Effect of a Training Program about Violence against Women on Nursing Students' Knowledge, Opinions, and Professional Role Readiness: A quasi-experimental Evaluation

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Abstract

Background: Violence against women is a public health concern that require urgent resolution. Undergraduate nursing education is crucial for shaping attitudes and facilitating the development of a comprehensive understanding about domestic violence. **Aim:** To evaluate the effect of a training program about violence against women on nursing students' knowledge, opinions, and professional role readiness. **Material and methods: Design:** A quasi-experimental one group pre- post-follow up assessment post intervention design was used. **Sample:** A total sample of 186 students in the fourth level of the faculty of nursing, Mansoura University. **Tools:** Data were collected using the sociodemographic and history of exposure form, Physician Readiness to Manage Intimate Partner Violence Survey including readiness scale, knowledge, and opinions. The session started with baseline assessments using the questionnaire, training sessions, the posttest was conducted immediately after completing the sessions. Follow up was performed after one month. **Results:** The results indicated that the mean score of the students' readiness, knowledge, and intimate partner violence opinion scales improved after the training sessions with a significant difference ($p<0.001$). **Conclusion:** The violence against women training program is an effective method for educating and enriching nursing students' knowledge, opinion, and professional role readiness. **Recommendations:** Provide a well-planned training program about violence against women to increase the nursing students' knowledge, opinions, and professional role readiness.

Keywords: Training program; violence against women; nursing students; knowledge; opinions, readiness.

Introduction

Violence against women (VAW) is a major public and clinical health issue that requires immediate attention. Women's human rights are violated by violence against them. Internationally, one of the most prevalent types of VAW, domestic violence (DV), also known as intimate partner violence (IPV), happens between current or former IP **(World Health Organization [WHO], 2022)**. IPV could include physical, emotional, sexual, cultural/spiritual, and financial violence, with a wide range of controlling, coercive and intimidating behaviors **(Webster et al., 2018)**. According to WHO (2017), 38% of all female killings globally are committed by male partners, and one in three women encounter physical and/or sexual violence during their lifetimes. With 37% of all cases of DV against women worldwide, the Eastern Mediterranean region comes in second **(WHO, 2020)**.

According to statistics from the National Council for Women (NCW), up to 86% of wives may experience domestic violence each year, putting almost 8 million Egyptian women at danger. The majority of married men—four out of every five—have used psychological abuse against their wives. Also, about 50% of young women have reported experiencing physical abuse at the hands of either their brothers or fathers. **(Naguib, 2021)**.

WHO (2012) stated that IPV could occur in all socioeconomic levels, religious, cultural, ethnic, racial, and sexual orientation groups, regardless of income or social status. IPV has a detrimental effect on women's emotional and physical health, causing them direct bodily harm, a variety of chronic health conditions, and prohibiting them from being actively involved in professional life. **(Gomez - Fern ´ andez´, Goberna-Tricas, & Paya-Sanchez, 2017; Tambag & Turan, 2015)**.

IPV is a problem that frequently arises in medical settings and is associated with negative health outcomes (Kramer, Lorenzon, & Mueller, 2004). Around three times as many women who have experienced abuse as women who have not use health care. Even though abuse victims constantly interact with nurses, doctors, and other primary healthcare professionals, many Health Care Professionals (HCPs) fail to detect the violence they have witnessed **(WHO, 2013)**. Women prefer to hide their own experiences with violence until specifically questioned by an HCP, therefore it is possible for them to receive medical care for physical injuries without disclosing that they are abuse victims **(Baird, Saito, Eustace, & Creedy, 2015; Di Giacomo, Cavallo, Bagnasco, Sartini, & Sasso, 2017)**.

In many cases, nurses and midwives are the first people spousal abuse victims speak to, and it is their responsibility to help those who encounter DV. Even though many are unprepared to respond and frequently necessitate proper training **(Alhalal, 2020; Kalra, Hooker,**

Reisenhofer, Di Tanna, & Garcia-Moreno, 2021). The WHO urges the immediate addition of DV material to all pre-registration training **(Hutchinson et al., 2020)**.

HCPs acknowledged that lack of knowledge was the biggest obstacle to treat, investigate, and diagnose VAW **(Baird et al., 2015; Crombie, Hooker, & Reisenhofer, 2017; Gomez-Fern ´ andez ´ et al., 2017)**. Despite the fact that doctors agree that it is important to identify abused women, they frequently avoid inquiring about violence in patients and are ill-equipped to deal with it when

they do. This is a result of inadequate knowledge on how to assist IPV victims and direct them to beneficial services **(Baird et al., 2015; Doran & Hutchinson, 2017; Ramsay et al., 2012)**.

Additionally, Regular inquiry is hampered by a variety of factors, such as underestimating the seriousness of the issue, feeling unprepared, being unsure of how to react or answer to inquiries, worrying about privacy, not having enough time to deal with issues properly, having prejudice against abuse victims, having language barriers, and thinking that IPV is outside the purview of their professional duties **(Baird et al., 2015; Di Giacomo et al., 2017; Doran & Hutchinson, 2017; Tambag & Turan, 2015)**.

