

1st COLLOQUIUM OF SOCIAL SCIENCES

FSPPP UiTM KEDAH 2012

DATE : 19TH MAY 2012

VENUE : DEWAN SARJANA, UiTM KEDAH

TIME : 8.00 AM - 5.00 PM

ORGANIZED BY:
BACHELOR OF ADMINISTRATIVE
SCIENCE CLUB (BASIC) IN COLLABORATION
WITH FACULTY OF ADMINISTRATIVE SCIENCE
AND POLICY STUDIES (FSPPP) UiTM KEDAH

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THE RELATIONSHIP BETWEEN HEALTH BELIEF MODEL (HBM) AND BREAST SELF EXAMINATION (BSE) AWARENESS, KNOWLEDGE FEMALE STUDENT: UITM KEDAH

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Breast Cancer is one of the leading causes of women death in Malaysia. Early detection methods such as BSE play an important role in reduction of death for breast cancer as the primary prevention strategies. BSE is a self screening method that should be taught at the early ages of women to aware them about the importance of early detection of breast cancer and it can be performed without assistance of health professionals and requires no equipment. However, most women do not perform a regular BSE which is a relatively effective and inexpensive way to prevent the breast cancer death and morbidity. Thus, to gain the women awareness and knowledge of BSE, HBM been utilized as a tool to predicting BSE knowledge which highlighting four psychological dimensions which are, perceived susceptibility, perceived benefits, perceived severity and perceived barriers. Therefore, the purpose of this paper is to examine the relationship of HBM and BSE knowledge and to quantify the most significant dimensions of HBM lead to BSE knowledge among female student in UITM Kedah.

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**CHAPTER 1
INTRODUCTION**

1.1 INTRODUCTION

Globally, cancer is known by the people as one of the deadly disease which had been the top ten list leading causes to death. It is estimated that 7.4 million people died because of cancer in 2004 and if thus trends continue, 83.2 million more will have died by 2015, (World Health Statistic, 2008). Breast cancer also been believed as the leading cause of cancer mortality among women in world country. In United States, for the year 2012, about 226,870 new cases of invasive breast cancer in women and about 39,510 deaths from breast cancer recorded, (American Cancer Society). In Malaysia breast cancer is alarming. According to the Ministry of Health 2011 statistic, breast cancer is the leading cause of cancer mortality among women with the highest rate of mortality which is 32% compare to the other cancer (Berita Harian 2011). In Malaysia, 30-40% of the breast cancer patients were diagnosed in the late stages (Hisham and Yip, 2004). However, if the cancer was detected and been treated at the early stages, the chance of recovery will increases (Behrouz Lotfi, Sayede Zahra Hashemi & Alireza Ansari Moghadam, 2012). In the other research, it is believe that the lifespan of more than 90% of breast cancer lengthened compared with those diagnosed with advanced-stage disease (Yavari P., Mehrabi

Y.,Porhoseyngholi M., 2005). It is shown that early detection and effective treatment is important and breast cancer screening is a necessary method of disease controls such as breast

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self examination (BSE). Today, BSE is one of the very important components of breast screening programs as it can help with the early detection of breast cancer screening. At the same time, several studies demonstrated that breast self-examination was a promising method for early detection (Foster & Costanza, 1984; Huguley & Brown, 1981). However, even it is known that BSE is the best practice for the early detection of breast cancer, there are still low of numbers among women practicing the BSE as part of their health routine to get away from the disease. Researcher interested to review on the women awareness regarding BSE practice by using the Health Belief Model (HBM). In the research done by Jacob C, Penn E and Brown (n.d), they were using the Health Belief Model in order to get the occurrence of BSE behavior towards their respondent. The HBM assumes on individual's perception of susceptibility and severity of an illness in order to produce the readiness to take health action. The model includes of four dimensions which is perceived susceptibility, perceived severity if contracted the disease, perceived benefits of a particular health action and perceived barriers to adopting the health action (Rosenstock 1974).

