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Factors Affecting the Acceptance of CA Cervix Examination Services Among Chumphon Provincial Officers.

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ABSTRACT

This survey research was aimed at studying factors affecting the acceptance of CA Cervix examination services among 419 female Chumphon provincial officers aged 35-59 years who worked in Chumphon province. Factors included in the study were CA cervix examination practice, demographic characteristics, predisposing factors, enabling factors, and reinforcing factors. Comparison between those who had received CA cervix examination services and those who never had with respect to these factors had been carried out. Results showed that demographic characteristics- marital status, education levels, and family monthly income-differed significantly between these two groups ($p = 0.000$, $p = 0.009$, $p = 0.002$, respectively).

Predisposing factors which consisted of knowledge about CA cervix, and recognition of the benefits of the examination also differed significantly between these two groups ($p = 0.000$, $p = 0.000$, $p = 0.013$, respectively).

It has been found that those who had received Pap smear screening, on average, had significantly better attitudes towards these ser-vices, the enabling factors, at Chumphon Hospital than those who never had ($p = 0.003$).

Those who had received the examination services had significantly higher average score on reinforcing factor-the accessibility to information on CA cervix examination-than those who never had ($p = 0.000$).

It has been clear from this study that the above factors had significant effects on the samples' decision to seek Pap smear. However, little has been done to make use of these factors to motivate the target population to get Pap smear which are important to their well-being. Facts and accurate information on such issues should be widely disseminated to educate and instill positive attitudes among the target groups to

encourage them to seek the services. Public health organizations in Chumphon province, therefore, should carefully plan and launch a proactive campaign, for the entire province and at the same time, to promote Pap smear among the target population. In addition, a policy should be formulated o require such examination as a part of yearly routine check up.

Cancer has been a major public health problem of all countries throughout the world, especially, cancer mortality rates in developed countries are higher than those of developing ones. However, cancer prevalences among developing countries are on the rise. World Health Organization has estimated that the number of cancer cases will be doubled in the next two decades. Public Health Information Center, Bureau of Policy and Planning reported increased mortality rates of cancer of all types.[1] Among all incidences of cancer, cancer of cervix was the highest one-also[2] the highest incidence of cancer of female's reproductive organs.[3] and the leading cause of death from cancer among Thai women.[4] Pathological study of CA cervix showed no clinical signs and symptoms or any lesions at an early stage, nevertheless, early detection by Pap smear will reduce spreading of cancer.[5] and increase the efficiency of medical care and reduce social and economic losses. It was expected that government officials would take the lead in taking Pap smear screening, however, the review of cytological study of Pap smear previously carried out at Chumphon Hospital during 1994-1997, showed that among 6, 187 Pap smears done during this period, only 7.5% of them were government officials.[8]

To increase the acceptance rate of Pap smear screening, Chumphon Hospital launched a survey research to study factors affecting the acceptance of such services among Chumphon provincial officers.

Objectives

1. To study demographic characteristics of the samples and their practices in relation to Pap smear screening.

2. To study predisposing, enabling, and reinforcing factors of the acceptance of Pap smear screening, using Precede Framework[6] and Health Belief Model.[7]

3. To compare :

3.1 demographic characteristics, predisposing, enabling, and reinforcing factors of those who had received Pap smear screening with that of those who never had.

3.2 predisposing, enabling, and reinforcing factors of Ministry of Public Health officials, Ministry of Education officials, and other ministries officials.

3.3 the accessibility of Pap smear screening of the government officials of Ministry of Education, Ministry of Public Health, and other ministries.

3.4 When was last Pap smear taken and follow up from institutions ?

Hypothesis to be tested

1. Demographic characteristics, predisposing factors, enabling factors, and reinforcing factors of provincial government officers who had received Pap smear screening differ significantly from those who had not.

2. Demographic characteristics, predisposing factors, enabling factors, and reinforcing factors of provincial government officers in different ministries are the same.

