Effect of an Educational Intervention on Women's Knowledge and Attitude Regarding Cervical Cancer

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Abstract **Background:** Cervical cancer is a significant health issue worldwide**.** Improving women knowledge and attitude regarding cervical cancer has a pivotal role in reducing risks and bad prognosis of cervical cancer. Women should be equipped with sufficient knowledge regarding early detection and prevention of cervical cancer. **Aim** of this study was to evaluate the effect of an educational intervention on women's knowledge and attitude regarding cervical cancer. **Design:** A quasi- experimental design was adopted in the current study. **Sample: -** A purposive of (65) women' were included in the current study. **Setting: -** The current study was conducted at outpatient clinic affiliated at obstetric department at Benha University Hospital. **Tools of collection: -** Two tools were used for data collection, first tool interviewing questionnaire to collect data about the women's socio demographic data and women's knowledge regarding cervical cancer as definition, risk factors, complication. Two tools was cervical cancer related attitude. **Results**: The result of the present study should that the total knowledge mean score was improved from (11.33±7.28) at pre intervention to (21.20±47) at post intervention phase. In addition there was 0.0% of the studied woman have positive attitude to pre intervention meanwhile, after intervention 30.8% of them have positive attitude. **Conclusion:** Educational intervention was effective in improving the women's knowledge and attitude regarding cervical cancer. **Recommendations**:-Cervical cancer education program should be provided for all women's in all different ages in Egypt.

Keywords: attitude, cervical cancer, educational intervention, knowledge, women

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1. Introduction

Cervical cancer is a significant health issue worldwide. It is the second most common cancer worldwide in women under 45 years of age, whereas it also affects a significant number of women over that age**.** Although cervical cancer is acknowledged as a preventable disease, it is still the major health burden for women in many developing countries because an adequate scale of screening program is lacking [1].

Cervical cancer is a leading cause of morbidity and mortality among women in the low and middle-income countries. Of 500,000 new cervical cancer cases diagnosed annually worldwide, where more than 80% are diagnosed at advanced stage and have poor treatment outcomes [2].

Cervical cancer is both a preventable and treatable disease. Vaccination against the human papillomavirus vaccines (HPV) has been shown to prevent cervical cancer and genital warts, and subsequently reduce the number of women requiring follow –up and treatment [3].

Cervical cancer is cancer of the cervix. Extending into the upper end of the vagina. Cervical cancer is mainly caused by persistent infection with certain types of human papillomavirus (HPV) which include16 and 18 types are responsible for approximately 70% of cervical cancer cases in all countries around the world [4]. Other risk factors include Early sexual debut, multiple sexual partners, smoking, genetic predisposition and compromised immunity are associated with development of cervical cancer. The most common symptom of cervical cancer identified was blood stained vaginal discharge, post-coital bleeding, painful coitus and post-menopausal bleeding, pelvic pain and inter-menstrual bleeding as symptoms, weight loss, fatigue and back pain [5].

Prevention, early diagnosis and treatment have been shown to reduce mortality due to cervical cancer. Many countries have significantly reduced their cervical cancer morbidity and mortality through cervical cancer screening and early treatment. In the United States, the introduction of the Pap smear has been responsible for a 90% decrease in deaths from cervical cancer. Early detection through cervical cancer screening has decreased the incidence of cervical cancer by 50% over the last 30 years [6].

A lack of knowledge about HPV and low levels of understanding of HPV vaccination has direct implications for women's participation in cervical cancer. Despite this, the importance of health education as an integral part of primary prevention for cervical cancer is often ignored.

[7]. Incidence of cancer can be reduced through controlling the causes and risk factors. A health education method presents information .about cervical cancer prevention may be the key to changes in cervical cancer knowledge and attitude as well as preventive measure [8].

