± 4.33	16.47 ± 4.90	10.560 <sup>HS</sup>	.000

**NB.**<sup>HS</sup>: High significance ( $p < .001$ )

**Figure (4):** Adolescents girls' problems with bullying on pre intervention and post intervention (after 3 months).**Table (4):** Distribution of studied students regarding feelings when exposed to bullying on pre and post nursing intervention (after 3 months) (n=40).

Feelings when exposed to bullying	Pre intervention		Post intervention after 3 months		Fisher's Exact Test	P-value
	No.	%	No.	%		
Disturbance (headache, insomnia and bad dreams)	25	62.5	8	20.0	14.90 <sup>HS</sup>	.000
Fear and terror	28	70.0	10	25.0	16.24 <sup>HS</sup>	.000
Symptoms of depression and anxiety	30	75.0	11	27.5	18.06 <sup>HS</sup>	.000
Loss of self-esteem and assertiveness	32	80.0	11	27.5	22.18 <sup>HS</sup>	.000
Not feel love and happiness	26	65.0	10	25.0	11.83 <sup>S</sup>	.001
Feeling of guilt	22	55.0	8	20.0	10.45 <sup>S</sup>	.001
Anger and frustration	36	90.0	11	27.5	32.23 <sup>HS</sup>	.000
Desirable feeling	25	62.5	10	25.0	11.42 <sup>S</sup>	.001
Ignoring it	28	70.0	17	42.5	6.15 <sup>S</sup>	.013
<b>Mean total score</b>	6.30 ± 1.22		2.30 ± 1.30		t = 14.14 <sup>HS</sup>	.000

**NB.**<sup>HS</sup>: High significance ( $p < .001$ )    <sup>S</sup>: significant ( $p < .05$ )

**Table (5):** Distribution of studied students regarding methods of dealing with bullying on pre and post nursing intervention (After 3 months) (n=40).

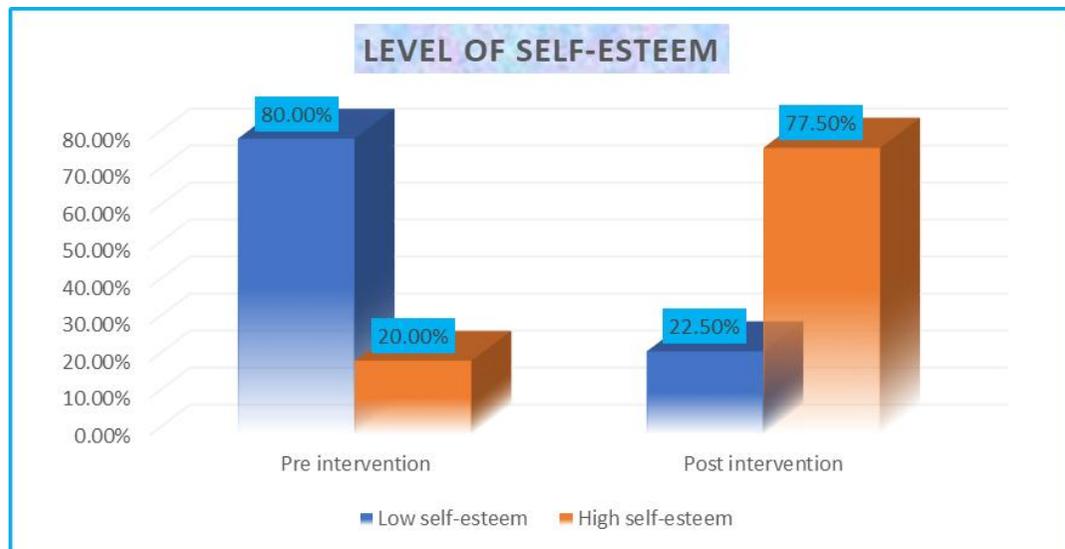
Methods of dealing with bullying	Pre intervention		Post intervention After 3 months		Fisher's Exact Test	P-value
	No.	%	No.	%		
Responded to the bully with hardly words	18	45.0	33	82.5	12.017 <sup>HS</sup>	.000
Requested assistance from family or friends	22	55.0	31	77.5	4.528 <sup>S</sup>	.033
Escaped from the bully	23	57.5	11	27.5	7.366 <sup>S</sup>	.007
Did not do anything	19	47.5	5	12.5	11.667 <sup>HS</sup>	.001
Confusion and inability to act	29	72.5	11	27.5	16.200 <sup>HS</sup>	.000
Asked for help from responsible person	18	45.0	34	85.0	14.066 <sup>HS</sup>	.000
Leave the place	23	57.5	36	90.0	10.912 <sup>HS</sup>	.001
Used self-defense tools such as using a pin or any machine brushes or spray powder of spices	15	37.5	25	62.5	5.00 <sup>S</sup>	.025
Asked help from police person	16	40.0	32	80.0	13.33 <sup>HS</sup>	.000
<b>Mean total score</b>	4.600 ±2.39		8.025 ±1.48		t = -7.701 <sup>HS</sup>	.000

**NB:** HS: High significance (p<.001) S: significant (p<.05) NS: Not significant (p>.05).

**Table (6):** Distribution of studied students' self-esteem on pre and post nursing intervention (after 3 months) (n=40).

