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Perceived Barriers Of Cervical Cancer Screening Among Married Women In Minggir, Godean, Gamping Sub-Districts, Sleman District Yogyakarta

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ABSTRACT

Coverage of cervical cancer screening in Indonesia has only reached 5% and cervical cancer in Indonesia is still relatively high. The aimed of this cross-sectional study were to explore perceived barriers of cervical cancer screening and regular screening history among 384 married women in Sleman, Yogyakarta. Data were collected using modified questionnaire items from Champion Health Beliefs Model Scale. Results showed that only 13.8% of respondent have regular screening. Most of respondent in both group Regular and Non-regular/Never had screening perceived that they preferred a female doctor to conduct a screening. Significant association was found between perceived barriers for screening and women's regular screening history (p -value =0.000). Important barriers reported from this study were male physicians, time-consuming for screening procedure, and embarrassment. Effort to increase screening need to focus on women who have high perceived barriers so that cervical cancer screening's promotion can be achieved.

Keywords: cervical cancer screening, perceived barriers, women.

INTRODUCTION

Cervical cancer ranks the second most frequent cancer in women in Indonesia after breast cancer (WHO/ICO, 2010). According to WHO/ICO (Institute Catala d'Oncologia) (2010), Indonesia has a population of 227,345,000 with an at risk population of developing cervical cancer (15 years and older) at around 79.14 million. Current estimates indicate

that every year around 13,762 Indonesian women will be diagnosed with cervical cancer and 7493 will subsequently die from the disease.

Incidence rate of cervical cancer in Indonesia 2011 reached 100 per 100,000 populations with accumulated distribution in Java and Bali expected to increase 25% within the next 10 years if no preventive measures are put into place

(Rasjidi, 2012). Each day there are 41 new cases of cervical cancer culminating in 20 women dying daily in Indonesia; or it could be roughly estimated that every hour a woman dies from cervical cancer in the country and the highest prevalence of women die from this disease is in Yogyakarta with approximately 100/100,000 (Agustina, 2014; Yuliatin, 2010).

Indonesian government has set a minimum target of reaching 80% cervical cancer screening (CCS) coverage among Indonesian women in line with the WHO recommendation of targeting population at risk of cervical cancer (Kemenkes, 2013). In fact, coverage of cervical cancer screening in Indonesia has only reached 5% and cervical cancer in Indonesia is still relatively high (Aziz, 2012).

Previous literature have reported that women's beliefs regarding which refer to perceived susceptibility, perceived severity, perceived benefits, and perceived barriers are important factors that influence their decisions to get regular CCS (Brotto et al, 2008; Lee-Lin et al, 2007; McFarland, 2009; Paskett et al, 2004; Reis et al, 2012). Nonetheless, most of these studies have been conducted in other countries including the US (Lee-Lin et al, 2007; McFarland, 2009); the UK (Fallowfield, et al, 2010; Sawaya et al, 2009); Turkey (Reis et al, 2012; Esin et al, 2011); Taiwan (Hsu et al, 2011); Cambodia dan Lao PDR (Dang et al, 2010); Jordan (Amarin et al, 2008); India (Roy et al, 2008); and Malaysia (Wong et al, 2008). There are 11 published CCS studies in Indonesian women; notwithstanding, none of these have focused on women perceived barriers of CCS, but only examined on demographic factors, behavior, and barriers to CCS which are already well-established knowledge. The purpose of this study was; therefore, to examine and describe women perceived barriers of CCS among married women in Sleman, Yogyakarta, and relationship between perceived barriers of CCS and women CCS history.

METHODE

A descriptive cross-sectional study was conducted from July to September, 2014 with convenience sampling to recruit 384 participants aged 21 to 55 years who joined in

the monthly family welfare activities including 3 sub-districts (Minggir sub-district, Godean sub-district, and Gamping sub-district), Sleman district, Yogyakarta, organized by the local governments. Women who had been diagnosed with cervical cancer and unmarried were excluded.