The ability of healthcare professionals to satisfy the physical, emotional, confidentially, and security needs of abused women could be improved by providing them with training and assistance **(Kalra et al., 2021)**. Undergraduate nursing education is crucial for shaping attitudes and facilitating the development of a comprehensive understanding of DV. Undergraduate nursing education must continually emphasize the link between violence and poor health; this will enable students to recognize exposure to violence and respond appropriately when treating patients in clinical settings in the future **(Doran & Hutchinson, 2017; Doran et al., 2019)**.

Little research has been conducted to assess nursing students' knowledge, attitudes, and role readiness about DV **(Doran & Hutchinson, 2017)**. Furthermore, studies document that effective undergraduate educational interventions are lacking. In order to ascertain if a VAW training program would enhance undergraduate nursing students' understanding of and opinions towards IPV as well as their readiness for professional roles among future nurses reacting to IPV, this study's objective is to examine these factors.

Aim of the Study

This study aimed to determine whether a VAW training program would improve undergraduate nursing students' awareness and opinions toward IPV as well as their professional role readiness among future nurses responding to IPV.

Research Hypothesis

H_1: Nursing students who received training program about VAW will demonstrate a satisfactory level of professional role readiness than the pre-training schedule.

H2: Nursing students who received training program about VAW will have high knowledge score in post-test than pre-test.

H3: Opinions of nursing students toward DV will improve based on the training program.

Method

Research Design

A quasi-experimental one group assessment pre- post- and follow up post intervention design was utilized in the current study during the first term of the academic year 2021-2022.

Variables under the Study

The training program about violence against women is the independent variable. Students' knowledge, opinions, and professional role readiness are dependent variables.

Setting

In Egypt's Mansoura University's Nursing Faculty, this study was carried out.

Sample

A convenient sample technique was used to select the nursing students in this study, 186 nursing students voluntarily enrolled in the training on VAW. Students who finished the pretest were included in the study group.

Tools of Data Collection

The study tool was adapted from Physician Readiness to Manage Intimate Partner Violence Survey (PREMIS) that developed and validated by Short, Alpert, Harris, and Surprenant (2006). It is a 10-minute survey that provides a thorough and accurate assessment of the readiness of doctors and nurses to manage IPV patients. The tool examines the readiness, knowledge, and opinions related to IPV. Survey grouped into four major sections.

Section (1): Student profile that included two parts. Part A: Students sociodemographic characteristic form, which include 12 questions that inquire about age, gender, marital status, religion, residence, family type, educational level and employment status of the parents, and income level. Part B: History of exposure to DV/ IPV. This form includes five questions that inquire about type of violence witnessed, history of violence, type of violence against women's, who is the one who practicing violence and their attitude against violence.

Section (2): Circumstantial and readiness of the students that included two parts. Part A: Previous DV/IPV training and the estimated number of the training hours. Part B: Readiness scale which include eight statements asking

respondents regarding preparedness when working with sufferers of IPV. Responses ranged from one (not prepared) to seven in terms of scores (well prepared). The higher score indicating proper readiness role of student nurses.

Section (3): IPV knowledge questionnaire include 20 multiple choices, matching, and true/false questions. Each correct answer awarded one mark. The measure of IPV knowledge was the sum of the correct answers. The higher score indicating satisfactory knowledge level related to IPV.

Section (4): IPV opinions on seven points Likert scale consisted of 19 statements concerning about the attitudes and beliefs of the students. It ranged from one (strongly disagree) to seven (strongly agree). Some opinion items were intentionally worded negatively and had their scores overturned. The scale consisted of six sub-dimensions. These sub-dimensions "Preparation (9, 11 statements)", "self-efficacy (2, 4, 16, 17 statements)", "victim understanding (3, 5, 18 statements)", Victim autonomy (10, 12, 13 statements)", "risk factor (6, 7, 8, 15, 19 statements)", and "constrains (1, 4 statements)". There were 133 total points awarded. The higher score indicating positive opinion toward IPV.

Validity & Reliability of the Tools

The content validity of the adapted tool was tested by three experts in the community health nursing. The scale's Cronbach's alpha values of section two, three, and four were 0.902, 0.893, and 0.896 respectively that signifying high reliability.

A pilot Study

Twenty one students, or 10% of the target group, were asked to participate in a pilot study to test the tool's applicability, and they were then left out of the study sample.

Ethical Considerations

Approval obtained from the Faculty of Nursing Research Ethics Committee (No. P. 0259). Each student who participated in the study provided written informed consent after being first told of its purpose. The data will be considered confidential and used only for research purpose. Each students had the right to withdraw from the study at any time.

Procedure of Data Collection and program Implementation

The program content developed after reviewing the prior and current literature regarding DV/IPV using CINAHL, PubMed, ProQuest, online nursing Journals and textbooks. Five experts were requested for content validity of the program booklet and to give their opinion and suggestions. Based on their suggestions, the content was reviewed.

Four stages of implementation took place (assessment, planning, implementation, and evaluation).

Assessment stage. The students divided into 12 subgroups (15-16 students/subgroup). Aim of the study, questionnaire's components were explained by the researchers. The questionnaire (pretest) was circulated among the students in roughly 15-20 minutes.