Self-esteem	Pre intervention						Post intervention after 3 months						X <sup>2</sup>	P-value
	Agree		Neutral		Disagree		Agree		Neutral		Disagree			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Feeling of equal value with other	9	22.5	20	50.0	11	27.5	33	82.5	4	10.0	3	7.5	28.95 <sup>HS</sup>	.000
Feeling of have number of good qualities	14	35.0	21	52.5	5	12.5	34	85.0	4	10.0	2	5.0	21.17 <sup>HS</sup>	.000
Feeling of doing things like most of other people	17	42.5	17	42.5	6	15.0	36	90.0	3	7.5	1	2.5	20.18 <sup>HS</sup>	.000
Taking positive attitude towards self	15	37.5	15	37.5	10	25.0	33	82.5	4	10.0	3	7.5	16.88 <sup>HS</sup>	.000
Generally feeling satisfied with self	11	27.5	19	47.5	10	25.0	35	87.5	1	2.5	4	10.0	31.29 <sup>HS</sup>	.000
Wishing had more respect for self	11	27.5	16	40.0	13	32.5	27	67.5	10	25.0	3	7.5	14.37 <sup>HS</sup>	.001
Generally, tend to feel a failure	6	15.0	25	62.5	9	22.5	2	5.1	5	12.8	32	82.1	28.22 <sup>HS</sup>	.000
Feeling of not have much to be proud of	8	20.0	29	72.5	3	7.5	0	0.0	7	17.9	32	82.1	45.46 <sup>HS</sup>	.000
Certainly, feeling useless at time	16	40.0	20	50.0	4	10.0	1	2.6	8	20.5	30	76.9	38.25 <sup>HS</sup>	.000
There are times feeling of not benefit	17	42.5	16	40.0	7	17.5	2	5.1	6	15.4	31	79.5	31.53 <sup>HS</sup>	.000
Total mean score	19.95 ±2.06						27.35 ±3.11						t = -12.54 <sup>HS</sup>	.000

**NB:** HS: High significance (p<.001)

**Figure (5):** Level of students' self-esteem on pre and post nursing intervention (after 3 months),

### Discussion

In recent decades, Bullying has attracted increasing attention in public health, sparking numerous initiatives in both study and practice. (Hall& Chapman, 2018; Silva et al., 2018). Bullying is common among students with disabilities (Blake et al., 2016). Peer victimization affects children with special needs two to three times more frequently than the general population. Also, the prevalence of bullying rises for individuals with obvious disabilities (such as cerebral palsy, blindness, hearing loss) and chronic conditions (Rose et al., 2015). However, there is little empirical studies examining bullying among visually impaired students, particularly, in low- and middle-income countries (Blake et al., 2016). The impact of the bullying on victims are feeling of loneliness, difficulty adjusting, insecurity, low self-esteem, despair, and the worst case scenario is suicide. (WHO, 2019).

Regarding places of bullying, the present study clarified that, the most common places of bullying among studied students were crowded places, followed by via mobile and internet. While the lowest common places were at home. This study was consistent with Aulia, (2016) who conducted a study about "Bullying experience in primary school children. *SCHOULID*" and mentioned that the most common places of bullying were the internet, school and street.

Concerning frequency of exposure to bullying, the current study clarified that half of studied

students always exposed to bullying. While less than one third of them rarely exposed to bullying and more than one third of them sometimes exposed to bullying. In the same context, Adib-Hajbaghery and Rezaei-Shahsavarloo (2015) conducted a study about " Nursing students' knowledge of and performance in communicating with patients with hearing impairment " and found that more than one third of studied sample sometimes exposed to bullying and less than one third rarely exposed to bullying. In contrary, this result was inconsistent with Fekkes et al., 2015 who conducted a study about " Bullying: Who does what, when and where? Involvement of children, teachers and parents in bullying behavior" and showed that 16.2% of the children reported being bullied frequently (many times per month or more frequently), and that over 7% reported being bullied frequently (several times per week). This could be due to adolescents who do not "fit in" due to cognitive, developmental, emotional, physical, or sensory differences. Bullying is more common among them than it is in the general community, and the incidence rises with chronic or observable condition.

