

## **CHAPTER 2**

### **LITERATURE REVIEW**

The review of the literature for this study includes the following topics:

1. Cervical Cancer and Pap Smear Test
2. Health Belief Model
3. Health Beliefs Concerning Cervical Cancer
4. Health Beliefs Concerning Cervical Cancer and Pap Smear Test Attendance
5. Health Beliefs among Muslim Women

#### **1. Cervical Cancer and Pap smear test**

##### **1.1 Cervical cancer**

###### **1.1.1 Definition**

Cancer of the cervix is a progressive disease, beginning with abnormal neoplastic cells in the epithelial layer of the cervix that spread into stromal tissue causing invasive cervical cancer (Ziegfeld, Lubejko, & Shelton, 1998).

###### **1.1.2 Etiology**

A specific agent likely to be responsible for cervical cancer is human papilloma virus (HPV), the cause of most venereal warts. HPV of genotypes 16 and 18 shows a significant presence in women with cervical cancer (Brown, 1998).

###### **1.1.3 Risk factors associated with cervical cancer**

- (1) Sexual and reproductive factors

Of the established risk factors for the development of cervical cancer, those relating to female sexual behavior are the most consistently found and reported: young age at first intercourse, multiple sexual partners (Bosch & Munoz, 1992; Brinton, Herreto, Reeves, Gaitan, & Tenorio, 1993) and high parity (Bosch & Munoz, 1992; Brinton, et al., 1993; Ngelangel et al., 1998).

### (2) Cigarette smoking

Of the studies of invasive cervical cancer that controlled for number of sex partners and age at first intercourse (Ngelangel et al., 1998; Chichareon et al., 1998), all demonstrated increased risk, supporting the hypothesis that cigarette smoking is an independent risk factor.

### (3) Male factors

As sexual factors are undoubtedly associated with cancer risk, one would expect the sexual characteristics of the male consorts of women with cervical cancer to be important. One of the earliest reports proposing a sexually transmitted male factor to the development of cervical cancer revealed a nearly threefold higher incidence of this disease in women whose husbands were previously married to women diagnosed with cervical cancer (Kessler, 1977). Agarwal, Sehgal, Sardana, Kumar, and Luthra (1993) noted that men's premarital and extramarital sexual activities play a role in cervical cancer. This is consistent with Castellsague et al. (1996) who found that men who reported multiple sexual partners or who were carriers of HPV may place their wives at high risk of developing cervical cancer.

#### (4) Contraception method

The combined oral contraceptive pill has been implicated in cervical cancer, possibly due to the estrogen in the pill making ectropion on the cervix more extensive, therefore offering a larger area where metaplasia can be more vulnerable to HPV (Andrews, 1997).

Several studies exploring risk factors for invasive adenocarcinoma found a distinctly higher risk in women on oral contraceptive pill (Brinton, et al., 1993; Madeleine et al., 2001). Although some studies found no increased risk of invasive cervical cancer among oral contraceptive pill users, recent well controlled studies have revealed excess risk in women using oral contraceptives for 5 or more years (Beral, Hannaford, & Kay, 1988).

#### (5) Socioeconomic

Low socioeconomic status has consistently been cited as being a risk factor in the development of cervical cancer. Ngelangel et al. (1998) noted that women who had low socioeconomic status were associated with cervical cancer. An increased risk in the lower socioeconomic populations has been associated with poor access to the health care preventive services and excessive risk-taking behavior (Chambers, 2001).

#### (6) Human immunodeficiency virus (HIV)

The importance of immunosuppression in the development of malignancies is demonstrated by the association between HIV infections and cervical intraepithelial neoplasia (CIN), nearly half of HIV-infected women demonstrate CIN on routine colposcopy, with the majority coinfecting with HPV (Chambers, 2001). Lasen et al. (2000) noted that severe HIV related immunodeficiency strongly increases the risk of cervical cancer. That is consistent with Mandelblatt, Kanetsky, Eggert, and Gold

(1999) who found that HIV seems to be a co- factor in the association between HPV and this cervical neoplasia and this effect may vary with the level of immune functions.

#### 1.1.4 Pathophysiology

Most cervical cancers are preceded by precancerous changes that remain noninvasive for as long as 20 years. The progression of these cellular alterations to cancer does not always occur; however, the risk of progression increases with the degree of cellular dysplasia. Squamous cell carcinoma usually arises from cells at the transition zone between squamous and columnar epithelium near the external cervical (Hansen, 1998).

#### 1.1.5 Staging of the disease

The following guidelines are used based on clinical classification by the International Federation of Gynecology and Obstetrics (FIGO), (Swearingens & Ross, 1999).