A package of questionnaire used in this study had 3 parts. Part 1 was Demographic data developed by the researcher to assess age, age of marriage, religion, level of education, income per month, health insurance information, types of health care facilities available, and source of health information. Part 2 was perceived barriers of CCS measured by 15 questions modified Champion Health Beliefs Model Scale (CHBM). All of the items across the subscales have five-point Likert-type response choices: strongly disagree (scores 1 point) through to strongly agree (scores 5 points). Part 3 was Cervical cancer screening history form in terms of whether they had a test within the past 1-3 years with yes/no response. The Content Validity Index (CVI) was 0.95 and exhibited Cronbach's alpha coefficients was 0.81.

Univariate and bivariate analysis was used in this study. Bivariate association between women's belief with CHBM-scale items and regular CCS history was examined using Chi-Square. The study was approved by the ethical committee Institute Review Board (IRB) of Khon Kaen University, Thailand No. 4.3.03: 17/2014.

RESULT

The average age in both group who have regular CCS and non-regular/never had CCS was 30 to 55 years. The majority of the participants in both groups were Muslim. More than half of the participants in each group graduated senior high school and had low income or below the regional minimum wage in Indonesia. The majority of women who had CCS regularly reported that they had health insurance. In contrast, most of the women without history of CCS had no health insurance. Most of participants in both groups went for a health examination at government health care facilities and obtain health information from mass media. The demographic characteristics of participants presented in detail in Table 1.

Table 1. Demographic characteristics of participants (n=384)

Demographic characteristics	Regular CCS (n=53)	Non-regular/ Never had CCS (n=331)
	n (%)	n (%)
Age (years)		
21 – 29	2 (3.8)	65 (19.6)
30 – 55	51 (96.2)	266 (80.4)
Age when get married		
16 – 19	3 (5.7)	33 (10)
20 – 24	32 (60.2)	145 (43.9)
25 – 29	17 (32.2)	125 (37.7)
≥ 30	1 (1.9)	28 (8.4)
Religion		
Muslim	45 (84.9)	299 (90.3)
Christian	6 (11.3)	21 (6.4)
Catholic	2 (3.8)	11 (3.3)
Level of education		
Elementary school	4 (7.5)	40 (12.1)
Junior high school	4 (7.5)	43 (13.0)
Senior high school	23 (43.5)	137 (41.4)
Diploma	4 (7.5)	20 (6.0)
University graduate	18 (34.0)	90 (27.2)
No education	-	1 (0.3)
Income per month		
< Minimum wage	34 (64.1)	254 (76.7)
> Minimum wage	19 (35.9)	77 (23.3)
Health insurance		
Yes	34 (64.2)	122 (36.9)
No	19 (35.8)	209 (63.1)
Medical care access		
Government hospital	5 (9.4)	19 (5.7)
Primary health care	24 (45.4)	191 (57.7)
Private hospital	5 (9.4)	29 (8.8)
Private medical practitioner	19 (35.8)	89 (26.9)
Herbal medicine	-	3 (0.9)

Demographic characteristics	Regular CCS (n=53)	Non-regular/ Never had CCS (n=331)
	n (%)	n (%)
Health information sources		
Print media	10 (18.8)	62 (18.8)
Electronic media	25 (47.2)	164 (49.5)
Health care provider	13 (24.5)	63 (19.0)
Family	3 (5.7)	-
Friends	2 (3.8)	42 (12.7)

Almost all of the participants never had any CCS experience. Interestingly, only (13.8%) from the total number of participants reported that they had CCS regularly. The most frequent used CCS method was Pap Smear Test. The detail of CCS history showed in Table 2.

Table 2. The frequency and percentage of CCS history of participants (n=384)

History of CCS	Frequency	Percentage
CCS regularly history (at least once in the past 1-3 years)		
Yes	53	13.8
No	331	86.2
The last CCS occasion (at least once at any time in life)		
Never had any CCS	310	80.7
After gave birth	28	7.3
Annual physical examination	26	6.8
Others (e.g. free examination, menopause time, abdominal pain symptom)	20	5.2
The last CCS method		
Never had any CCS	310	80.7
Pap Smear Test	58	15.1
Visual Inspection with Acetic Acid (VIA)	10	2.6
Human Papilloma Virus Test (HPV-Test)	6	1.6