1.2 PROBLEM STATEMENT

Breast cancer continues to be the most common type of ailment among women in Malaysia (the Star, 2011). Approximately 70% of the breasts cancers are believed to have developed periodically as a result of exposure to chemical in the environment, 5% to 10% of inherited genetic mutation and 15% to 20% of result of a combination of both genetic and environment factors (Underwood et al, 2008). Basically, lack of knowledge among women in early age contributed towards the risen of breast cancer disease. According to Muhammad,A.H et al (2010), Karayurt,O. et al (2008), Guilford,K. (2011), Royse & Dignan, (2009) found that the

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Most of female university students had inadequate knowledge and risk factor of breast cancer which study participant generally answers just over half (57%) of the knowledge correctly, lead to the most of female university to be a barrier to screening through Breast Self-Examination (BSE). The Health Belief Model (HBM) appeared most frequently in the literature explaining breast cancer screening (Becker and Maiman, 1975; Rosenstock et al.,1988). The same thought also been shared with Champion, (2003), Champion & Miller, (1992), the HBM is now considered the most widely used model for predicting BSE behaviour. Besides that, HBM has been applied towards this research because HBM are the most suitable model for this research. The aim of this study was to assess the awareness and knowledge of female university students about breast cancer and breast self examination.

1.3 Research Question

What are the relationship between Health Belief Model (HBM) and Breast Self Examination awareness knowledge of female student?

Which is the most significance factor in Health Belief Model (HBM) lead to Breast Self Examination awareness knowledge of female student?

1.4 Research Objective

To examine relationship between Health Believe Model and knowledge awareness of Breast Self Examination among college women.

To quantify the most significant factor in Health Belief Model (HBM) lead to Breast Self Examination awareness knowledge of female student.

1.5 Scope of Study

Purposed of study to assess the awareness and knowledge of female university students about breast cancer and breast self examination. Target population for this study are cover among all degree colleges' women in the UiTM, Kedah. Target population are required from range of age between 18 to 25 years old. UiTM colleges women are fulfil all the requirement as a respondent by the researcher.

1.6 Significance of study

Significance for this research conducted to give knowledge among colleges women towards the important to assess the awareness and knowledge of female university students about breast cancer and breast self examination in order to reduce the rate of mortality of breast cancer. Besides that, this will help the college's women to take serious consideration makes a Breast Self Examination and become more aware on the breast cancer in the adult young age above 18 years old.

This study also addressed the risk factor lead to the lack awareness of breast cancer which contributed towards the problem of breast cancer arises. Basically, this will increase the awareness of breast cancer and precaution action can be taken by the colleges' women to detect early of breast cancer disease.

This study also utilizes Health Belief Model which is suitable to be conducted to know the knowledge, belief and screening behaviour among the colleges women which there exist complementary element which is perceived susceptibility, perceived severity, benefit and barrier in order to check whether colleges women are aware towards the breast cancer or not.

1.7 Definition of term

1.7.1 Breast Cancer

Breast cancer are the most disease which killing many of women in the world country. Mostly, breast cancer are activates to the women between 30 above. Furthermore, breast cancer should be aware during the adult young ages in order to detect the breast cancer in early stages.

1.7.2 Health Believe Model (HBM):

Health Belief Model is a value-expectancy theory that has been used both to explain change and maintenance of health-related behaviours and as a guiding framework for health behaviour interventions. HBM has widely used to examine factor of that influenced women on their awareness of breast cancer. in addition, this had been supported by the Wood, M.E (2008) the models has been used to examine common factor tat influenced women to comply with current mammography screening guidelines.

1.7.3 Perceived Barriers

One's opinion of the tangible and psychological costs of the advised action (Steward & McNelly, 2002). It is about a person belief about the tangible and

psychological costs of the advised action; besides that, a key construct of the Health Belief Model (HBM). Sutton (2002) defined perceived barrier refers to the

perceived disadvantages of adopting the recommended action as well as perceived obstacles that may prevent or hinder its successful performance. Rawlett (2011) defined perceived barriers are the negative aspects in order for a person to take a specific health action.

1.7.4 Perceived Benefits

One's opinion of the efficacy of the advised action to reduce risk or seriousness or impact (Steward & McNelly, 2002) which is also about person belief in the various action and behaviours taken by an individual will be effective in reducing threat and advised action to reduce risk or seriousness of impact; a key construct of the HBM. Perceived benefits refer to the perceived advantages of the alternative course of action including the extent to which it reduces the risk of the disease or the severity of its consequences (Sutton, 2002). According to Rawlett (2011), one's thoughts concerning the effectiveness of the recommended action to actually avoid or reduce the seriousness of the condition are termed perceived benefits.