- Stage 0 : carcinoma in situ; pervasive.
- Stage I : cancer cells in the cervix only.
- Stage IA : microscopic disease measuring not more than 5 mm in depth from its base and not more than 7 mm horizontally.
- Stage IB : lesions greater in size than IA, seen clinically or microscopically.
- Stage II : cancer involving cervix and vagina (upper two thirds only) but not the pelvic wall.
- Stage IIA : no involvement of uterine tissue.
- Stage IIB : involvement of uterine tissue.

Stage III : involvement of the pelvic wall or lower third of the vagina.

Stage IIIA: no extension onto the pelvic wall.

Stage IIIB : extension onto pelvic wall and/or causes hydronephrosis  
(obstructed flow urine to kidney, producing kidney atrophy).

Stage IV : cancer in bladder, rectum, and other organs of the  
pelvis.

Stage IVA: metastasis to adjacent organs.

Stage IVB: metastasis to distant organs.

#### 1.1.6 Clinical Manifestations

Early cervical cancer is asymptomatic, often for several years, with the only clinical evidence being cellular abnormality detected by the Pap smear. Later, with local extension and invasion, cervical cancer may manifest as cervical lesions, vaginal bleeding, painful coitus, and dysuria. (Hansen, 1998).

#### 1.1.7 Diagnostic parameters (Ziegfeld, et al., 1998)

(1) A Pap smear is the most accurate, convenient, and cost-effective technique used to detect cervical cancer. The American Cancer Society recommends that women who are sexually active or who are 18 years of age or older have a Pap smear and pelvic examination annually. Pap smears can identify numerous infections, reactive changes, and cellular abnormalities. If a Pap smear is abnormal, other tests are necessary to diagnose the problem.

(2) Colposcopy is a diagnostic test used to evaluate the cervix after an abnormal Pap smear. A 3% acetic acid solution is applied to the cervix. This solution allows the examiner to visualize and biopsy abnormal areas.

(3) A cervical biopsy may be performed on abnormal areas seen during colposcopy for definitive diagnosis.

(4) Cystoscopy or intravenous pyelogram (IVP) may be performed to rule out bladder or renal involvement.

(5) Chest x-ray is done to rule out metastases in the pleural cavity.

(6) Proctoscopy, sigmoidoscopy, or barium enema may be performed if bowel involvement is suspected.

(7) A supraclavicular lymph node biopsy is done if any of these nodes are palpable.

#### 1.1.8 Treatment

Treatment depends on the degree of cervical invasion and staging, and may include total abdominal hysterectomy (TAH), total vaginal hysterectomy (TVH), or radical abdominal hysterectomy (RAH); any of which may be performed as initial or after the tumor volume is depleted by intracavitary or external beam radiation therapy. (Ziegfeld, et al., 1998)

### **1.2 Pap smear test**

The Pap smear has been shown to be a universally successful screening test, reducing mortality from squamous cell cancers of the cervix. Its purpose is to detect premalignant conditions of the cervix. Screening may reduce the risk of death from cervical cancer by as much as 80-98% (Koss, 1989; Chambers, 2001).

Pap smear was introduced as a screening test for cervical cancer and inexpensively detects cervical cancer at an early stage. Dr George Papanicolaou, a Greek physician, developed the Pap test in the 1940s, and it began to be used regularly in gynecological examinations during the 1950s. Since then, the incidence

of invasive cervical cancer and the mortality rate from cervical cancer have declined, but the number of women with cervical intraepithelial neoplasia (CIN) has increased at an alarming rate (Allen & Phillips, 1997 cited by Reeves, Roux, & Lockhart, 1999).

#### 1.2.1 Frequency of Pap smear test

The American Cancer Society (ACS), the National Cancer Institute, and the American Medical Association (AMA) recommend, as reported in the United States Preventive Services Task Force, that women should have their first Pap smear at 18 years of age or when they first have intercourse. Women 18 – 64 years of age should have Pap smears yearly or every three years after three normal, consecutive, annual Pap smears. After 65 years of age, women should have Pap smears yearly, or every three years after two normal, consecutive, annual Pap smears.

The American College of Obstetricians and Gynecologists (ACOG) currently recommends annual Pap tests for all sexually active women. Controversy exists regarding the screening schedule. For example, women who take birth control pills are often required to undergo an annual Pap smear before their prescriptions are refilled. Even women who do not require a Pap smear benefit from regular pelvic and breast examinations, as these checkups may detect potential problems. There is concern that women who do not need a Pap smear may find it easy to delay a checkup. Women should consult their physicians or nurse practitioners to determine how often they should have a Pap smear. Women at high risk, such as those with multiple sex partners, a history of sexually transmitted (STD) (especially HPV), a non-monogamous male partner, those of Africa-American heritage, elderly women who have not been screened, those with a family history of cervical cancer, and women whose mothers used diethylstilbestrol (DES) during pregnancy should undergo

more frequent screenings. In addition, nurses must make efforts to test those who have not been screened (Allen & Phillips, 1997 cited by Reeves, et al., 1999).

