Effect of Coping Strategies Education regarding Bullying on Knowledge and Behavioral Change among Secondary School Students

Fatma Mohamed El swerky[1], Hoda Esmat Mahmoud Khalil [2], Hoda Sayed Mohamed Sayed [3], Wafaa Mohesen Ahmed Elkady [4], Wafaa Hamed Kamal Elshafie [5], Nahla Ali Maher Nashaat[6]

(1) Family & Community Health Nursing Department, Faculty of Nursing, Port Said University
(2) Community Health Nursing, College of Nursing, Misr University for Science and technology
(3) Family & Community Health Nursing Department, Faculty of Nursing, Badr University in Cairo
(4) Doctor of Nursing Sciences with a Specialization in Mental Health Nursing - Ain Shams University and Director of the Training Department at the Cardio-Thoracic and Vascular Surgery Hospital, Ain Shams University
(5) Community Health Nursing Department, Faculty of Nursing, Mansoura University, Egypt
(6) Community Health Nursing Department, Faculty of Nursing, Alexandria University

Abstract

Bullying in schools is a widespread problem that, if not managed properly, can lead to a population that is psychologically, emotionally, physically, and socially dysfunctional for an extended length of time**. The aim was to** evaluate the effect of coping strategies education regarding bullying on knowledge and behavioral change among secondary school students. **Subjects and method: Design:** A quasi-experimental research design was utilized to fulfill the aim of this study. **Setting:** the research was conducted at four secondary schools in Port Said city. **Subjects**: A multi-stages technique of a purposive sample of 300 secondary school students was enrolled. **Tools for data collection:** The first tool was a structured interview questionnaire which consisted of two parts; part (I) demographic characteristics of the secondary school students; part (II) secondary school students' knowledge regarding bullying (pre/post) and the second tool was a coping behavior checklist for bullying. **Results**: The study result revealed that 56.0% of the secondary school students aged between 16-18 years with a mean of 16.38+1.23. There were highly significant improvements in secondary school students' knowledge post coping strategies education regarding bullying after two months of intervention (P<0.001). Three-fifths of the studied secondary school students reported suffering from all health effects, followed by absenteeism then depression, and suffering decreased self-esteem. The results also showed a highly statistically significant improvement in the secondary school students' behaviors regarding bullying between pre and post-intervention phases. **Conclusion:** The present study concluded that coping strategies education had a positive effect on improving knowledge and behavioral change among secondary school students**. Recommendations:** The study recommended that training programs should be provided among secondary school students to fight against bullying and should be aware of the harms of bullying and focus on its prevention in their organizations. Replication of the current study with a larger sample of secondary school students in different settings is required for generalizing the results.

Keywords: Bullying, Behavioral change, Coping strategies education, Knowledge, Secondary school students.

Introduction:

Bullying refers to intentionally harming or disturbing other less powerful people repeatedly and over time by using physically, verbally, or psychologically aggressive means. School bullying has been a major public health issue in many countries for a long time **(Boden et al., 2016; Ford et al., 2017; Zhang et al., 2019). The World Health Organization (2020)** reported that approximately 13% of children aged 11 to 13 years suffer frequent bullying victimization.

In developed economies such as the United States, Britain, and European countries, the percentage of children who experience frequent bullying victimization is usually between 10% and 30% **(Chester et al., 2015)**.

Due to the prevalence of bullying among students, many researchers around the world have dedicated their research studies to explore its causes and consequences. It has been widely reported that school bullying is detrimental to the health and well-being of

children and is linked to a variety of issues, such as depression, anxiety, hyperactivity, loneliness, and sleeping problems (**Ford et al., 2017; Savahl et al., 2019**). More importantly, these negative effects may be passed on to later adult life. Therefore, interventions at an early stage of life to prevent the negative effect of bullying are critical to child development **(Boden et al., 2016).**

Proper coping strategies are also very crucial for children to manage bullying victimization. A specific coping strategy may either facilitate or hinder children in avoiding the negative effect of bullying, depending on the cognitive ability and coping skills of the children (**Undheim et al., 2016**). From the typology perspective, the coping strategies for bullying can be divided into some subcategories, such as support seeking, wishful thinking, avoidance, and fighting back and some are more effective than others in coping with bullying victimization. Because of this, it is of great importance to understand how children adopt specific kinds of coping strategies under a particular level of bullying victimization (**Evans et al., 2017; Parris et al., 2019**).

Bullying is a form of aggressive behavior that is carried out intentionally and repeatedly to harm another party who is physically or psychologically less powerful. There are different types of bullying such as physical (hitting, kicking pushing), verbal (teasing, name-calling), relational aggression (rumor spreading, exclusion, and coercion), damage to property (taking lunches, destroying school books), cyberbullying (text-message, email and social media harassment) and extortion. Bullying can occur at any location such as in the classroom, the playfield, the school bathroom, and the lunch area.

Bullying is an issue that is becoming a serious problem, more girls are bullied than boys (66.9% of girls and 62.9% of boys), and that there is a consensus by stakeholders that there is need for an effective immediate response the researchers have a profound interest in the welfare of our nations' children and seek to hopefully assist in creating a positive change in their attitude and behavior through creating awareness of bullying, its impact, and strategies (**Chu et al., 2019**).

Coping can be seen as the moderator of the bullying strain relationship. Coping strategies may intervene to assist in allowing the individual to return to their equilibrium state before the consequences of bullying affect the organizational and individual outcomes. Theorists Lazarus and Folkman define coping as "constantly changing cognitive and behavioral efforts to manage specific external and internal demands that are appraised as taxing or exceeding the resources of the person" (**Lazarus & Folkman, 1984; Reknes et al., 2016**). Similar findings were observed in previous coping studies, which indicate that control is an essential factor in dealing with the situation effectively, with a lack of control being a definitional characteristic of bullying (**Einarsen et al., 2019**).