1.7.5 Perceived Severity

One's opinion of how serious a condition and its sequel are (Steward & McNelly, 2002). A person perception concerning the seriousness of a breast cancer it will be

illustrated a key construct of the HBM. According to Sutton (2002), perceived severity refers to the seriousness of the disease and its consequences as perceived

by the individual. Perceived severity is the individual's opinion of the graveness of the condition and its sequelae (Rawlett, 2011).

1.7.6 Perceived Susceptibility

One's opinion of chances of getting a condition (Steward & McNelly, 2002). It is about person belief regarding the chance of getting a breast cancer disease it will illustrate a key construct of the HBM. Perceived susceptibility is the individual's perceived risk of contracting the disease if he or she were to continue with the current course of action (Sutton, 2002) The concept of perceived susceptibility is a person's own belief of the likelihood of getting a condition (Rawlett, 2011).

CHAPTER 2

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1 Literature Review

In this chapter will discuss on the literature review and the conceptual framework for this study regarding Health Belief Model (HBM) and Breast Self Examination (BSE) awareness among female student.

2.1.1 Overview

Breast cancer is one of the leading mortality diseases among women in Malaysia. It had been proven by Lim, Halimah and Rampal (2008) that there were 11,952 new cases of breast cancer reported from the year of 2003 to 2005, and the crude incidence rate for 2004 is 41 per 100,000 populations. This situation is happened due to the lack of knowledge and awareness about the killer disease among women which is influenced on their health life style in order for them to be aware or not. The health education activities and early screening program are two measures that complement each other to raise the level of knowledge among females and to modify behavior for early detection of breast cancer (W.A. Milaat, 2000). Therefore, it is mentioned in the medical literature that since the most common symptom of breast cancer is a painless lump, women should be using

breast self examination (BSE) for early detection (Saulat Jahan, Abdullah M. Al-Saigul & Muzamil H. Abdelgadir, 2006). In order to predict the individual's

behavior towards the early detection of breast cancer using BSE, HBM model is the best tool to use which is the HBM have four dimensions behaviors, classified as the perceived susceptibility, perceived seriousness, perceived benefits and perceived barriers. There were a lot of research done using the HBM model in order to predict the perception and health behavior. This is supported by Areej K. Othman (2009) stated that over five decades, the Health Belief Model (HBM) has been one of the most widely used conceptual frameworks in health behavior, and in the study of breast cancer screening behavior in particular.

2.1.2 Awareness of Breast Self Examination Knowledge

The early detection methods of breast cancer include breast self-examination (BSE), clinical breast examination (CBE) and mammography (Lechner et al. 2004). Besides that, BSE also known as self-awareness, Breast Self-Examinations (BSE) are encouraged women of any age to aware about breast cancer (American Cancer Society, 2007).

Unlike to mammography and clinical breast examination, BSE is simple, inexpensive, low in technology, teaching is possible to both health professionals and women and more importantly raises awareness about breast cancer in women (Karayurt O., 2008). Generally, breast cancer can easily being detected by seen at the mirror whether there exist changes or any lump at breast. Besides that, many of country have using BSE as

early stage for breast cancer detection. The statement has been supported by Mitra I, Baum M, Thornton H, Houghton J., (2000) stated that in many countries, especially in developing countries, BSE may be the only realistic approach to the early detection of breast cancer. Richards et al., (2000) stated that with more awareness and better treatment, the survival rate of women with breast cancer has improved greatly. Breast self-examination (BSE) and mammography are effective screening methods to diagnose breast cancer at an early stage.

Budden L., (1995) seen health behaviors such as BSE can help empower women to take some control and responsibility over their health promotion. For younger women, BSE education and adherence are a gateway to health promotion behaviors which set the stage for adherence to clinical breast examination and mammography screening later in life (Rosenberg R, Levy- Schwartz R., 2003). Although the value of BSE is controversial (Hakama M.,1995 and Thomas DB., 2002), American Cancer Society recommends as an option breast awareness and BSE for early detection of breast cancer. It benefits women in two ways: women become familiar with both the appearance and the feel of their breasts and detect any changes in their breasts as early as possible (ACS, 2008). Besides that, people who conduct BSE indirectly become aware towards breast cancer disease and lead to the reducing rates of breast cancer disease. According to Siahpush M, Sigh GK, (2002) BSE makes women more "breast aware", which in turn may lead to an earlier diagnosis of breast cancer. The rationale behind extending BSE practice as a screening test is the fact that breast cancer is frequently detected by women themselves without any other symptoms (Levshin V, Fedichkina T, Droghachih V, 1998).

