FACTORS EFFECTING ON WOMEN SATISFACTION OF CERVICAL CANCER SCREENING IN ROIET PROVINCE, THAILAND

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ABSTRACT: The study aims to examine the factors affecting the level of satisfaction with cervical cancer screening among women between the ages of 30 and 60 in Mueang Suang and Phon Sai District, RoiEt Province. The research is a descriptive study and uses quota samplings of 400 cases. Data was collected between March 1st and 15th, 2010. Descriptive statistics (frequency, percentage, mean, and standard deviation) and Chi Square are applied in data analysis. The study result shows that 35.2 % of the total samples, which constitute the majority, are between 30-40 and 51-60 years of age; while 78.7 % of the total samples are married, 67.0 % have primary education, 76.0 % work in the agricultural sector, 64.5 % earn less than 5,000 baht of income per year, 49.75 % were between 20-29 years of age when they first married, 56.5 % have regular cervical cancer screening history, 33 % used to receive screening service but have stopped, and 10.5 % have never had cervical cancer screening. The study shows moderate levels of knowledge, attitude, behavioral practice, and satisfaction with the service provision and environment among the samples at 47.7 %, 49.3 %, 59.0 %, and 59.2 % respectively. A significant association is found between the satisfaction with cervical cancer screening and the demographic characteristics: marital status, occupation, income, age of first marriage, and number of children. Age and level of education factors show no relation to the satisfaction with cervical cancer screening; while knowledge, attitude, and behavioral practices show statistically significant relation to the satisfaction with cervical cancer screening. This study provides useful recommendations for operational planning, prevention and control of cervical cancer so that screening service model could be improved to be consistent with the community way of life and emphasize the partnerships with community organizations in campaigning for cervical cancer screening.

KEYWORDS: Cervical Cancer, Cervical cancer screening, Satisfaction.

INTRODUCTION: Cervical cancer threatens the lives of women all over the world. For each 500,000 new cases, there are 231,000 deaths every year. 80% of new cases are found in the developing world. In Thailand, cervical cancer is the killer disease of Thai women; about 20.9 per hundred thousand or 6,300 new cases each year[1]. Cervical cancer affects mostly women between the ages of 45 and 50 and is often detected at the more invasive stage of carcinoma when the survival rate is five years. If we put together the total number of patients, women with invasive carcinoma and new patients, only 60,000 women are cured every year. Most of these patients, between 80% and 86%, have Squamous Cell Carcinoma type while 12% to 19% suffer from other types of cervical cancer[2].

Although the causes of cervical cancer remain unknown, certain risk factors have been identified. They include women with multiple sexual partners, those who started having sexual relations before the age of 18, women with Human Papilloma Virus infection smokers, those with a high number of births and finally women with a history of cervical cancer in the family[3].

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Although cervical cancer is a serious disease and causes the death of thousands of women each year, early detection is possible through the cervical cancer screening called Papanicolaou Smear or Pap Smear. So in order to lower the death rate and the effect of this disease, women must have regular cervical cancer screening as this helps the early detection of any abnormal cells. Any abnormal pre-cancerous cells found can be more easily cured at this early stage and can in fact reverse to become normal healthy cells again [4]. As stated in the 8th Public Health Development Plan (1997-2001), the policy of the Thai government is to lower the number of deaths from cervical cancer. The target set by this policy is to have 80% of women aged between 35 and 59 screened for cervical cancer be regularly. This policy also states that, at least once a year, information about cervical cancer screening should be distributed to women in the 35-59 age group who have had abnormal results, These women would have to have at least one follow up screening after two consecutive pap smear results show they have abnormal cells. At the same time, they should also receive information about cervical cancer at least once a year after they have had positive pap smear results. This will be followed by checkups at least every three years. Although, all public health centers were able to implement this policy, the results they achieved were not successful.

According to the findings of the International Agency for Research on Cancer, a yearly screening of 80% of the female population between the ages of 30 and 60 can significantly bring down the rate of deaths from cervical cancer by 61%. The same target was set by the Thai government in the 9th Public Health development Plan (2002-2007).