The study of coping strategies used in response to acute stressors such as bullying is significant because their efficacy can vary in mitigating bullying, and the choice of coping strategies may also reflect the severity of bullying and the victim's broader psychological condition**. There are still crucial knowledge gaps and some key challenges in the field that need to be tackled to establish successful organizational approaches and clinical procedures or even create a solid knowledge base for our understanding of this pertinent problem **(Yang & Zhang, 2018).** Community health nurses and psychiatric mental health nurses can contribute to struggling to combat this dreadful phenomenon.

The bullied are impacted negatively and their subjective psychological processing determines their position and how they are viewed by others. The victims are "teased, called hurtful names, physically abused, excluded from groups to hurt their feelings, belongings taken and sometimes damaged, threaten to hurt and negative rumors spread". The victims experience a decline in their academic performance, diverse psychoemotional, social issues and medical

issues, and truancy. The students from lower grades are said to be targeted for bullying more than those from the higher grades. It is therefore imperative for a holistic approach including students, teachers, school principals, experts, key policy makers, police and School Inspectors, education, and training, to minimize or prevent bullying (**Miranda et al., 2019**).

Significance of the study:

Bullying affects children of all ages, ethnic background, and socioeconomic levels. "Bullying can threaten students' physical and emotional safety at school and can negatively impact their ability to learn". Coping strategies are more effective at a specific level of bullying. Finding answers to these questions will have significant implications for how to create and implement appropriate interventions to prevent the increasingly pervasive problem of school bullying.

There is the need to develop a deeper understanding of the problem and possible interventions for its treatment and or prevention. There is therefore a need for change in the students' attitude and behavior. Bullying is a form of aggressive behavior that is carried out intentionally and repeatedly to harm another party who is physically or psychologically less powerful (**Moore et al., 2017**).

Aim of the study:

The study aimed to evaluate the effect of coping strategies education regarding bullying on knowledge and behavioral change among secondary school students through:

Research Hypotheses:

H1- Secondary school students who have been exposed to coping strategies education will have more knowledge in post-test than pre-test.

H2- Secondary school students who have been exposed to coping strategies education will have better behavioral change in post-test than pre-test.

Subject and Methods:

Research design:

A quasi-experimental research design was utilized to fulfill the aim of this study; it identified a pre-group that is as comparable to the post-group as possible. There were differences in results between before and after groups. In a pretest-posttest design, the dependent variable is measured once before the intervention is implemented, and once after it is implemented (**Price et al., 2015**).

Setting:

The research was conducted at four governmental secondary schools in Port Said city. These included Alm-Eldin Althanaweia Banat, Port Said Althanaweia Banat, Abd Elrhman Althanaweia Banen, and El-Naser Althanaweia Banen secondary schools in Port Said City. Port Said City contained 10 secondary schools. The researchers selected two female and two male secondary schools of the total number of schools by stratified random sample which was four secondary schools.

Subjects:

A purposive sample of 300 secondary school students male and female was enrolled. Secondary school students in Port Said city were the subjects of the current study who were selected based on the next inclusion criteria: Both sexes, willing to participate in the study. Exclusion criteria: The presence of chronic problems, psychological or mental disorders.

A multistage sampling technique was used to select the required sample size as follows:

Four schools were randomly selected (two male and two female schools) from Port Said city

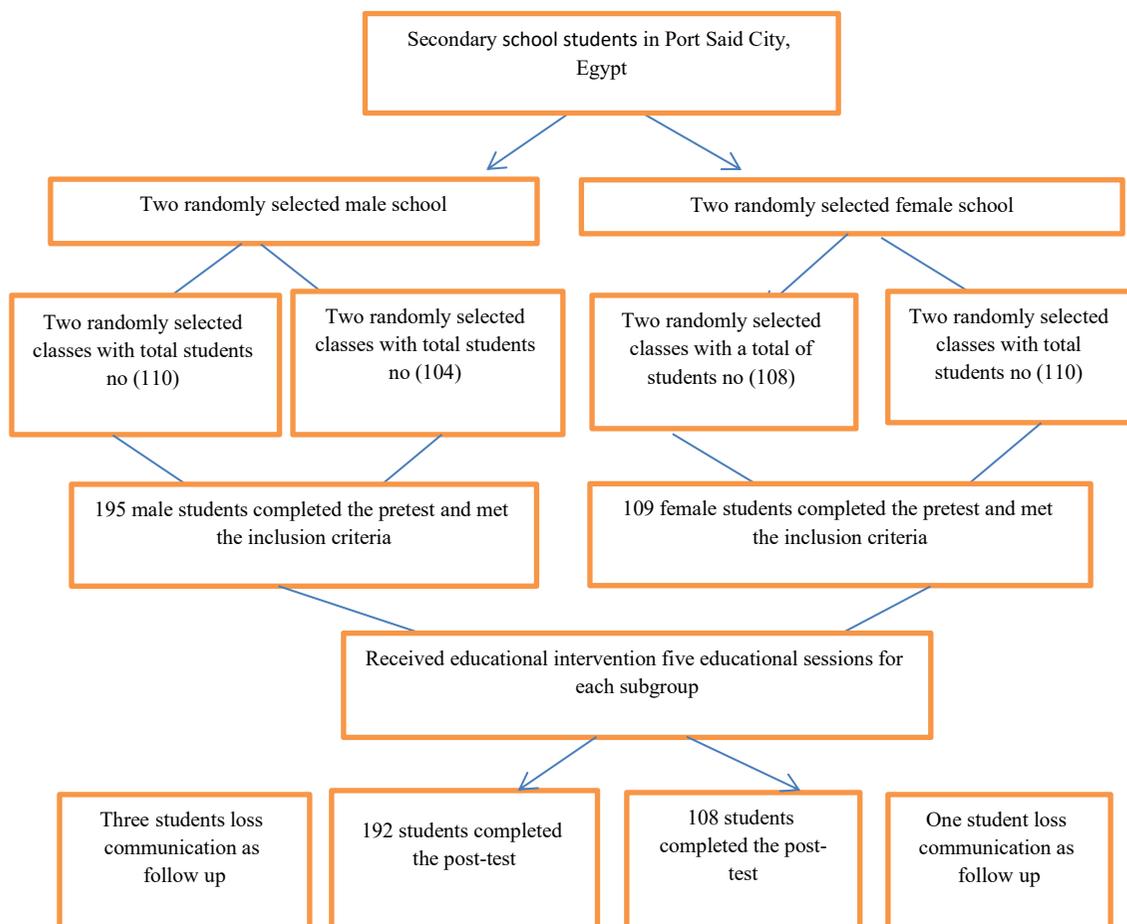Two random classes were chosen randomly from each school

Figure 1. graphic illustration of the studied sample flowchart.