### 1.2.2 Taking of smears

#### (1) Patient preparation

The patient is told that the test involves collecting cells from the cervix and that, although slight discomfort may be felt during insertion of the speculum, there will be no actual pain. The nurse determines if the patient has douched, had sexual intercourse, is menstruating, has used a lubricant, or has taken a tub bath in the 24 hours before the test, because these may affect the accuracy of test results.

The patient is asked to void and then remove her clothes from the waist down. The nurse asks the patient to drape herself and to lie on the examining table with buttocks at the edge of the table and heels in the stirrups. (Myers & Beare, 1994)

#### (2) Procedure

A Pap smear is a painless screening test for cervical cancer. Specimens are taken from the endocervix and ectocervix . The test is simple and has no side effects. It should be performed annually with a pelvic examination in women who are, or have been, sexually active, and in women who have reached the age of 18. After three or more consecutive annual examinations with normal findings, the Pap test may be done less often at the discretion of the physician. Women at high risk for cervical cancer and those over 40 should have annual checkups (Pottler & Perry, 2001).

The examiner first collects a sample of the outer cervix or ectocervix. A plastic spatula is rotated 360 degrees against the cervical surface. Once the spatula is withdrawn, the examiner spreads the specimen lightly over a glass slide. The nurse who is assisting sprays the specimen with cytological fixative and labels the slide. The



examiner next uses a cytobrush to collect endocervical cells. The cytobrush is inserted into the cervical os and rotated one full turn. The specimen is then spread across the slide by rolling the brush with moderate pressure. The specimen is sprayed again, and the slide is labeled. At the end of the procedure the nurse warns the client that blood spotting is normal for a few hours (Pottler & Perry, 2001).

### 1.2.3 Pap classification

Papanicolaou's classification of the cytological findings consists of five grades: (Harpex, 1997).

- I. Normal
- II. Atypical smear
- III. Indicates some type of dysplasia
- IV. Carcinoma in situ
- V. Invasive squamous cell carcinoma

## **2. Health Belief Model**

The Health Belief Model (HBM) is an influential and widely used psychosocial approach explaining health related behavior. It has a theoretical structure and was developed to explain why and what conditions that people take preventive health measures. The model has been used as a conceptual framework in a variety of health behavior studies, including disease detection and prevention. (Rosenstock, Strecher, & Beaker, 1998)

The HBM consists of individual perception variables, modifying factors, and variables likely to affect initiating actions. Individual perception variables directly

influence the tendency to act, while modifying variables affect behavior undertaking indirectly. The individual perception variables are beliefs about personal susceptibility to a certain disease and perceptions of the seriousness of that disease. The two variables together indicate the implied perceived threat of the illness for an individual. Modifying factors are those forces that affect an individual's perception and include a variety of demographics, sociopsychological factors such as personality and social class, and structural variables such as knowledge about the disease and prior contact with it. Cues to action or stimulus to act might be internal or external. The internal cues might include uncomfortable symptoms or thoughts about the condition of an ill relative or friend. The external cues might include mass media campaigns, advice from others, or a reminder postcard from a physician. In addition, variables likely to affect initiating actions include perceived benefits and perceived barriers to preventive behaviors (Becker, 1974 cited by Ali, 2002) . See figure 2:

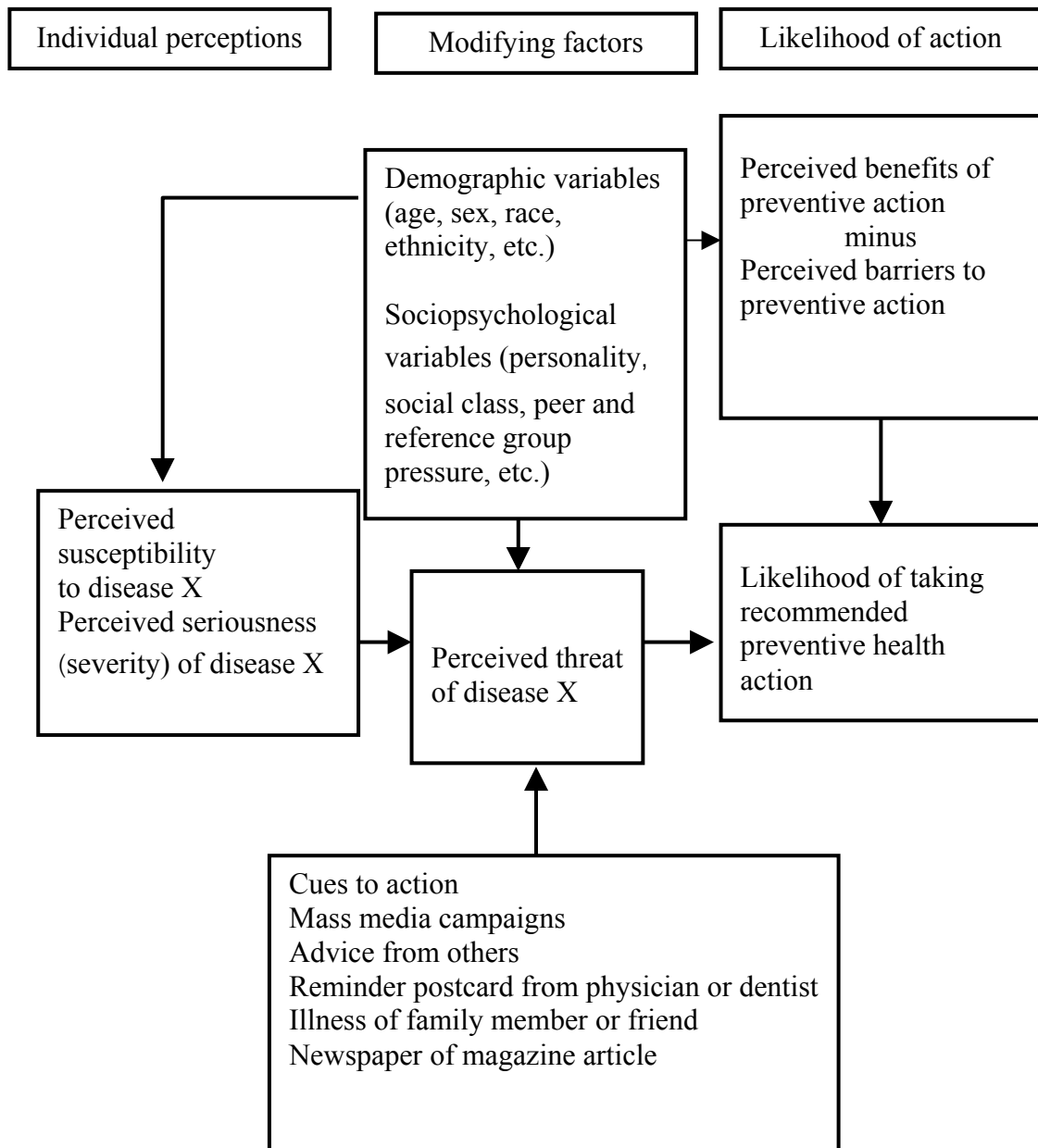


Figure 2: Health belief model (Becker & Haefner, 1977)

### **3. Health Beliefs Concerning Cervical Cancer**

The health beliefs concerning cervical cancer in this study consist of perceived threat of cervical cancer, perceived benefits of Pap smear test attendance, and perceived barriers to Pap smear test attendance, as follows:

3.1 Perceived threat of cervical cancer consists of perceived severity of cervical cancer and perceived susceptibility to cervical cancer

#### **3.1.1 Perceived severity of cervical cancer**

Many 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, Easton, Telljohann, & Wallace, 1996; Jennings, 1997; Rungsesuwan, 1996; Phipps, et al., 1999; Mays et al., 2000; Kavila, 1994; Jirowong & Manderson, 2001).

Price, et al. (1996) explored 330 adult females' perceptions and practices regarding cervical cancer by sexual orientation. The researchers found that most of the women had strong beliefs that cervical cancer lead to death and pain. This is consistent with Phipps, et al. (1999) who studied cancer knowledge, beliefs, and attitudes among Cambodian and Vietnamese women living in Philadelphia, Pennsylvania. The finding shows that the almost women believed cervical cancer to be a serious disease that means you will die soon, "a painful disease", "you will be crying in pain." The researchers suggested that educational efforts about cancer need to first identify beliefs about cancer that may impact on participation in cancer screening. Jennings (1997) studied focus group responses of African American and Latina women about getting a Pap smear. The researcher found that in response to the question, "When you think about the word cancer' what comes to mind?" the majority

of the informants answered with thoughts of death and dying, pain and suffering, fear, and loss of hope and purpose of life. Informants believed that people with cancer lost their hair, suffered the loss of body parts, had long hospitalizations, were sterile or infertile, and were anorexic.