Planning. Session plan and materials of the program were: topic, target people (4th level nursing students), date of sessions, audio-visual resources (PowerPoint presentation, and booklet), goal, learning outcomes, content, time allotted for each content, summarization, and conclusion.

Implementation. A three-week structured program was conducted where the students divided into 12 subgroups. The program included two sessions (90 and 100 minutes for the first and second session respectively) on Saturday and Wednesday that was conducted in the Labs of the Faculty of Nursing and Aweesh Elhagar Health Unit Hall. The session on VAW was taught to students by the researchers. The students who participated in the pre-test received the booklet during the sessions. Goal of the training program that the students will be able to screen and respond to women who experience DV/IPV.

Content of the training program is presented as follows. Two theoretical sessions.

1st session. An introduction focused on creating rapport with the students, as well as an explanation of the program's goal and objectives. It included information on facts regarding DV/IPV, types of violence, risk factors and effect of IPV, conditions need to be considered to screen for woman abuse, barriers of screening and why nurses are well-positioned to screen for woman abuse.

2nd session. Education on skills to foster an environment that facilitates disclosure to the nurse and techniques to raise awareness regarding disclosure, causes that an IPV victim may not be able to leave a violent relationship, the most appropriate ways to ask about IPV, actions recommended when detect a victim of IPV, stages of change, preventions of and community resources toward IPV.

Evaluation. The program was immediately evaluated, and a follow-up was conducted one month later using the same questionnaire. Throughout the follow-up, three students were not present.

Statistical Analysis

Version 20.0 of SPSS for Windows was used to conduct statistical analyses (SPSS, Chicago, IL). Continuous data were reported as means and had a normal distribution (standard deviation). Numbers and percentages were used to express categorical data. Student's T-Test was used for comparison between two for variables with continuous data while one-way analysis of variance (ANOVA) test was used for comparison among more than two for variables with continuous data. Correlation co-efficient test was used to test for correlations between two variables with continuous data.

The study's questionnaires' reliability (internal consistency) test was computed. Statistical significance was set at $p<0.05$.

Limitation of the Study

The post one month test was done on behalf of post three months test because of cancellation of three weeks of the educational semester because of Covid-19 pandemic situation.

Results

Table 1 shows 74.1% were females with mean age 22 and standard deviation, 75.8% were single, 60.8% lived in rural areas and 65.1% had nuclear family. Regarding their mothers, 38.7% had university degree education and 47.3% were housewives, whereas their fathers 36%, 37.6% completed secondary school of education and worked under the government respectively. Regarding income, 31.7% of them their income just met routine expenses and 63.4% of parents still married.

Table 2 represents that 66.7% of the student's witnessed of violence in the form of physical and economic that represented 30.6% among the students. Also, it was stated that 68.8% of the students had a history of violence, in the form of psychological and emotional 33.6% and 20.3% respectively.

Students also mentioned that 64.5% saw violence practiced by the father, husband, and mother (54.2%, 16.7%, 14.2%), respectively. The students had various attitudes against violence in the form of silent and cried (31.2%, and 24.7%) respectively and only 21.5% of the students took legal action.

Table 3 reveals that the mean score of the students' readiness, knowledge, and intimate partner violence opinion scales improved from pre-intervention to post-intervention and follow up with a significant difference ($p<0.001$). The results demonstrated several significant differences with ($p<0.001$) between the scores of the opinion subscales: as preparation, self-efficacy, victim understanding level, risk factor and constrains among the nursing students over the study period.

The association between the sociodemographic data and readiness, knowledge, and opinion mean scale score over time as shown in Table 4. The readiness and knowledge scores of the study group throughout time and sociodemographic data, such as age, domicile, mother's education, father's occupation, and mother's occupation, differed significantly. For gender and father education, there was a significant difference between readiness pre-intervention, gender, and father education while no difference over time.

The knowledge scores of the study group varied significantly according to father education, gender, and time. Family type and readiness post-intervention only showed a significant difference, but knowledge score of the study group throughout time and family type showed no significant difference. In terms of age, gender, domicile, mother and father's educational levels, family structure, and father and mother's occupations, there was no statistically significant difference between the study group's opinions throughout time and these sociodemographic variables.

Table 5 demonstrates that there was a statistically significant difference (P 0.0001) between the study group's readiness and knowledge over the course of the trial. Also, there was no statistically significant difference across the study period but a weakly positive link between the study group's readiness and opinion. Over the course of the investigation, there was no statistically significant difference between the study group's knowledge and opinions. During the study period, there was a statistically significant difference (P 0.0001) between the study group's readiness and the amount of training it received, mostly during the follow-up. Moreover, there was a marginally favorable link between the study participants' knowledge, opinions, and training.

Figure 1 illustrates that only 74 (39.7%) had previously attended training on Intimate Partner Violence. The hours of prior training received varied from less than 30 hours to 120 hours.

Figure 2 declares that the students attended different mode of training in the form of skills -based training workshop (21.6%), lecture or a talk (18.9%), nursing at the clinical setting and classroom training (14.9%).