The sample size was calculated for the paired sample (before-after study) using the MedCalc software based on the following parameters: Type I error rate/two-tailed test α= (0.05), Type II error rate/β=20, Effect size (E)=0.5, SD=1 with 80% power and 95% confidence limit. This resulted in a minimum required sample size of 167. Thus, the final sample size adopted in this study was adjusted to 200 participants to compensate for potential non-response.

Tool of data collection:

Tool (1): A structured interview questionnaire: This tool was developed by the researchers after reviewing the related literature: It was developed based on **(Evans et al., 2017; Parris et al., 2019; Patton et al., 2017; Zhang et al., 2019; World Health Organization 2020)** which consisted of four parts:

Part (1): Demographic characteristics of the secondary school students:

It included questions regarding the demographic characteristics of the students (4 questions) such as age, gender, educational level, and residence.

Part (II): Secondary school students' knowledge regarding bullying (pre/post):

This part was designed to assess secondary school students' knowledge regarding bullying (pre/post). It included 15 open-end questions regarding the definition of bullying, incidence, types of bullying in schools, frequencies of bullying behaviors, sources of bullying, causes of bullying,

reactions of participants to the bullying acts, effects of bullying on students, methods of bullying, the preventive effort of bullying, the health effect of bullying, and coping strategies of bullying.

Scoring system:

Each correct and complete answer was scored 2, the incomplete answer was 1, and zero was given for an incorrect answer. A subtotal knowledge score for each part and a total score were calculated. 60% and more of the total was considered satisfactory knowledge, and below 60% was considered an unsatisfactory level of knowledge.

Tool (2): A coping behavior checklist for bullying:

The researcher developed the coping behavior checklist for achieving the aim of this study based on **Cooper et al., (2011); Ebrahim and Elrefaey, (2018)**. It aimed to assess secondary school students' behaviors toward bullying. It included 24 behavior statements distributed under nine main headings. They were paying attention to the signs of being a victim of bullying (5 statements). Ignoring the feeling of being bullied (2 statements), confronting the perpetrator (3 statements), keeping a record of bullying (2 statements), getting witness (2 statements), keeping calm and patience (2 statements), getting help from supervisors (2 statements), following up the action taken (2 statements), engage in meaningful and fulfilling activities (4 statements). These checklists were used pre and post-implementation of the coping strategies education.

Scoring system:

Each behavior statement was judged against a three-point Likert scale of frequently done (3 scores), sometimes done (2 scores), and never done (1 score). A subtotal score of each behavior was displayed as a number and percentage with a merge of frequently and sometimes done together to be displayed as done and not done. A total score of behaviors (72 marks) was summed and classified as negative behavior (score 24-40); indefinite behaviors (score 41-56), and positive behaviors (score 57-72).

Procedures:

Validity of the tools:

The content validity of the tools was checked by five experts professors, three professors in the field of community health nursing, and two professors of psychiatric health nursing to ensure that the questions were clear, relevant, applicable, and complete. No changes were made according to the judge of experts.

Reliability of the tools:

Test-retest reliability was used. The internal consistency of the tools was calculated using Cronbach's alpha coefficients. the Cronbach alpha coefficient test. It was (0.89) for both the structured interview questionnaire and coping behavior checklists for workplace bullying.

Administrative and ethical considerations:

A permission letter was issued from the Dean of Port Said Faculty of Nursing to the directors of the research settings. The researcher obtained official approval from the administrators of the study settings to carry out the study. A clear explanation was given about the aim, nature, importance, and expected outcomes of the study. The researchers explained to secondary school students the aim and benefit of the study. Written consent was obtained from secondary school students to gain their cooperation. The secondary school students were informed that their participation is voluntary and have the ethical right to participate or refuse participation in the study. It was further emphasized that their responses are confidential, and had their right to withdraw from the study at any time without giving further explanation.

A pilot study:

The pilot study was conducted on 10% (30 secondary school students) of the entire sample to confirm that the measures were clear, that they were applicable, and that the time required to complete the survey was reasonable. Secondary School students who participated in the pilot study were included in the study, as no modification was done to the constructed tool.

Fieldwork: After getting permission, the researchers visited each study setting consecutively three days/a weeks (Saturday, Monday, and Wednesday) from 9 am to 1 pm. The study was carried out over four months, starting from the beginning of February 2021 to the end of May 2021. The time consumed to fill in the tools was 30 minutes for the structured interview questionnaire and 45 minutes for the coping behavior checklists for bullying.

The education plan was conducted through three consecutive phases, assessment, implementation, and evaluation.

Assessment phase:

A baseline assessment was performed using the structured interview questionnaire to collect the secondary school students' characteristics (once). The second part of the questionnaire was used to assess secondary school students' knowledge regarding bullying. Besides the assessment of the secondary school students' actual behaviors in managing to bully.

