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Effect of Educational Training Intervention on Overcoming Nurses' Barriers to Screening Intimate Partner Violence against Women in Outpatient Clinics

Mervat Mostafa Arrab*, Hanady Shaaban Ibrahim

Family and Community Health Nursing, Faculty of Nursing, Menoufia University, Egypt
*Corresponding author: ibr4ever73000@hotmail.com

Abstract Intimate partner violence (IPV) against women is an important public health problem facing women globally. Many barriers facing nurses and other healthcare providers to screen abused women were reported in many studies. **Aim:** The aim of the current study had twofold; **First,** to examine barriers to intimate partner violence screening among nurses in outpatient clinics. **Second,** to evaluate the effect of an educational training intervention on nurses for barriers to intimate partner violence screening. Study **design: A** Quasi-experimental study was used. **Setting:** The study was conducted in outpatient clinics at two hospitals (University Hospital and Education Hospital in Shebin El-Kom City. Menoufia Governorate, Egypt). **Subjects:** Seventy-five nurses who completed the educational training intervention were included according to power analysis estimation. **Tools**: Self-administered questionnaire to examine the barriers for IPV screening among nurses which consisted of two parts: **part 1:** demographic data of studied nurses and **part 2:** The Domestic Violence Health Care Provider Survey instrument to investigate the barriers to IPV screening among nurses. **Results:** Nurses reported several sources of barriers based on the DVHCPS instrument items including self-efficacy, system support, victim blaming, professional role resistance, and victim provider safety. There was a highly statistically significant difference regarding barriers to IPV screening ($P<0.001$) and screening examination rate was increased by nurses ($P<0.001$) after the implementation of the educational training intervention. **Conclusion:** This study highlights the beneficial effect of the educational training intervention as an effective method in reducing the barriers for IPV screening among nurses for women attending the outpatient clinics; improving the rate of screening and periodical examination of nurses regarding IPV. **Recommendation:** In-service training courses for nurses on current updates regarding intimate partner violence screening examination technique, regular training for nurses about intimate partner violence screening tool in-addition, IPV protocol management for abused women attending outpatient clinics.

Keywords: *intimate partner violence, screening, barriers, educational training intervention*

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1. Introduction

Intimate partner violence (IPV) is "any behavior within an intimate relationship that causes physical, sexual, or psychological harm" [1]. It represents a major public threat to the health and rights of women worldwide. In a multi-country study conducted by WHO [2] revealed that, one third of all women have experienced physical and/or sexual violence by an intimate partner" [3], in addition to, it is estimated that 5.3 million incidences of IPV victimizations of women occur each year [4].

Intimate partner violence has physical, social and mental health consequences for short- and long-term [5]. Women who had experience of IPV use health services clinics more often than women with no experience of IPV [6] these visits are considered an opportunity for healthcare providers to determine women's experiences of IPV and reduce negative health consequences [7].

Healthcare providers including nurses are the foundation stone in preventing IPV, identifying abused women early, providing necessary treatment, and referral to appropriate resources. However, nurses are in the critical position to interact, detect and reply to IPV victims [8]. Lack of knowledge, heavy workload, language barriers, threats to personal safety, the healthcare hierarchy, and lack of communication and collaboration between various stakeholder groups within the healthcare system are important barriers facing providing care [9]. Nurse's barriers are lack of appropriate services and support within hospitals and in the society. Barriers to routine screening for IPV are; time constraints, lack of protocols and policies, and departmental philosophies of care that may conflict with IPV screening recommendations [10]. So, nurses' educational and training needs response will help them function autonomously within multidisciplinary teams when caring for abused women considered an urgent need for the health care system [11].

The most common women's responses to IPV are crying, hit back, hide, seek immediate safety by going to their mothers' houses, thinking of suicide, or few informed the police [12]. Emergency and primary health care settings are most important settings for identifying and help IPV victims. Healthcare settings should be equipped to manage the crisis, emotional support, information, guidance, private communication with a healthcare provider and to make connections to community-based social service agencies [13].

