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NURSES KNOWLEDGE ON PREVENTION AND CONTROL OF CERVICAL CANCER

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ABSTRACT
Background: Cervical cancer is the fourth most prevalent cancer form and the fourth leading cause of cancer death in women globally **Objective:** To access nurses knowledge on prevention and control of cervical cancer. **Methods:** This descriptive type of cross-sectional study was conducted among 384 nurses of Rajshahi Medical College Hospital from May 2020 to May 2021. Respondents were enrolled in the study using convenient sampling technique. Data was collected by face to face interview with a semi-structured questionnaire. **Results:** Nurses had an overall Fair level of knowledge about cervical cancer, as well as 31.0% had Good knowledge, and 13.0% had a Poor level of knowledge regarding cervical cancer. **Conclusion:** Nurses need to continuing medical education and the creation of cervical cancer prevention policies and strategies at all levels of the health sector. The necessary steps should be taken to increase awareness among the nurses about cervical cancer.

KEYWORD: Cervical Cancer, Screening, Knowledge, Prevention, HPV.

1. INTRODUCTION
A cancer that develops in the cervix is called cervical cancer.[1] More than 90% of cases are caused by human papillomavirus infection (HPV).[2] Smoking, a weakened immune system, oral contraceptive pills (OCP), beginning sex at a young age, and having numerous sexual partners are other risk factors, however they are less significant.[2] Cervical cancer risk is also influenced by genetic factors.[6] Early on, often there are no symptoms.[1] Later signs and symptoms might include abnormal vaginal bleeding, pelvic pain, or discomfort during sex.[1] While post-sex bleeding may not be significant, it could also be a sign of cervical cancer.[3] Typically, a biopsy is performed after a cervical screening for diagnosis. The treatment of cervical cancer varies worldwide, largely due to access to surgeons skilled in radical pelvic surgery, and the emergence of fertility-sparing therapy in developed nations. Cervical cancers are radiosensitive, radiation may be used in all stages where surgical options do not exist. Surgical intervention may have better outcomes than radiological approaches.[4] In addition, chemotherapy can be used to treat cervical cancer, and has been found to be more effective than radiation alone.[5]

Cervical cancer is the fourth most prevalent cancer form and the fourth leading cause of cancer death in women globally.[7] There were 266,000 fatalities from cervical cancer in 2012, according to estimates of 528,000 new cases.[7] This represents around 8% of all cancer cases and deaths combined.[8] In developing nations, 90% of cervical cancer deaths and 70% of new cases occur.[9] It is one of the most frequent causes of cancer death in low-income countries.[10] Cervical cancer rates have significantly decreased in developed nations due to the widespread adoption of cervical screening programs.[11]
In Bangladesh, cervical cancer is the second most prevalent kind, with 12,000 new cases being discovered yearly and over 6,000 fatalities from the disease's complications.[12] Most occurrences of cervical cancer can be avoided using primary (HPV vaccine) and secondary prevention strategies (screening for and treating precancerous lesions). Early diagnosed, cervical cancer can be managed effectively.[13] As cervical cancer prevention technologies and vaccine science evolve, so does the need for utilizing nurse expertise in these areas. Nurses serve as a core source of vaccine information.[14] Therefore, nursing play important role in preventing and controlling cervical cancer , not only by ensuring that all aspects of their nursing practice are properly conducted, but also through nursing research, patient education. So our study aim to access nurses knowledge on prevention and control of cervical cancer.

2. METHODOLOGY
2.1 Study design: Descriptive cross-sectional study.

2.2 Study Setting: Rajshahi Medical College Hospital, Rajshahi, Bangladesh.

2.3 **Study period:** The study was conducted between May 2020 and May2021.

2.4 Study Sample: The sample size was calculated using a 95% confidence level and 5% error with a response rate of 50%, the sample size adding a 10% drop out rate, 384 nurses were considered to participate in the survey. So, a convenience sample consisted of 384 nurses.

2.5 The inclusion criteria: Only female nurses with at least six months of working experience and age not less than 20 years are eligible.

2.6 Tools of the study: A self-administrative questionnaire that was utilized to collect data. Questionnaire divided in to three part are as follows:
A. consists of socio-demographic characteristics as Nurses' Age (years), education, marital status, nursing experience (years), religion.