Maternity nurses had a gold role in prevention of cervical cancer as maternity nurses are key person in health care delivery system. Nurses should educated women at different ages to improve knowledge and attitude. Nurses may be able to apply the knowledge in to practice & assume responsibility & accountability for women's & eventually help to improve the reproductive health of the women & can prevent morbidity & mortality of women due to cervical cancer [9].

1.1. Significance of the Study

There were an estimated 266,000 deaths from cervical cancer worldwide in 2012, accounting for 7.5% of all female cancer deaths. Almost nine out of 10 (87%) cervical cancer deaths occur in the less developed regions. Mortality varies 18-fold between the different regions of the world, with rates ranging from <2 per 100,000 in Western Asia, Western Europe, and Australia/New Zealand to more than 20 per 100,000 in Melanesia (20.6), middle (22.2), and Eastern (27.6) Africa [10]. In Egypt 25.76 million women aged 15 years and older at risk of developing cervical cancer. The current estimates indicate that every year about 514 women are diagnosed with cervical cancer and 299 die from the disease [11]. Several studies represented that improving women's awareness "knowledge and attitude " had a gold role in improving prevention and prognosis of cervical cancer among studied women. [12], so the present study was conducted to evaluate the effect of an educational intervention on women's knowledge and attitude regarding cervical cancer.

1.2. Aim of the Study

This study was undertaken to evaluate the effect of an educational intervention on women's knowledge and attitude regarding cervical cancer. This

Aim achieved through:

- Assessing women's knowledge and attitude regarding cervical cancer
- Designing and implementing of an educational intervention on women's knowledge and attitude regarding cervical cancer
- Evaluating the effect of an educational intervention on women's knowledge and attitude regarding cervical cancer.

1.3. Hypothesis

Knowledge and attitude of women regarding cervical cancer will improve after receiving an educational intervention.

2. Subjects and Methods

2.1. Research Design

Quasi experimental design was utilized to fulfill the aim of this study

2.2. Setting

The study was carried out at outpatient clinic affiliated at obstetric department at Benha University hospital

2.3. Sample Type and Criteria

A purposive sample of 65 women was recruited for the study and fulfilled the following inclusion criteria; Married women and capable to read and write, Woman age ranged from 15- 65 years didn't diagnosis with cervical cancer.

2.4. Sample Size

According to Benha University hospital statistical center, 2016, flow rate of the women were 650 women at the end of year 2016. Ten percent of flow rate (65 women) was selected.

2.5. Data Collection

To accomplish the goals of the study, two tools were used for data collection.

2.5.1. First Tool

Interviewing questionnaire was developed by the researchers in Arabic language after reviewing of related literature. It encompassed three main parts:

i. Part 1., women' socio -demographic characteristics: such as age, Level of education, occupation and residence.

ii. Part 2, **Obstetrical data:** such as age at marriage, gravidity, parity and using contraceptive method.

iii. Part 3: **Women knowledge related Cervical cancer:-**

This part was developed to assess women's knowledge about cervical cancer. It included items. (Meaning of cervical cancer, types, risk factors, symptoms, methods of screening, prevention and treatment) regarding cervical cancer.

iv. Scoring system of knowledge

A correct answer was scored as "one" and the incorrect "zero". The total knowledge score was calculated by summation of the scores for the correct answers. The total possible score ranged from (0 to 27 marks) and means and standard deviations were calculated. The higher scores reflect higher levels of knowledge about cervical cancer.

2.5.2. Second Tool

Women attitude related Cervical cancer it included (9) items, there was developed by the researchers in Arabic language after reviewing of related literature.

i. Scoring system of attitude.

The answer was scored as (1 disagree, (2) for uncertain and (3) for agree answers. Total attitude scored was calculated as follow; negative total <60%, uncertain 60-75%, and positive > 75%.

2.5.3. Tools validity

The tools were reviewed for comprehensiveness, appropriateness, and legibility by an expert panel consisting of five obstetrics of woman health nursing as community health nursing experts. The panel ascertained the face and content validity of the tools. The tools were modified according to the panel judgment on simplicity of sentences and appropriateness of content.