Jirowong and Manderson (2001) studied the beliefs and behaviours about Pap smear test and breast self-examination among Thai immigrant women in Brisbane, Australia. Item analysis of the women's perceived severity of cervical and breast cancers. The majority of women knew that cervical and breast cancers caused death if left untreated; the disease could disseminate to other organs; they can cause suffering, pain, anxiety and unhappiness (97%) and they require costly treatment for cervical cancer (97%) and breast cancer (94%). This is consistent with Kavila (1994) and Rungsesuwan (1996) who found that Thai women had strong beliefs that cervical cancer leads to death and can affect their work and family life.

### 3.1.2 Perceived susceptibility to cervical cancer

Most women believed themselves to have a low susceptibility to cervical cancer because they did not have any family history of cancer (Schulmeister & Lifsey, 1999). Other women believed that women who are susceptible to cervical cancer will be those women who do not take care of the perineum and married women are more susceptible to cervical cancer than unmarried women, regardless of their sexual activity (Rungsesuwan, 1996; Jennings, 1997; Jirojwong & Manderson, 2001; Price, et al., 1996; Yi, 1994; Schulmeister & Lifsey, 1999).

The women's beliefs of susceptibility regarding cervical cancer seem to focus on beliefs of a low susceptibility to cervical cancer. Schulmeister and Lifsey (1999) surveyed the knowledge, beliefs, and practices of cervical cancer screening of

Vietnamese women. The majority of women in this study believed that it was unlikely that they would ever be diagnosed with cervical cancer and cited not having “cancer in the family” as the primary reason for their perceived low risk. Also, that married women are more susceptible to cervical cancer than unmarried women regardless of their sexual activity. The researchers suggested that the low rate of Pap test utilization by women in this study could be attributed to Vietnamese cultural beliefs and perception of low susceptibility and severity, and the presence of many barriers to Pap testing. Price, et al. (1996) examined 330 adult females’ perceptions and practices regarding cervical cancer by sexual orientation. The researchers found that the majority of respondents (70%) perceived that all women, regardless of sexual orientation, are equally likely to develop cervical cancer. This may indicate a belief that the development of cervical cancer is a natural developmental process of women, a process beyond personal control. The denial of personal control over any form of cancer with behavioural risk factors may again be a method of dealing with cognitive dissonance.

Another study that addressed women’s perceived susceptibility to cervical cancer was by Jennings (1997) who studied focus group responses of African American and Latina women about getting a Pap smear test. The researcher found that the majority of women believed that cervical cancer affected women who did not keep themselves clean, or was a problem only among nonmonogamous, younger women. This is consistent with Jirowong, Manderson (2001), and Rungsesuwan (1996) who studied Thai women and found that they thought that not taking care of their perineum and vulva would increase their chance of getting cervical cancer.

### 3.2 Perceived benefits of Pap smear test attendance

The majority of women strongly believed benefits of Pap smear tests as an effective method to detect cervical cancer and other problems of reproductive organs, could save lives from early detection and being promptly treated (Price, et al., 1996; Rungsesuwan, 1996; Mays et al., 2000; Jirowong & Manderson, 2001; Jennings, 1997; Burak & Meyer, 1997; Lee, 2000; Schulmerister & Lifsey, 1999). However, some women displayed a variety of misconceptions about Pap smear test. They believed that it could test for sexually transmitted diseases and perceived Pap smear test to be unnecessary (Burak & Meyer, 1991; Gupta, Kumar, & Stewart, 2002; Lee, 2000).

Price, et al. (1996) studied the perception of cervical cancer and Pap smear screening behaviour and found that the majority of participants perceived some benefits to having a Pap test. The most common benefits to screening were “It would detect cervical cancer when it is more easily treated” (88%), “It could help save my life” (88%), and “It gives me peace of mind” (78%). The least common benefits were “It could help find other problems with my reproductive system” (72%). This is consistent with Mays et al., 2000 who examined women’s knowledge and beliefs about genital warts, HPV, cervical cancer, and Pap test found that the majority of participants perceived the benefit of Pap smear was to detect changes in the cervix suggestive of precancerous or cancerous conditions. In addition, none of the responses mentioned the association of HPV infection with the need for Pap smear. Other studies (Foxall, Barron, & Houfex, 2001) found that participants were overwhelmingly positive in their beliefs that gynecological screening and Pap tests were beneficial to their health. Nearly 90% strongly agreed or agreed that regular

gynecological exams were essential for reproductive health. Lee (2000) studied the knowledge, barriers, and motivators related to cervical cancer screening among Korean- American women and found that the majority of participants perceived benefits of the Pap smear test as a preventive strategy. Most participants in all groups were aware of its purpose; to determine whether a women has cancer in the uterus or to allow early detection of the cancer. However, these women also displayed a variety of misconceptions about the Pap smear; for example, they thought, that it could test for sexually transmitted disease, for other types of cancer, or for inflammation or infection.