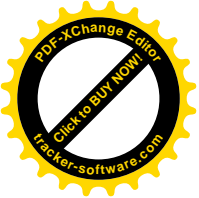
Concerning barriers to use, the majority of the women in both group Regular CCS and Non-regular/ Never had CCS

perceived that they preferred a female doctor to conduct a CCS. Some item responses in the perceived barriers scale showed that more women in the Regular CCS group did not believe the barriers to CCS compared with women in the Non-regular/Never had CCS group, such as did not know where to go for a CCS, embarrassment, having a CCS takes too much time, CCS is too painful, health professionals doing CCS are usually men as opposed to women (, other problems are more important than having a CCS, and no health center close to their home. The detail of perceived barriers of CCS showed in Table 3

Table 3. Frequency and percentage of participants with perceived barriers on CHBM-based items

CHBM items	Regular CCS (n=53)	Non-regular/Never had CCS (n=331)
	n (%)	n (%)
1. I am afraid to have a CCS for fear of a bad result		
Strongly disagree	8 (15.1)	8 (15.1)
Disagree	29 (54.7)	29 (54.7)
Neutral	4 (7.5)	4 (7.5)
Agree	10 (18.9)	10 (18.9)
Strongly agree	2 (3.8)	2 (3.8)
2. I don't know where to go for a CCS		
Strongly disagree	15 (28.3)	46 (13.9)
Disagree	27 (50.9)	144 (43.5)
Neutral	1 (1.9)	41 (12.4)
Agree	6 (11.3)	90 (27.2)
Strongly agree	4 (7.5)	10 (3)
3. I would be ashamed to lie on a gynecologic examination table and show my private parts to have a CCS		
Strongly disagree	15 (28.3)	23 (6.9)
Disagree	21 (39.6)	161 (48.6)
Neutral	6 (11.3)	31 (9.4)
Agree	10 (18.9)	106 (32)
Strongly agree	1 (1.9)	10 (3)
4. Having a CCS takes too much time		
Strongly disagree	6 (11.3)	22 (6.6)
Disagree	25 (47.2)	113 (34.1)
Neutral	5 (9.4)	67 (20.2)

CHBM items	Regular CCS (n=53)	Non-regular/Never had CCS (n=331)
	n (%)	n (%)
Agree	14 (26.4)	119 (36)
Strongly agree	3 (5.7)	10 (3)
5. Having a CCS is too painful		
Strongly disagree	8 (15.1)	17 (5.1)
Disagree	30 (56.6)	156 (47.1)
Neutral	9 (17)	96 (29)
Agree	5 (9.4)	57 (17.2)
Strongly agree	1 (1.9)	5 (1.5)
6. Health professional doing CCS are usually a men more than women		
Strongly disagree	10 (18.9)	24 (7.3)
Disagree	25 (47.2)	127 (38.4)
Neutral	8 (15.1)	108 (32.6)
Agree	5 (9.4)	56 (16.9)
Strongly agree	5 (9.4)	16 (4.8)
7. I have other problems more important than having a CCS		
Strongly disagree	10 (18.9)	42 (12.7)
Disagree	29 (54.7)	163 (49.2)
Neutral	9 (17)	80 (24.2)
Agree	4 (7.5)	37 (11.2)
Strongly agree	1 (1.9)	9 (2.7)
CHBM items	Regular CCS (n=53)	Non-regular/Never had CCS (n=331)
	n (%)	n (%)
8. I am too old to have a CCS regularly		
Strongly disagree	14 (26.4)	55 (16.6)
Disagree	30 (56.6)	218 (65.9)
Neutral	3 (5.7)	24 (7.3)
Agree	6 (11.3)	31 (9.4)
Strongly agree	-	3 (.9)
9. There is no health center close to my house to have a CCS		
Strongly disagree	10 (18.9)	42 (12.7)
Disagree	29 (54.7)	155 (46.8)
Neutral	7 (13.2)	40 (12.1)