2.5.4. Tools Reliability

Test-retest was repeated to the same sample of studied women on two occasions and then compares the scores the cronbach's coefficient alpha was (0.765) cervical tool.

2.6. Ethical Considerations

A written official letter was obtained from the Dean of the Faculty of Nursing, Benha University to the head of department obstetrics and gynecology Benha University in order to obtain their approval for conduction of the research after explaining its purpose. At the time of data collection oral consent was taken from participants after clear and proper explanation of the study purpose and its importance for them. Each woman was informed about the aim of the study then oral consent was obtained before data collection. Strict confidentiality was safeguarded throughout the study. The women were assured that all data was used only for research purpose. They were informed that they could withdraw from the study at any time before the completion of the study

2.7. Pilot Study

A pilot study was carried out on 10% from the total number of sample (7) women' to assess the tools clarity, objectivity and feasibility. As well to estimate the time needed for data collection. Those women in the pilot study were not included in the main study sample since some modifications were done.

2.8. Field Work

A written official letter was obtained from the Dean of the Faculty of Nursing, Benha University to the head of department obstetrics and gynecology Benha University in order to obtain their approval for conduction of the research after explaining its purpose. At the time of data collection oral consent was taken from participants after clear and proper explanation of the study purpose and its importance for them. The study was carried out through four phases: assessment, planning, implementation, and evaluation. These phases were carried out from beginning of March 2017 to the end of September 2017, covering along a period of Seven months. The previous mentioned setting was visited by the researchers three days/week (Saturday, Monday and Wednesday) from 9.00 am to 12.00 pm.

2.8.1. Assessment Phase

Upon securing official permissions to conduct the study, the researchers approached and interviewed each woman', explained the purpose and procedure of the study, and asked for her participation. Upon consent to participate ask woman to complete tool 1 and II to collect baseline about knowledge and attitude of women regarding cervical cancer. Average time for the completion of each women interview was around (30-45 minutes). A number of interviewed woman' / week ranged from 6-8 woman'.

2.8.2. Planning and Implementation Phase

Based on the needs identified in the assessment phase and in view of the related literature, the researchers developed educational booklet for cervical cancer with simple Arabic language to suit women's understanding included meaning of cervical cancer, types, risk factors, symptoms, pap smear test and its technique , vaccination, methods of prevention and treatment of cervical cancer The educational intervention involved (3) scheduled sessions. These sessions were repeated to each subgroup of (3-4) women. The duration of each session lasted from half an hour to one hour including periods of discussion according to their achievement, progress and feedback. At the beginning of the first session an orientation to the educational intervention and its aims took place.

2.8.3. Evaluation Phase

After two months. The effectiveness the application of educational intervention for women's knowledge and attitude regarding cervical cancer was assessed by the same pretest format.

2.9. Statistical Analysis

Data analysis was performed using IBM SPSS statistical software version 22. The data were explored. Descriptive statistics with mean and standard deviation (SD) for continuous variables and frequency for categorical variables were analyzed. Qualitative variables were compared using chi square test $(X2)$ as the test of significance, paired and independent (t) test and ANOVA test was used to compare mean score between two and more groups respectively. Correlation coefficient (r) was used to evaluate association between studied variables. The p-value is the degree of significant. A significant level value was considered when p-value ≤ 0.05.

3. Results

Table 1.

Variable	Frequency	%
Age in years		
20-29	21	32.3
30-39	33	50.8
40-50	11	16.9
Mean ±SD	31.64±7.821	
Educational qualification		
Read & write	9	13.8
Basic education	26	40.0
Secondary	30	46.2
Residence		
Urban	42	64.6
Rural	23	35.4
Occupation status		
Working	7	10.8
House wife	58	89.2

Table 1: It shows that about more half of studied sample have age from 30 to 39 years, and less than half of sample had secondary education and more than half of them live in urban and most of them were not working.