1.1. Significance of the Study

Violence is a worldwide event. In all societies, it is a fact of life and across all cultures, regardless of socio-economic status. In a developed country like America, women are six times more likely to be violated by intimate partners than men [14]. In Egypt, screening for IPV has the potential to improve health outcomes for women and their families, promote early detection, prompt interventions and reduction of the adverse effects of IPV [15]. Despite the importance of routine screening of IPV for all women in health care settings, it is still low as reported [16]. In Egypt 26% of married women get violated physically and/or sexually by IPV [17]. Intimate partner violence violates the basic women rights which results in serious injury or death [18]. For detection, reporting, and referring the IPV cases to the appropriate facilities nurses were in a vital situation this is with the determination of the rate of IPV among women. Different barriers facing nurses for screening include lack of information, training, protocols, and administrative support and referral and community recourses about IPV [19]. Increase detection of cases and screening rates of IPV may reduce barriers and lead to earlier referral of IPV victims. Less than 2% of women were screened about IPV by health care providers [20], and through regular screening and education by clinicians can detect the violence before it becomes late. Health care professionals have a unique opportunity to stop the cycle of abuse by intervening, promoting safety, and preventing the death of IPV victims [21]

Major barriers to assessing and intervening in suspected cases of intimate partner violence continue to exist within the healthcare system mainly due to lack of education, reflecting that assessment of domestic violence is proportionate with educational offerings [22]. The American Nurses Association [23] advocates for the education of registered professional nurses in the assessment, prevention, intervention and referral skills related to domestic violence. The first-line response for people who experience domestic violence is healthcare professionals. It is vital to have education, policies, and protocols in place so that they can identify, record IPV and assist victims with getting the services and support their need. Unfortunately, healthcare professionals face personal barriers, job-related barriers and patient-related barriers that may hinder their ability to effectively identifying and assisting victims of intimate partner violence. In addition, the dynamics of IPV are complex, and it is often difficult to understand how it presents within affected women [24].

1.2. Aim of the study

The purpose of the current study was to assess the nurses' barriers to screen women to intimate partner violence in outpatient clinics and to evaluate the effect of an educational training intervention on nurses' barriers to IPV screening.

1.3. Research Hypotheses

1- Nurses' barriers to IPV screening of abused women will have higher percentage after receive educational training intervention compared to before the educational intervention.

2- The nurses' screening practice towards IPV during providing their nursing services will be improved after receiving the educational training intervention compared to before educational intervention.

3- The examination rate for screening towards IPV will be improved after receiving the educational training intervention compared to before educational intervention.

2. Subjects and Methods

2.1. Research Design

A quasi-experimental design with pre and post test of educational training intervention was used.

2.2. Research Setting

This study was conducted at outpatient's clinics in two governmental hospitals (University Hospital and Education Hospital in Shebin El-Kom City, Menofia Governorate, Egypt).

2.3. Research Sample

A study population comprised all nurses working at antenatal care, family planning, obstetric units and forensic medicine department in the previous settings, (n=125 nurses). Inclusion criteria: Nurses who were accepted to participate in the training program and not participated in other studies with similar objectives, Egyptian, diploma nurse, bachelors and postgraduates.

2.3.1. Sample size determination

n = Z2 pq/ E2 = 400
Z at 95% confidence = 1.96
P: estimated percent in population = 50%
q: 100-p= 100-50= 50%
e: accepted sample errors (0.05)
Power = 0.8
n= 384.

Since the population size less than 10000, the final sample estimate (nf) calculated using the formula:

nf = n/1+(n/N)

Where: nf= The desired sample size (when population is less than 10000)

n= the desired sample size (when population is more than 10000)

N= the population of nurses in the selecting setting is 125
Nf = 384/1+ (384/125) = 93 participants.

From a total of 93 nurses, 18 participants were excluded from the study due to lack of participation in the sessions, not completing the questionnaire, or taken sick leave while 75 nurse are actually participated in the study and complete the intervention.

2.3.2. Sampling Procedure

A stratified random sampling was utilized, including 75 nurses as participants from the study population out of 125 nurses. The study population was divided into the following strata's: pediatric units, antenatal care units and family planning, obstetric units and forensic medicine department strata in the previous setting. The number of the participants selected from each stratum was equally proportioned to the population of the strata. The researcher obtained a list of all eligible nurses' participants from each stratum and then randomly picked the participants from each stratum to obtain the desired sample (75). The random selection from each stratum was achieved by assessing a numerical value to each participant in each stratum and then a randomizer computer package was used to generate the desired sample size from all the strata.

2.4. Tool of the Study

Tool: Self-administered questionnaire to assess the barriers to IPV screening by nurses which consisting of two parts:

2.4.1. Part (1) demographic data (age, sex, job, religious, educational level, marital status, years of experience, and health setting/units where they work).

2.4.2. part (2) the Domestic Violence Health Care Provider Survey (DVHCPS): Instrument was used to investigate the barriers for IPV screening by nurses (measure health care providers' IPV knowledge, attitudes, beliefs, and the ability to apply this knowledge in daily practice and IPV screening. instrument was developed by the Group Health Cooperative and Harborview Injury Prevention and Research Center, (1997) [25].