Health professionals should teach that by performing BSE regularly, women get to know how their breasts normally look and feel and can more readily detect any signs or symptoms if a change occurs such as development of a lump or swelling, skin irritation or dimpling, nipple pain or retraction, redness or of an Cancer Society (2006) also recommends the nipple breast skin, or a discharge other than breast milk. Women should also be taught that they should see their health care provider for evaluation as soon as possible when such changes are noted. Women's familiarities with their breast tissue and changes that may occur are facilitated by monthly practice of BSE. Given the fact that large numbers of women diagnosed with breast cancer come to their health care centers after feeling a lump in their breasts, it seems that BSE should be considered an important tool for early detection of breast cancer.

Despite the well-known efficacy of BSE, results of a study involving women from 20 European countries showed that the percentage of women who regularly perform BSE between the ages of 17 and 30 years is only 8% (Wardle et al., 1995). Karayurt, (2003), Sec- ginli and Nahc-ivan, (2003), Aydm, (2004) found that Turkish studies carried out in samples consisting of women with differing levels of education and varied age groups reveal that the rate of regular BSE practice among women in Turkey is between 27% and 44%, and the rate of monthly BSE in adult women is between 5.5% and 13.3% (Karayurt, 2003; Akc-ay et al., 2005). These low rates of BSE are similar to those found in studies from other countries such as United States, Jordan and Australia (Williams et al., 1998;

Sadler et al., 2001; Petro-Nustus and Mikhail, 2002; Jirojwong and MacLennan, 2003). Most of the adult have low rates doing BSE because they lack of knowledge

regarding breast cancer and do not know how to performing BSE. According to Agars and McMurray, (1993), Williams et al., 91998) among the many reasons cited by study participants for not performing BSE are lack of knowledge about how to perform BSE, lack of time or fear of finding a lump. Studies that had as their aim to change health beliefs, attitudes and behaviours about breast health and BSE (and also increase knowledge about breast cancer and breast cancer screening) demonstrate that the educational attempts affecting such changes do indeed have positive results (Leight et al., 2000; Ortega-Altamirano et al., 2000; Fitch et al., 2001; Janda et al., 2002; Thomas et al.,2002).

2.1.3 Perceived Benefits

Perceived benefits, another key component of the health belief model, have been defined as “the beliefs about the positive outcomes associated with a behavior in response to a real or perceived threat” (NCI, 2008). In other words, benefits of practicing BSE were positively correlated with health motivation. The more they believed in the benefit of practicing BSE, the more they felt motivated to engage in BSE practices. This finding is consistent with Lee, Kim, and Song (2002) who found that health motivation was positively correlated with benefits. This seems like an intuitive finding in that both variables are associated with a positive attitude toward health behaviors, so one would expect them to correlate. In this case, according to the definition, if a woman perceives BSE as beneficial, she will practice it. Umeh et al. (2001) and Dundar et al. (2006) noted that the more benefits that were perceived, the more likely women were to engage in BSE performance. Research has found that 76% of women were convinced that screening

practices were beneficial (Petro-Nustas, 2001). Many factors may be related to perceiving benefits from BSE. One explanation for this finding can be found in the outcome expectancy research. Outcome expectancy is also used to predict health behaviors, such that if engaging in a health behavior is perceived as beneficial (positive outcome expectancy) then, according to the research, this perception will predict that the person will engage in the health behavior (Williams, Anderson, & Winett, 2005). When this explanation is applied to the above mentioned finding between benefit of engaging in BSE and motivation, it becomes fairly clear as to why these two variables were positively correlated. When engaging in BSE is perceived to have a positive outcome, early detection of breast cancer and protection from later stages of breast cancer, the person becomes motivated to practice BSE.

Furthermore, perceived benefits may be impacted by knowledge about the behavior. Chouliara et al. (2004) indicated that Greek women may not perceive BSE as a beneficial practice due to lack of knowledge and information about the issue; on the other hand, due to the amount of information exposure among Scottish women, not only are they more knowledgeable but also perceive BSE as more beneficial. Women who perceived that performing BSE would reduce the severity of breast cancer outcomes were more likely to engage in more frequent BSE practices (Gray, 1990).