Materials and Methodology

This study is a survey research. The population studied were female government

officials aged 35-59 years, working in Chumphon Municipality. Total number of samples were 419 who had been selected by using quota sampling method and the data were collected by using questionnaires.

Results

1. Fifty eight percent of the samples have had Pap smear screening. however, only 20.5% of them had this examination within one year. Health care institutions last visited by those who had received the examination were, respectively, Chumphon Hospital (41.6%), private clinics (20.6%), and National Cancer Institute (19.8%).

Reasons for having the examination for CA cervix were yearly routine check-up (67.1%), abnormal phenomena/discomfort (16.0%), and other reasons (16.9%).

Ministry of Public Health officials differed significantly from those of Ministry of Education with respect to last health care institution visited for Pap smear and the reason for having the examination ($p = 0.000$, $p = 0.017$, respectively). Most Ministry of Public Health officials had the examination at Chumphon Hospital and cited the reason for having the examination as yearly routine check-up. Officers of Ministry of Education and of other ministries, however, acquired the services at health care institutions other than Chumphon Hospital, and their reason for having the examination was abnormal phenomena/ discomfort (Table 1, 2).

Table 1. Numbers and Percentages of Pap smear Examination Practice among samples.

Examination Practice	Number (persons)	Percent
Pap smear screening	N = 419	
• Yes	243	58.0
• No	176	42.0
Last Pap smear	N = 243/(419)	
• Within one year	86	35.4/(20.5)
• Within two years	55	22.6/(13.1)
• Within three years	25	10.3/(6.0)
• Within four years	15	6.2/(3.6)
• Longer than four years	65	25.5/(14.8)
Service institutions for the last Pap smear	N = 243	
• Hospital	101	41.6
• Clinic	50	20.6
• National Cancer Institute	48	19.8
• Others	42	17.3
• Health Center	2	0.8
Reasons for having Pap smear	N = 243	
• Yearly routine check-up	163	67.1
• Abnormal phenomena	39	16.0
• Others	41	16.9

Table 2. Comparison of Pap smear screening of officials in different ministries.

Items	MOE		MOPH		Others		F/X^2 (DF)	P
	N	%	N	%	N	%		
Accessibility to services	X	32.5	X	36.19	X	32.74	14.298 (2)	0.000
	SD	5.50	SD	6.07	SD	4.39		
Last Pat smear examination								
• Within one year	66	59.5	75	77.3	22	62.9	8.0366 (4)	0.09
• Within two years	23	20.7	10	10.3	6	17.1		
• Longer than 2 years	22	19.8	12	12.4	7	20.0		
Service institutions for the last Pap smear examination								
• Chumphon Hospital	20	18.0	71	73.2	10	28.6	67.729 (2)	0.000
• Others	91	82.0	26	26.8	25	71.4		
Reasons for having Pap smear examination								
• Yearly routine check-up	29	26.1	44	45.4	13	37.1	11.917 (4)	0.017
• Abnormol phenomena	25	22.5	24	24.7	6	17.1		
• Others	57	51.4	29	29.9	16	45.7		

Note : MOE = Ministry of Eduction
MOPH = Ministry of Public Health
DF = Degree of freedom

Table 3. Comparison of Pap smear screening among government officials, classified by the time period from last visit to the time of the survey.

Items	In 1 year		In 2 years		> 2 years		X^2 (DF)	P
	N	%	N	%	N	%		
Service Institutions								
• Chumphon Hospital	45	52.3	24	43.6	32	31.4	8.559 (2)	0.014
• Others	41	47.3	31	56.4	70	68.6		
Reasons for having examination								
• Yearly routine check-up	73	84.9	38	69.1	52	51.0	31.046 (4)	0.000
• Abnormal phenomema	11	12.8	9	16.4	19	18.6		
• Others	2	2.3	8	14.5	31	30.4		

The number of clients receiving Pap smear screening at Chumphon Hospital has been increasing and the rising popular reason for that was, basically, yearly routine check-up ($p = 0.014$, $p = 0.000$, respectively) (Table 3).