Data collected from the assessment phase guide the development of the educational plan regarding coping strategies for bullying. The educational intervention included two main sections. The first section encompassed theoretical content regarding bullying. It included a definition, incidence, types, frequencies of bullying behaviors, sources of bullying, reasons of bullying, proper reactions of participants to the bullying acts, effects or outcomes of bullying and how to avoid the adverse effect, methods of bullying, the preventive effort of bullying, and coping strategies of bullying.
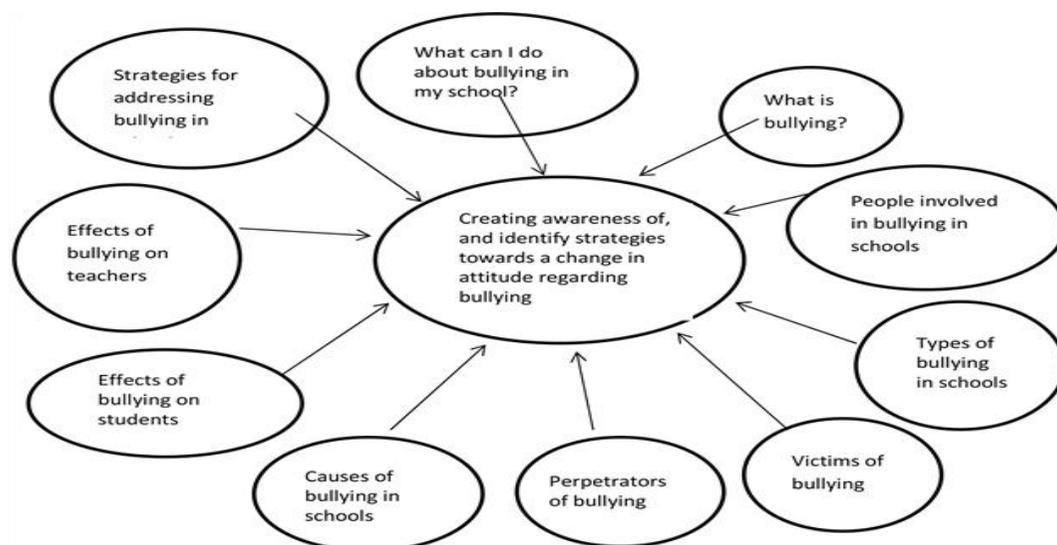
The second part of the teaching plan was concerned with coping strategies regarding bullying. It included two different forms of coping. The first one is problem-focused coping, which includes efforts to solve the problem at hand (this type of coping is commonly used when the situation may be altered). The other form of coping is emotion-focused, which includes efforts to minimize negative emotions by avoiding the stressor (it is commonly used when the person appraises that nothing can be done to eliminate the stressor).

The coping strategies educated in the current study were adopted based on **(Folkman and Lazarus (1980); Zapf and Gross (2001); Reknes et al. (2016).** The strategies included paying attention to signs of being a victim of bullying, ignoring the feeling of being bullied, confronting the perpetrator, keeping a record and documenting the bullying, getting witness, being calm and patient, getting help from supervisors or human resource representatives, following up the action taken with the administrators, and engaging in meaningful and fulfilling activities outside of work.

Implementation of the intervention was carried out in the previously mentioned settings. An overview of the education time plan at the start of the first session, content, and purpose was presented. Secondary school students were divided into groups according to the assigned setting, and secondary school students' circumstances. Each group consisted of 10-15 secondary school students approximately. The session started with a review of what had been given through the previous sessions and the aims of the new topic, taking into account the use of precise language to fit secondary school students' qualifications. As well, the session ended with a summary of its content and feedback gained from them.

The intervention was conducted through five sessions. The time of each session ranged between 30 and 45 minutes, according to the secondary school student's needs and conditions. The theoretical content about bullying was presented in two sessions in the form of lectures/discussions, followed by the coping strategies of educational sessions consisting of three sessions in the form of demonstration and demonstration using role-play and simulator, real objects, and real objects discussions and brainstorming. The researchers used effective media of conveying information as PowerPoint presentations, posters, and videos. A printed handout was developed and offered for secondary school students as a reference to be used after finishing the educational plan.

-**Evaluation phase** was done post-implementation was followed and carried out after two months by using pre and post the same tool (tool (1), part(II), and tool (2)) to compare changes in students' knowledge and behaviors regarding bullying.

Results:

A total of 300 secondary school students participated in this study, **table (1)** revealed that the mean age of primary school students was 16.23 ± 2.04, the age group from 17 to < 18 years was the prevalent (52 %); it was found that 37% of them were in first grade. Regarding residence, 80% of secondary school students were living in urban areas.

Figure (1): Portrayed that females were more than males 56% compared to 44.0%.

Figure 2 illustrated the health effect on the studied secondary school students, it was noticed that 60% of them reported that they suffered from all mentioned health effects, followed by absenteeism 16%, then reducing attention 12%, and 8% suffering from decreased self-esteem, the vast minority of the 4% was for physical problems (CVS, DM, and neurovascular problems).

Table (2): Demonstrated frequency and percentage distribution of the studied secondary school students' knowledge regarding bullying, it was noticed that there was an improvement post the coping strategies education with a highly statistically significant difference between students' knowledge regarding bullying pre/post one month of coping strategies education (P<0.001).

Table 3 revealed a highly statistically significant improvement in the secondary school students' total knowledge regarding bullying between pre and post-coping strategies education.

Table 4 showed that most of the studied secondary school students had unsatisfactory knowledge regarding the reason for bullying, coping strategies with bullying (95%), the incidence of bullying, reactions of the participants to bullying act, and preventive efforts against bullying (90%), methods of bullying (80%), and the health effect of bullying (86%) before the coping strategies education. The same table also revealed a statistically significant improvement in secondary school students' total knowledge regarding bullying post coping strategies education compared to pre and post coping strategies education at p <0.001.

Table 5 portrayed the secondary school students' most prevalent behaviors before implementing coping strategies were keeping calm and patient among the participants, confronting the perpetrator, and engaging in meaningful and fulfilling activities. One of

the notable findings is that 92% of the participant students did not pay attention to the signs of being a victim of bullying after implementing coping strategies were confronting the perpetrator 100%, engaging in meaningful and fulfilling activities 93%, keeping calm and patience; and follow up the action taken 95%, keeping a record of bullying, and getting help from the supervisors or human resource representative 94%, Ignoring the feeling of being bullied, and getting witness among 85% of the studied students. The same table also showed a highly statistically significant improvement in

the student's behaviors toward bullying between pre and post- coping strategies at p<0.001.