CHBM items	Regular CCS (n=53)	Non-regular/Never had CCS (n=331)
	n (%)	n (%)
Agree	6 (11.3)	79 (23.9)
Strongly agree	1 (1.9)	15 (4.5)
10. If there is cervical cancer development in my destiny, having a CCS cannot prevent it		
Strongly disagree	14 (26.4)	59 (17.8)
Disagree	26 (49.1)	173 (52.3)
Neutral	8 (15.1)	57 (17.2)
Agree	4 (7.5)	33 (10)
Strongly agree	1 (1.9)	9 (2.7)
11. I prefer a female doctor to conduct a CCS		
Strongly disagree	4 (7.5)	3 (.9)
Disagree	7 (13.2)	15 (4.5)
Neutral	1 (1.9)	12 (3.6)
Agree	28 (52.8)	206 (62.2)
Strongly agree	13 (24.5)	95 (28.7)
12. I will never have CCS if I have to pay for it		
Strongly disagree	13 (24.5)	35 (10.6)
Disagree	26 (49.1)	183 (55.3)
Neutral	1 (1.9)	38 (11.5)
Agree	9 (17)	59 (17.8)
Strongly agree	4 (7.5)	16 (4.8)
13. My husband would not permit me to have a CCS		
Strongly disagree	13 (24.5)	57 (17.2)
Disagree	38 (71.7)	213 (64.4)
Neutral	2 (3.8)	43 (13)
Agree	-	13 (3.9)
Strongly agree	-	5 (1.5)
14. I am afraid that I will not be able to explain to my husband why I need CCS		
Strongly disagree	11 (20.8)	45 (13.6)
Disagree	33 (62.3)	204 (61.6)
Neutral	6 (11.3)	53 (16)
Agree	1 (1.9)	26 (7.9)
Strongly agree	2 (3.8)	3 (.9)

CHBM items	Regular CCS (n=53)	Non-regular/Never had CCS (n=331)
	n (%)	n (%)
15. Other people may have negative attitudes toward me if I come to get CCS		
Strongly disagree	12 (22.6)	51 (15.4)
Disagree	27 (50.9)	186 (56.2)
Neutral	6 (11.3)	52 (15.7)
Agree	7 (13.2)	36 (10.9)
Strongly agree	1 (1.9)	6 (1.8)

Based on bivariate analysis, there was significant association between women's perceived barriers and women's regular CCS history. On the other hand, 3 demographic variables that had significant association with women's regular CCS history were age, income per month, and health insurance. The detail of the association presented in Table 4.

Table 4 Association between demographic variables, HBM variables and women's regular cervical cancer screening (CCS) history

Variable	Regular CCS history (Yes/No)	
	X ²	P-Value
Age	5.244	.022*
Age of marriage	1.330	.249
Religion	1.442	.230
Level of education	1.283	.257
Income per month	4.325	.038*
Health insurance status	14.108	.000*
Medical care access	1.481	.224
Health information	.105	.746
Perceived barriers	38.685	.000*

*Statistical significant at $\alpha = .005$

DISCUSSION

Of the 384 married women who participated in this study, around 19.3% of participants showed that they have CCS experience at least once at any time in life. However, only 13.8% had CCS regularly every 1-3 years as suggested

by physician or health care provider. This number has been higher than the national coverage 4 years ago that said CCS coverage only reached 5%.

Around 7.3% participants stated that their last CCS experience was post giving birth. This is because CCS is not integrated in postpartum check-up. Postpartum maternal health services in Indonesia incorporated physical examinations (checking vital signs, examination of the peak height of the uterus, lochia and other vaginal fluids, and breast examination), provision of advice pertaining to exclusive breastfeeding, provision of communication, information, education and communication (IEC) concerning postpartum maternal and newborn infant health, as well as family planning services postpartum (Indonesian Ministry of Health, 2013).

Pap smear was a test that most married women had obtained for their last CCS method, while around 3% received Visual Inspection with Acetic Acid (VIA). Beside that, only 1.6% had had a HPV-test as their last CCS method; this is because the HPV test is the most expensive screening method. VIA is available from public hospital, private medical practitioners - from doctors and midwives. Cost estimation for VIA test is around Rp. 15,000 – Rp. 50,000 (1 – 4 USD). VIA costs are cheaper if compared with Pap smear; yet, people are more familiar with Pap smear than VIA. This is due to lack of socialization about the difference between VIA and Pap smear in the community, especially in rural communities.

