



Assessment of the knowledge towards Cancer Cervix among Nurse Staff in Health Care Facilities in Beni-Suef City, Egypt

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Abstract

Health professionals are a direct source of medical information to the public. Hence, it is crucial that their knowledge is accurate and aids in building awareness. **Aim:** Increase knowledge and ability of female nurses to disseminate proper information about breast and cervical cancer to population. **Methodology:** An observational cross-sectional study was conducted from April 2017 to January 2018, among 350 nurses working in Beni-Suef university hospital, El Salam private hospital, rural and urban PHC units were surveyed by a self-administered questionnaire to measure their knowledge about cancer cervix. **Results:** The majority of nurses (76.6%) had an optimal knowledge about cancer cervix with optimal knowledge score about all domains except general knowledge which was suboptimal=57.8%. The knowledge score was significantly affected by some socio-demographic factors. The main source of information about cancer cervix was colleagues by (70.5%) of nurses. **Conclusion:** There is a need for educating nurses about cancer cervix with giving priority to improve cancer cervix content in the educational nursing curriculum with development of periodic workplace training courses for nurses and continuous professional education programs that focus on Pap smear for health care workers.

Keywords: Nurses, Knowledge, Cancer Cervix

1. Introduction:

Cervical cancer is a preventable disease. The vast majority of cervical cancer cases are caused by certain strains of the Human Papilloma virus (HPV) [1, 2]. A Papanicolaou test, commonly known as a Pap smear, is recommended by physicians for

detection of precancerous cells and small tumors caused by HPV that can later develop into cervical cancer if the condition is left untreated [3]. Early detection can allow women to obtain treatment for abnormal cells before they become cancerous, effectively

preventing the development of cancer [4]. Additionally, there is growing evidence that culturally-based knowledge, beliefs, attitudes, and emotions regarding cervical cancer influence women's screening behaviors [5, 6].

This research provides the opportunity to assess level of knowledge cancer cervix among female nurses in different health care facilities in Beni-Suef city.

This study is directed to nurses due to their crucial role in patient education on the subject such that in some parts of the developed world, the specialist breast care nurse has evolved [7]. This role, which includes public advocacy, care giving, support and research, is required more in developing countries such as Egypt, where there is a paucity of diagnostic facilities.

2. Patients and Methods

Study Design: a descriptive cross-sectional, questionnaire- based study.

Study Duration: From April 2017 to January 2018

Study population and sampling: The study was conducted among nurses working at Beni-Suef University hospital (governmental hospital), El Salam hospital (private hospital), El-Ghamrawy health office, Shark El Nil health care center, Mokbel health office, Abdel Salam Aref health office, El Ramad health office

(urbanPHC), Sherif Basha, El kom El ahmar, Barot, Belefia and Abu Sleim health care units (rural PHC), which were selected randomly as a representative sample of the health care facilities in Beni-Suef city.

A total of 350 nurses from these health care facilities were asked to fill a questionnaire inquiring about their knowledge about cancer cervix

Study tool: A self-administered questionnaire was prepared in Arabic language used for data collection, and then it was pilot tested. Finally, the questionnaire was designed to cover these main parts:

Part 1: socio-demographic characteristics of surveyed nurses including (12 questions) about age, marital status, educational status, residence, number of children, department, number of years of work, source of getting information about breast cancer and cancer cervix, source of getting health services, costs of mammogram and Pap smear included in health insurance system or not, their income and whether it is enough or not.

Part 2: knowledge about cancer cervix among nurses which was divided into 6 domains ; general knowledge (8 questions) , knowledge of risk factors (8 questions), symptoms and signs (8 questions), diagnostic methods (3 questions), treatment methods (5 questions) and prevention of cancer

cervix (2 questions) to get a total of (34 questions) assessing knowledge about cancer cervix .

Answers were coded, with the correct answer given (1) while the incorrect or I don't know answers were given (0). Knowledge score was calculated by calculating the sum of questions of each domain to get a final score of each domain, and then a total score was calculated by getting the sum of domains' scores.

For cancer cervix questionnaire, total knowledge score ranged from 0 to 34 points which classified into: suboptimal knowledge "0-19" and optimal knowledge "20-34" where optimal means good knowledge and suboptimal means bad knowledge.

Data analysis: The collected data were coded then entered and was analyzed using the SPSS version 18 (Statistical package for social science).