However, if the screening takes place every five years, the death rate will be about 55%. If, on the other hand, only 30% of women aged 35-59 receive a Pap Smear test on a yearly basis, this will bring down the death rate from cervical cancer to 15%. Therefore and in order to ensure Thai women receive more cervical cancer screening is through the more invasive screening method. If 80% of women in the target group have this kind of screening, cervical cancer cases in Thailand can be cut by 50% in five years. In fact, the most suitable age for Thai women to start being screened for cervical cancer is 35. Visual Inspection with Acetic acid (VIA) can be used to screen the target group women aged between 30 and 45. A trained nurse can use the VIA screening which includes applying between 3% and 5% of vinegar on the cervix area and checking on the spot if there are any abnormalities. If these exist, a cryosurgery is carried out immediately after the screening. This method is believed to be particularly suitable in poor countries with significant health problems and with limited trained medical staff and resources[5] . As a matter of fact, both VIA and Pap smear screenings can help decrease the death rate from cervical cancer if women were aware of the importance of cervical cancer screening.

In 2006, there were 64 new cases of cervical cancer in RoiEt Province. The majority of these cases were women between the ages of 40 and 49. 53.13% of these women were at stage one of the disease, 21.28% at stage two, 14.06% at stage three and 10.94% could not have the stage of the disease identified. This research has found that after screening, the number of women in the target group who were found to be at stages one or two of the disease was higher than at any other stage. Some studies have found that the chances of a cure are better when the disease is caught at an early stage [6]. According to the findings of the "Internal

Performance Monitoring and Supervision Team at the Ministry of Health", the %age of women within the target group who received cervical cancer screening by Pap Smear from the cervical cancer prevention and control programme in the past five years (2005-2009) is as follows: about 9.30% in 2005, 44.00% in 2006, 9.56% in 2007, 50.29% in 2008 and 17.97% in 2009. The rate of women in the same target group who were screened using the VIA method during the same period is as follows: 36.49% in 2005, 43.77% in 2006, 50.27% in 2007, 55.69% in 2008 and 4.45% in 2009. This shows that the coverage of cervical cancer screening is lower than the target set by the Ministry of Public Health. This suggests that the majority of women were at risk of not having cervical cancer detected prior to the symptoms appearing[7].

The researcher's aim is to study the factors affecting women's satisfaction of cervical cancer screening in RoiEt Province. These factors will in turn help shed some light on the factors that affect cervical cancer screening. The researcher's interest in this subject is also linked to the fact this study is the first of its kind. It is expected that the findings of this research will contribute to raising women's awareness of the importance of cervical cancer screening so that there is an increase in the number of women in RoiEt Province who use the screening services available.

The objectives of this study were 1) to study the factors affecting the level of satisfaction women between the ages of 30 and 60 have with the cervical cancer screening services in Mueang Suang and Phon Sai district, RoiEt Province. 2) to study the factors affecting these women's decision to have cervical cancer screening in Mueang Suang and Phon Sai district, RoiEt province.

MATERIAL AND METHODS: The study was descriptive research to study the factors effecting on women satisfaction of cervical cancer screening in RoiEt province, Thailand. The study area was selected by probability sampling was Muaeng Suang district and Phon Sai district. Sample was women aged 30 to 60 years that lived in Muaeng Suang district and Phon Sai district, RoiEt province with 400 cases by using quota sampling .They were listed in a database population by using "HOS xP PCU" The program use for keep data base records on people in the area for health services provided.of hospitals and public health centers. Questionnaire was used as the study tools in this research, each scale's reliability was Cervical cancer knowledge test was validated quality of reliability by Kuder Richardson (KR-20) technique that analysis result was 0.75. Cervical cancer attitude test and service satisfaction of cervical cancer screening used Conbrach's Alpha Coefficient was used for testing reliability that the reliability was higher than 0.5.Cervical cancer attitude 10 items were Alpha = 0.89. Experiences and practices 10 items were Alpha = 0.85. Service satisfaction of cervical cancer screening 15 items was Alpha = 0.82. Data analysis processing used SPSS for Windows (Statistical Package for the Social Science for Windows) Version 17 for the frequency distribution, mean percent standard deviation, mean, percentage, and standard deviation, were presented of the table format with descriptive. Inference statistics was used in Chi-square test.