B. The nurses' knowledge was assessed using 10 questions to assess knowledge regarding cervical cancer symptomatology, knowledge about risk factors of cervical cancer 9 question and knowledge about prevention and control of cervical cancer 11 question. Answer points were assigned to each question, with one point awarded for each yes response and zero for no or I don't know responses.Each participant's overall knowledge score was calculated by adding their yes answers together. The knowledge marks were categorised into Poor knowledge (≤50%), Fair knowledge (51- 80%), and (> 80) measured Good knowledge.

C. Personal behaviour question why not received cervical screening consisted of 5 question.

2.7 Validity and reliability of the study: A board of five academic and health-care experts examined and validated the questionnaire; no comments were made. The questionnaire items had an internal consistency of 0.90 Cronbach's alpha (), which was considered acceptable.

2.8 Statistical analysis: Data were processed and analyzed using computer software program SPSS version-25. The data present on categorical scale were expressed as frequency and corresponding percentage and compared by chi-square test, while the quantitative data were presented as mean and standard deviation (SD) and compared by student's t-test. Postoperative final outcome were evaluated using confidence interval. For all analyses level of significance was set at 0.05 and p-value <0.05 was considered significant.

2.9 Data presentation: The observation and findings of the investigation and statistical analysis were presented using appropriate charts, figures, tables, and diagrams. The mean, range, percentage, and standard deviation (SD) were utilized in the case of continuous variables. Cross table and composite graph were employed in the case of categorized variables.

2.10 Ethical considerations: This study was approved by the nursing department, Rajshahi Medical College Hospital. Approval from nurses were obtained. Several strategies were utilized to protect the nurse's rights who agreed to participate in this study. First, oral verbal consent of the nurses was obtained prior to the administration of the questionnaire. The nurses were informed of the purpose of the study, and that they had the right to refuse to participate. Also the voluntary nature of participation was stressed as well as confidentiality. Furthermore, the nurses were told that they can refrain from answering any questions and they can terminate at any time. Anonymity of the nurses was maintained at all times.

3. RESULTS

Table 1: Distribution of the nurses according to demographic variables (*n=384*).

Variables	Characteristics	Frequency	Percent
Age (years)	20-30 years old	130	34.0
	31-40 years old	152	39.5
	>40years old	102	26.5
Education	Nursing diploma	188	49.0
	Bachelor	138	36.0
	Master	58	15.0
Marital status	Single	81	21.0
	Married	303	79.0
Nursing experience (years)	5 years or less	234	61.0
	6–15 years	119	31.0
	>15 years	31	8.0
Religion	Hindu	42	11
	Muslim	328	85.5
	Christ	10	2.5
	Buddhist	4	1.0

Ever been screened for cervical cancer	Yes	65	17.0
	No	319	83.0
Ever been taken HPV vaccine	Yes	46	12.0
	No	338	88.0

Table 1 shows that maximum 140 (39.5%) of the nurse's age group were in 20–30 years. Majority of the nurses had diploma degree 188 (49.0%). However, around two third of them 303 (79.0%) were married, and majority of the nurses years of experience were 5 years or less 234 (61.0%). Majority of the nurses 328 (85.5%) religion were Muslim as well as least number of nurses 4 (1.0%) religion were Buddhist. Ever been screened for cervical cancer only 65 (17.0%) nurses were received screened for cervical cancer on the other hand least number of the nurses 46 (12.0%) ever been taken HPV vaccine.

Table 2: Distribution of the nurses according to knowledge about cervical cancer symptomatology (*n*=384).

Attributes*	Frequency (Yes)	Percent
Postmenopausal bleeding	320	83.4
Foul smelling vaginal discharge	312	81.3
Irregular periods	277	72.2
Postcoital bleeding	270	70.3
Chronic pelvic pain	252	65.6
Unexplained weight loss	252	65.6
Intermenstrual bleeding	243	63.3
Dyspareunia	199	49.0
Back pain	106	27.6
Unresponsive diarrhea	63	16.4

Table 2 shows that majority of the nurses correctly identified having multiple sexual partners 320 (83.4%), foul smelling vaginal discharge 312 (81.3%), irregular periods 277 (72.2%), postcoital bleeding 270 (70.3%), as a symptomatology for cervical cancer respectively. Around half of the nurses identified chronic pelvic pain 252 (65.6%), unexplained weight loss 252 (65.6%), intermenstrual bleeding (63.3%), dyspareunia (49.0%) and below half of the nurses identified back pain (27.6%), & unresponsive diarrhea (16.4%) as a symptomatology for cervical cancer respectively.