- Descriptive statistics for the socio-demographic characteristics of participants were first analyzed:
- Description of qualitative variables by frequency and percentage.
- Description of quantitative variables in the form of mean and standard deviation (mean \pm SD).
- Graphs were used to illustrate simple information. Suitable statistical tests were used (Chi-square (χ^2), Binary logistic regression and one way ANOVA test). P-values equal to or less than 0.05 considered statistically significant.

Ethical considerations: The study was approved by the ethical committee of the Faculty of Medicine, Beni-Suef University. Prior to data collection, official permissions were obtained from the faculty of Medicine Beni-Suef University then sent to the authorities of El-Salam hospital and the primary health-care centers including in this study to get their permissions.

Informed consent was obtained from all participants before recruitment in the study, after explaining the objectives of the work. Confidentiality was guaranteed on handling the data base and questionnaire forms. The questionnaires included explanations about the purpose of the study confirmation of confidentiality of data and assuring that it will never be used for purposes other than scientific research.

3. Results

Out of 350nurses, 130 (37%) were working in Beni-Suef University hospital, 89 (26%) in El Salam hospital, 92 (26%) in rural PHC and 39 (11%) in urban PHC as shown in fig (1).

There was a significant difference between the participating nurses in the 4 health care facilities regarding marital status, educational status, residence, work department, source of information about breast cancer and cancer cervix, source of health care coverage, and sufficiency of income as shown in Tab (1)

About (80.4%) of nurses correctly answered that early diagnosis of cancer cervix improves its treatment results, (70.4%) knew that it may be

asymptomatic, (64.8%) were with correct answer about the curability of cancer cervix.

Only (8.9%) knew that cancer cervix is not one of the most common cancers in Egypt as shown in Tab (2). There is a statistically significant difference among participating nurses regarding general knowledge and

preventive methods domains of cancer cervix as shown in Tab (3)

Figure (1): Distribution of Participating Nurses in Relation to Their Work Place.

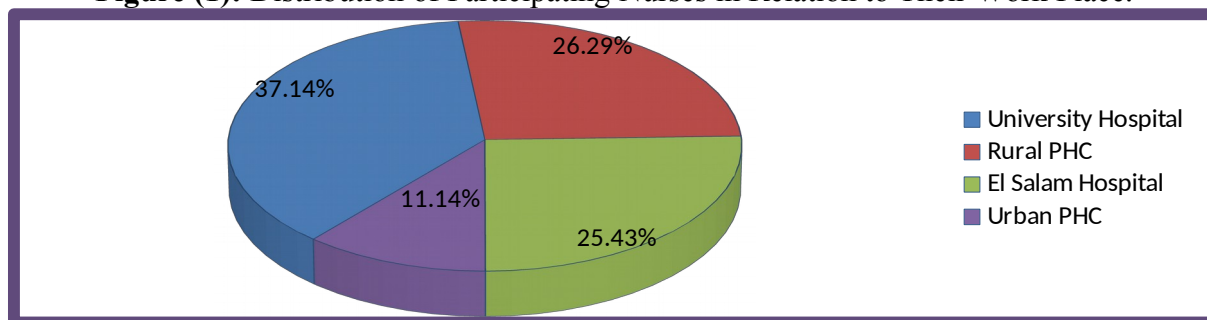


Table (1): Characteristics of Participating Nurses in the 4 Health Care Facilities

Characteristics	Group N (%) mean ±SD				Total	P-value
	University hospital (130)	El-Salam hospital (89)	Rural PHC(92)	Urban PHC(39)		
Age						
Mean ±SD	35.5 ±9.6	33.7 ±6.9	37.5 ±3.3	34.4 ±8.7	35.2 ±8.2	0.0048*
Marital status						
Single	16 (12.3)	13 (14.8)	0 (0)	2 (5.1)	31 (32.4)	0.003*
Married	106 (81.5)	76 (85.2)	90 (97.8)	37 (94.9)	310 (326)	

)	3	
Divorced	2 (1.5)	0 (0.0)	0 (0)	0 (0)	2 (0.6)	
Widow	6 (4.6)	0 (0.0)	2 (2.2)	0 (0)	8 (2.3)	
Number of children						
Mean ±SD	2.1 ±1.3	2.4 ±1.4	3.1 ±0.9	2.5 ±1.1	2.5 ±1.3	0.001 *
Education status						
Diploma	97 (74.6)	58 (64.8)	92 (100)	25 (64.1)	27 (77.7)	0.001 *
Faculty	33 (25.4)	31 (35.2)	0 (0)	14 (35.9)	78 (22.3)	
Residence						
Rural	9 (6.9)	0 (0)	92 (100)	0 (0)	11 (28.9)	0.001 *
Urban	121 (93.1)	89 (100)	0 (0)	39 (100)	24 (67.7)	