RESULTS: Demographic characteristics of the study samples showed that, of the 400 samples: 35.25 % were aged between 30 and 40 years and between 51 and 60 years; 78.75 % were married; 67.00 % had primary education; 78.75 % worked in the agriculture sector or unemployed; 64.50 % had less than 5,000 baht of income per year; 49.75 % were aged between

20 and 29 years when they were first married; and 58.75 % had two children The Cervical cancer screening history. The research found that the majority or 56.60% of the samples received regular training every year and the latest screening was received one year before the interview; 33.00% used to have screenings a long time ago; and 10.50% never had any screening ,respectively. The analysis of the samples' cervical cancer knowledge found that 65.25 % of the samples had average knowledge about cervical cancer in medium level, found that the samples had positive attitude towards cervical cancer screening: 44.05% agreed that regular screening every year helps find early-stage of cancer; 38.00% viewed that cervical cancer screening was a waste of time that should better be spent on their work; and 33.00% viewed that there was no need to take the screening if one was healthy and strong and had no abnormal symptom. The research also found that 11.25% of the samples were embarrassed to receive the screening from physicians who are their acquaintances; 7.50% felt embarrassed to receive the screening; 7.50% felt stressed when they took the screening for fear that they might find that they had cervical cancer; and 7.00% were very worried that they might have cervical cancer after they discovered that their relatives or neighbours had the disease. found that the majority of the samples or 76.50% were informed by the village health volunteers or public health officials to take the cervical cancer screening; 70.50% took the screening every time that they were reminded by the village health volunteers or public health officials; 68.75% were informed of the test result; and 60.50% took the screening because they were motivated by the campaign for cervical cancer screening. A significant association is found between the satisfaction with cervical cancer screening and the demographic characteristics: marital status, occupation, income, age of first marriage, and number of children. Age and level of education factors show no associated to the satisfaction with cervical cancer screening. Tables below indicate the association among independent and dependent variables.

Table 1 The association between the sample demographic characteristics and satisfaction of cervical cancer screening, sorted by number and percentage. (n=400)

Demographic characteristics	satisfaction of cervical cancer screening				X^2	P-value
	Low	Medium	High	Total		
Age (years)						
30 - 40	22(34.3)	83(35.0)	36(36.2)	141(35.3)	0.89	0.999
41 - 50	19(29.8)	70(29.5)	29(29.4)	118(29.4)		
51 – 60	23(35.9)	84(35.5)	34(34.4)	141(35.3)		
Marital Status						
Single	1(1.6)	6(2.5)	12(63.2)	19(4.7)		
Couple	45(70.3)	195(82.3)	75(23.8)	315(78.8)	19.63	0.001*
Widowed/divorced/separated	18(28.1)	36(15.2)	12(18.1)	66(16.5)		
Education						
Non education	1(1.6)	3(1.3)	2 (2.0))	6(1.5)		
Primary school	46(71.9)	164(69.2)	58 (58.6)	268(67.0)	11.22	0.189
Secondary school/vocational	15(23.4)	46(19.5)	21(21.2)	82(20.5)		
High vocational certificate/diploma	0(0.0)	11(4.6)	7(7.1)	18(4.5)		
Bachelor degree higher education	2(3.1)	13(5.4)	11(11.1)	26(6.5)		
Occupation						
Agriculture/non occupation	48(75.0)	198(83.6)	69(69.7)	315(78.5)		
Trade	8(12.5)	8(3.4)	1(1.0)	17(4.25)		

Table 1 (Cont.) The association between the sample demographic characteristics and satisfaction of cervical cancer screening, sorted by number and percentage. (n=400)