Scoring system of the Domestic Violence Health Care Provider Survey (DVHCPS):

The Domestic Violence Health Care Provider Survey (DVHCPS) is Arabic translated valid tool which was adopted for this study. The DVHCPS includes 35 items with a 5 point Likert scale ranging from Strongly Disagree (0) to Strongly Agree (4). Survey items are categorized into six domains. These domains include self Efficacy (7 items), social support (4 items), victim blaming (7 items), Professional role resistance (7 items), victims' providers' safety (10 items).

The questionnaire was evaluated giving a score of 0 – 140.The total score of each nurse was categorized arbitrarily into "poor management" when the nurse achieved less than or equal ≤ 50% of the total score, and "good management" when the nurse achieved > 50% of the total score. Accordingly, if the total "DVHCPS" score of a nurse was "0 - 70", she/he was classified as has **poor management towards IPV**, and if the total DVHCPS" score of a nurse was "71 – 140", she was classified as had "**good** management **towards IPV**".

Concerning nurses' IPV screening, we studied it in a list of 7 items, each was five points Liker scale (0 – 4) as (0) for "Do not exam.", (1) for "Examine 1-20%", (2) for "Examine 21-40%", (3) for Examine 41-60% and (4) for Examine > 60%.

2.5. Study Procedure

The study was conducted according to the following steps:

(1) Before conducting the research, the researchers followed the ethical issues and official permission was obtained from the ethical committee, faculty of nursing, Menoufia University

(2) An official letter from the Faculty of Nursing, Menofia University was forward to the manger of each hospital (University Hospital and Education Hospital in Shebin El-Kom City, Menoufia Governorate, Egypt) to take permission to conduct the study after explaining its purpose and importance.

(3) Informed written consent was obtained from nurses before starting the data collection. The agreements were taken after the aim of the study was explained and informed about what would be done with the results. They were given an opportunity to refuse or withdraw at any stage of the study and were assured that the information would remain confidential and used for the research purpose only.

(4) Letters were sent to key system decision makers and securing system in each hospital and community partners such as national council for women rights and human rights and civil institution to be represented in the study.

(5) Tool of the Domestic Violence Health Care Provider Survey (DVHCPS). It contains 42 items with a 5 point Likert scale ranging from s strongly disagrees to strongly agree. it includes six domains (self-efficacy which contain 7 items, system and institutional barriers contain 4 items, victim blaming contain 7 items, professional role resistance 7 items, victims' providers' safety contain 10 items, and frequency of IPV Screening contain 7 items).

(6) **Validity of the tools:** It was determined by a jury of experts in community medicine and community health nursing, obstetric and psychiatric health nursing specialty, and then modifications were carried out according to the expert's judgment on the clarity of the sentences and convenience of the contents.

(7) **Reliability of the tools:** The researcher carried out the reliability of the instrument with an overall Cronbach alpha, it was found to be acceptable and ranging from 0.73 to 0.91. This indicates that the instruments were consistent and reliable in achieving the purpose of the study.

(8) A pilot study was carried out on 10 nurses to assess the clarity, feasibility, applicability of the study tools, and the time needed to fill each tool. The sample of the pilot study was excluded from the total sample to assure the stability of the results. The time spent to fill the tools from

participants ranged between 30 to 45 minutes according to the needed explanation.

(9) The 75 nurses who complete the questionnaire divided into two group according to their place, they received the educational training nursing intervention. The educational nursing intervention was implemented during five months, the field work started in January 2017 till June 2017.

(10) Implementation of the study passed into three phases (assessment phase, implementation phase and evaluation phase).

2.5.1. Assessment phase: Data was collected in a comfortable and private place was chosen for the interview. Orientation was done about the purpose of the study, significance, content. Also, researchers informed nurses by another's persons who will be included in the sessions.