Table 6 clarified a highly statistically significant improvement in the secondary school student's behaviors toward bullying post- coping strategies education compared to preintervention at p <0.001. The table also shows that positive behaviors were significantly improved from 5% to 86% pre and post-coping strategies education and the negative behaviors were decreased from 80% of the studied secondary school students to 4% post-coping strategies education.

Table (1): Frequency and percentage distribution of the studied secondary school students regarding their demographic characteristics (n=300)

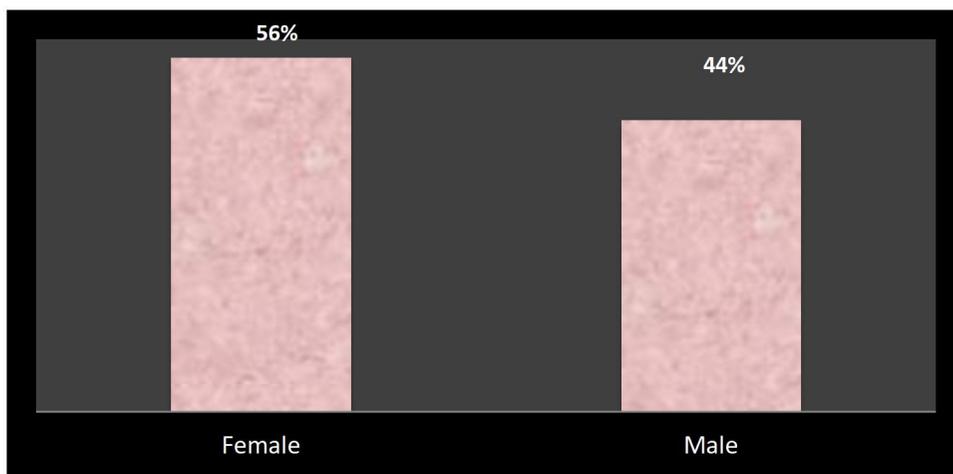| Demographic characteristics	No	%
Age:		
• 16 to < 17		48
• 17 to < 18	144	52
Mean ± SD	156	**16.23 ± 2.04**
Educational grade		
• -First grade	111	37
• -Second grade	99	33
• -Third grade	90	30
Residence		
• Urban	240	80
• Rural	60	20

Figure (1): Percentage distribution of the studied secondary school students according to their gender (n=300)
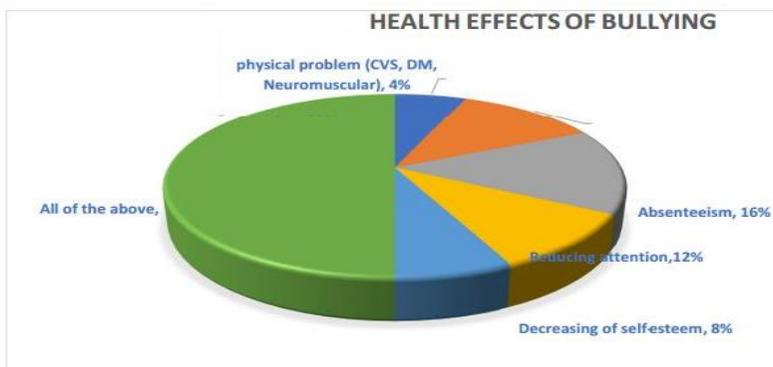
Figure (2): Percentage distribution of health effects of bullying on the studied women (n= 300).

Table (2): Frequency and percentage distribution of the studied secondary school students ' knowledge regarding bullying pre and post coping strategies education (n=300)

Secondary School students' knowledge	No =(300)		X^2	P-value
	Pre coping strategies education (%)	Post coping strategies education (%)		
Definition of bullying	20%	94%	65.393	<0.00 1*
Incidence	25%	92%	135.56	<0.001*
Types of bullying in schools	29%	89%	153.154	<0.001*
Frequencies of bullying behaviors	33%	87%	152.433	<0.001*
Sources of bullying	23%	90%	164.345	<0.001*
Causes of bullying	25%	89%	134.322	<0.001*
Reactions of participants to the bullying acts	33%	90%	103.504	<0.001*
Effects of bullying on students	39%	95%	143.064	<0.001*
Methods of bullying	35%	92%	142.343	<0.001*
The preventive effort against bullying	38%	89%	154.323	<0.001*
The health effect of bullying	37%	87%	124.321	<0.001*
Coping strategies for bullying	24%	90%	105.304	<0.001*

*highly significance at 0.001 levels   -Chi-square test

Table (3): Comparison of the total knowledge score level of the studied secondary school students regarding bullying pre and post coping strategies education(n=300)

Total knowledge	Pre coping strategies education		Post coping strategies education		X^2	P-value
	No	%	No	%		
Satisfactory	48	16	276	92	29.035	<0.001*
Unsatisfactory	252	84	21	7		

*highly significance at 0.001 levels   -Chi-square test

Table (4): Comparison of the studied secondary school student's knowledge level regarding bullying pre and post coping strategies education (300)

Knowledge variables	Pre coping strategies education		Post coping strategies education	
	Unsatisfactory	Satisfactory	Unsatisfactory	Satisfactory
	%	%	%	%
Definition of workplace bullying	92.0	8.0	5.0	95.0
Incidence of workplace bullying	95.0	5.0	5.0	95.0
Types of workplace bullying	95.0	5.0	4.0	96.0
Frequencies of bullying behaviors	92.0	8.0	5.0	95.0
Sources of bullying	90.0	10.0	10.0	90.0
Causes for bullying	85.0	15.0	12.0	88.0
Reactions of participants to the bullying acts	95.0	5.0	5.0	95.0
Effects or outcomes of bullying	90.0	10.0	10.0	90.0
Methods or models of workplace bullying	90.0	10.0	10.0	90.0
The preventive effort against bullying	95.0	5.0	5.0	95.0
the health effect of bullying	86.0	14.0	95.0	5.0
Coping strategy for bullying	88.0	12.0	8.0	92.0
X²-test 89.6 pre-intervention versus post-intervention			**P-value** -P<0.0001	