Table 2. Distribution of the studied women according their obstetric data(n=65).

Obstetric data	NO	%
Age at marriage		
Less than 18	6	9.2
18-21	24	36.9
22-26	35	53.7
Mean ±SD	21.52±2.801	
Gravidity		
1-2	34	52.3
3-4	19	29.2
5+	12	18.5
Mean ±SD	3.1385±1.22317	
Party		
1-2	36	55.4
3-4	26	40.0
5-6	3	4.6
Mean ±SD	2.8615±0.86380	
Using contraceptive method		
Yes	59	90.8
No	6	9.2

Table 2: illustrates that more than half (53.7%) the mean age at marriage were 21 years of studied women married for about (22-26) years, with mean of (21.52+2.801). about one third of them had gravid1-2 and more than half (55.4%) ranged from (1-2) of parity and the majority of them were used contraceptive methods.

Table 3 shows the distribution of the studied women regarding their knowledge of cervical cancer. There was a highly statistical significant regarding cervical cancer knowledge concerning meaning, types, risks, symptoms, diagnostic and treatment (p<0.001).

Figure 1: This figure reveavels that 10.8% of studied woman have good knowledge pre intervention compared to 64.6% of them post intervention.

Table 4 shows the distribution of the studied women regarding their attitude on cervical cancer. There was statistical significant difference between studied women attitude regarding cervical cancer pre and post intervention. The highly improvement were concerning their attitude toward highly prevalent, curable if detected early, cervical cancer at least every three years as Chi-square χ2 rest 73.90 were 81.16and77.09) respectively.

Figure 2:- This figure reveavels that 0.0% of the studied woman have positive attitude to pre intervention meanwhile, after intervention 30.8% of them have positive attitude.

Table 5:-. illustrates that there was no statistical significant relation among studied women total knowledge score regarding their age and residence at both pre and post intervention phases .while there was a significant relation between knowledge and educational qualification and their occupational status at pre intervention phase.Moreover there was a high statistical significant relation among total knowledge score and their education (<0.001**) at post intervention.

Table 3. Distribution of knowledge regarding cervical cancer definition and risk factors of the studied women (n=65)

Knowledge	Pre-intervention Mean ±SD	Post-intervention Mean ±SD	Paired t test	P value
Meaning of cervical cancer	.5231±.50335	.9077±.29171	-5.130	<0.001**
Types of cervical cancer	1.3385±1.18950	2.5231±.70948	-7.500	<0.001**
Risks for cervical cancer	2.6000±1.51863	4.0923±.96377	-6.607	<0.001**
Symptoms of cervical cancer	2.7846±2.08036	4.7846±1.08242	-6.600	<0.001**
Diagnostic studied for cervical cancer	2.0615±1.53986	4.2462±1.69587	-6.910	<0.001**
Preventive measures of cervical cancer	.9692±1.19856	2.4308±.95147	-8.460	<0.001**
Treatment of cervical cancer	1.0615±1.14396	2.2154±.76019	-7.213	<0.001**
Total knowledge score	11.3385±7.28928	21.2000±4.47283	-9.243	<0.001**

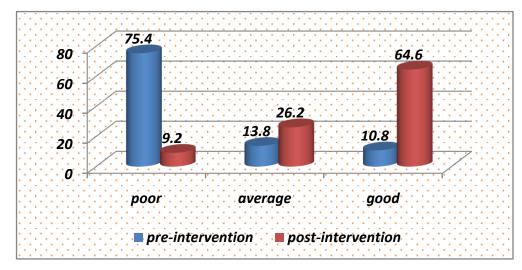**A highly statistical significant difference (P ≤ .001) * Statistical significant difference (P ≤ .05).

