CHAPTER 4

RESULTS AND DISCUSSION

Results

This descriptive research aims to determine the levels of health beliefs concerning cervical cancer in Muslim women, to determine the frequency of their Pap smear test attendance, and to examine the relationships between their health beliefs and their Pap smear test attendance. The sample was 100 Muslim women who visited the primary health care center at Chana Hospital during August and September 2003.

The results from this study are presented in 5 parts.

Part 1: Demographic Characteristics of the Sample

Part 2 : Pap Smear Test Attendance

Part 3 : The Level of Health Beliefs Concerning Cervical Cancer

Part 4 : The Relationship between Health Beliefs Concerning Cervical Cancer and Pap Smear Test Attendance

Part 1: Demographic Characteristics of the Sample

1.1 Sample characteristics

The characteristics of the 100 Muslim women in this study are presented in Table 1. Their ages ranged from 35 to 65 years ($\overline{X}$ = 41.26, SD = 7.06). The most common age in the sample was between 35 - 45 years (73%). The majority of the

women were married (86%). Seventy- eight percent of them had primary school education level. Most of the women were agricultural workers (39%) and had family income less than 5,000 baht per month (67%).

Table 1 Demographic characteristics of the samples (N = 100)

Demographic characteristics	Percent
Age (yrs) ($\overline{X}$ = 41.26, SD = 7.06)	
35 - 45	73
46 - 55	23
56 - 65	4
Marital status	
Married	86
Widowed	11
Divorced	3
Education level	
Illiterate	9
Primary school	78
Secondary school	11
Diploma certificate	1
Bachelor' s degree	1

Table 1 (Continued)

Demographic characteristics	Percent
Occupation	
Agriculture	39
Housewife	32
Small business	16
Employee	12
Government officer	1
Income / month (baht)	
Less than 5,000	67
5,000 - 10,000	31
More than 10,000	2

1.2 Risk factors associated with cervical cancer

Table 2 shows the percent of sample by risk factors associated with cervical cancer. Most women (74%) had their first intercourse between 14 - 20 years old and 56 percent had their first pregnancy when they were 15 - 20 years old. Their average number of children was four. Twenty-seven percent of samples had family planning. Of the 27 women, 12(44%) used the pill and 9(33%) used injection as contraceptive methods. 0nly 12(12%) of the sample had a history of reproductive

organ problems. The most common problem were viginitisa and leukorrhagia (n = 8).
Only one woman had a family history of cervical cancer and 10 of women were not
sure.

Table 2 Percent of sample by risk factors (N = 100)

Risk factors	Number (Percent)
Age at first intercourse	
14 – 20	74
21 – 25	17
26 – 35	9
Age at first pregnancy	
15 – 20	56
21 – 25	30
26 – 35	11
Have not been pregnant	3
Number of children ($\overline{X}$=3.78, SD =2.12)	
1 - 3	50
4 – 6	28
7 – 10	19
No children	3

Table 2 (Continued)

Risk factors	Number(Percent)
Family planning	
Yes	27
No	73
Contraceptive methods (n = 27)	
Pill	12 (44.44)
Injection	9 (33.34)
Tubal ligation	3 (11.11)
Abstinence periods	3 (11.11)
History of reproductive organ problems (n = 12)	
Viginitis, Leukorrhagia	8 (66.67)
Bleeding after sexual intercourse	2(16.67)
Vaginal bleeding	1 (8.33)
Sexually transmitted diseases	1 (8.33)
Family history regarding cervical cancer	
Yes	1
No	89
Not sure	10

1.3 Sources of cervical cancer information

Table 3 provides number and percent of the sample from sources of cervical cancer information. Most Muslim women (97%) had received information about cervical cancer. Sources of information were mainly from health care personnel (46%), followed by mass media (33%), and friends (14%).