Another study, Jirowong and Manderson (2001) reviewed the beliefs and behaviours about Pap smear test and breast self examination among Thai immigrant women in Brisbane, Australia. Item analysis on women's perceived benefits found that women were aware of the benefits of having Pap smear tests. These included: if cancer was detected by the test it helped to identify the abnormality of cervical cells (95.9%), it helped to determine the stage of cancer (94.5%) and it reassured them of their health status (84.8%). Bottorff, et al. (2001) studied cervical cancer screening in ethnocultural groups: Case studies in women centered care found that some women thought that Pap testing was beneficial; a way to "keep healthy" and protect families from the "suffering" caused by a disease that could affect "any women". Jennings (1997) who determined barriers and facilitating factors associated with Pap smear test among African and Latina women found that the majority of participants believed that Pap smear test detect cervical cancer early, check for any problems including infections. This is consistent with Rungsesuwan (1996) and Kavila (1994) who found



that most Thai rural women perceived that Pap smear test detect cervical cancer early and improve treatment result.

### 3.3 Perceived barriers to Pap smear test attendance

Women's perceived barriers to Pap smear test attendance can be categorised to structural and psychosociocultural barriers. Structural barriers are factors that may affect the target population's access to health services (Lee, 2000). The most frequently mentioned structural barriers were cost, lack of insurance and lack of time (Spurlock, Nadel, & Mcmanmon, 1992; Kavila, 1994; Jennings, 1997; Price, et al., 1996; Foxall, et al., 2001; Marrazzo, Koutsky, Kiviat, Kuypers, & Stine, 2000). Psychosociocultural barriers include personal feelings, societal and cultural beliefs related to women undergoing Pap smear test. The most frequently mentioned psychosociocultural barriers to having a Pap smear test were fear of the Pap smear test itself (e.g., fear of the speculum insertion, fear that the test would be painful, fear that the speculum would be inserted too far), embarrassment of exposing genitalia especially to doctors and should not be exposed the genital area to others (Broughton & Thomson, 2000; Bottorff, et al., 2001; Gupta, Kumar, & Stewart, 2002; Kavila, 1994; Jirowong & Manderson, 2001; Suwaratchai, 1996; Moonnan, 1998; Rungseswan, 1996). Other women perceived barriers to Pap smear test attendance as the procedure would affect the women's virginity and fear of the Pap test results (Lee, 2000; Bottorff, et al., 2001; Schulmeister & Lifsey, 1999; Bottorff, et al., 2001).

Spurlock, et al. (1992) who studied age and Pap smear history as a basis for intervention strategy found that women who were 45 – 59 believed that cost of medical care was a problem with not having recently had a Pap smear test. This is consistent with Kavila (1994) and Jennings (1997) who found that the majority of

women believed cost was a barrier for having Pap smear test. Price, et al. (1996) studied perception of cervical cancer and Pap smear screening behaviour and found that the majority of participants perceived the barriers to Pap smear tests were “no health insurance” (33%), “I forget to get a Pap” (32%), and “I do not like getting Pap tests” (31%) The least common barriers mentioned included: “I am too busy to get a Pap test” (2%). Another study by Foxall, et al. (2001) studied ethnic influences on body, awareness, trait anxiety, perceived risk, and breast and gynecologic cancer screening practices. The researchers found that lower screening practices may have been related to financial factors such as cost of screening and lack of health insurance.

Psychosociocultural barriers include societal and cultural beliefs related to women undergoing Pap smear test. Jennings (1997) who examined barriers and facilitating factors associated with Pap smear use among African-American and Latina women found that most participants believed Pap smears were embarrassing because a women had to expose herself to a doctor, and they did not like the idea of having a male doctor perform the Pap smear. In addition, some women stated that Pap smears were extremely uncomfortable and were fearful that the speculum used during the examination would be cold or not clean. Neilson and Jones (1998) studied women’s lay knowledge of cervical cancer/cervical screening: accounting for non attendance at cervical screening clinics found that the majority of women showed preference for a female professional to take the smear. The main reasons cited for non-compliance were fear and dislike of the test itself. Lee (2000) studying Korean-American women found that most mentioned barriers to women having Pap test were; fear of learning that one has cancer or another disease; a fatalistic attitude (i.e., an attitude that negates the value of testing because “whatever will be will be”); the

lack of pain or other symptoms, indicating for them that no illness is present; and dislike of the test procedure itself for a variety of reasons. They disliked Pap tests because of pain and the embarrassment of exposing genitalia to the provider, especially male doctors.