Demographic characteristics	satisfaction of cervical cancer screening				X^2	P-value
	Low	Medium	High	Total		
Housewife	3(4.7)	11(4.6)	6(6.1)	20(5.0)		
Employee	3(4.7)	2(0.8)	5(5.0)	10(2.5)		
Government officials	2(3.1)	18(7.6)	18(18.2)	38(9.5)	33.15	0.001*
Income(baht)						
Less than 5,000	47(73.4)	148(62.4)	63(63.6)	258(64.5)		
5,001-10,000	9(14.1)	55(23.2)	17(17.2)	81(20.3)	19.15	0.004*
10,001- 20,000	0(0.0)	23(9.7)	15(15.2)	38(9.5)		
More than 20,000	8(12.5)	11(4.6)	4(4.0)	23(5.7)		
Age at first marriage(years)						
Less than 20	21(32.8)	105(44.3)	50(50.5)	176(44.0)		
20-29	31(48.4)	122(51.5)	46(46.5)	199(49.8)	26.94	0.001*
30-39	12(18.8)	8(3.4)	3(3.0)	23(5.7)		
More than 40	0(0.0)	2(0.8)	0(0.0)	2(0.5)		
Number of children						
Non	1(1.6)	7(2.9)	19(19.2)	27(6.7)		
One	4(6.3)	21(8.9)	7(7.0)	32(8.0)	58.79	0.001*
Two	32(50.0)	158(66.7)	45(45.5)	235(58.7)		
Three	16(25.0)	33(13.9)	27(27.3)	76(19.0)		
More than three	11(17.1)	18(7.6)	1(1.0)	30(7.6)		

* Statistical significance at the level of 0.05

Association between knowledge, attitude, and Practice and behavior experience and satisfaction of cervical cancer screen. Tables below indicate the relationship among independent and dependent variables.

Table 2: The association between knowledge, attitude, and Practice and behavior experience and satisfaction of cervical cancer screening, sorted by number and percentage. (n=400)

Variables	Satisfaction with cervical cancer screening				X^2	P-value
	Low	Medium	High	Total		
Knowledge Level						
Low (0 – 4 points)	10(15.6)	28(11.8)	27(27.3)	5(16.3)	26.81	.000*
Medium (5 – 8 points)	51(79.7)	150(63.3)	60(60.6)	261(47.7)		
High (9 – 10 points)	3(4.7)	59(24.9)	12(12.1)	74(36.00)		
Attitude Level						
Low (10 – 28 points)	8(12.5)	34(14.4)	12(12.1)	54(13.5)	3.64	.001*
Medium(29 – 39 points)	45(70.3)	167(70.4)	74(74.8)	286(71.5)		
High (40 – 50 points)	11(17.2)	36 (15.2)	13(13.1)	60(15.0)		
Experiences and behavioural practices						
Low (14 – 18 points)	24(37.5)	30(12.6)	22(22.2)	76(19.0)	37.87	.001*
Medium (19 – 25points)	31(48.4)	163(68.8)	42(42.4)	236(59.0)		
High (26 – 30 points)	9(14.1)	44(18.6)	35(35.4)	88(22.0)		

* Statistical significance at the level of 0.05

DISCUSSION: 1) The study had limitations regarding the random selection of the geographic area for data collection. The researcher selected a specific area Mueang Suang District and Phon Sai District, RoiEt Province and therefore deprive the data of diversities in the demographic characteristics i.e. education, occupation, income, knowledge, attitude, Practice and behavior

experience, and access to the service. This might be due to the fact that both districts offered similar public health services and the samples shared the similar customs, beliefs and life style. It can be said that the selected geographical areas did not cover all areas of RoiEt Province so as to represent the province. Be that as it may, the knowledge and the result of the study can be applied to the development and improvement of cervical cancer prevention effort in the selected geographical areas as well as in other areas with a similar profile, which will positively affect the future implementation plans.

2) From the demographic characteristics of the samples, it was found that the factors regarding the samples' marital status, age at first marriage, number of children, and the last screening results were associated, with statistical significance, with the cervical cancer screening satisfaction. This might be because the use they had several deliveries, which posed a high risk of cervical cancer.

3) The samples had high level of knowledge about the following items: the early stage of cervical cancer could be treated early (88.50 %); women with multiple sexual partners or whose husbands had sexually transmitted disease had high risk of cervical cancer (79.75 %) and regular cervical cancer screening can help prevent having invasive cervical cancer. This might be because of the samples had the information and knowledge about cervical cancer from the medias such as television, radio, newspapers, journals, and the public health officials and village health volunteers. Be that as it may, the samples lacked the correct understanding about the vaccination against cervical cancer. They failed to understand that it work only with women who had never had vaginal intercourse. This might be modern and dispread. Knowledge and information about cervical cancer has association with cervical cancer screening satisfaction with statistical significance. This association corresponds to the result of the study by Moltha Thayida (2002), which stated that the knowledge and information about cervical cancer were associated with cervical cancer screening at the statistical significant value of 0.05.