2. Mean age of the samples was 42.8 years (SD = 6.2 years.) The majority of the samples (72.5%) were married, 18.4% were single, and 9.1% were widowed/divorced/ separated. More than half of the samples (54.9%) hold bachelor degrees, 22.9% of them were high school/vocational school graduates. The average family monthly income for this sample was 20,174.20 baht (SD = 11,988.60 baht).

3. Most of the samples had moderate knowledge and perception about CA cervix and the predisposing factor. Fifty three percent of them had moderate level of general knowledge, 63.2% had moderate knowledge in risk of having the disease, 71.8% had moderate knowledge about the benefits of having the examination. Surprisingly, 65.5% of the samples had relatively been well aware of the severity of the disease.

The government officials of each ministry in this study had significantly different knowledge about CA cervix, risk of having the disease, and its severity ($p = 0.000$, $p = 0.014$, $p = 0.000$, respectively) with Ministry of Public Health officials had better knowledge, in all aspects, than other ministries' officials. However, there was no significant difference of the knowledge about the benefits of having CA cervix examination among these government officials.

4. It was found that 51.6% of those who had Pap smear screening at Chumphon Hospital rated the accessibility to the services there as fair. Factors that discourage them to get the Pap smear at the Hospital were long waiting time and infrequent services offered, once a week, which did not meet the demands of the clients. Ministry of Public Health officials had significant better accessibility to the Pap smear screening at Chumphon Hospital than any other ministries' officials ($p = 0.000$).

5. The access to Pap smear screening information-reinforcing factor-was rated by the respondents as fair. The average score of having an access to such information was 1.27 with SD = 0.57. Not surprisingly, results from this study also revealed that Ministry of Public Health officials had significantly better access to the information than any other ministries' officials ($p = 0.000$) (Table 4).

6. The comparison between those who had and those who had not received Pap smear screening showed :

6.1 there were statistically significant difference between these two groups with respect to demographic characteristics-marital status, education levels, and family income ($p = 0.000$, $p = 0.009$, $p = 0.002$ respectively).

6.2 the disposing factors-knowledge about CA cervix, recognition of disease's severity, and being aware of the benefits of early detection of the disease-of those who had received the examination services were significantly higher than the other ($p = 0.000$, $p = 0.000$, $p = 0.0013$, respectively).

6.3 the attitude towards the examination services provided by Chumphon Hospital, enabling factors, of those who had received the services was statistically better than that of those who had not ($p = 0.003$).

6.4 those who had received the examination services had significantly better access to information about Pap smear than those who had not ($P = 0.000$) (Table 5).

Table 4. Comparison of predisposing, enabling, and reinforcing factors of government officials in different ministries.

Items	MOE		MOPH		Others		F/X^2	P
	X	SD	S	XD	X	SD	(DF)	
Predisposing Factors								
• Knowledge about CA cervix	11.6	1.96	12.27	1.92	9.93	2.73	34.18 (2)	0.000
• Aware of risk	18.8	2.53	19.61	2.67	19.11	2.99	3.217	0.041
• Aware of severity	14.09	2.07	15.04	1.85	12.99	3.21	22.00 (2)	0.000
• Revognize the benefits of examination	16.47	2.38	16.68	1.86	16.56	2.33	0.416 (2)	0.6603
Enabling Factors								
• Accessibility to Chumphon Hospital's Services	31.72	5.17	35.54	6.02	31.56	6.06	22.96 (2)	0.000
Reinforcing Factors								
• Accessibility to information	8.25	3.96	10.26	3.34	7.78	4.06	15.401 (2)	0.000

Note : MOE = Ministry of Education
MOPH = Ministry of Public Health
DF = Degree of freedom

Table 5. Comparison of demographic characteristics, predisposing, enabling, and reinforcing factors of those who had and those who had not received Pap smear.