Table 3: Distribution of the nurses according to knowledge about risk factors of cervical cancer (*n*=384).

Attributes*	Frequency (Yes)	Percent
Multiple sexual partner	269	70.1
Multiparity	240	62.5
Long term OCP use	201	52.6
Sex <17 years	168	43.8
Chlamydia infection	156	40.6
Smoking	168	43.8
Weak immunity	149	38.8
Uncircumcised sexual partner	103	26.8
Hereditary	23	6.0

***Multiple responses**

Table 3 shows that above half of the nurses knew multiple sexual partner 269 (70.1%), multiparity (62.5%), Long term OCP use 201 (52.6%) as well as below half of the nurses knew Sex <17 years 168 (43.8%), chlamydia infection 156 (40.6%), smoking 168 (43.8%), weak immunity 149 (38.8%) whereas near quarter of the nurses knew uncircumcised sexual partner 103 (26.8%), and least number of the nurses knew hereditary 23 (6.0%) as a risk factor for cervical cancer respectively.

Table 4: Distribution of the nurses according to knowledge about prevention and control of cervical cancer (*n*=384).

Attributes*	Frequency (Yes)	Percent
Vaccination against HPV	349	90.9
Correct age group for HPV vaccination	331	86.2
Using condom during sexual encounter	315	82.1
Avoiding multiple sexual partners	350	91.2
Delaying initiation of sex after 18 years	254	66.2
Male circumcision	308	80.2
Avoiding prolong use of OCP	104	27.1
Avoiding smoking	169	44.0
Avoiding multiple deliveries	304	79.2
Early screening	355	92.5
Correct age group for screening using VIA	62	16.1

*** Multiple responses**

Table 4 shows that majority of the nurses knew about prevention of cervical cancer such as: Vaccination against HPV 349 (90.9%), avoiding multiple sexual partners 350 (91.2%), early screening 355 (92.5%), correct age group for HPV vaccination 331 (86.2%), using condom during sexual encounter 315 (82.1%), male circumcision 308 (80.2%), avoiding multiple deliveries 304 (79.2%), whereas around half of the nurses knew about prevention of cervical cancer such as: delaying initiation of sex after 18 years 254 (66.2%), avoiding smoking 169 (44.0%), but only 104 (27.1%) knew avoiding prolong use of OCP, and 62 (16.1%) knew correct age group for screening using VIA as a prevention and control measures for cervical cancer respectively.

Table 5: Distribution of the nurses according to reasons for not doing cervical cancer screening (n=319)

Variables*	Frequency (Yes)	Percent
Not thought about it	97	30.4
No time	66	20.7
Still young for it	52	16.3
Don't know about cervical cancer screening facility	36	11.3
Not aware of any test	18	5.6
It is expensive	26	8.2
Fear to pain	284	89.0
No cervical cancer sign	243	76.2
Fear for unsterile instruments	214	67.0

Table 5 shows that majority of the nurses' reasons for not doing cervical cancer screening 284 (89.0%) were fear to pain 243 (76.2%) were no cervical cancer sign 214 (67.0%) were fear for unsterile instruments. However, 97 (30.4%) were not thought about it 66 (20.7%) were no time 52 (16.3%) were still young for it 36 (11.3%) don't know about cervical cancer screening facility 26 (8.2%) were it is expensive 18 (5.6%) were not aware of any test nurses reasons for not doing cervical cancer screening respectively.