Table (5): Comparison of the studied secondary school students 'behaviors regarding bullying pre and post coping strategies education (300)

Students' behaviors regarding bullying	Not done	Done	Not done	Done
	%	%	%	%
Paying attention to the signs of being a victim of bullying	87.0	22.0	8.0	92.0
Ignoring the feeling of being bullied	82.0	18.0	8.0	92.0
Confronting the perpetrator	96.0	4.0	0.0	100.0
Keeping a record of bullying	85.0	15.0	6.0	94.0
Getting witness	82.0	18.0	8.0	92.0
Keeping calm and patience	92.0	8.0	5.0	95.0
Getting help from supervisors or human resource representative	85.0	15.0	6.0	94.0
Following up on the action taken	95.0	5.0	5.0	95.0
Engaging in meaningful and fulfilling activities	90.0	10.0	7.0	93.0
X²-test 22.8 pre-intervention versus post-intervention P-value P<0.001				

Table (6): Comparison of the studied secondary school student's total behavior change regarding bullying pre and post coping strategies education (300)

Items	Secondary school student's total behaviors			
	Pre coping strategies education		Post coping strategies education	
	No	%	No	%
Positive	15	5.0	258	86.0
Indifferent behavior	45	15.0	30	10.0
Negative	240	80.0	12	4.0
X² test Pre-intervention versus post-intervention = 19.07 P-value<0.001				

Discussion:

Bullying is a common problem among secondary school students, who are subjected to it during the school day, and their mental health suffers as a result. Furthermore, **Craig and Leschied (2019)** found that abuse had a major influence on students' physical and mental health, contributing to well-documented psychological symptoms like stress, post-traumatic stress disorder, and depression (**Syahputri & Kumara, 2018**). As a result, the goal of this study was to see

how bullying coping techniques education affected secondary school students' knowledge and conduct.

The current study findings revealed that females were more than males, these findings agreed by **Anjum et al. (2019)**, who conducted a study about "mediating bullying and strain in an educational institution in Pakistan" and reported that a higher percentage of those who exposed to bullying were female.

Concerning the health effects on the secondary school students surveyed, the current study shows that three-fifths of them reported suffering from all of the aforementioned health effects, followed by absenteeism, reduced attention, low self-esteem, and physical issues (CVS, DM, and neurovascular problems). This is a reflection of the harmful impact of bullying on secondary school students' physical and psychological well-being. A qualitative feminist grounded theory technique was used to analyze a population sample of 40 people in three provinces throughout Canada and came up with similar results. Female health is harmed as a result of bullying, according to the findings, and this was identified as the major issue for women in this research (**Chatters, 2019**).

These findings are consistent with those of **Nielsen et al., (2017)**, who reported on the health-related consequences of bullying exposure in their study, which found that bullying exposure is linked to physical, and mental health problems, post-traumatic stress symptoms, and exhaustion. Bullying had a long-term influence on absenteeism, according to the findings. In a study about "student bullying, coping techniques, and health problems," **Defoe (2018)** found similar results. Bullying victims may experience and report psychosomatic and physiological ailments, as well as psychological issues such as anxiety and depression symptoms, according to the research. Furthermore, fifty percent of the employees have demonstrated increased absenteeism. Bullying has been linked to serious health issues in victims, including anger, anxiety, sleep disorders, fatigue, concentration disorders, depression, and somatic disorders (**Einarsen et al.,**

2011; Karabulut, 2016). Bullying can also lead to severe mental health problems such as major depressive disorder, and symptomology that resembles post-traumatic stress disorder suicide (**Rugulies et al., 2019**).

As regard**s** secondary school students' knowledge about bullying, it was noticed that there was an improvement post the coping strategies education with a highly statistically significant difference between students' knowledge regarding bullying pre and post-education. From the researchers' point of view, this result reflects the positive effect of coping strategies education, which meets the secondary school students' needs and provides them with sufficient knowledge regarding bullying. The current study showed that most of the studied secondary school students had unsatisfactory knowledge regarding the reason for bullying, and coping strategies with bullying with a statistically significant improvement in secondary school students' total knowledge. This level of knowledge might be due to the current study setting did not have any anti-bullying policies to be followed on bullying events. Even there is no educational training regarding bullying or coping strategies to deal with workplace bullying.

This conclusion is consistent with **Craig and Leschield (2019)**, who found significant heterogeneity in how bullying was described, as well as variability in the ability to intervene to stop the violence. The findings of the anti-bullying training module on senior high school facilitators were reported by **Syahputri and Kumara (2018)**, who found that peer facilitators had improved their knowledge and skills in anti-bullying presentations. An anti-bullying intervention program was done by **Amse, (2019**) and found to be effective. The intervention program had a positive effect on all outcome variables: awareness, knowledge, attitude, self-efficacy in defense behavior, and defense behavior result expectancies. In contrast to these findings, **Chatters (2019)** found no significant differences in knowledge or skills between the taught and non-trained groups when it came to bullying.

These findings are supporting the first research hypothesis.

Finding of the present study portrayed that the secondary school students' most prevalent behaviors before implementing coping strategies were keeping calm and patient among of the participants but after implementing coping strategies were all confronting the perpetrator, most of them were engaging in meaningful and fulfilling activities, keeping calm and patience; and follow up the action taken, keeping a record of bullying, and getting help from the supervisors, Ignoring the feeling of being bullied, and getting witness with a highly statistically significant improvement in the student's behaviors toward bullying between pre and post- coping strategies. These findings may be referred to as a lack of awareness of the studied students about the phenomenon of bullying. Besides, they were not equipped with any training. Additionally, there are no policiesthat help them cope with it.