Items	Yes		No		X^2/t		p
	N	%	N	%		(DF)	
Demographic Characteristics							
Age (years)	X = 43.07	SD = 6.38	X = 42.31	SD = 5.94	-1.22	417	0.224
Marital Status							
• Single (n = 77)	16	20.8	61	79.2	55.80	2	0.000
• Married (N = 304)	206	67.8	98	32.2			
• Widowed/ Divorced/ Separated	21	55.5	17	44.7			
Education Levels							
• High school/ vocational school	70	50.0	70	50.0	15.288	5	0.009
• Higher vocational certificate	17	44.7	21	55.3			
• Bachelor degree	151	65.7	79	34.3			
• Master degree	5	45.5	6	54.5			
Average monthly income (Baht)	X = 21, 711.55	SD = 11,944.17	X = 17,991.54	SD = 11,745.71	-3.06	417	0.002
Ministry under which they work							
• Ministry of Education (N = 187)	111	59.4	76	40.6	5.02	2	0.081
• Ministry of Public Health (N = 157)	97	61.8	60	38.2			
• Other (N = 75)	35	46.7	40	53.3			
Predisposing Factors							
• Knowledge about CA cervix	X = 11.73	SD = 1.71	X = 10.68	SD = 2.74	-4.48	271	0.000
• Aware of risk	X = 19.24	SD = 2.59	X = 19.13	SD = 2.82	-0.43	417	0.669
• Aware of severity	X = 14.63	SD = 1.99	X = 13.72	SD = 2.69	-4.01	417	0.000
• Recognize the benefits of examination	X = 16.88	SD = 2.09	X = 16.34	SD = 2.29	2.50	417	0.013
Enabling Factors							
• Accessibility to Chumphon Hospital's services	X = 35.85	SD = 5.70	X = 32.13	SD = 5.90	-2.96	417	0.003
Reinforcing Factors							
• Accessibility to information	X = 9.88	3.37	X = 7.60	SD = 4.42	-5.75	313.46	0.000

Discussion

1. Among 419 samples studied in this research, only 58.0% of them had received Pap smear screening and only 20.5% had done so within one year. This showed that this group of population at risk who were female government officials aged 35-59 years, did not give priority to early detection of CA cervix which was the first leading cancer among female aged 35-59 years.[2] Furthermore, the incidence of CA cervix has been increasing ; it has been predicted that the number of cases would be doubled in the next two decades, and cancer death rates would be all increased.[1] However, early detection of CA cervix, using Pap smear, will greatly help to decrease invasive carcinoma.[5] The number of samples who had received the examination within one year, 20.5%, was not satisfactory since it implied that another 79.5% of population at risk who could develop CA cervix at any moment in their life times had not yet had any examination in the past one year.

2. Results from this study showed that those who used to receive Pap smear screening had better knowledge about CA cervix, and were better aware of the benefits of early detection of CA cervix than those who had not ($p = 0.000$, $p = 0.000$, $p = 0.013$, respectively). It was clear that these factors had significant impacts on the acceptance of Pap smear of the target population. However, public health organizations, particularly Chumphon Hospital, have not yet put enough information to public for this screening and the dissemination of relevant to the target population, resulting in low rate of Pap smear among the target groups. This has been in consistent with the fact that Ministry of Public Health officials who had better access to the information about CA cervix and the examination had higher proportion of those who had given high priority to Pap smear and had it done as part of yearly routine check-up. Therefore, Chumphon Hospital should take this opportunity to actively provide knowledge and distribute information about CA cervix and the benefits of early detection to encourage the target population to get the services. It should also make Pap smear a mandatory part of yearly routine check-up for people who are at risk.

Suggestion

1. Hospitals and public health organizations should draw proactive plans and implementation for publicizing CA cervix and the examination and design effective service system to encourage the population at risk to recognize the importance of Pap smear.

2. Chumphon Hospital should launch a full-fledged campaign, at least once a year, to publicize CA cervix and to proactively and distribute the information to the entire target population.

3. Every public health organization in Chumphon province should carry out a campaign for CA cervix detection all at the same time. Duration of the campaign should be stretched out to cover the whole month. This kind of campaign should be repeatedly carried out at the same period of time of every year, so the people will automatically remember the definite time of the campaign.

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