Bottorff, et al. (2001) studied Muslim women and found that most women believed that diagnosis would lead to fear, anxiety, painful or unsuccessful treatments and the Pap smear test affected virginity. The researchers suggested that women's values, such as those related to their modesty and shyness, and not removing one's Kashra were understood and respected. Jirojwong and Manderson (2001) who studied beliefs and behaviours about Pap and breast self examination among Thai immigrant women in Brisbane, Australia found that 78% of women believed that those who had never had sexual intercourse did not need to have Pap smears, and 61% wanted to have the tests done by female general practitioners and embarrassment influenced their reluctance to have a Pap smear test. Gupta, et al. (2002) found that among Sri Lankan women who had not had a Pap smear test, the most common reasons were that it were as perceived as unnecessary, and because of fear of discomfort, shyness or embarrassment. Srisei (1997) studied factors affecting the Pap smear screening among women at Nan Hospital, Nan Province and found that among the majority of women who had not had a Pap smear test, the most common reasons were lack of time, no abnormal signs, and fear. Another study by Kavila (1994) found that Thai women perceived barriers of Pap smear test attendance were embarrassment, pain, lack of time, and not being allowed to expose their genital area to others. Suwaratchai (1996) studied the factors affecting the screening for cervical cancer in married women in Amphor Maung, Ubonratchathani and found that women's perceived barriers to Pap

smear test were cost of the screening, embarrassment and they preferred to be screened by female medical staff. This is consistent with Moonnan (1998) who found that the women who did not receive Pap smear tests gave the reasons for not having the test as embarrassment and lack of verbal persuasion.

#### **4. Health Beliefs Concerning Cervical Cancer and Pap Smear Test Attendance**

Kavila (1994) studied health knowledge and beliefs concerning cervical cancer and cervical cancer screening requests of women in San Pa Tong District, Chiang Mai Province. The finding of the study was a significant correlation between the total health belief score and cervical cancer screening requests at the 0.01 level. Considering the relationship between each individual belief score and cervical cancer-screening request showed that perceived benefits and barriers were significantly correlated with cervical cancer screening. The relationship between perceived susceptibility and perceived severity with cervical cancer screening requests, were not significantly correlated. Rungesuwan (1996) used the HBM to examine knowledge, health beliefs, cues to action factors, and cultural factors on seeking Pap smear test among Thai women in rural areas. There were significant relationships, at level 0.05 between seeking Pap smear test and cultural factors, health beliefs, spouse's knowledge about cervical carcinoma and neighbourhood support ( $r = 0.508, 0.366, 0.323, 0.316$  and  $0.219$  respectively). With respect to health beliefs, there was no significant relationship between seeking Pap smear test and perceptions of severity of cervical carcinoma.

## **5. Health Beliefs among Muslim Women**

Muslim constructions of the meaning of health and illness are influenced by traditional and religious beliefs as well as biomedical concepts. Health is a composite of physical, emotional, psychological, and religious aspects of health. The balance is essential both between and within each dimension (Linda, 2000). If the balance is disturbed, illness arises. Many Muslims view God as the originator of all actions. This belief may have an impact on their view of illness or disease. Disease may be seen as the will of God, a test of faith, or a punishment for sins committed. In turn, a Muslim patient may believe that healing only occurs through God's will. Many Muslims will not make definite statements about the future without including the phrase, "In sha Allah", which means "God willing"(Baqui, 1979)

Islam promotes health as a key element within its belief system. Muslim males and females are closely governed by religious beliefs throughout the life cycle. (Ruang Khachorn & U-Po, 2002). Athar (1993) states, "Islam is a way of life to live, a system to be followed, a code of ethics and a constitution to be applied in the daily life of every person". The Qur'an, the Holy book of Moslems, and the Sunnah, an account of the way of life of the Prophet Mohammed, contain guidelines for a balanced lifestyle and include messages indicating that health promotion is a primary focus, while treatment of disease is a secondary focus (Athar, 1993). In addition, the teachings of the Prophet Mohammed, also know as hadith, contain powerful statements that support health practices. Some of the key Islamic religious practices influencing health preventive behaviours can be categorised to Islamic mandates that facilitate health preventive behaviour, and Islamic mandates that hinder health preventive behaviour, as follows:

## 5.1 Islamic mandates that facilitate health preventive behavior

5.1.1 Islamic mandates on cleanliness. The Qur'a stresses cleanliness of the body and the mind (Athar, 1993). Women are required to go through a special cleansing process, Ghusl-EL-Haydh, at the end of each menstrual period while preparing herself for prayers. Boonark and Tongtae (2002) noted that the religious mandates fasting, cleaning the body before prayer, and circumcision may lead to lower levels of reproductive tract infections among women.