				0)	1 . 1)	
Department						
Surgery	12 (9.2)	28 (30.7)	13 (14.1)	5 (12.8)	58 (116.3)	0.001 *
Gynecology/Obstetrics	37 (28.5)	11 (12.5)	31 (33.7)	6 (15.4)	85 (124.4)	
Internal medicine	36 (27.7)	16 (18.2)	30 (32.6)	0 (0)	82 (123.5)	
Radiology	6 (4.6)	0 (0)	7 (7.6)	3 (7.7)	16 (46)	
Pediatric	35 (26.9)	4 (4.5)	11 (12)	0 (0)	50 (143)	
Oncology	0 (0)	7 (8)	0 (0)	7 (17.9)	14 (44)	
**Others	4 (3.1)	2 3 (26.1)	0 (0)	1 8 (14.6)	4 5 (11)	

				2)	2 .9)	
Years of experience						
Mean ±SD	11.6 ±8.3	10 .4 ±7	13 .4 ±6 .2	9 .6 ±5. 6	1 1 .5 ±7 .3	0.012 *
Source of information						
Colleagues	94 (72.3)	65 (72.7)	55 (59.8)	33 (38.6)	24 (27.5)	0.001 *
Media	13 (10)	0 (0)	4 (4.3)	0 (0)	17 (19.9)	
Network	0 (0)	0 (0)	1 (1.1)	0 (0)	1 (1.3)	
Patients	23 (17.7)	24 (27.3)	32 (34.8)	61 (54)	85 (94.4)	
Health services utilization						
Health Insurance	21 (16.2)	21 (23.9)	5 (5.4)	19 (48.7)	66 (74.9)	0.001 *
Private	67 (51.5)	6 (6.8)	2 (2.2)	12 (33)	87 (97)	

				0.8)	24.9)	
Health unit/Governmental hospital	42 (32.3)	62 (69.3)	85 (92.4)	82.5)	197.562)	
Health insurance includes mammogram and pap smear						
Yes	130 (100)	89 (100)	92 (100)	391)	350)	----
Income is sufficient						
Yes	120 (92.3)	89 (100)	85 (92.4)	391)	335)	0.001*
No	10 (7.7)	0 (0)	7 (7.6)	0 (0)	174.9)	

*P-value ≤0.05 is statistically significant.

Table (2): Knowledge among Participating Nurses about Cancer Cervix

variable	Right answer N (%)				Total	P-value
	University Hospital	El-Salam hospital	Rural PHC	Urban PHC		
Cancer cervix one of most common cancers in Egypt	20 (15.4)	5 (5.7)	6 (6.5)	0 (0)	31 (8.9)	0.07*
Cancer cervix is a cause of death in Egypt	67 (51.5)	59 (67)	59 (64.1)	27 (69.2)	212(60.7)	0.00

						2*
Cancer cervix caused by viral infection	76 (58.5)	60 (68 .2)	63 (68 .5)	25 (64 .1)	22 4 (64 .2)	0.014*
Cancer cervix is curable	76 (58.5)	71 (80 .7)	52 (56 .5)	27 (69 .2)	22 6 (64 .8)	0.001*
Cancer cervix is common in females aged 45 to 55	72 (55.4)	54 (61 .4)	47 (51 .1)	25 (64 .1)	19 8 (56 .7)	0.123
Cancer cervix may be a symptomatic	79 (60.8)	68 (78 .2)	70 (76 .1)	28 (71 .8)	24 5 (70 .4)	0.001*
Early diagnosis improves treatment results	97 (75.8)	83 (94 .3)	75 (81 .5)	25 (64 .1)	27 9 (80 .4)	0.003*
There is a vaccine for the responsible virus	76 (58.5)	51 (58)	52 (56 .5)	18 (46 .2)	19 7 (56 .4)	0.211
Total percent of correct answers	57.8%					

*P-value ≤0.05 is statistically significant.