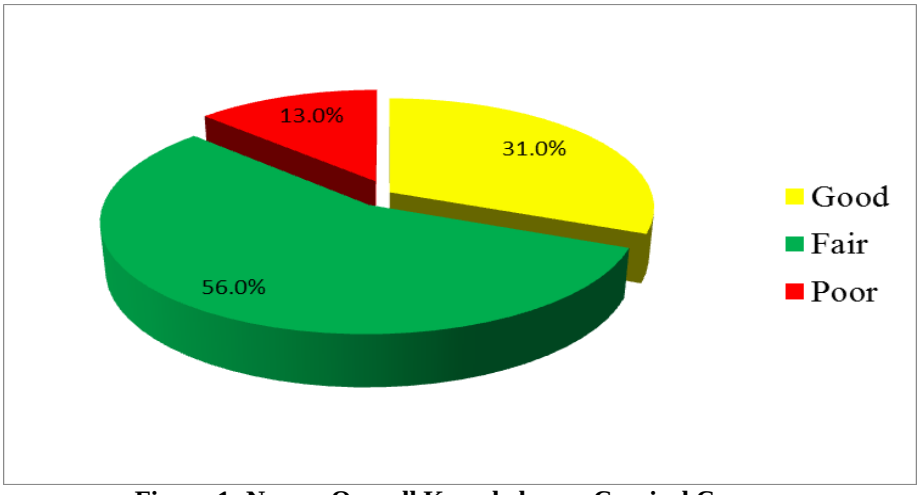

Figure 1: Nurses Overall Knowledge on Cervical Cancer.

Figure 2 shows that 56.0% of the Nurses had an overall Fair level of knowledge about cervical cancer, as well as 31.0% had Good knowledge, and 13.0% had a Poor level of knowledge regarding cervical cancer.

4. DISCUSSION

Cervical Cancer is a preventable disease and a key task of its prevention is detection of the premalignant form by cervical screening.

This study revealed that half of the nurses knew multiple sexual partner 269 (70.1%), multiparity (62.5%), Long term OCP use 201 (52.6%) as well as below half of the nurses knew Sex <17 years 168 (43.8%), chlamydia infection 156 (40.6%), smoking 168 (43.8%), weak immunity 149 (38.8%) whereas near quarter of the nurses knew uncircumcised sexual partner 103 (26.8%), and least number of the nurses knew hereditary 23 (6.0%) as a risk factor for cervical cancer respectively . Nurses also knew about prevention of cervical cancer such as: vaccination against HPV 349 (90.9%), avoiding multiple sexual partners 350 (91.2%), early screening 355 (92.5%), correct age group for HPV vaccination 331 (86.2%), using condom during sexual encounter 315 (82.1%), male circumcision 308 (80.2%), avoiding multiple deliveries 304 (79.2%), whereas around half of the nurses knew about prevention of cervical cancer such as: delaying initiation of sex after 18 years 254 (66.2%), avoiding smoking 169 (44.0%), but only 104 (27.1%) knew avoiding prolong use of OCP, and 62 (16.1%) knew correct age group for screening using VIA as a prevention and control measures for cervical cancer respectively.

Majority of the nurses' reasons for not doing cervical cancer screening 284 (89.0%) were fear to pain 243 (76.2%) were no cervical cancer sign 214 (67.0%) were fear for unsterile instruments. However, 97 (30.4%) were not thought about it 66 (20.7%) were no time 52 (16.3%) were still young for it 36 (11.3%) don't know about cervical cancer screening facility 26 (8.2%) were it is expensive 18 (5.6%) were not aware of any test nurses reasons for not doing cervical cancer screening respectively. Nurses had an overall Fair level of knowledge about cervical cancer, as well as 31.0% had Good knowledge, and 13.0% had a Poor level of knowledge regarding cervical cancer.

There is no national cervical cancer screening program in India[15] and in such a setting, opportunistic screening is only feasible when women come to procure health services for other ailments. In such a system, the onus is on the health worker to offer screening to eligible women and nursing staff plays a very important role. It is very important to understand the level of knowledge of the latter so that the gap can be covered and their services can be utilized effectively.

5. CONCLUSION & RECOMMENDATION

This study concludes that nurses have a fair knowledge of cervical cancer symptoms and risk factors and necessitate an institutional-based workshop and training on the cervical cancer.

Nurses need to be well educated on cervical cancer due to its public health importance in Bangladesh and the world. These results reflect a need for continuing medical education and the creation of cervical cancer prevention policies and strategies at all levels of the health sector. The necessary steps should be taken to increase awareness among the nurses about cervical cancer.

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Conflict of interest: None to declare.

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