Table 1: Socio-demographic Characteristics of the Students (n=186)

Items	N	%
Age (years)		
21 – < 23	125	67.2
23 – 24	61	32.8
Mean (SD)	22.2 (0.9)	
Gender		
Male	48	25.8
Female	138	74.2
Marital Status		
Single	141	75.8
Married	44	23.7
Divorced	1.0	0.5
Residence		
Rural	113	60.8
Urban	73	39.2
Family type		
Nuclear	121	65.1
Extended	65	34.9
Mother's education		
Cannot read & write	16	8.6
Basic	45	24.2
Secondary	53	28.5
University or Higher	72	38.7
Father's education		
Cannot read & write	12	6.4
Basic	52	28.0
Secondary	67	36.0
University or Higher	55	29.6
Father's Occupation		
Governmental work	70	37.6
Free business	77	41.4
Not working	39	21.0
Mother's Occupation		
Governmental work	59	31.7
Housewife	88	47.3
Free business	39	21.0
Parents' Marital Status		
Married	118	63.4
Divorced	32	17.2
Single parent	36	19.4
Income		
In debt	25	13.4
Just meet routine expenses	59	31.7
Meet routine expenses & emergencies	53	28.5
Able to / invest money	49	26.4

Table 2: Students' History of Exposure to Domestic Violence (n=186)

Item	N	%
Violence witnessed	124	66.7
Type of violence witnessed [a]		
Physical	38	30.6
Sexual	17	13.8
Emotional	21	16.9
Psychological	10	8.1
Economic	38	30.6
Violence against students	128	68.8
Type of violence against students [b]		
Physical	20	15.6
Sexual	16	12.5
Emotional	26	20.3
Psychological	43	33.6
Economic	23	18.0
Violence practiced	120	64.5
Violence practiced by [c]		
Father	65	54.1
Mother	17	14.2
Husband	20	16.7
Relatives	18	15.0
Attitude against violence		
Silent	58	31.2
Cried	42	22.6
Responded (verbal, physical)	46	24.7
Took legal action	40	21.5

Note. [a]n=124, [b]n=128, [c] n=120.

Table 3: Intimate Partner Violence Domains Mean Scores over the Study Period

	Pre-intervention	Post-intervention	Follow-Up	ANOVA Test	
	Mean (SD)	Mean (SD)	Mean (SD)	F	P
Readiness	32.3 (13.3)	44.3 (10.4)	45.9 (7.6)	89.139	<0.001**
IPV Knowledge	33.7 (16.9)	40.2 (19.9)	45.8 (16.1)	21.624	<0.001**
Opinions					
Preparation	3.9 (1.2)	3.2 (1.6)	6.9 (2.7)	190.942	<0.001**
Self-efficacy	16.6 (4.9)	15.6 (4.0)	14.4 (4.0)	12.400	<0.001**
Victim understanding	3.5 (1.4)	5.6 (2.4)	4.4 (2.0)	52.848	<0.001**
Victim autonomy	5.0 (2.2)	5.4 (2.7)	10.0 (3.8)	162.128	<0.001**
Risk factor	14.5 (4.5)	15.7 (3.9)	15.0 (3.6)	4.643	0.010*
Constrains	6.6 (2.6)	7.7 (2.3)	8.2 (2.4)	20.442	<0.001**
Opinions Score	50.9 (10.1)	51.2 (17.5)	61.0 (13.6)	30.833	<0.001**

Figure 1. Hours of prior training among the study group (n=74)