2.5.2 Implementation phase: The researcher arranged the intervention sessions based on prevention strategies consistent with The Minnesota Department of health, (2001) [26] it has published public health strategies to address societal issues, which conceptualizes population public health interventions to be carried out on three different levels: Individual-based strategies this concerned with nurse' role in screening for violence among women attending outpatient clinics, systems based strategies which concerned with working collaboratively within healthcare team and Community based strategies concerned with working with community institutions and organizations. This educational nursing intervention was developed and given through sessions' each session has a general objective and set of specific objectives. The researchers divided the study group into 2 groups' according to place of work each group consisted of 30-35 nurses. The educational nursing intervention used has been sequenced through the three educational sessions; session started according to nurses' suitable time, usually at 9 Am, three days per week at the morning shift, the duration of each session was ranged from 60-90 minutes including periods of discussion according to participants' achievement, progress and feedback in groups. A coffee break was available for the participants. The study intervention's sessions carried out in a comfortable seminar room equipped with suitable materials. Methods of teaching include lectures, question and answer, and role-playing, and techniques such as brainstorming, group discussion, and Power-Point presentation included educational videos and true stories of case studies by using data show. Also, nurses were given an illustrated guide booklet about IPV; this illustrated booklet was developed by the researchers after reviewing the related literature. At the beginning of the first session of the nursing intervention, the telephone number of the researchers and participants were available to each other. Nurses were oriented regarding the contents of educational nursing intervention, its purpose and its impact; and were informed about the time of the next session. Each session started by a summary about what has been discussed in the previous session and the objectives of the new session. The session ended by a summary of its contents and feedback from the participants.

Educational nursing intervention:

First session (Nurse -focused- approaches): this session aimed to enhance nurse's awareness of IPV issue and acquire nurses about screening tools and routine screening for identification of abuse. This was done through acquiring knowledge for nurses to identify the following items background and history of IPV, related definitions, prevalence of IPV in Egypt compared to other countries, its risk factors, characteristics of abused women, the consequences of intimate partner violence on women and their families, dynamic to break the cycle of violence in domestic abused women, encourage victimized woman to report to IPV to legal entities, training them on how to ask about and screen violence in safe work environment without the risk of ostracism and use therapeutic approaches probability and knowledge of and collaboration with local advocacy programs; legal and ethical issues in working with IPV survivors skills training for asking about and responding to reports of IPV from patients, including assessing danger; and helping to develop safety plans.

The second session (System-based approaches): this session aimed to develop of the clinic or unit-based policies and procedures, which are critical to a successful systems-based response to IPV. Through join healthcare system which included healthcare administrators and managers, hospital communication system, social and psychological specialists, security system of outpatients clinics in hospitals **which included**: provide education about IPV issue, increase staff awareness about how IPV affects health and increases sensitivity to the needs of patients in crisis, prompt intervention to help victims, time management, collaboration, enforce screening protocols to manage the IPV event collaboratively as one team.

Third session: (**Community-based approaches): this session aimed to** collaborate with local advocacy agencies and IPV experts. Through guide healthcare community leaders and community resources about the importance of Legislations related to IPV issue, Documentation, Reporting, and make appropriate referrals, Advocacy, establish network with domestic violence advocacy programs and civil institutions which include women rights' and human rights' and drawing up protocols for the proper management of abuse.

2.5.3. Evaluation phase: after implementation of the 3 educational training intervention sessions for nurses, the researcher interviewed the nurses 3 months later from the beginning of the educational intervention to evaluate the post evaluation data.

2.6. Statistical Analysis

- Data was coded and transformed into specially designed form to be suitable for computer entry process. Data was entered and analyzed by using SPSS (Statistical Package for Social Science) statistical package version 22. Graphics were done using Excel program.

- Qualitative data as age were presented by mean (x) and standard deviation (SD). Qualitative data were presented in the form of frequency distribution tables, number and percentage. It was analyzed by chi-square (x2) test. However, if an expected value of any cell in the table was

less than 5, Fisher Exact test was used (if the table was 4 cells), or likelihood Ratio (LR) test (if the table was more than 4 cells). Level of significance was set as P value <0.005 for all significant tests.

3. Results

Table 1 illustrates that a total of 75 Egyptian nurses, primarily female (n=61, 8.3%) sample participated in this study. The mean age of participants ranged from 36-55 years' old which represented 66.7% of the total sample. The most frequent years of nursing experience was ranged from 10-20 years old (41participant which represented 54.7%). Most nurses were married (n=56, 74.7%) with the remaining nurses being single (n=12, 16%) or divorced (n=3. 4%). The total sample of the nurses was 75 divided into 19 nurses was taken from pediatric units, 22 nurses from antenatal and family planning outpatient from both hospitals, 15 nurses form obstetric units from both hospitals and 19 nurses from the forensic department in the university hospital.

Table 2 Nurses reported several sources of barriers based on the DVHCPS instrument items including self-efficacy, system support, victim blaming, professional role resistance, victim provider safety. Related to self-efficacy and nurse's capability for screening, about 98.7% of nurses disagreed that they have access to IPV strategies to help victims change IPV situation and 96% disagreed that they were there are strategies to help batterers and have access to IPV information and 48% feel confident for referring batterers.

Table 1. Socio-demographic characteristics of the nurses (N=75).