4) The samples had positive attitude towards the following items: regular cervical cancer screening every year helps detect cervical cancer at the early stage, taking cervical cancer screening is not a waste of time away from ones work, screening is necessary even though one is physically healthy and strong and has no symptom of any abnormality. This corresponds to the study by Chitkhet Tomuean (2009), which found that early-stage cervical cancer responded well to treatment. The samples had negative attitude towards the following: feeling embarrassed when receiving screening by doctors or nurses who were one's acquaintances and feeling embarrassed to take the screening, This is consistent with the studies by Sarayut Srisan (2005) and Suwimol Boonchan (2008), which found that embarrassment was a reason for failure to take cervical cancer screening.

5) The study showed that the samples had regular practices behavioural and experiences regarding cervical cancer: 76.50% of the samples were informed by the health volunteers and public health officials to receive the screening. This might be attributed to the cervical cancer screening campaign, the public relation to the target group, the annual physical examination all of which followed the government's policy to reduce the incidences of cervical cancer death and the benefit from exercising the health care rights from the National Health Security Office. This is consistent with the study by Suwimol Boonchan (2008), which found that knowledge

and information about cervical cancer screening service came from public health officers, and the study by Wijit Thownil (2004), which found that the advices from public health centre officials or hospital personnel constituted a factor that associated with the decision of women aged between 35 and 60 years old to have cervical cancer screening.

6) The result of the study found that 36.75 % were the most service satisfaction in order-after. Result of the screening was notified and public services were organized mobile services in the community, 35.75 and 33.25 % respectively. According to the study of Wilairut Srimhuan (2003) found that the facilities were organized to attend the cervical cancer screening.

RECOMMENDATIONS: For Policy recommendation

1) The campaign for women to take cervical cancer screening should be carried out continuously by emphasising the approaches and formats that correspond to the lifestyle, livelihood, and local culture. Local leaders who have health knowledge, such as the health volunteers, local leaders and respected academics in the locality, should be promoted to take a more active role. Mass media that can reach wider public, such as television, major radio channels, community radios, should be used in the campaign to educate the public on cervical cancer.

2) Public health education should be promoted through the printed media such as document, leaflets, journals, posters, in order to attract more attention from the public.

3) Appropriate public health programmes should be promoted by cooperating with the support from the various social networks, for example, the house visits by community health volunteer groups or the letters sent to women to motivate them to action.

Practical recommendation

1) The resources in a community, such as the village health volunteers (who presently receive a subsidy of 600 baht per person a month) or the community leaders, should be optimally exploited. They should be provided, through training, with the knowledge about the advantages of cervical cancer screening and the risk from failure to pay attention to the screening, so that they could contribute to the public relation effort to disseminate information to the public, particularly the target group the women between 30 and 60 years old. Resources in the locality should also be used, for example,

The community primary healthcare centres and the community halls can be used as the meeting places for information dissemination and exchanges in the effort to bring about results in cervical cancer prevention.

2) Public health mobile units should be sent to the communities to provide cervical cancer screening service in order to reach out to the women target group.

3) The establishment and facilities that provide cervical cancer screening should be improved to ensure better privacy, and they should exist in sufficient numbers to make people feel more confident in their service.

4) Unnecessary procedure should be trimmed down to make it more convenient for the client and save the clients' time.

5) The public health mobile unit should be improved to have similar standard of facilities, cleanliness, security and privacy as the clinic of that establishment to ensure public confidence when they come to the mobile unit for service.

Recommendation for further research

1) The study should cover appropriate geographical area and samples size to ensure the data distribution of the samples that represents a sufficiently diverse demography.

2) To make experimental study with the media format for educating the public and persuading more women in the target group to receive cervical cancer screening service.

3) To make a comparative study of the factors that affect the women's decision to receive cervical cancer screening, in order to find out the problems and the approaches to develop a clearer perspective on the issue.

4) To make in-depth study on the factors that affect the women's decision to receive cervical cancer screening, so as to use the finding to improve the service and make it more relevant to the real need of each community.

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