These findings are similar to many studies that indicated that avoidance or non-active goal-oriented coping behaviors are common *(***Einarsen et al., 2020**)*. Moreover, the most adopted behaviors by the women after coping strategies education were variable. Confronting the perpetrator was reported by all the studied students, engaging in meaningful and fulfilling activities, keeping calm and patient; and follow up on the action taken, keeping a record of bullying, getting help from the supervisors or human resource representative, ignoring the feeling of being bullied, and getting witness was reported by most of the studied women after the intervention. This finding might reflect the benefit they gainfrom the training on how to cope positively with the events of bullying.

Based on an intervention program aiming to equip students with optimal strategies to deal with bullying victimization in Greece, **Roussi-Vergou et al., (2018)** found four categories of coping strategies, these four categories include reduced optimism, improving the relationship with the bully, wishful thinking, and avoidance. In addition, how children cope with bullying victimization displays gender differences **(Kristensen & Smith, 2018).**

Findings of the current study clarified that positive behaviors were significantly improved and the negative behaviors were decreased post coping strategies education. The study results are in the same line as **Ali et al., (2020)** who conducted a study on " Effect of Coping Strategies Education on Knowledge and Behaviors of Women Experienced Workplace Bullying "and reported that positive behaviors were considerably improved after the intervention, with the majority of the women adopting positive behaviors in the post-intervention and follow-up phases, compared to their pre-intervention level. When compared to their preintervention phase, the majority of them showed a decrease in negative behaviors during the post and follow-up phases. This finding reflects the impact of coping strategy instruction on improving students' behaviors in the current study. Similary, **Escartin, (2016)** studied " Insights into bullying: Psychosocial drivers and effective interaction" and found that the majority of the outcomes were favorable, indicating that bullying treatments are more likely to affect awareness, attitudes, and self-perceptions. This improvement might be referred to as the education they receive regarding bullying and the coping strategies they are taught during the intervention.

Conclusion:

Based on the results of the present study, the research hypotheses were supported. The present study concluded that coping strategies education had a positive effect on improving knowledge and behavioral change among secondary school students exposed to the coping strategies education compared to pre-intervention of coping strategies education**.**

Recommendations:

Based on the findings of the present study, the following recommendations were suggested: -

- Community health nurse plays an important role in providing continuous

health educational program regarding bullying and its harmful effects should be taught to secondary school students.

- The community and schools have to conduct as well as implement the program for improving awareness regarding the bad effects of bullying

- Informal measures such as support from the schools, highlighting bullying problems, increasing awareness, and providing training strategies are also suggested.

- Playground supervision should be monitored and students are monitored within their classes, restrooms, the cafeteria, and other areas which were noted in the school survey as hot spots for bullying.

- Ensure a school rule entitled no teasing no put-downs is established and enforced

- Ensure a foolproof confidentiality system to report acts of bullying from both victims and witnesses where students may report acts of bullying without fear of retaliation.

- Provide schoolwide co-curricular activities which are designed to build students' self-esteem e.g. talent showcasing, interests, hobbies, and abilities.

- Provide students with opportunities to discuss bullying and enlist their support in defining bullying as unacceptable behavior. One way to begin a discussion is to conduct a session on current events with bullying as a topic. Students may share views and experiences.

- Involve students in establishing classroom rules against bullying. Such rules may include a commitment from the teacher not to look the other way when bullying incidents occur.

- Develop a classroom action plan so that students know what to do when they witness a bullying incident.

- Take immediate action when bullying is observed or reported. By taking immediate action and dealing directly with the bully, adults support both the target and the witnesses.

- Confront bullies in private. Engaging the bully in front of peers may enhance

the bully's status and power or lead to further aggression.

- Notify parents of both the bully and the target and try to resolve the problems as soon as possible, including referrals to counseling when appropriate.

- Psychiatric health nurse plays an important role in providing emotional support to someone who has been hurt by offering kind words in private and helping them through the next steps.

- Further research needs to be done on determining how family intervention can assist in the prevention of bullying and about harmful effects of bullying among children and a comparison study between adults and children.

References:

Amse, J. (2019). Evaluation of the effectiveness of anti-bullying intervention program" survivors." Communicationstudies. The University of Twente. https://essay.utwente.nl/65998/1/Amse%20Joanne%20-s%201128566%20scriptie.pdf

Anjum, A., Muzzam, A., Manzoor, F., Visvizi, A., & Nawaz, R. (2019). Mediating bullying and strain in higher education institutions: The Case of Pakistan. Sustainability. (11), 2244. doi:10.3390/su11082244

Boden, J. M., van Stockum, S., Horwood, L. J., & Fergusson, D. M. (2016). Bullying victimization in adolescence and psychotic symptomatology in adulthood: Evidence from a 35-year study. Psychological Medicine, 46(6), 1311–1320.

Chatters, S. J. (2019). Impact of bullying prevention training on the knowledge, attitude, and behavior of pre-education majors (future trainers). Graduate thesis and dissertations. The University   of

Chester, K. L., Callaghan, M., Cosma, A., Donnelly, P., Craig, W., Walsh, S., & Molcho, M. (2015). Cross-national time trends in bullying victimization in 33 countries among children aged 11, 13, and 15 from 2002 to 2010. The European Journal of Public Health,

25(Suppl. 2), 61–64.

Chu, X.-W., Fan, C.-Y., Lian, S.-L., & Zhou, Z.-K. (2019). Does bullying victimization influence adolescents' psychosocial problems? A three-wave longitudinal study in China. Journal of Affective Disorders, 246, 603–610.

Cooper, J., Walker, J., Askew, R., Robinson, J., & McNair, M. (2011). Students' perceptions of bullying behaviors by Nursing faculty. Issues in Educational Research, 21(1), 1- 21.