In bivariate analysis, age was significantly associated with CCS history ($p=0.022$). This finding was supported by studies in Canada, and in accordance with Nigerian study which reported a significant association between age and CCS participation in the bivariate model; but the association did not hold in the multivariate model (Cerigo et al., 2013; Olumide et al., 2014). The results from this study revealed that the majority of the women in both groups married when they were young adults (20-24 years); however, this did not make them eager to come and get a CCS until they reached a certain age or symptoms presented themselves

Income per month was found to be significantly correlated with CCS history ($p=0.038$). This finding supported other study by Chang, et al., (2017) who found that total income per month was significantly associated with women's participation to get a CCS in Korea. This could be due to the expensive

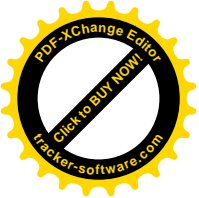
cost of CCS in Indonesia. Therefore, women in both the low income and high income groups were reluctant to think again of going to get a CCS when they did not have any complaints in terms of their health condition.

On the other hand, health insurance status was found to be statistically significant when associated with CCS ($p=0.000$) amid bivariate analysis. These finding confirmed a report by Roy, Tricia, & Tang (2008) who found that health insurance coverage was significantly associated with CCS among Indian women with different religions. This study showed that more than half of the participants 64% who had regular CCS had health insurance. Women will get a free screening if they had health insurance and vice versa.

Perceived barriers were found to be significantly associated with women's CCS history ($p=0.000$). Concerning individual items in the perceived barriers scale, almost all of married women with regular CCS and women without regular CCS felt that they would prefer a female doctor to conduct a CCS. This is because the majority of the participants in this study are Muslim, and Muslim women are likely to choose a female doctor when getting a CCS. This statement was supported by Guimond & Salman (2013) who stated that Muslim women wish to reject showing a sensitive part of their body to anyone other than a biological family member or husband.

Moreover, 24.5% of married women with regular CCS and 22.6% among married women who had no CCS regularly perceived that they will never have CCS if they have to pay for it. This finding confirmed the significance of medical expenses on women's decision to get CCS. Cost barriers pertaining to CCS were also mentioned by a quarter of participants in Ghana and most women in Mexico (Abotchie, & Shokar, 2009; Leyva et al., 2006).

The problem of health care service access is still felt by some married women. Around 28.4% of the participants without regular CCS reported that there was no health center close to their home to have a CCS. The number is higher compared with only 13.2% in the women with regular CCS. Approximately 18.9% of married women with regular CCS and 30.2% of women who had never had CCS regularly stated that they did not know where to go for a CCS. Similarly, Leyva et al., (2006) reported that most Mexican women perceived that difficulty of health care access is one of the important barriers to getting a CCS.



In some items, married women in the Non-regular/ Never had CCS group had more perceived barriers to CCS than women who had regular CCS such as fear of a bad result, they had other problems more important than having a CCS, they were afraid that they would not be able to explain to their husband why they needed a CCS, CCS would take too much time, and CCS is too painful. Similar result in study reported by Awodele et al. (2011) showed that around 14.4% of participants in Nigeria believed that a CCS is painful. Being worried about pain, result, and time-consumed appear to be barriers to CCS and should be addressed amid future intervention.

Interestingly, none of the married women with regular CCS agreed that their husband would not permit them to have a CCS, while 5.4% of women without regular CCS agreed with this statement. The small number of participants also shown among Hispanic and Indian women agreed that partner permission was one of the barriers to having a CCS (Byrd et al., 2004; Roy et al., 2008). Moreover, a small number of married women perceived that if cervical cancer is their destiny, having CCS cannot prevent it, and they believed that negative perceptions from others would appear if they went to get a CCS, while 11% felt that they were too old to have a CCS. In general, women partaking in this study seemed to have high perceived barriers of CCS.

When comparing to the two groups, this study presented that the women in the Non-regular CCS group perceived higher barriers than the women with regular CCS in terms of fear of bad result, do not know where to go for a CCS, embarrassment, time taken, CCS is too painful, the presence of male health care workers, other problem more important than having a CCS, no health center close to their home, cost of CCS, husband's permission, and afraid in terms of explaining to their husband why they need a CCS.

CONCLUSION

To sum up, these outcomes suggest reasons for the low CCS coverage among married women. In the final model, health insurance coverage and perceived barriers scale were found to be significant predictors of ever having had regular CCS. The specific barriers mentioned in this study may be taken into account amid health education interventions to

encourage CCS which likely to be developed in the future by the Indonesian government in collaboration with health care providers. The success of a screening program is highly dependent on the willingness and presence of women who are at risk to participate in such a program. Effort to increase screening need to focus on women who have high perceived barriers so that cervical cancer screening's promotion can be achieved.

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