Figure 1. Percentage distribution of the total knowledge score regarding cervical cancer of the studied women at pre and post intervention

Table 4. Distribution of attitude regarding cervical cancer of the studied women (n=65)

Items	Pre-intervention						Post-intervention						Chi-square χ^2	P Value
	Disagreed		Uncertain		Agree		Disagreed		Uncertain		Agree			
	No	%	No	%	No	%	No	%	No	%	No	%		
Carcinoma of the cervix is highly prevalent	31	47.7	26	40.0	8	12.3	4	6.2	4	6.2	57	87.7	73.90	<0.001**
Cervical cancer is curable if detected early.	15	23.1	43	66.2	7	10.8	4	6.2	3	4.6	58	89.2	81.16	<0.001**
Postmenopausal women still have the risk of getting cervical cancer.	26	40.0	32	49.2	7	10.8	4	6.2	5	7.7	56	86.2	73.94	<0.001**
Maintaining sexual hygiene can prevent cervical cancer.	25	38.5	26	40.0	14	21.5	3	4.6	14	21.5	48	73.8	39.53	<0.001**
Cervical cancer has no symptoms in the precancerous lesions period.	31	47.7	27	41.5	7	10.8	6	9.2	5	7.7	54	83.1	68.23	<0.001**
Cervical cancer can be detected in its earliest stages.	27	41.5	26	40.0	12	18.5	4	6.2	4	6.2	57	87.7	62.54	<0.001**
Early sexual activity is one of the risk factors of cervical cancer.	28	43.1	28	43.1	9	13.8	6	9.2	5	7.7	54	83.1	62.40	<0.001**
Women should be screened for cervical cancer at least every three years.	20	30.8	36	55.4	9	13.8	2	3.1	4	6.2	59	90.8	77.09	<0.001**
Cervical smear cytological examination is a major method for cervical cancer screening.	25	38.5	25	38.5	15	23.1	4	6.2	25	3.5	36	55.4	23.85	<0.001**

**A highly statistical significant difference (P ≤ .001) * Statistical significant difference (P ≤ .05).
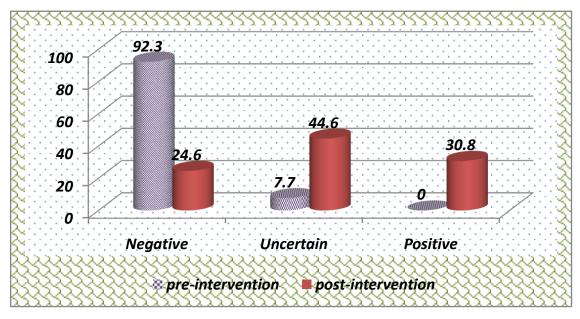

Figure 2. Percentage distribution of the total attitude score regarding cervical cancer screening of the studied women at pre and post intervention

Table 5. Relation between women's total knowledge score and their related personnel characteristics related cervical cancer. (n=65)

Variable	Mean ±SD	Statistical test			Mean ±SD	Statistical test		
		F Test	Independent t test	P value		F Test	Independent t test	P value
Age in years								
20-29	8.2857±3.509	0.101		>0.05	19.0476±3.499	0.719		>0.05
30-39	8.0303±3.627				19.8788±2.607			
40-50	7.7273±2.101				18.8182±3.655			
Education								
Read & write	7.0000±1.936	12.54		<0.05*	13.6667±2.121	46.13		<0.001**
Basic education	6.5000±2.239				19.8333±2.520			
Secondary	10.2308±3.64				20.9615±.999			
Residence								
Urban	8.0952±3.505		0.223	>0.05	19.6667±2.816		0.620	>0.05
Rural	7.8788±3.416				19.1515±3.212			
occupation								
Working	13.0000±3.55		3.96	<0.05*	21.7143±.7559		5.09	<0.001**
House wife	7.4655±2.798				19.1552±3.150			

