Factors Affecting the Utilization of Pap Smear Screening Program among Nurses in the Department of Medicine, Siriraj Hospital

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ABSTRACT

Objective: To determine factors affecting the utilization of Pap smear screening program among nurses in the Department of Medicine, Siriraj Hospital. The surveyed factors included knowledge of cervical cancer, attitude toward Pap smear screening, and the negative attitude toward Pap smear procedures.

Methods: This study was a cross-sectional survey. A questionnaire was distributed to 400 nurses in the Department of Medicine.

Results: The response rate was 98.3% (393/400). 113 nurses were eligible to have Pap smear (aged 35 years). Only 34.5% of them had regular Pap smear screening. Knowledge and attitudes between regular and non-regular groups were not different (p-value = 0.90 and 0.97, respectively). Most of nurses had good attitude toward Pap smear. In non-regular Pap smear group, most of nurses refused to have Pap smear screening due to the perception of Pap smear procedures.

Conclusion: There were no relationship between knowledge or attitude and the decision to utilize Pap smear screening program. Approximately 50% of nurses had good knowledge of cervical cancer. Most of the nurses had good attitudes toward Pap smear regardless of the utilization of Pap smear screening. However, the nurses who did not use the screening program tended to have negative attitude toward Pap smear procedures.

Keywords: Attitude; Knowledge; Pap smear

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Cervical cancer is an important public health problem of women in developing countries in South and Central America, Sub-Saharan Africa, and South-East Asia.[1,2] In Thailand, cervical cancer is the most common cause of death from cancer in females. There are newly diagnosed 7,000 cases per year and 93.5% of these cases are older than 35 years. Most of them are diagnosed at an invasive late stage, rather than at a precancerous or early cancerous stage. The earlier the precancerous or cancerous stage is detected, the greater the likelihood of the curable rate.[3-5]

In developed countries, the initiation and the maintenance of cervical cancer screening program involving screening of sexually active women annually or once in every 2-5 years have resulted in a large decline in the incidence and the mortality of cervical cancer.[4-7]

To date, the Thai Royal College of Obstetricians and Gynecologists and the Department of Medical Services introduce clinical practice guidelines for cervical cancer screening in Thailand.[3] National Cancer Institute of Thailand urges Pap smear every 5 years for all women older than 35 years and for all women at any ages with gynecologic symptoms. This recommendation arises from the study of International Agency for research on cancer (IARC/WHO) which revealed that the regular Pap smear screening every 5 years resulted in 84 percents decrease in the incidence of cervical cancer in women aged 35-64 years old.[1,2]

The screening procedure is simple, available and well-recognized beneficial, however, only 28% of Thai women older than 35 years have regular Pap smear.[8] In addition, 60-80% of women with invasive cervical cancer have not had a Pap smear screening during the past 5 years, and many of them have never had a Pap smear test.[8] The lack of awareness, cultural and attitude barriers may further deteriorate the poor utilization of screening facilities.[9-15]

Nurses are healthcare personnel who are expected to have regular Pap smear. However, we noticed that most of nurses refused Pap smear even though it is recommended as a part of routine health check up programs for

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TABLE 1. The characteristics of the subjects.

Characteristics	N	Result
Average age in years ± SD	386	31.76 ± 9.3
(min./ max.)		(20/58)
Age group: age ≥ 35 years	386	113 (29.3%)
Single marital status	390	312 (80%)
Family history of cervical cancer	390	26 (6.7%)
Ever had Pap smear	386	86 (22.3%)
Have Pap smear at least every 5 yr. in nurses age ≥ 35 yr.	113	39 (34.5%)

TABLE 2. Factors affecting the prevalence of Pap smear among nurses.

Factors	Prevalence of Pap smear	p-value
Age group		
< 35 years	31/273 (11.4%)	<0.01
≥ 35 years	55/113 (48.7%)	
Marital status		
Single	32/312 (10.3%)	<0.01
Non-single	54/78 (69.2%)	

Thai women. This study is aimed to determine factors affecting the decision making to have regular Pap smear for cervical cancer among nurses. The surveyed factors included knowledge and attitude toward Pap smear screening and the presumed causes of not having the Pap smear screening.

METERIALS AND METHODS

This study was conducted at Siriraj Hospital as a cross-sectional survey. We performed literature review and informal interview some nurses regarding the associated factors on their decision making to have Pap smear screening. A questionnaire was developed using possible variables that defined as associated factors on their attitudes toward a regular Pap smear. We developed draft and modified the items to fit the objectives, asked comments from experts, pre-tested the questionnaire for validity and reliability in some nurses, modified wording to be understandable, and finally concluded the questionnaire. After permission was granted by Vice Medical Director and Head of Nurse Department, 400 copies of the questionnaire were distributed to all wards in the Department of Medicine.

The questionnaire consisted of demographic data (7 items), knowledge of cervical cancer (14 items), attitude toward Pap smear screening (8 items), and the negative attitude toward Pap smear procedures (7 items). Good knowledge was defined as having more than 70% of correct answers in the knowledge section. Good attitude was defined as having more than 50% of positive responses in the attitude section.