Socio demographic data		Frequency	Percent
Age groups	25 ≥35 years	25	33.3
	35 -55 years	50	66.7
	Mean ± SD 38.01±6.06		
Sex	Male	14	18.7
	Female	61	81.3
Job	Diploma	67	89.3
	Observer	8	10.7
Educational level	Diploma	65	86.7
	Bachelors	8	10.7
	|Master degree	2	2.7
Experience groups	< 10 years	17	22.7
	10 - 20 years	41	54.7
	21 - 35 years	17	22.7
	Mean ± SD 16.31±6.21		
location of job	Pediatric outpatients	19	25.3
	Antenatal care and family planning outpatients	22	29.3
	Obstetric outpatients	15	20.0
	Forensic department outpatients	19	25.3
	total	75	100
Social status	Married	56	74.7
	Single	12	16.0
	Widowed	4	5.3
	Divorced	3	4.0
Total		75	100.0

Table 2. Barriers for screening Intimate partner violence women identified by nurses (N=75)

Screening Barriers	Percent				
	Disagree		Agree		Total
1. Self- efficacy	**No**	**%**	**No**	**%**	
1. Have no time to screen	48	49.3	27	50.7	100.0
2. There are strategies to help batterers	73	96	2	4	100.0
3. Strategies to help victims change IPV situation	74	98.7	1	1.3	100.0
4. Feel confident for referring batterers	36	48	39	52	100.0
5. Feel confident to refer victim	30	40	45	60	100.0
6. Have access to IPV information	72	96	3	4	100.0
7. Know ways to ask victims to decrease IPV victims risk	63	84	12	16	100.0
2. Social support					
1. Access to social workers to assist IPV victims	71	94.6	4	5.4	100.0
2. Social workers can help victims	73	97.3	2	2.7	100.0
3. Access to mental health referral	72	96	3	4	100.0
4. Mental health services can help victims	61	81.3	14	18.7	100.0

Screening Barriers	Percent				
	Disagree		Agree		Total
3. Victim blaming					
1. Victim get something from IPV relationship	52	69.3	23	20.7	100.0
2. choose to be IPV victims	48	64	11	36	100.0
3. Victims and batterers are responsible for IPV	12	16	63	84	100.0
4. Patient personalities makes them IPV victims	9	12	66	88	100.0
5. Women go against traditional roles lead to IPV	25	33.3	50	66.7	100.0
6. Victim passive personality lead to IPV	18	24	57	76	100
7. action leads to IPV	45	60	30	40	100
4. Professional role resistance					
1. Afraid of offending patient when asking about IPV	20	29.4	55	73.3	100.0
2. Asking about IPV is invasion to patient privacy	22	29.3	53	70.7	100.0
3. It is demeaning to ask about IPV	23	30.7	52	69.3	100.0
4. Asking non-abused patients makes them angry	13	17.3	62	82.7	100.0
5. It is non- nursing role to resolve couple conflict	23	30.7	52	69.3	100.0
6. Investigation causes of IPV is non-medical role	34	42.6	41	57.4	100.0
7. If patient not disclose, they feel it is not my business	18	24	57	76	100.0
5. Victim provider safety					
1. Reluctant to ask batterers for my personal safety	6	8	69	92	100
2. Workplace security is not enough to deal with IPV	2	2.7	73	97.3	100
3. Afraid of offending patient when asking about abusive behavior	2	2.7	73	97.3	100
4. Challenging batterers direct their anger to care providers	2	2.7	73	97.3	100
5. There are ways to ask about IPV without endanger nurse	15	20	60	80	100
6. Nurses can effectively discuss IPV with batterers	25	33.3	50	66.7	100
7. Can discuss IPV with batterers without endanger victims	36	48	39	52	100
8. Avoid dealing with batterers for victims safety	3	4	72	96	100
9. No ways to ask batterers without endanger victims	39	52	36	48	100
Afraid when dealing with batterers increase victims risk	25	33.7	50	66.3	100

For the system support domain, most 97.3% disagreed that social workers can help IPV victims, and 96% disagreed that there is access to mental health referral, 94.6% disagreed that social workers to assist IPV victims. Moreover, 81.3% believe that IPV victims do not have access to mental health services.

Related to victim blaming domain, 69.3% of nurses believed that victims' personality gets something from IPV relationship. In addition, 64 % agreed that people choose to be IPV victims.

According to professional role domain, 73.3% of nurses agreed that they are afraid of offending patient when asking about IPV and 70.7% agreed that asking about IPV is invasion of patient privacy and over half (57.4%) agreed that it was not their role to ask about IPV when victims choose not to disclose their victimization.