**A highly statistical significant difference (P ≤ .001) * Statistical significant difference (P ≤ .05).

Table 6. Relation between women's total attitude score and their related personnel characteristics related cervical cancer. (n=65)

Variable	Mean ±SD	Statistical test			Mean ±SD	Statistical test		
		F Test	Independent t test	P value		F Test	Independent t test	P value
Age in years								
20-29	10.8095±6.25	0.052	-	>0.05	20.2381±4.32	1.11	-	>0.05
30-39	10.7813±7.95				19.7576±4.60			
40-50	11.5455±5.61				22.0000±3.22			
Education								
Read & write	1.3333±2.00	15.54		<0.05*	12.7778±4.84	42.58	-	<0.001**
Basic education	14.3077±5.65				22.5385±1.90			
Secondary	11.7667±7.03				22.5667±3.00			
Residence								
Urban	10.1667±7.19	-	0.629	>0.05	21.0238±4.48	-	0.425	>0.05
Rural	12.3636±6.44				21.5217±4.53			
occupation								
Working	17.1429±7.51	-	2.19	<0.05*	25.5714±2.29	-	4.69	<0.001**
House wife	10.6379±7.00				20.6724±4.39			

**A highly statistical significant difference (P ≤ .001) * Statistical significant difference (P ≤ .05).

Table 6: Relation between women's total attitude score and their related personnel characteristics related cervical cancer. illustrates that there was no statistical significant relation among studied women total attitude score regarding their age and residence at both pre and post intervention phases .while there was a significant relation among their attitude and their educational qualification and their occupational status at pre intervention phase.Moreover there was a high statistical significant relation among total attitude score and their education (<0.001**) at post intervention.

Table 7. Correlation between total knowledge and attitude score of the studied women at pre and post intervention (n=65)

Variables	Total attitude pre-intervention		Total attitude post-intervention	
	R	P value	r	P value
Total knowledge pre-intervention	.033.	.795	-	-
Total knowledge post-intervention	-	-	.060	.638

**. Correlation is a highly statistically significant at the 0.01 level (2-tailed).

Table 7: Correlation between total knowledge and attitude score of the studied women at pre and post intervention. Indicates that there was appositive association between studied women total knowledge and total attiude score. That means increase knowledge is positively associated with increase attitude

4. Discussion

Cancer is increasingly becoming the disease of the century, especially cervical cancer that is now the fourth most common Gynecologic malignant tumor worldwide after breast cancer to cause death among the female population. This disease originates at the squamocolumnar junction of cervical canal. It most commonly arises in an area known to undergo considerable changes during late fetal life, adolescence and first pregnancy [13].

The aim of present study was to evaluate the effect of educational intervention for women's knowledge and attitude regarding cervical cancer. The current study result supported the stated hypothesis that educational intervention will improve studied women knowledge and attitude score. Regarding studied women knowledge about cervical cancer at the pre-intervention phase, the present study revealed that the majority of women had poor knowledge pre intervention. These findings are agreed with [5] in the study to evaluate "effectiveness of structured education program on knowledge regarding cervical cancer prevention "at India, and found represented that the majority of the studied females had a poor level of knowledge regarding cervical cancer at the pre-program phase. Moreover the present study findings are supported by [14], in the study to "Effect of Educational Program Women' Knowledge, Attitude Regarding Cervical Cancer and Early Detection by Pap Test "at king of Saudi Arab, it was illustrated that at the pre-program phase the majority of the studied women had poor knowledge regarding pap test 88% of women, in both control and study group in base line survey. This can be attributed to the absence of a well-organized cervical cancer program.

On the other hand, the present study findings showed that there was a highly significant improvement of knowledge score regarding knowledge post intervention, these study findings are agreed with [15], in the study to assess "effectiveness of planned teaching program on knowledge regarding cervical cancer among women" that conducted at India, the study findings revealed that there was a significant difference between the two tests was tested using paired t-test the level of significant was highly (p<0.001) indicated that there was a significant difference in the knowledge of women on cervical cancer. In the same line with [16] in the study conducted for

"evaluation of an educational program on cervical cancer for rural women "in Southern India. A similar findings were supported the present study findings, and showed the posttest mean was significantly higher than that of the pretest mean.