Table 3 Number and percent of the sample from sources of cervical cancer

   information (N = 100)

Variables	Number(Percent)
Received information about cervical cancer	
Yes	97 (97)
No	3 (3)
Sources of information (n = 184)*	
Health care personnel	84 (45.65)
Mass media (book, newspaper, magazine	
radio, leaflet, handbook, TV.)	61 (33.16)
Friends	25 (13.58)
Health care volunteers	10 (5.43)
Family members / relatives	4 (2.18)

*More than one answer

Part 2: Pap Smear Test Attendance

Table 4 shows number and percent of the sample of Pap smear screening behavior. The result indicated that 61(61%) of the Muslim women had never received a Pap smear test. The reasons given were that they did not have any abdominal signs and symptoms (44%), no chance of getting cervical cancer (21%) and felt embarrassment (11%). Of those who had received the test (n = 39), 25(64%) had been tested only one time in a period of more than 5 years. Only 13 percent have the test as part of their annual check up. The reasons given for Pap smear test attendance were routine check up the birth of a child (47 %), availability of a mobile Pap smear service (24%), and health checks (18%). The venues for testing were Chana Hospital (62%), private clinic (14%), Songklanagarind Hospital (7%), and HatYai Hospital (7%).

Table 4 Number and percent of sample of Pap smear screening behavior (N = 100)

Pap smear test	Number (Percent)
Received Pap smear test attendance	
Yes	39 (39)
No	61 (61)
Frequency of Pap smear test attendance (n = 39)	
6 months	2 (5.12)
1 year	5 (12.83)

2 – 3 years	5 (12.83)

Table 4 (Continued)

Pap smear test	Number(Percent)
4 – 5 year	2 (5.12)
More than 5 years	25 (64.10)
Reasons of Pap smear test attendance (n = 45)*	
Routine check - up after birth of a child	21 (46.67)
Mobile Pap smear service	11 (24.44)
Health checking	8 (17.78)
Vaginal discharge or bleeding from vagina	3 (6.67)
Uteritis	1 (2.22)
Having bleeding after sexual intercourse	1 (2.22)
Reasons for not attending Pap smear test (n = 117)*	
No signs or symptoms	52 (44.44%)
No chance of getting cervical cancer	24 (20.51%)
Embarrassment	13 (11.11%)
Transportation	12 (10.27%)
Pain	8 (6.84%)
No time	5 (4.27%)
Financial	2 (1.71%)
Did not know where to have Pap smear test	1 (0.85%)

*More than one answer

Table 4 (Continued)

Pap smear test	Number(Percent)
Health service for Pap smear attendance (n = 42)*	
Chana Hospital	26 (61.90)
Private clinic	6 (14.28)
HatYai Hospital	3 (7.14)
Songklanagarind Hospital	3 (7.14)
Primary health care centers	2 (4.77)
Songkla Hospital	2 (4.77)

*More than one answer

Part 3: Sample of Health Beliefs Concerning Cervical Cancer

Table 5 provides ranges, means, standard deviations, and the level of the health belief scores concerning cervical cancer. The results showed that the mean score of total health belief scores was at moderate level ($\overline{X}$ = 87.30, SD = 12.47). Considering the subtotal of health beliefs scores, the mean score of perceived threat was at moderate level ($\overline{X}$ = 44.27, SD = 9.16), perceived benefits was at high level ($\overline{X}$ = 20.53, SD = 3.66), and perceived barriers was at low level ($\overline{X}$ = 20.82, SD = 9.72)

Table 5 Means, standard deviations, and the level of health belief scores concerning

cervical cancer

Variables	Range of score		$\overline{X}$	SD	Level
	Possible scores	Subject scores			
Perceived threats	14-70	21-70	44.27	9.16	moderate
Perceived benefits	5-25	5-25	20.53	3.66	high
Perceived barriers	9-45	9-43	20.82	9.72	low
Total health belief	28-140	48- 117	87.30	12.47	moderate

Table 6 provides means and standard deviations of item health belief scores. The highest mean score of perceived threat of cervical cancer was that cervical cancer would affect their relationship with their spouses ($\overline{X}$ = 3.94, SD = .91), suffering ($\overline{X}$ = 3.89, SD = .89), can not take care of their family ($\overline{X}$ = 3.67, SD = 1.06), and cervical cancer would affect their work '' ($\overline{X}$ = 3.59, SD = .98).

For the perceived benefit of Pap smear test, the highest mean score was Pap smear test is an effective method to detect cervical cancer ($\overline{X}$ = 4.14, SD = .85), followed by having Pap smear test is good for them ($\overline{X}$ = 4.09, SD = .95), and having Pap smear test help to detect cervical cancer at an early stage and can be promptly treated ($\overline{X}$ = 4.03, SD = .89).