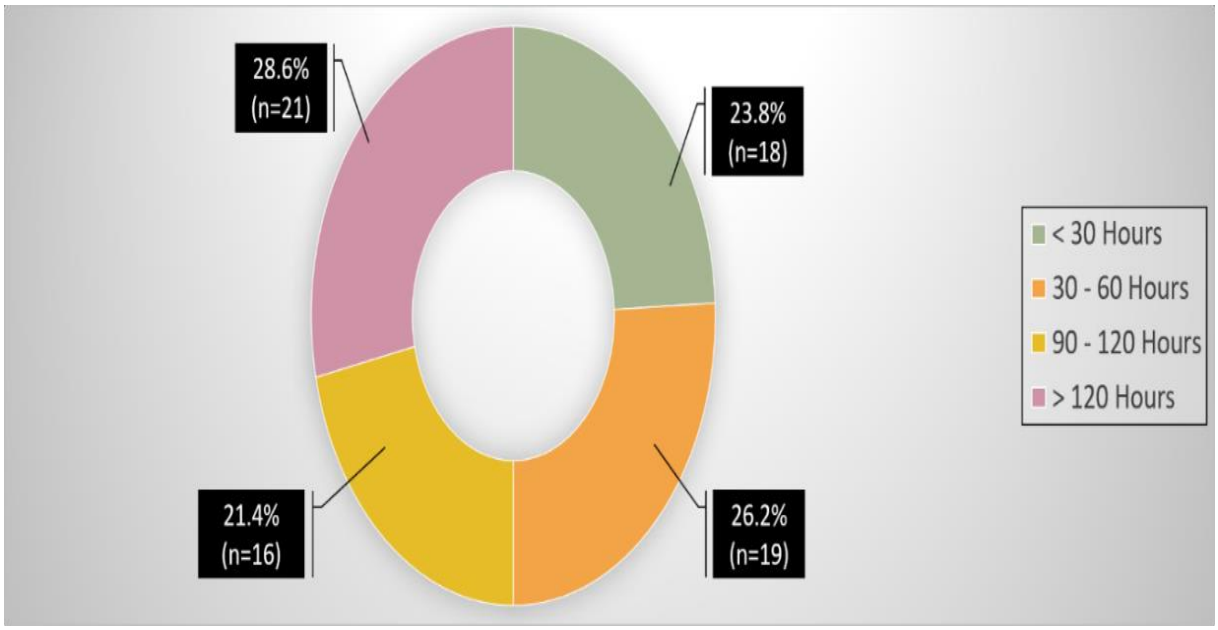

Figure 2. Mode of prior training among the study group (n=74)

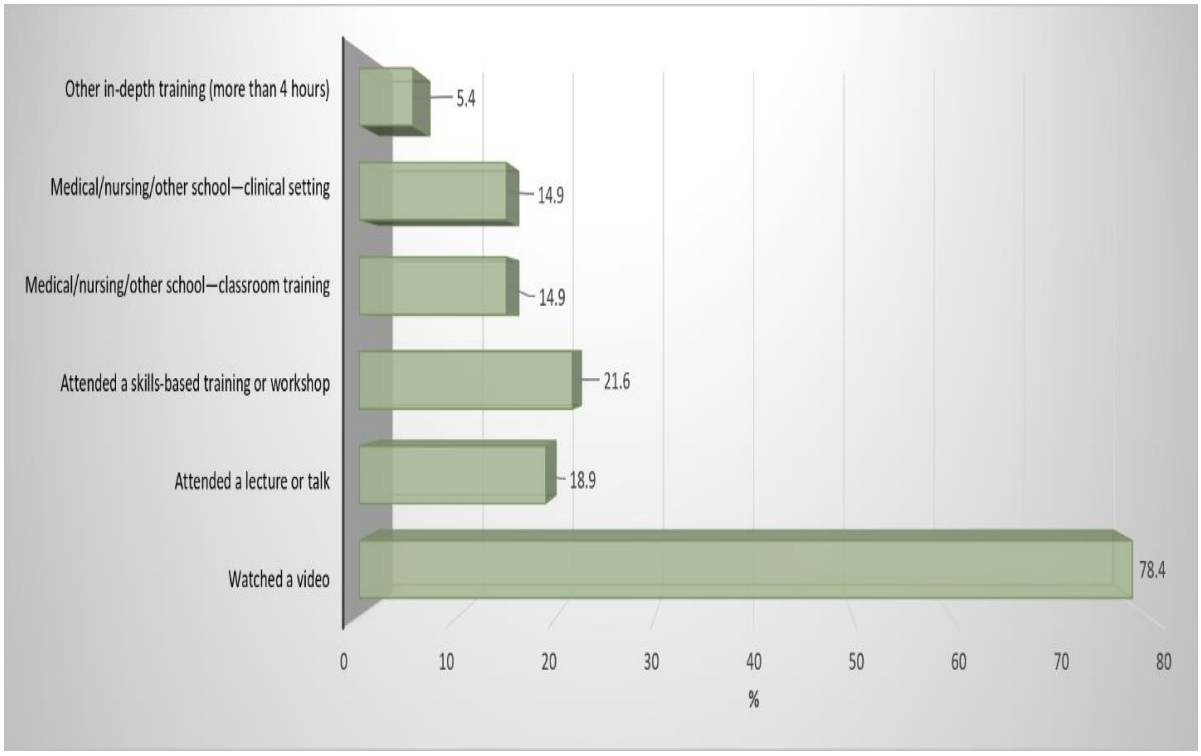

Table 4: Association between Socio-demographic Characteristics of Students and Readiness, Knowledge, and Opinion Mean Score