In relation to the attitude of the studied women regarding for cervical cancer at the pre-intervention, the present study findings pointed out that, the majority women had a negative attitude .These findings may be due to lack of cervical cancer prevention awareness program and lack role of mass media toward cervical cancer prevention The present study findings supported by a previously mentioned study by *[14]* that illustrated that majority of the studied females had a negative attitude. In addition [17] in Egypt in the study to evaluate "the effect of educational intervention on women's knowledge and perception about cervical cancer and human papillomavirus vaccines in Tanta City". As regarding the effect of educational intervention on attitude of the studied women regarding cervical cancer, the present study findings revealed that studied women attitude was highly positive after the implementation of the educational intervention.

As regards the correlation between studied women knowledge and attitude, the present study findings revealed that there was a positive correlation between total knowledge and attitude scors this may be du to effect of educational intervention on knowledge and attitude for woman regarding cervical cancer .. these findings were supported by [18], in the study to evaluate Knowledge about cervical cancer and barriers of screening program among women in wufeng County. In China, who reported that the good knowledge, the positive attitude. On the other hand [19] in the study to evaluate Knowledge, Attitude and Practice Regarding Cervical Cancer Screening Among Women Attending a Teaching Hospital, Bharatpur, Chitwan, who reported that there was strong negative correlation between knowledge score and practice score regarding cervical cancer screening among women (r = -0.194).

Regarding the personal characteristics of the studied women the present study findings showed that about half of studied sample have age from 30 to 39 years, and nearly half of sample had secondary education and more than half of them live in urban and most of them were not working. these results were in agreement with [17] in the previously mentioned study indicated that half of the women (50.4%＆ 53.7% respectively) were aged 26-35years and lived in urban areas. In addition the study findings illustrated that about more than third of the women 35.2% had secondary education while 19.2% were illiterate; the majority of women 96.8%, 88.0%, and 82.4% respectively were married and not working.

In addition regarding obstetric history of studied woman the present study findings showed that the mean age of marriage were (53.7%) years in about half of them about one third of them had gravid1-2 and the majority of them were used contraceptive methods. [20] in the study to evaluate Awareness of cervical cancer risk factors and symptoms: Cross-sectional community survey in post-conflict Northern Uganda reported that about two thirds of women 62.9%, had ≤ 2 gravida and 84.6% of them used contraceptive method .

Regarding relation between knowledge and personal characteristics of studied sample the present study findings showed that there were no statistically significant relation between studied women knowledge and their age and residence .Additionally the present study represented that there was a highly statistically significant relation between knowledge and educational level and occupation of studied women. These results were agreed with [21] in the study to evaluate Knowledge, attitude, and practices related to cervical cancer among adult women who found that age, level of education and income were significantly associated with the highest knowledge score among women with higher education were more likely to have adequate knowledge. These findings may be due to that a highly educated woman pay more attention to health and have more opportunities to obtain relevant information and thereby increase knowledge.

Regarding the relation between attitude and personal characteristics of studied sample the present study findings represented than there was no significant relation between personal characteristics and attitude of studied sample these results were agreed with [22] in the study to "evaluate Knowledge, attitudes, and practice related to cervical cancer screening among Kuwaiti women. It was indicated that level of education and occupation were a high significant factor associated with positive attitudes.

5. Conclusion

Educational program is effectively improving women's knowledge and attitude regarding cervical cancer.

6. Recommendation

1. Disseminate information that focus on educating the women about cervical cancer risks, prevention and early detection to enhance uptake of cervical cancer.
2. Cervical cancer education program should be provided for all women's in all different ages in Egypt.

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