Regarding perceived barrier of Pap smear test, the highest mean score was receiving a Pap smear test would be painful '' ($\overline{X}$ = 2.80, SD = 1.24). The following were beliefs that cervical cancer can not be prevented because it depends on God

($\overline{X}$ = 2.74, SD = 1.29), fear of the Pap test results ($\overline{X}$ = 2.63, SD = 1.19), and they are afraid to have Pap smear test by a male doctor ($\overline{X}$ = 2.59, SD = 1.33).

Table 6 Means and standard deviations of item scores of perceived threat of cervical cancer, perceived benefit, and perceived barrier of Pap smear test attendance (N=100)

Items	$\overline{X}$	SD
Perceived threat of cervical cancer		
1.Having cervical cancer would affect the relationship with her spouse	3.94	.91
2.Cervical cancer is a disease that makes patients suffer	3.89	.89
3. Women with cervical cancer can not take care of their family	3.67	1.06
4.Having cervical cancer would affect m y work	3.59	.98
5. Women with cervical cancer will die early	3.54	1.07
6.Cervical cancer is a severe and fearful disease	3.49	1 .02

Table 6 (Continued)

Items	X̄	SD
7.Having a husband with multiple sexual partners places me at high risk of developing cervical cancer	3.27	1.21
8.Having a husband who underwent circumcision, prevents me from getting cervical cancer	3.16	1.15
9. As I get older, I have more chance of getting cervical cancer	2.82	1.17
10.Having first intercourse at a young age increases the chance of having cervical cancer	2.77	1.09
11.Becoming pregnant at an early age increases the chances of having cervical cancer	2.71	1.16
12.When I hear friends or relatives have cervical cancer ,it makes me think that I have a chance to get it	2.62	1.06
13. High parity increases my chances to get cervical cancer	2.58	1.16
14. I think, I have a great chance to get cervical cancer	2.22	1.11
Perceived benefit of Pap smear test		
15.Pap smear test is an effective method to detect cervical cancer	4.14	.85
16. Having a Pap smear test is good for me	4.09	.95
17. Having Pap smear test helps to detect cervical cancer at an early stage and can be promptly treated	4.03	.89

Table 6 (Continued)

Items	X̄	SD
18. Having a regular check-up with Pap smear test can prevent invasive cervical cancer	3.86	1.01
19. Having a Pap smear test lets me to know whether I have cervical cancer.	3.77	1.08
Perceived barriers of Pap smear test		
20. Receiving a Pap smear test would be painful	2.80	1.24
21. I believe cervical cancer can not be prevented because it depends on God	2.74	1.29
22. I am afraid to know the results of the test	2.63	1.19
23. I am afraid to have a Pap smear test by a male doctor	2.59	1.33
24. I feel embarrassment to have a Pap smear test	2.53	1.32
25. Receiving a Pap smear test can affect my work	2.31	1.25
26. I had a problem financing a Pap smear test	2.31	1.33
27. I am afraid the place for having a Pap smear test is not private	2.31	1.22
28. I have no time to have Pap smear test	2.29	1.25

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Part 4: The Relationships between Health Beliefs Concerning Cervical Cancer and Pap Smear Test Attendance

Table 6 presents the relationships between the sample's health beliefs concerning cervical cancer scores; perceived threat of cervical cancer, perceived benefit and barrier of Pap smear test scores and frequency of Pap smear test attendance. The results showed that there was a significant relationship between total health belief scores and the frequency of Pap smear test attendance($r = .27$, $p < 0.05$). Considering the relationship between each individual's beliefs and Pap smear test attendance, the perceived threat of cervical cancer, perceived benefit, and perceived barrier of Pap smear test scores were significantly correlated to Pap smear test ($r = .23$, $p < 0.01$; $r = .32$, $p < 0.05$, and $r = .-0.21$, $p < 0.05$ respectively).

Table 7 Spearman ranks correlation between health beliefs concerning cervical cancer; perceived threat of cervical cancer, perceived benefit and barrier of Pap smear test scores and frequency of Pap smear test attendance (N= 100)

Health belief	Pap smear test attendance
Total Health beliefs	0.27*
Perceived threat	0.23**
Perceived benefits	0.32*
Perceived barriers	-0.21*

*$p < 0.05$, **$p < 0.01$

Discussion

The resulting health beliefs concerning cervical cancer and Pap smear test attendance among Muslim women is presented and discussed below:

1. Sample characteristics

The majority of the women were aged between 35 - 45 years with an average of 41.86 years. There were in the age group which had high risk of cervical cancer. (Deerasamee et al., 2001). Most of them (88%) had a personal income of less than 5,000 baht per month, which was classified in is low socioeconomic level. Previous studies had been found that this socioeconomic status which increases their risk for cervical cancer. Women in low socioeconomic level were unlikely to access the health care preventive services and had excessive risk-taking behavior (Chambers, 2001; Ngelangel et al. 1998). The level of education of the subjects is quite low. Most of them had primary education and only one had a bachelor's degree. This result is similar to Ruangkhachorn and U-Po (2002), who studied gender roles in reproductive health among Thai Muslim males and females in Songkhla. Most of the subjects had primary education and had an average monthly income less than 5,000 baht.

2. Risk factors associated with cervical cancer

In this study, it was found that Thai Muslim women who experienced intercourse at an early age or became pregnant and married before they were 20, that these were significant high risk indicators of cervical cancer (Table 2). This findings were supported by the study of Na- Ranong and Thongsuksai (2000) who studied contraceptive practice and induced abortion in Muslim women at a private clinic in Nathawee District, Songkhla province. In this study, the results showed that most of

the subjects experienced first intercourse and first pregnancy before the age of 20 years. This may be because in Thai Muslim social women are usually discouraged to continue their education after finishing at the primary level. They are often preasured to stop school and marry while they are young (not more than 15 years) (Boonark & Tongtae, 2002). These results suggest that a strategy promoting Pap smear testing should include women's perception about their risk factors concerning cervical cancer and the routine check up. In terms of family planning, only 27 percent used family planning. This poor utilization of family planning may be a consequence of religious beliefs that a child is a gift from heaven so family planning is not needed (Boonark & Tongtae, 2002). Most of the women (88%) did not have a history of reproductive organ problems, especially signs of infections. Boonark and Tongtae (2002) noted the religious mandates of fasting, cleaning the body before prayer, and circumcision may lead to lower levels of reproductive tract infections among Muslim women

3. The frequency of Pap smear test attendance

The result indicated that most Muslim women (61%) had not received a Pap smear test. Only 39 percent of the women reported that they had a Pap smear test. The result of this study was supported by another study (Boonark & Tongtae, 2002) which indicated that Thai Muslim women from the South had low rates of Pap smear testing, only 33 percent had received a Pap smear test. The results of this study are far from the goal set by the Thai National Cancer Institute which indicates that Thai women who are 35 years or older should have a Pap smear test at least once a year (Janpeng, 1998). Of the women who had received a Pap smear test, very few of them (13%) repeated regularly testing.

The main reasons for Pap smear test attendance was an appointment made after the birth of a child. Therefore, many women did not regularly undergo Pap tests. Previous studies show that Pap smear has been available to women for many years and have generally been utilized primarily by women of childbearing age (Rungsesuwan, 1996; Jennings, 1997). Women in childbearing years are most likely to see gynecologists, either as part of obstetric care or for birth control (Schulmeirster & Lifsey, 1999.) These findings suggest that health care personnel need to reinforce the recommendations to continue regular Pap smear test by providing screening in the course of routine care or to take advantage of opportunities for providing or scheduling Pap smear tests in the course of visits for other reasons. Women who had never received a Pap smear test gave the reason that they did not have any abdominal signs or symptoms. This result indicated that Muslim women in this study were not knowledgeable about cervical cancer and misunderstand the purpose of receiving a Pap smear test. Health care personnel should emphasized to Muslim women to be aware that Pap smear test was a vaginal exam that screens for cervical cancer. Makie (1993) stated that of the women who died from cervical cancer. 80 percent had never received a Pap smear test. These findings suggest that nursing intervention for sharing knowledge about the importance of Pap smear testing for this group of women was need.

4. The level of health beliefs concerning cervical cancer

4.1 Perceived threat of cervical cancer

Muslim women perceived the threat of cervical cancer was at a moderate level. Most women perceived the severity of cervical cancer and the impact of getting cervical cancer on them and their family rather than their susceptibility to cervical

cancer. This may be because Thai Muslim women are expected to do housework, raise the children, and take care of their husbands. That is why they perceive cervical cancer as a severe and fearful disease, which causes death, suffering, and affectes their family life. These perceptions were similar to many studies which found that most women strongly believe that cervical cancer leads to death, pain, suffering, fear, loss of hope and purpose for life, can affect their work, and their family life (Price, et al., 1996; Rungsesuwan, 1996; Jennings, 1997; Phipps, et al., 1999; Mays et al., 2000; Kavila, 1994; Jirowong & Manderson, 2001).