The respondents who were 35 years or older were categorized into utilizing or non-utilizing groups. The utilizing group was the group who used the Pap smear screening program at least once every 5 years.

Data were presented in mean ± SD or number/total (%) where appropriated. A comparison between the utilizing and the non-utilizing groups was analyzed using Chi-square test. A p-value of < 0.05 was considered statistically significantly different.

RESULTS

The response rate was 98.3%. The mean age of respondents was 31.8 ± 9.3 years (ranged 20-58 years) and 29.3% (113/386) were 35 years or older. Most of the respondents were single (80%). 6.7% had family history of cervical cancer. 77.7% had never had Pap smear. 39 from 113 nurses (34.5%) whose age 35 years or more performed regular Pap smear (performed Pap smear at least every 5 year) whereas 65.5% had never done or performed Pap smear less frequent than every 5 year (non-regular Pap smear) (Table 1).

48.7% of nurses who were 35 years or older had Pap smear screening. Nurses younger than 35 years had ever had Pap smear in only 11.4 %. The marital status is classified into two groups, single and non-single group. Couple, divorce, widow and separation were categorized in non-single group. 69.2% of nurses in non-single group had Pap smear screening. Nurses in single group had ever had Pap smear in only 10.3%. There was a positive association between age group or marital status and the prevalence of Pap smear screening (p-value < 0.01) (Table 2).

Nurses in utilizing and non-utilizing Pap smear groups had similar knowledgeable proportion. Good knowledge was 48.7% and 50% respectively. As for the attitude toward Pap smear, good attitudes were found at very high percentage in regular and non-regular Pap smear groups (89.7% and 91.9%, respectively) (Table 3).

The majority of nurses had good knowledge about the following risk factors of cervical cancer: Human papilloma virus (86.5%), multiple partners (77.4%), frequency of sexual intercourse (71.2%), precancerous stage (88.8%) and treatment of early cervical cancer (95.7%). Interestingly, only half of the nurses had good knowledge of these risk factors: oral contraceptives (42.7%), multiparity (58.5%), active smoking (55.7%). Moreover, approximately half of the nurses misunderstood some variables as risk factors: stress (49.4%), vaginal liquid soap usage (42.0%), irregular menstruation (39.4%), and tampon usage (61.6%).

Most nurses (82.2%) were not optimistically thinking that medical personnel had low risk of cancer. Also, 77.9% of them did not have misconception that only person who has sexual intercourse had risk of cervical cancer. Interestingly, only 65.1% of the total respondents had the right concept that good genital hygiene was not associated with cervical cancer. In addition, only 19.6% of the total respondents were concerned with hymenal tear caused by Pap smear procedure.

The causes for not utilizing Pap smear screening program in nurses age 35 years or older included embarrassment (86.1%), dislike of lithotomy position (92.0%), dislike of feeling of foreign body (speculum) insertion into the vagina (92.6%), fear of pain (82.1%), fear of infection (80%), apprehension of the result (100%), concern of hymenal tear (57.1%). However, there were approximately 50% of the nurses who decided to

TABLE 3. Factors affecting the utilization of Pap smear screening program among nurses aged 35 years or older.

Factors	Utilization of Pap smear screening program		p-value
	Utilizer	Non-utilizer	
Good knowledge about cervical cancer	19/39 (48.7%)	37/74 (50%)	0.90
Positive attitude toward Pap smear	35/39 (89.7%)	68/74 (91.9%)	0.97

TABLE 4. The effects of negative attitude toward the Pap smear procedures on the utilization of Pap smear screening program among nurses aged 35 years or older.

Negative attitude toward the Pap smear procedures	Utilization of Pap smear procedures	
	Yes	No
Embarrassment	31/59 (52.5%)	31/36 (86.1%)
Dislike of lithotomy position	30/59 (50.8%)	23/25 (92.0%)
Dislike of feeling of foreign body (speculum) insertion into vagina	31/58 (53.4%)	25/27 (92.6%)
Fear of pain	29/53 (54.7%)	32/39 (82.1%)
Fear of infection	15/23 (65.2%)	12/15 (80.0%)
Apprehension of the result	24/46 (52.2%)	13/13 (100%)
Concern of hymenal tear	8/17 (47.1%)	4/7 (57.1%)

have regular Pap smear despite the negative attitude toward the Pap smear procedures (Table 4).

DISCUSSION

Nurses are health personnel who are expected to be well informed about cervical cancer, have a good attitude toward Pap smear and utilizing Pap smear screening. The questionnaire comprised four sections, namely: demographic data, knowledge of cervical cancer, attitude toward Pap smear screening and negative attitude toward Pap smear procedures. Knowledgeable questions concerned true and false risk factors, the pre-cancerous stage and early treatment. Attitude questions included the appropriated time, frequency, and the understanding of Pap smear screening. During private interviews before finalizing the questionnaire, some nurses initiated that Pap smear procedures influenced their decision not to have Pap smear screening. Therefore, we used this information to formulate questions about the negative attitude.