Related to victim/ provider safety domain, nurses were concerned about their own safety and victims' safety. However, approximately all nurses (97.3%) reported that workplace security is not enough to deal with IPV, afraid of offending patient when asking about abusive behavior and challenging batterers direct their anger to care providers. However, about eighty percent of nurses agreed that it was possible to ask about IPV without endangering themselves. Despite this, 66.3% nurses were afraid when dealing with batterers increase victims' risk.

This Table 3 reveals that there was high statistical significant improvement after the educational training intervention for nurse's response to barriers of IPV screening which represented in five domains (self-efficacy, system and institutional barriers, victim blaming, professional role resistance, victims' providers' safety).

Table 3. Pre and post intervention about nurses' responses to barriers of IPV screening that they may face during providing their health care services (N=75)

Nurses Barriers' for IPV screening	Pre intervention				Post intervention				Test of sig.	P value
	Poor		Good		Poor		Good			
	N0.	(%)	N0.	(%)	N0.	(%)	N0.	(%)		
Self-efficacy	63	(84%)	12	(16%)	0	0%	75	(100%)	X^2=128	0.000 HS
Social support	73	(97.3)	2	(2.7%)	7	(9.3%)	68	(90.7%)	X^2=243	0.000 HS
Victim blaming	37	(49.3%)	38	(50.7%)	0	0%	75	(100%)	X^2=140	0.000 HS
Professional role resistance	21	(28%)	54	(72%)	0	0%	75	(100%)	X^2=153	0.000 HS
Provider safety	75	(100%)	0	(0%)	1	(1.3%)	74	(98.7%)	X^2=214	0.000 HS

Table 4. Effect of educational training intervention on nurses' screening rate and periodical examination toward IPV during providing their health care services*

The examination rate of IPV screening among nurses in the last three months	Pre intervention					P value
	Screening rate	If yes, nurse's screening				
		Examin1-20% N0. (%)	Examin 21-40% N0. (%)	Examin 41-60% N0. (%)	Examin >60% N0. (%)	
Injuries (n=54)	14(25.9%)	10(71.4%)	4(28.6%)	0	0	0.000
Chronic pelvic pain(n=54)	5(17.9%)	3(60%)	2(40%)	0	0	0.000
Irritable-bowel syndrome(n=39)	9(23.1%)	6(60%)	3(40%)	0	0	0.000
Headache(n=53)	13(24.5)	8(61.5%)	5(38.7%)	0	0	0.000
Depression-or Anxiety(n=31)	3(9.7%)	2(66.6%)	1(33.3%)	0	0	0.000
Hypertension/coronary artery diseases(n=58)	8(13.9%)	6(75%)	1(12.5%)	1(12.5%)		0.000
patient is pregnant seek obstetric or gynecological care (n=69)	7 (10.14%)	5(71.4%)	2(28.6%)	0	0	0.000
The examination rate of IPV screening among nurses in the last three months	**Post intervention**					**P value**
	Screening rate	**If yes, nurse's screening**				
		Examin 1-20% N0. (%)	**Examin 21-40% N0. (%)**	**Examin 41-60% N0. (%)**	**Examin > 60% N0. (%)**	
Injuries (n=30)	12(40%)	0	2(20%)	8(60%)	2(20%)	0.000
Chronic pelvic pain(n=21)	15(35%)	0	5(33.3)	9(60%)	1(6.7%)	0.000
Irritable bowel syndrome(n=29)	15(34.5%)	0	9(60%)	4(26.7%)	2(13.3%)	0.000
Headache(n=20)	8(40%)	0	2(25%)	6(75%)	0	0.000
Depression or Anxiety(n=12)	4(33.3%)	0	0	4(100%)	0	0.000
Hypertension/ coronary artery diseases(n=24)	6 (25%)	0	0	3(50%)	3(50%)	0.000
patient is pregnant seek obstetric or gynecological care (n=57)	20(35.08%)	0	5(25%)	10(50%)	5(25%)	0.000

*Rows will not add to n=75, because not all nurses provided care to each type of patient.

Table 4 shows that there was high statistical significant increase in nurses' screening rate of IPV and also, periodical examination during providing their nursing services after the implementation of educational training intervention was improved.

4. Discussion

Screening barriers are defined as those factors that prevent nurses from screening women for potential IPV. Barriers contributing to the low rate of IPV screening by nurses can be categorized according to the DVHCPS into five domains. The domains include self-efficacy, system support, blaming the victims, professional role, and victim/provider safety [27].