	Readiness			Knowledge			Opinion		
	Pre-intervention	Post-intervention	Follow-Up	Pre-intervention	Post-intervention	Follow-Up	Pre-intervention	Post-intervention	Follow-Up
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Age (years)									
21 – 22	34.7 (12.5)	45.7 (8.5)	46.9 (6.2)	36.1 (16.8)	43.8 (19.4)	49.6 (13.2)	60.5 (13.6)	49.6 (15.7)	51.5 (10.1)
23 – 24	27.6 (13.8)	41.3 (13.1)	43.8 (9.6)	28.8 (14.1)	32.9 (15.8)	37.9 (18.6)	62.1 (13.5)	54.6 (20.5)	49.7 (10.2)
Student T test [T, P]	3.514 <0.001**	2.737 0.007*	2.663 0.008*	2.926 0.003*	3.812 0.002*	4.944 <0.001**	0.750 0.454	1.838 0.068	1.168 0.244
Gender									
Male	27.2 (13.0)	44.0 (10.3	45.6 (8.3)	28.3 (13.5)	33.3 (16.5)	41.6 (16.1)	61.1 (14.2)	47.6 (11.2)	51.7 (9.9)
Female	35.4 (12.5)	44.4 (10.5)	46.1 (7.2)	37.0 (16.3)	44.4 (19.6)	48.3 (15.7)	60.9 (13.3)	53.4 (20.1)	50.5 (10.3)
Student T test [T, P]	3.874 <0.001**	0.228 0.819	0.398 0.691	3.321 <0.001**	3.512 <0.001**	2.530 0.012*	0.088 0.929	1.897 0.059	0.702 0.483
Marital Status									
Single	36.4 (12.2)	44.9 (9.7)	46.2 (6.7)	38.9 (14.7)	47.1 (18.0)	50.0 (15.4)	60.7 (12.8)	51.2 (17.9)	50.6 (10.2)
Married	26.0 (12.9)	43.5 (9.8)	47.1 (7.5)	27.0 (13.1)	30.5 (14.3)	40.9 (14.9)	61.5 (15.0)	51.9 (18.1)	51.0 (9.7)
Divorced	23.3 (10.3)	42.3 (14.4)	42.2 (11.1)	19.7 (9.6)	23.4 (11.0)	33.3 (13.4)	61.5 (15.1)	49.9 (14.9)	52.1 (11.0)
One-way Anova Test [F, P]	19.171 <0.001**	0.712 0.492	3.387 0.036*	25.429 <0.001**	30.010 <0.001**	14.934 <0.001**	0.078 0.925	0.104 0.902	0.200 0.819
Residence									
Rural	36.0 (12.3)	45.6 (8.9)	46.3 (7.3)	37.6 (15.6)	44.5 (17.7)	48.4 (15.7)	61.4 (12.7)	53.1 (19.3)	50.2 (10.7)
Urban	26.6 (12.9)	42.2 (12.1)	45.3 (8.1)	27.7 (13.0)	33.5 (15.3)	41.7 (16.0)	60.4 (14.9)	48.3 (13.9)	52.0 (9.2)
Student T test [T, P]	5.024 <0.001**	2.250 0.026*	0.878 0.381	4.504 <0.001**	4.360 <0.001**	2.828 0.005*	0.492 0.623	1.863 0.064	1.190 0.236
Family type									
Nuclear	33.4 (13.2)	45.5 (9.3)	45.9 (7.1)	36.0 (16.8)	42.0 (19.9)	47.9 (15.4)	60.5 (12.8)	51.3 (17.8)	50.7 (9.0)
Extended	30.3 (13.3)	42.0 (11.9)	45.9 (8.5)	29.6 (14.3)	36.9 (17.5)	41.9)16.8	62.0 (15.1)	51.1 (17.1)	51.3 (12.1)
Student T test [T, P]	1.531 0.128	2.228 0.027	0.048 0.962	4.925 <0.001**	1.736 0.084	2.444 0.015*	0.739 0.461	0.088 0.930	0.372 0.710
Mother's education									
Cannot read & write	30.5 (12.0)	42.6 (10.8)	43.6 (9.6)	34.4 (16.6)	39.0 (19.1)	42.3 (18.9)	60.1 (12.9)	52.6 (22.6)	52.1 (12.5)
Basic	23.2 (11.7)	41.1 (12.5)	43.5 (10.2)	22.8 (10.8)	27.0 (10.3)	36.4 (15.9)	64.2 (12.5)	50.2 (14.6)	52.7 (10.5)
Secondary	37.0 (13.0)	47.5 (7.7)	47.8 (5.5)	38.8 (16.3)	45.7 (19.2)	50.7 (13.3)	61.7 (15.4)	51.4 (15.7)	51.2 (11.4)
University or Higher	35.0 (12.1)	44.2 (10.0)	46.5 (6.1)	36.6 (15.3)	44.7 (16.5)	48.8 (15.2)	58.6 (12.7)	51.4 (19.5)	49.3 (8.2)
One-way Anova Test [F, P]	12.276 <0.001**	3.428 0.018*	3.426 0.018*	11.213 <0.001**	13.626 <0.001**	8.876 <0.001**	1.690 0.171	0.085 0.968	1.173 0.322
Father's education									
Cannot read & write	17.7 (7.9)	39.6 (16.1)	42.9 (5.4)	20.4 (9.8)	27.4 (13.1)	34.5 (10.1)	62.1 (12.8)	45.7 (5.3)	55.3 (12.8)
Basic	28.5 (12.0)	41.9 (12.4)	44.8 (9.9)	29.0 (14.2)	34.3 (16.5)	40.1 (16.1)	61.5 (14.7)	54.9 (22.1)	49.1 (9.6)
Secondary	35.9 (13.2)	45.7 (9.3)	46.3 (7.5)	37.9 (17.4)	41.6 (20.3)	48.0 (16.2)	62.0 (12.6)	50.5 (14.8)	53.3 (11.8)
University or Higher	34.9 (12.7)	45.7 (7.1)	47.1 (5.2)	36.1 (15.0)	46.9 (17.1)	50.9 (14.6)	59.0 (14.0)	49.9 (17.2)	48.8 (6.6)
One-way Anova Test [F, P]	9.750 <0.001**	2.527 0.059	1.539 0.206	6.656 <0.001**	12.122 <0.001**	7.040 <0.001**	0.572 0.634	1.331 0.266	3.406 0.019*
Father's Occupation									
Governmental work	33.2 (13.8)	44.6 (9.4)	46.7 (7.6)	34.3 (16.1)	41.8 (18.7)	47.6 (15.3)	61.7 (11.8)	49.0 (14.5)	49.7(9.3)
Not working	26.0 (10.4)	40.2 (14.6)	43.5 (8.4)	23.7 (11.3)	27.4 (13.3)	34.5 (17.0)	62.4 (14.3)	53.4 (21.4)	53.5 (12.0)
Free business	34.8 (13.3)	46.0(8.0)	46.4 (7.1)	38.3 (15.8)	45.3 (18.0)	49.8 (13.9)	59.7 (14.7)	52.2 (17.8)	50.7 (9.8)
One-way Anova Test [F, P]	6.131 0.003*	4.344 0.014*	2.603 0.077	12.202 <0.001**	14.138 <0.001**	14.016 <0.001**	0.652 0.522	0.972 0.380	1.769 0.173
Mother's Occupation									
Governmental work	31.0 (12.7)	45.0 (7.9)	46.2 (6.9)	34.1 (16.4)	39.9 (19.2)	46.7 (16.0)	60.7 (16.1)	51.8 (19.6)	50.7 (8.0)
Housewife	36.3 (12.6)	45.5 (8.4)	46.9 (6.1)	37.8 (14.8)	45.9 (18.0)	50.0 (13.6)	60.5 (11.8)	52.0 (18.2)	49.5 (9.9)
Free business	25.3 (12.7)	40.3 (15.7)	43.1 (10.6)	24.0 (11.1)	27.9 (13.1)	34.8 (17.1)	62.6 (13.5)	48.8 (11.9)	54.5 (12.7)
One-way Anova Test [F, P]	10.695 <0.001**	3.730 0.026*	3.571 0.030*	11.997 <0.001**	14.297 <0.001**	13.695 <0.001**	0.351 0.704	0.487 0.615	3.364 0.037*
Parents' Marital Status									
Married	38.3 (11.2)	46.4 (7.8)	47.7 (5.6)	40.3 (15.0)	48.8 (16.7)	52.1 (13.8)	61.6 (14.2)	51.2 (17.2)	50.6 (10.3)
Divorced	22.2 (9.8)	44.6 (12.0)	44.8 (6.6)	23.1 (10.8)	26.1 (12.8)	37.3 (12.4)	59.3 (11.6)	48.5 (13.5)	51.9 (8.8)
Single parent	21.9 (10.6)	36.9 (12.9)	40.9 (11.2)	21.4 (10.2)	24.8 (11.4)	32.6 (15.1)	60.6 (13.4)	53.6 (21.3)	51.1 (10.8)
One-way Anova Test [F, P]	48.538 <0.001**	12.926 <0.001**	13.267 <0.001**	38.641 <0.001**	51.158 <0.001**	34.614 <0.001**	0.357 0.700	0.736 0.481	0.203 0.81