In considering Muslim women's perception of the risks of cervical cancer, most of them strongly disagreed they had chances of having cervical cancer. This may be because they did not have any signs or symptoms of cervical cancer. In addition, only one of them had a family history of cervical cancer. The finding was supported by the study of Schulmeister and Lifsey (1999) who found that most women in their study perceived low risks of cervical cancer because none of them had a family history of cervical cancer. Jirowong and Manderson (2001) noted that the subjects who had a history of cervical cancer in their families perceive a more personal threat from cervical cancer than the subjects who were healthy. Janz and Becker (1974) stated that a person will perceive a threat of a disease when an illness had signs or symptoms of disease.

4.2 Perceived benefits of Pap smear testing

Most of the subjects perceived the benefits of Pap smear testing were at a high level. More than 80 percent of women agreed that Pap smear testing is an effective method to detect cervical cancer (85%), having Pap smear test is good for them (84%), and regular Pap smear check-ups can prevent invasive cervical cancer,

by being promptly treated (83%). Most Muslim women perceived the benefits of a Pap smear test. Sources of information regarding cervical cancer were mainly from health care personnel (46%) and mass media (33%) indicating most women are knowledgeable about cervical cancer and Pap smear testing. Other studies also showed women's perception of the benefits of Pap smear testing included a Pap smear test as an effective method to detect cervical cancer which could save lives by early detection and being promptly treated (May et al., 2000; Rungsesuwan, 1996; Jirowong &Manderson, 2001; Jennings, 1997)

4.3 Perceived barriers of Pap smear testing

Most subjects perceived barriers of Pap smear testing was at a low level. Nearly 70 percent of them did not perceive that they did not have time to receive a Pap smear test, or they had financial problems to pay for a Pap smear test. One reason may be because of the policy of the Thai government policy to provide Pap smear test without charge for women aged 35 years or more. More than half of them (56%) did not feel embarrassment or fear to receive a Pap smear test by a male doctor (Table 1, Appendix D, pp.91-92). This may be because most of the subjects were married (86%) and 97 percent had experience of the birth process which included frequent vaginal examinations. This exposure can diminish embarrassment during Pap smear test (Holroyd, Shia, & Twinn , 2001). However, 34 percent of women did agree that receiving a Pap smear test would be painful and believed that cervical cancer can not be prevented because it depends on God (35%)(Table 1, Appendix D,pp. 91).Thus, health care teams have to change this belief by increasing women's awareness about the risks of cervical cancer and the important of prevention in having a Pap smear test.

Mohammed stated that "An ounce of prevention is better than a ton of treatment and we should use preventive measures to maintain good health'' (Athar, 1993).

5. Health beliefs concerning cervical cancer and Pap smear test attendance

The results of this study showed , there were significant relationships between total health belief scores and the frequency of Pap smear test attendance (r = .27, p < 0.05). There were also significant relationships between perceived threat of cervical cancer, perceived benefits, and perceived barriers of a Pap smear test and Pap smear test attendance(r = .23, p < 0.01; r = .32, p < 0.05, and r =.-0.21, p < 0.05 respectively). Muslim women who perceived a threat from cervical cancer, perceived benefits, and perceived less barriers of Pap smear test were more likely to participate in Pap smear test attendance. (Bisk, Sutton, & Golombok 2000; Kavila, 1994; Rungsesuwan, 1996). The findings from this study provide support for health belief model. However, the correlation between health beliefs (perceived threat of cervical cancer, perceived benefits, and perceived barriers of a Pap smear test) and Pap smear test were low. This can be explained that there might be other factors, which influenced with the frequency of Pap smear test, such as age, education, socioeconomic status (Srisel, 1997, Suwaratchai,1997) which did not include in the present study. This finding can be used to design health education to increase Muslim women perception of their risk for cervical cancer and their perception of benefits of Pap smear testing and decrease their perception of barriers of Pap smear testing. Within this framework, the provision of health education should increase the likelihood of Muslim women receiving a Pap smear test. In addition possible related health beliefs concerning cervical cancer and Pap smear test such as age, level of education and socioeconomic status of the women needed to be considered.