Regarding Self-efficacy barrier, approximately all study nurses reported that they did not use strategies to help victims and batterers. This high percentage might have resulted from the lack of IPV knowledge provided to nurses for IPV screening and intervention [28]. And about half of nurses reported that they did not have enough time in their daily practice for IPV screening. The same result was obtained by [29] who studied Jordanian Nurses' Barriers to Screening for Intimate Partner Violence who reported that only about half of nurse using strategies to help victims and batterers and 40% of study sample reported that they did not have enough time for IPV screening.

Regarding system support barrier was identified as the greatest cluster of barriers among study nurses. System support such as social and mental health services are important so that victims can be referred to entities that will provide help and support while promoting victim's safety. Nearly all of the nurses disagreed with the importance of social workers providing this much-needed help and support, and only 2.7% of the nurses reported that social workers were capable of providing the needed help for IPV victims. In the same line [30] who studied "system issues: Challenges to intimate partner violence screening and intervention" reported that equally troubling is that when nurse have access to social services, there may still be gaps and an inadequacy in the services that are provided to IPV victims. Nurses disagreed that mental health services were important or capable to help IPV victims. This might be a reflection that the nurses did not have access to mental health services for their patients. However, seeking mental health care is very important for IPV victims. [31] studied determinants of depressive symptoms in Jordanian working women stated that Jordanian women who experienced IPV and depression symptoms did not seek mental health services because they were unaware of the serious impact that mental illness can cause or the value of mental health care. In addition, IPV victims have fears of being stigmatized by their communities and families. Although, the importance of seeking mental health services for eliminating or decreasing psychological impacts of violence against

women, Egyptian nurses undervalued this importance of mental health services. Also, few health settings in Egypt provide social and mental health services. So, even if Egyptian nurses are educated about community services available, nurses will likely be unable to access them. More importantly, [32] studied the domestic violence against women and its consequences on family health in Maser El-Kadima district and reported that Egyptian IPV victim's refused to disclose IPV or to be referred to legal, social, or mental services to avoid being culturally stigmatized and for preserving the reputations of themselves and their family

Regarding the victim barrier nurses held beliefs and attitudes about IPV victims that likely hinder their screening and take appropriate care. Nurses' preconceptions and beliefs included that victim had passive personalities that resulted in the IPV situation. This finding are supported by [29] and [33] who studied Health professionals' perceptions of intimate partner violence against women in Serbia" both of them indicate that victims of IPV are sometimes perceived as having personalities that account for their victimization: low self-esteem, self-blame, and dependent personalities. Regardless a woman's personality, women should be blamed for the violence they experience. This may have indicated that Egyptian women live within Egypt's cultural and religious rules. Egyptian culture is conservative and believes in the dominant role of the male over the female throughout the lifespan. Women tend to stay in an IPV relationship for the sake of their children, stigma of divorce, and economic dependence on their husbands. Also, [34] studied spousal violence in Egypt, population Reference Bureau reported that Egyptian women will not be supported by their family and culture and will experience resistance if they want divorce.

Regarding professional barrier nurses have a professional responsibility to appropriately screen all patients seeking health care. Nurse held preconceptions about IPV screening such as their inability to ask about IPV because it is a sensitive familial issue and they fear offending patients or making them angry, and feared to disrupt their patients' privacy. According to professional role domain, the majority of nurses agreed that they are afraid of offending patient when asking about IPV and about seventy percent agreed that asking about IPV is invasion to patient privacy and over half nurses agreed that it was not their role to ask about IPV when victims choose not to disclose their victimization. These findings are supported by [29] and [35] who studied domestic violence screening and treatment in the workplace, whose participants indicated that IPV screening was not a nursing role. Nurses should be educated to screen and ask patients in an appropriate way about IPV. Placing value on IPV screening is a necessary first step towards the universal screening of all patients.

Regarding victim/ provider safety barrier. This study indicated that nurses concerns and fears about their own and victim's safety may be due to inadequacy of security services at the Egyptian health settings to protect them when interacting with batterers and screening victims for IPV. This finding was similar to the findings [29] and [36] they indicated that Jordanian victims underwent batterers' retaliation and revenge and increased violence severity and intensity after their IPV disclosure.

Regarding nurses screening for IPV, the findings revealed that it was low. The highest screening rate was done for women seen for injuries (25. 9%).the same results were reported by [29] and [37] who studied care provided in visits coded for intimate partner violence in a national survey department, both of them indicated that the most common diagnosis for IPV victims seeking care in the emergency department in Jordan and Columbia was related to upper and lower extremity injuries (52% and 49%, respectively). Also, [38] who studied domestic violence management in Malaysia found that injuries resulting from violence might be one of the most common complaints seen at three primary health care clinics in Malaysia. However, only half of the clinicians screened and asked the patients about the underlying causes of their injuries. A consistent lack of screening even for females with injuries were occurring.