Table 5: Correlation between Opinion, Readiness, and Knowledge over the Study Time

	Readiness		Knowledge		Amount of training	
	R	P	R	P	R	P
Pre-Intervention						
Readiness	-	-	0.827	<0.001**	0.026	0.873
Knowledge	0.827	<0.001**	-	-	0.050	0.754
Opinion	0.085	0.249	0.113	0.124	0.141	0.374
Post-Intervention						
Readiness	-	-	0.386	<0.001**	0.101	0.523
Knowledge	0.386	<0.001**	-	-	0.018	0.910
Opinion	0.119	0.106	0.004	0.957	0.104	0.512
Follow-Up						
Readiness	-	-	0.540	<0.001**	0.323	0.037*
Knowledge	0.540	<0.001**	-	-	0.236	0.132
Opinion	0.102	0.166	0.072	0.326	0.118	0.458

Discussion

IPV is a major problem in both Egypt and worldwide. It is important for nursing students to have knowledge and awareness against women violence since after graduating, they will start to work and interact with women who have been exposed to violence. For that reason, this study was aimed to assess the effect of VAW training program on the knowledge, opinions, and professional role readiness of nursing students.

The current study entitled that 60.1% of the nursing students did not previously attend any training on IPV. This is in agreement with a Tanzanian study conducted by **Ambikile, Leshabari, and Ohnishi, (2020); Baird et al., (2015); Sabancıogulları, Tas¸kın Yılmaz, and Çakmaktepe, (2016)** where correct diagnosis and treatment of IPV for nursing and midwifery competency, IPV education and training remains inconsistent and insufficient. **Dikmen and Marakoglu, (2018)** reported that only 6.5% of the students received IPV training.