In relation to knowledge about bullying, the current study demonstrated that there was a greater improvement in students' knowledge about bullying following intervention than prior to it. Based on this result, it can be concluded that the nurse intervention enhanced the adolescent girls understanding of bullying. This could be

explained by the fact that the researcher employed several instructional methods (oral presentations, group discussion, and audio drama intervention). This finding was consistent with Mendes' (2015) who conducting a study about "Preventing school violence: an evaluation of an intervention program" and stated that most students did not fully understand bullying and how it differs from playful teasing prior to intervention. However, they had good awareness about the cause and types of bullying after the educational program.

Additionally, the study's findings agreed with Vessey & O'Neill (2018) who conducted a study about "Helping students with disabilities better address teasing and bullying situations: A MASNRN study" and stated that the majority of subjects had little to no understanding of bullying prior to the intervention, whereas the average post-test knowledge scores indicated that all subjects had sufficient knowledge of bullying. This finding might be the result of the lack of bullying education programs in schools. This may be the result of discussions on bullying with parents, teachers, and students, as well as the usage of various activities like reading, listening to audio dramatizations of bullying and violence in schools, and collages.

In relation to bullying scale (problems with bullying), there was highly significant difference between pre and post intervention regarding bullying as the total mean score of problems with bullying was decreased on post intervention than on pre intervention. This result came in the same context with Dijkstra et al., (2018) who conducted a study about "Beyond the class norm: Bullying behavior of popular adolescents and its relation to peer acceptance and rejection." and stated that popular children at school always make fun of them to make them feel bad on pre intervention more than post intervention. Also, this result was consistent with Paulina, et al., (2016) who conducted a study about "Bullying, Understanding the social engagement of a select group deaf individuals" and observed that there were statistically significant differences between the pre and post nursing intervention in terms of bullying. This may be a result of an audio drama nursing intervention that raises awareness of bullying and coping mechanisms. Additionally, they could provide the same dialogue assistance they already provide for these blind students if the bullying has occurred or is still occurring.

Supporting them by providing restorative strategies, such as groups to restore the beneficial relationships between peers. Giving nurses sufficient time to listen and plan their reaction to this problem is equally essential, otherwise, the time spent on bullying training would be for waste. Consequently, they must be supported by a large enough staff to provide appropriate and effective mental health care to the students at school.

Concerning feelings when studied students exposed to bullying, the present study revealed that, the majority of studied students on pre intervention were anger and have frustration, loss of self-esteem and assertiveness compared to less than one third on post intervention. Also, nearly three quarters of them have fear, symptoms of anxiety and ignorance on pre intervention compared to less than one third on post intervention. In addition, more than half of them had disturbance (headache, insomnia and bad dreams), feeling of guilt and no feeling of happiness on pre intervention comparing to less than one third on post intervention. There were improvement in the student feeling when they exposed to bullying post intervention than on pre intervention. This result was consistent with Nare et al., (2017) who conducted a study about "Adolescents with deafness: a review of self-esteem and its components in Iranian" and found that students who are subjected to bullying experience greater health problems than others who didn't exposed to bullying.

In relation to methods of dealing with bullying, the current study showed that the majority of studied students leaved the place and asked for help from responsible person as defense behavior against bullying on post intervention. This study was consistent with Warner-Czyz et al., (2018) who conducted a study about "Effect of hearing loss on peer victimization in school-age children" and reported that three quarters of their participant's students leaved the place on post intervention. Also, this result came in agreement with Danes-Staples et al., (2018) who conducted a study about "Bullying experiences of individuals with visual impairment: The mitigating role of sport participation" and showed that more than half of participants students when confronted by bullies, they ignored them and walked away. This might be due to the audio drama nursing intervention regarding

methods of dealing with bullying of adolescents with visual impairment. This might be related to the nursing intervention regarding methods of dealing with bullying.

In contrary, this result was inconsistent with Fekkes et al., 2015 who reported that more than half of the regularly bullied children told their teacher or parents that they exposed to bullying.

Regarding to students' self-esteem, the findings of this study revealed that studied students have more positive self-esteem on post intervention more than on pre intervention. This study was in agreement with Nare et al., (2017) who stated that the nursing intervention had a significant effect on the improvement of self-esteem of studied students. This could be due to knowledge level about bullying increase self-esteem. Also, during the audio drama intervention, the researchers emphasized on the students' 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.

### Conclusion

According to the results of this study, it was concluded that the visual impairment adolescent students have satisfactory level of knowledge regarding bullying. In addition, the visual impairment adolescent students become able to deal effectively with bullying and have more positive self-esteem after receiving of audio-drama nursing intervention.

### Recommendations

The following recommendations can be made in light of the study's findings:

1. Ongoing health education program should be implemented to educate visually impaired students about bullying in various settings.
2. Additional research should be conducted to determine what contributes to bullying among people with visual impairment.
3. Replicability of the study on larger sample of visually impaired students and at different study settings to ensure the generalizability of results.

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