Clinical practice guidelines for cervical cancer screening in Thailand recommended Pap smear every 5 years for all women aged 35 years or older and for women of any age with gynecologic symptoms. We, therefore, classified the subjects into two age groups: less than 35 years and 35 years old or older. The study found that the 35 years or older were more likely to have Pap smear screening. Older nurses are more concerned about their health than younger nurses. Non-single nurses were associated with ever had Pap smear screening. Nurses who were single may not feel comfortable to expose their perineum during Pap smear procedures. We cannot use the terms virgin and non-virgin instead of single and non-single because virginity is a particular sensitive issue for single Thai women. We just assumed that the single nurses are virgins. However, the majority of the study population is less than 35 years and single. Therefore, the conclusion on age factor and marital status should be interpreted cautiously. The association between family history of cervical cancer and Pap smear screening cannot be established because of insufficient data (6.7%).

From the study, few nurses had insufficient knowledge regarding risk factors of cervical cancer. This is a critical point as they are health professionals and play a major role in providing health information to the patients. Thus, health professionals' knowledge is subject to be improved. The negative attitude toward Pap smear procedures influenced the decision to have Pap smear screening. Private place for examination, treating them politely and gently, and educating patients when visiting could minimize this attitude. The time to perform Pap smear according to Thai guideline is consistent with this study; however, the frequency of Pap smear screening is not.

Finally, nurses in the Department of Medicine, Siriraj Hospital, have good knowledge of cervical cancer and good attitude toward Pap smear screening. There are more nurses who are 35 years or older have Pap smear screening at least every 5 years (34.5%) than Thai women in general (28.0%).

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บทคัดย่อ

ปัจจัยที่มีผลต่อการตัดสินใจเข้ารับการตรวจคัดกรองมะเร็งปากมดลูกของพยาบาลวิชาชีพสังกัดงานการพยาบาลอายุรศาสตร์และจิตเวชศาสตร์ โรงพยาบาลศิริราช

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วัตถุประสงค์: ศึกษาปัจจัยที่มีผลต่อการตัดสินใจเข้ารับการตรวจคัดกรองมะเร็งปากมดลูกด้วยวิธี Pap smear ของพยาบาลวิชาชีพสังกัดงานการพยาบาลอายุรศาสตร์และจิตเวชศาสตร์ โรงพยาบาลศิริราช

วิธีการ: เป็นการศึกษาแบบ cross-sectional survey โดยใช้แบบสอบถามจำนวน 400 ชุด ซึ่งประกอบด้วยความรู้และทัศนคติต่อการตรวจคัดกรองมะเร็งปากมดลูกด้วยวิธี Pap smear รวมถึงทัศนคติด้านลบต่อขั้นตอนและวิธีการตรวจคัดกรองมะเร็งปากมดลูกด้วยวิธี Pap smear

ผลการศึกษา: จำนวนแบบสอบถามตอบกลับร้อยละ 98.3 (393/400) ประชากรที่ศึกษาเป็นพยาบาลวิชาชีพที่มีอายุ 35 ปีขึ้นไป จำนวน 113 ราย โดยร้อยละ 34.5 (39/113) เป็นพยาบาลที่เข้ารับการตรวจคัดกรองมะเร็งปากมดลูกด้วยวิธี Pap smear อย่างสม่ำเสมอ ความรู้และทัศนคติของพยาบาลไม่แตกต่างกันระหว่างกลุ่มที่ตรวจสม่ำเสมอและไม่สม่ำเสมอ (p-value = 0.90 และ 0.97 ตามลำดับ) พยาบาลส่วนใหญ่ทั้ง 2 กลุ่มมีทัศนคติที่ดีต่อการตรวจ Pap smear พยาบาลส่วนใหญ่ในกลุ่มที่ตรวจไม่สม่ำเสมอปฏิเสธการตรวจเนื่องจากทัศนคติด้านลบต่อขั้นตอนและวิธีการตรวจ

สรุป: ความรู้และทัศนคติไม่ใช่ปัจจัยที่มีผลต่อการตัดสินใจเข้ารับการตรวจคัดกรองมะเร็งปากมดลูกด้วยวิธี Pap smear ของพยาบาลวิชาชีพสังกัดงานการพยาบาลอายุรศาสตร์และจิตเวชศาสตร์ โรงพยาบาลศิริราช พยาบาลร้อยละ 50 มีความรู้เกี่ยวกับมะเร็งปากมดลูกในเกณฑ์ดี พยาบาลส่วนใหญ่มีทัศนคติที่ดีต่อการตรวจ Pap smear อย่างไรก็ตาม พยาบาลที่ไม่ตรวจหรือตรวจ Pap smear ไม่สม่ำเสมอ มีแนวโน้มที่มีทัศนคติด้านลบต่อขั้นตอนและวิธีการตรวจ