Determining the barriers for nurses to screen for IPV can help planners and researchers reduce those barriers [30]. Reducing barriers could increase screening rates for, and detection of cases of IPV. Earlier detection can lead to earlier referral for IPV victims [39]. Based on available information, it was hypothesized that the frequency of IPV screening after implementing educational training intervention for nurses will help them in reducing the barriers for screening and also increase the rate of screening for IPV.

Results of the current study reported that there were statistically significant differences before and after the implementation of educational training intervention regarding barriers of screening which can be clustered as nurse attitudes, nurse beliefs, victim barriers, and health institutions. On the same context, Johnson et al., [40] studied evaluation of an IPV curriculum in a pediatric hospital in USA by conducted a longitudinal study incorporating pre and post participation assessment questionnaire and showed that a 30-minute curriculum on IPV screening was accompanied by a significant improvement among nurses for IPV Screening ($P<0.012$), improved in the nurses' perceived self-efficacy ($p <0.001$), Also, [41] studied the effect of an IPV educational program on the attitudes of nurses in USA concluded that educational programs led to an improvement in nurses' attitudes. This showed the positive effect of educational training intervention in overcoming the barriers for IPV screening.

Similarly, [42] who studied increasing nurse's knowledge and skills for enhanced response to IPV in USA through investigated nurses' needs about IPV and implemented an educational program to enhance their practice. Phase 1 of the study revealed the nurses' lack of knowledge regarding community resources for IPV and their incompetence related to the skills of IPV intervention. Phase II of their quasi-experimental study showed that training programs resulted in a significant improvement in nurses' skills ($P<0.003$). Also, [43] who studied training and documentation improve emergency department assessment of domestic violence victims in New Zealand indicted that training and supervision for nurses were impotent to promote nursing competence, enhance confidence, and increase awareness when dealing with victims of IPV. Also, this study was contradictory with the results of [44] who studied training program for healthcare professionals in domestic violence in England reported that most training programs are

limited in time frame (average one sessions of one –three hours repeated or followed up, not mandatory and have small numbers participating. The explanation or content or design of program is often incomplete.

Regarding intimate partner violence screening rates are variable and done infrequently before the implementation of educational training intervention but there were highly statistically significant increase screening rates of IPV after the implementation of educational training intervention due to certain factors which include its contents, screening protocol implementation, providing a suitable environment for disclosing sensitive information. This finding was consistent with [45] studied a five-year follow-up study of the Bristol pregnancy domestic violence program to promote routine enquiry in United Kingdom likewise, [46] studied training Sri Lankan public health midwives on IPV both studies reported that there was positive improvement in screening rates, increase in confidence and skill level in practice and more positive attitudes towards abused women were identified following implementation of education programs for a new IPV screening or assessment policy. Furthermore, [47] studied implementing successful IPV screening programs in healthcare settings: Evidence generated from a realist-informed systematic review in Canada a systematic review of screening programs identified that healthcare providers were more likely to screen for IPV when they were confident with the process (usually occurring with more extensive training programs). Similarity, [48] studied intimate partner violence screening and intervention in the healthcare setting in USA. Also, this come in agreement with [47] and [49] studied domestic violence screening in medical and mental health care setting: overcoming barriers to screening, identifying, and helping partner violence victims, this indicated that overcoming barriers of domestic violence screening allow nurses for improving the rate of screening in clinical practice. In the same line, [50] studied screening and intervention for intimate partner violence in healthcare settings: creating sustainable system-level programs reported and emphasized that a nursing educational training program on IPV can increase nurses' confidence and competency in screening for IPV.

5. Conclusion

This study highlights the beneficial effect of educational training intervention as an effective method in reducing the barriers for IPV screening by nurses for women attending the outpatient clinics; improving the rate of screening and periodical examination of nurses regarding IPV. This study highlights the importance of educational training intervention as an effective strategy in reducing the barriers in screening IPV by nurses in outpatient clinics. A significant improvement in both screening and routine examination rate to IPV are reported among nurses after receiving an educational training intervention.

6. Recommendations

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

- A common IPV screening tool and protocol of management for abused women should be applied in primary health care including outpatient clinics and hospitals.
- In-service training courses for nurses on current updates regarding IPV management.
- Join nurses, health care team and community leaders in the management of IPV issue in workplace and community settings.
- Further studies are needed with a large sample from all governorates will provide a picture of IPV screening, barriers, referrals and prevalence rate in Egypt.

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