Table (3): Comparison between Cancer Cervix Knowledge Domains Score & Total Knowledge Score

	Domain	Mean ±SD	Range (min-max)	P-value
General Knowledge of Cancer Cervix Score = 8	University hospital (N=130)	4.33 ±2.41	7 (0 – 7)	0.050* ¹
	El-Salam hospital (N=89)	5.11 ±1.67	7 (1 – 8)	
	Rural PHC (N=92)	4.49 ±1.85	7 (0 – 7)	
	Urban PHC (N=39)	4.61 ±1.89	7 (0 – 7)	
Cancer Cervix Risk Factors Score = 8	University hospital (N=130)	5.52 ±2.68	8 (0 – 8)	0.072
	El-Salam hospital (N=89)	6.14 ±1.43	5 (3 – 8)	
	Rural PHC (N=92)	5.51 ±1.71	7 (1 – 8)	
	Urban PHC (N=39)	6.10 ±1.70	6 (2 – 8)	
Cancer Cervix Symptoms Score = 8	University hospital (N=130)	5.84 ±2.59	8 (0 – 8)	0.468
	El-Salam hospital (N=89)	6.26 ±2.12	8 (0 – 8)	
	Rural PHC (N=92)	6.22 ±1.79	7 (1 – 8)	
	Urban PHC (N=39)	6.08 ±1.62	7 (1 – 8)	
Cancer Cervix Diagnosis Methods Score = 3	University hospital (N=130)	2.05 ±1.11	3 (0 – 3)	0.429
	El-Salam hospital (N=89)	1.89 ±0.95	3 (0 – 3)	
	Rural PHC (N=92)	2.04 ±0.90	3 (0 – 3)	
	Urban PHC (N=39)	2.18 ±0.91	3 (0 – 3)	
Cancer Cervix Treatment Methods Score = 5	University hospital (N=130)	3.85 ±1.52	5 (0 – 5)	0.225
	El-Salam hospital (N=89)	4.18 ±0.98	3 (2 – 5)	
	Rural PHC (N=92)	3.90 ±1.25	5 (0 – 5)	
	Urban PHC (N=39)	4.13 ±0.95	3 (2 – 5)	
Cancer Cervix Preventive Methods Score = 2	University hospital (N=130)	1.35 ±0.69	2 (0 – 2)	0.002* ²
	El-Salam hospital (N=89)	1.63 ±0.53	2 (0 – 2)	
	Rural PHC (N=92)	1.62 ±0.59	1 (1 – 2)	

TOTAL SCORE = 34	Urban PHC (N=39)	1.51 ±0.51	1 (1 – 2)	0.123
	University hospital (N=130)	22.94 ± 9.01	33 (0 – 33)	
	El-Salam hospital (N=89)	25.20 ±5.13	22 (11 – 33)	
	Rural PHC (N=92)	23.90 ±5.82	2 (6 – 33)	
	Urban PHC (N=39)	24.49 ±4.91	20 (13 – 33)	
TOTAL (N=350)		23.96 ±7	33 (0 – 33)	

*P-value ≤0.05 is statistically significant.

4. Discussion

The socio-demographic structure of this study identified that the mean age was 35.3±8.2 (Table 1). Out of total of 350 respondents, 24.4% were from gynecology and obstetrics, 23.5% were from internal medicine, 16.3% from the surgery and 14.3% were from pediatric department.

Knowledge about cancer cervix was mostly from colleagues as a source of information (70.5%) while web based information represented only 0.3%. Another valuable source of information about cervical cancer was from educational material in nursing school reported by 53.3% among 137 nurses followed by media (47.4%) and colleagues and self-study were constituted only 18.2% as a source of information in a similar study conducted in northern Tanzania [8].

among study participants was suboptimal (57.8%); with 64.8% reporting their knowledge about curability of cancer cervix, 70.4% knew that it may be asymptomatic, 64.2% knew that it might be caused by viral infection and 56.4% reported that there was a vaccine for the causative virus. In a similar study conducted among 205 staff nurses working in Rural Institute of Medical Sciences & Research, Saifai, Etawah showed that none of the study

nurses knew that cancer cervix may be asymptomatic, 76% reported that cancer cervix can be easily curable if diagnosed early, HPV was known by 54.1% as a risk factor and only 18% knew that there was a vaccine against HPV infection [9].

Overall scoring scores indicated acceptable level of knowledge about cancer cervix (range=0–33, mean= 23.96/34 points ±SD7) as shown in table (3). This result is similar to a study conducted in Thailand conducted which revealed a moderate to good knowledge about cancer cervix (range=3–30, mean= 21.5/35 points ±SD 6.108) [10].

5. Conclusion and Recommendations:

There is a need for educating nurses about breast cancer and cancer cervix with giving priority to improve breast cancer and cancer cervix content in the educational nursing curriculum with development of periodic workplace training courses for nurses and continuous professional education programs that focus on BSE for health care workers.

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