Craig, K., & Leschied, B. A. (2019). Preservice teachers' knowledge and attitudes regarding school-based bullying. Canadian Journal of education, 34(2), 21-33.

Defoe, D. (2018). Bullying at schools, coping, strategies, and health problems. Psychology. https://www.psycholawlogy.com/2018/02/06/bullying- work-legal-organizations-coping-strategies-health-problems/#comments

Ebrahim, R. M. R., & Elrefaey, S. R. I. (2018). The relationship between bullying, achievement factors, and self-esteem among nursing students. International Journal of Novel Research in Health care and Nursing, 5(3), 476-489. Available at www.noveltyjournals.com

Einarsen, S. V., Hoel, H., Zapf, D. & Cooper, C. L. (2020). Bullying and harassment in the places: Theory, research, and practice. Taylor & Francis Group. Boca Raton.

Escatin, J. (2016). Insights into bullying: Psychosocial drivers and effective interaction. Psychology Research and Behavior Management, 9, 157–169. https://doi. org/10.2147/PRBM.S91211.

Evans, C. B. R., Cotter, K. L., & Smokowski, P. R. (2017). Giving victims of bullying a voice: A qualitative study of post bullying reactions and coping strategies. Child and Adolescent Social Work Journal, 34(6), 543–555.

Folkman, S., & Lazarus, R. S. (1980). An analysis of coping in a middle-aged community sample. J Health Soc Behav, 21, 219 – 39.

Ford, R., King, T., Priest, N., & Kavanagh, A. (2017). Bullying and mental health and suicidal behavior among 14- to 15-year-olds in a representative sample of Australian children. Australian & New Zealand Journal of Psychiatry, 51(9), 897–908.

Kristensen, S. M., & Smith, P. K. (2018). The use of coping strategies by Danish children classed as bullies, victims, bully/victims, and not involved, in response to different (hypothetical) types of bullying. Scandinavian Journal of Psychology, 44(5), 479–488.

Lazarus, R. S., & Folkman, S. (1984). Stress, Appraisal, and Coping, Springer, New York, NY, USA.

Miranda, R., Oriol, X., Amutio, A., & Ortúzar, H. (2019). Adolescent bullying victimization and life satisfaction: Can family and school adult support figures mitigate this effect? Revista de Psicodidáctica (English Ed.), 24(1), 39–45.

Moore, S. E., Norman, R. E., Suetani, S., Thomas, H. J., Sly, P. D., & Scott, J. G. (2017). Consequences of bullying victimization in childhood and adolescence: A systematic review and meta-analysis. World Journal of Psychiatry, 7(1), 60–76.

Nielsen, M. B., Gjerstad, J., Jacobsen, D. P., & Einarsen, S. V. (2017). Does the ability to defend moderate the association between exposure to bullying and symptoms of anxiety? Front. Psychol. 8, 1953.

Parris, L., Varjas, K., Meyers, J., Henrich, C., & Brack, J. (2019). Coping with bullying: The moderating effects of self-reliance. Journal of School Violence, 18(1), 62–76.

Price, P. C., Jhangiani, R., & Chiang, I-C. A. (2015). Research Methods in Psychology. 2nd ed. BC campus open ed. https://opentextbc.ca/researchmethods/

Reknes, I., Einarsen, S., Pallesen, S., Bjorvatn, B., Moen, B. E., & Mageroy, N. (2016). Exposure to bullying behaviors at work and subsequent symptoms of anxiety: The moderating role of individual coping style. Industrial Health, 54, 421-432.

Roussi-Vergou, C., Andreou, E., Didaskalou, E., Slee, P., & Skrzypiec, G. (2018). "Coping with bullying" program in Greek secondary schools: An evaluation. In J. U. M. Gordon (Ed.), Bullying prevention and intervention at school (pp. 95–118). Springer

Rugulies, R., Madsen, I. E., Hjarsbech, P. U., Hogh, A., Borg, V., Carneiro, I. G., Aust, B. (2012). Bullying at work and onset of a major depressive episode among Danish female eldercare workers. Scandinavian Journal Environment and Health, 38(3), 218-227.
http://dx.doi.org/10.5271/sjweh.3278.

Savahl, S., Montserrat, C., Casas, F., Adams, S., Tiliouine, H., Benninger, E., & Jackson, K. (2019). Children's experiences of bullying victimization and the influence on their subjective well-being: A multinational comparison. Child Development, 90(2), 414–431.

Ali, M. H., Elsherbeny, M. M., Ahmed, A., &Hussein, M. M. (2020): Effect of Coping Strategies Education on Knowledge and Behaviors of Women Experienced Workplace Bullying, Evidence-Based Nursing Research Vol. 2 No. 3

Syahputri, W. H., & Kumara, A. (2018). Validation module "sharing" for facilitators of the anti-bullying program in senior high school students. In B. F. Hinitz (2018). Impeding bullying among young children in international group contexts. Springer. The USA. Pp. 158

Undheim, A. M., Wallander, J., & Sund, A. M. (2016). Coping strategies and associations with depression among 12- to 15-year-old Norwegian adolescents involved in bullying. The Journal of Nervous and Mental Disease, 204(4), 274–279.

World Health Organization. (2020). Social determinants of health and well-being among young people. Health behavior in school-aged children. http://www.euro.who.int/__data/assets/pdf_file/0007/167425/E96444_part2_5.pdf

Yang, F., & Zhang, L. (2018). Problem behavior patterns of victims of school bullying in rural China: The role of intrapersonal and interpersonal resources. Children and Youth Services Review, 93, 315–320.

Zapf, D., & Gross, C. (2001). Conflict escalation and coping with bullying: A replication and extension. Eur J Work Organ Psychol 10, 497-522.

Zhang, H., Zhou, H., & Cao, R. (2019). Bullying victimization among left-behind children in rural China: Prevalence and associated risk factors. Journal of Interpersonal Violence. Advance online publication. https://doi.org/10.1177/0886260519843287