5.1.2 Islamic mandates on prevention and individual responsibility in health promotion. The teachings of Islam stress disease prevention and individual responsibility in health matters. The Prophet Mohammed stated, "An ounce of prevention is better than a ton of treatment" (Athar, 1993). Islamic faith states that a person's body is a gift received in trust from the higher power, God. This gift should be taken care of instead of misused. The Prophet Mohammed (pbuh) stated that a cure exists for every disease but individuals should use preventive measures to maintain good health (Athar, 1993)

5.1.3 Islamic mandates on diet and eating habits. Islam encourages spiritual, emotional, and physical harmony by mandating health-promoting behaviors such as diet and exercise. The Islamic religion emphasizes eating in moderation as a way to stay healthy (Ahmad & Azzam, 1988 cited by Rajaram & Rashidi, 1999): mandates for fasting (Sawm) for a month beginning on the first day of Ramadan reflects self-discipline. Islamic fasting is prescribed as a way of training the mind and body in self-restraint, distracting an individual from temporal needs, and reminding an individual of the human needs of others. Within the context of health maintenance, fasting enables Moslems to gain the self-discipline necessary to avoid excessive weight gain

(Athar, 1993), a risk factor for cancer (American Cancer Society, 1997 cited by Rajaram & Rashidi, 1999). Islam also prohibits the consumption of liquor, illicit drugs, and smoking to protect the mind and body. The Prophet Mohammed stated that liquor has some benefits, but the potential harm to the body and the mind outweighs the beneficial effects (Athar, 1993). Recent research suggests that an increased risk of cancer is related to increased alcohol (Longneek, 1994) and increased dietary fat consumption (Hulka & Stark, 1995). Dietary restrictions and exercise are crucial components in the prevention of cancer that can be effectively encouraged among Islamic women within the framework of the Islamic tradition.

5.1.4 Islamic mandates on physical exercise. Physical exercise is part of the daily routine for most Muslims. Frequent exercise has been shown to help reduce the risk of cancer (Thompson, 1994). Islam requires that individuals pray (Salat) five times a day at fixed times. The movements in each Salat are mild, uniform, and involve all muscles and joints of the body, which condition the musculo-skeletal and cardiovascular systems and help to control anxiety, depression, and other emotional problems. In addition, the Prophet Mohammed encouraged regular physical exercise including swimming, horseback riding, and walking (Athar, 1993). Therefore, encouraging regular exercise is an effective recommendation for cancer prevention that is in agreement with the teachings of Islam.

## 5.2 Islamic mandates that hinder health preventive behavior

5.2.1 Islamic mandates on gender and modesty considerations. Modesty (He-jab), as mandated by Islamic cultural and religious practices, is a key consideration when dealing with Asian- Islamic women. Modesty requirements pertaining to dress exist for both men and women. After a girl reaches puberty, no

part of her body should be exposed except her face and hands (Women's Committee, 1992 cited by Rajaram & Rashidi, 1999) Islam does not permit women's extremities, much less their trunks (Meleis, 1995) to be exposed for medical examinations, except when absolute privacy is maintained (Rajaram & Rashidi, 1999), and the Islamic religion does not allow use of a healthcare provider of the opposite gender, unless it is impossible to locate a healthcare provider of same gender (Athar, 1993). This belief has an influence when undergoing cancer screening such as Pap smear test (Bottorff, et al., 2001), mammography (Kozier, Erb, Berman, & Burke, 2000), and breast cancer screening (Rajaram & Rashidi, 1999). Rajaram and Rashidi (1999) noted that, this religious restriction might keep women from effective participation in cancer prevention.

5.2.2 Patriarchal marital beliefs. Husband plays an important role in family decision making in the Muslim religions (Libbus & Kridli, 1996). Islamic teaching dictates that a man should be a woman's leader in many ways (Ruangkachorn & U-Po, 2002). Generally, husbands hold full authority in making important family decisions such as the desired family size, the selection of birth control methods and health services, for which wives must seek permission to attend from their husbands. Women who adhere to a stricter Islamic code are more restricted and their decision-making abilities depend on their husbands and male relatives, which in turn can restrict access and choice of health resources (Ruangkachorn & U-Po, 2002).

The literature, it was showed that cervical cancer was a significant health problem worldwide. In Thailand it is ranked as the first cause of death of all cancer in women. Screening through Pap smear test has been provided to decrease the incidence rate and mortality rate of cervical cancer. Unfortunately, this study found



that only 33 percent of Muslim women had undergone Pap smear testing. Previous studies had shown the association between women's health beliefs and Pap smear test attendance. Therefore, a major objective of this study is to explore health beliefs concerning cervical cancer and Pap smear test attendance. Further, it is expected that this result is likely to be the basis for designing culturally appropriate cervical cancer intervention and prevention activities in this population.