This study recognized that about two-third of students had witnessed violence and had a history of violence with psychological and emotional type of violence more exposed. In most cases, the committer was father and husband. This is in agreement with **Öztürk, (2021)** reported one-fifth of students had experienced domestic violence and half had experienced psychological violence. In most cases, the perpetrator was the father. Similarly, **Daglar, Bilgiç, and Demirel, (2017)** summarized that 20.5%–26.2% of students were exposed to violence, mainly psychological violence within the family. **Dikmen and Marakoglu, (2018)** also explained that exposure to or witnessing domestic violence could be an important factor contributing to the committing of violent acts by an individual. Moreover, it was stated that witnessing VAW may be an important factor influencing one's understanding of the seriousness of IPV for women's health. Hence, even though it has been recognized that personal experiences affect attitudes toward violence, the current study uniquely found that there was no significant correlation between the scores of the students on knowledge, readiness, and opinion over the time of the study and past violent experiences or having witnessed violence. This is in agreement with the finding of the study by **Öztürk, (2021)**.

Nursing students in the current study demonstrated a significant improvement in knowledge towards IPV post and follow up the educational sessions. This is in agreement with **Doran and van de Mortel, (2017)** who reported that Australian nursing students demonstrated a significant, mildly positive improvement in knowledge of, and attitudes towards DV. In accordance with **Ison et al, (2020)** students' understanding of the behaviors that constitute DV improved post-intervention and educational preparation of students is important. This is also in conformity with numerous studies revealed significant improvements in DV knowledge, communication, understanding, self-efficacy and/or confidence to assist DV victims following DV simulations in concert with other strategies such as scripts, videos, and presentations among third year Spanish nursing students that was according to **Jiménez-Rodríguez et al., (2020)** and fourth year medical students in Mozambique in a study by **Manuel et al, (2021).** This is also supported by the results of a scoping review conducted by **Aljomaie et al, (2022).** that sightseen health care delivered to those experiencing DV within primary health care settings in America, the United Kingdom, Brazil, and Sweden, identified deficit of educational preparation as an obstacle to comprehensive health care and an urgent need for nurses to be better educationally prepared.

The current study revealed positive improvement in the opinions of the nursing students towards IPV post and follow up the sessions. This is in accordance with **Sis Çelik and Aydın, (2019); Manuel et al, (2021)** have demonstrated improved skills and attitudes of the nursing students following DV education sessions. Similarly, several studies **Alhalal, (2020); Kaplan** and **Komurcu; Blumling et al., (2017); Sundborg et al., (2018); Nathan** and **Ferrara**, (**2020**) demonstrated statistically significant improvements in knowledge about and/or attitudes towards clients experiencing DV following educational program on DV have been noted with registered nurses across a range of international settings. Similarly, **Öztürk, (2021)** confirmed a significant difference between violence education and

attitude of the Turkish nursing students toward violence scores. This is supported by **Doran et al., (2017)** entitles that IPV education at foundation level must involve an exploration of attitudes and myths that require to be addressed before entering the clinical practice.

The current study entitled improvement the readiness of the nursing students towards IPV following the educational sessions. This is in accordance with **Sis Çelik** and **Aydın, (2019)** revealed improvement the ability of the midwives and Turkish student nurses to recognize the signs of violence and their views on their professional roles in addressing violence compared to a control group following a two-hour lecture on DV for 14 weeks. Nurses are the most preferred health professional women feel comfortable making a disclosure of DV. According to **Pinar** and **Sabanciogullari, (2019)** Turkish nurses must, at the very least, receive thorough undergraduate nursing education on gender-based violence in order to prepare a workforce that has positive attitudes, is committed, and is prepared for their crucial clinical role in identifying and responding to DV. This is in line with their report that Turkish nurses must understand the link between exposure to violence and women's ill health in order to respond appropriately. Also, **Crombie et al., (2017)** entitled nursing students are best supported to train about IPV in safe environments within their undergraduate teaching so they can practice their skills and develop confidence to effectively intervene in real peoples' lives once they graduate and enter the health workforce. Similarly, **Öztürk, (2021)** reported that most students stated that the course increased their understanding of the roles of health professionals. The current study presented that there were significant differences between the readiness and knowledge score of the study group over time and age, residence, mother education, father, and mother occupation. Further, there were no significant difference between opinion of the study group over time and sociodemographic data in the form of age, gender, residence, mother and father education, family type, father, and mother occupation. This is in accordance with **Dikmen** and **Marakoglu, (2018); Öztürk, (2021); Daglar et al., (2017)** demonstrated significant differences were found between the AORVS, AVS mean score and gender, grade level, raising awareness, and recognition of the role of health professionals with lower scores in the experimental group.

Conclusion

This study exhibits the effectiveness of VAW training program in exchanging opinions, and intensifying awareness and knowledge of the background, prevalence, batterers, barriers, significant associated burden of illness of DV, referral sources, stages of change, stages of IPV victim understanding, prevention and nurses' role readiness to support victims. Nurses need to feel comfortable to ask questions to identify DV and support women and children with interventions to reduce the burden of illness and save lives. Additional research may identify the best combination of educational practices at undergraduate level to achieve this outcome.

Recommendations

Core curriculum must include courses which teach IPV and workplace violence to equip graduates with a more comprehensive understanding of the importance and meaning of the subject so that they can respond adequately to cases of IPV in clinical settings.

The curriculum should be reevaluated in different regions and faculties to see how it can be generalized and developed for all nursing students.

A long-term, active, and well-planned continuous training program would be more effective, proactive, and inclusive clinical approach toward IPV to change professional perspective.

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