Benefits of practicing BSE were positively correlated with health motivation. The more they believed in the benefit of practicing BSE, the more they felt motivated to engage in BSE practices. This finding is consistent with Lee, Kim, and Song (2002) who found that health motivation was positively correlated with benefits. This seems like an intuitive finding in that both variables are associated with a positive attitude toward

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2.1.4 Perceived susceptibility

Perceived vulnerability and perceived susceptibility are two terms that have been used with great overlap within the literature; therefore, for the purposes of this paper, perceived vulnerability will be used instead. Perceived vulnerability is a key component of the health belief model. The NCI (2008f) defines perceived vulnerability as “an individual’s belief about the likelihood of a health threat’s occurrence” (¶ 1). This definition suggests that our levels of vulnerability depend on our perceptions of the likelihood of the health threat occurring. In the same meaning, perceived susceptibility was positively correlated with seriousness of breast cancer, such that the more they perceived themselves susceptible to breast cancer, the more serious they perceived the disease. This association is consistent with findings from Lee, Kim, and Song (2002) and Umeh and Rogan-Gibson (2001) who found that susceptibility was positively correlated with seriousness. One possible explanation for this finding suggests that feelings of

susceptibility towards breast cancer may lead to taking the disease more seriously. For example, although all humans are vulnerable to the common cold, many do not take it seriously and resort to traditional remedies or over the counter medicines after it is acquired. It is only in the case when the situation worsens and the need to seek out medical attention arises that the common cold is taken seriously. Knowing that a definitive cure exists may weaken our perceptions of seriousness and susceptibility for the common cold; however, when breast cancer is the issue, the situation changes immediately. Having a high-risk potential for developing breast cancer may increase how serious the disease is perceived to be, especially if a family history exists. In addition, knowing that the disease can eventually result in death if not detected in time may also alter our perceptions of seriousness. Therefore, it is crucial for women to understand the nature of breast cancer but also realize their risk levels in potentially acquiring this disease.

Despite seeing breast cancer as a serious disease, many women believed they were not susceptible to the disease in various studies (Lu, 1995; Petro-Nustas & Mikhail, 2002). This finding suggests that regardless of the degree of seriousness of the disease, many women lack the perception that they are potentially susceptible to the disease. Finally, Ng et al. (2000) indicated that there were a substantial percentage of women unaware of their risk levels. Cancer worry (Eibner et al., 2006; McCaul et al., 1996) and our perceived mental and physical health (Eibner et al., 2006) are contributing factors to our perceptions of vulnerability to breast cancer. Cohen (2006) and Petro-Nustas and Mikhail (2002) noted that as perceived susceptibility increased, so did BSE practice frequency. Specifically, women who perceived themselves as more susceptible to breast cancer were

2.8 times more likely to engage in BSE (Gray, 1990; Jirowong & MacLennan, 2003).

However, other studies have found no relation between perceived susceptibility and BSE practice frequency (Erblich et al., 2002; Foxall, Barron, & Houfek, 1998; Han, Williams, & Harrison, 2000). There may be various reasons for these contradictory findings such as cultural differences in perceptions of health and disease, differences in age, differences in levels of education, and differences in health care opportunities available.

2.1.5 Perceived Barriers

Perceived barriers, component of the health belief model, have been defined as "a person's estimation of the level of challenge social, personal, environmental, and economic obstacles to a specified behavior or their desired goal status on that behavior" (NCI, 2008). Cohen (2006) noted that a low rate of early detection practices is associated with a high number of barriers. Belgu' zar .,K and Cengiz H.A (2008), perceived barriers were another risk factor in the regular monthly BSE practices of the mothers and the daughters, It is known that cultural beliefs and values such as fatalism and pessimism are barriers influencing the obstacle and cure of cancers. Perceived barrier also influence people becomes resistance to change to do BSE because they do not have enough information regarding breast cancer and lead to the fear from the harmful for the treatment checking breast cancer. The desire to perform BSE may be influenced by cultural obstacles (Watts et al. 2004). In other studies, women have reported barriers such as lack of information, fear of finding a mass or cancer, feeling pain, worrying about body image or loss of attractiveness, forgetfulness, prevention by other tasks and time

constraints (Ho et al. 2005, Park et al. 2007). Interestingly, Cope (1992) suggested that the possibility of detecting a lump was considered to be a significant barrier to practicing BSE. That is, the potential negative consequences of detecting a lump, indicative of breast cancer, may increase anxiety and fear, therefore

inhibiting the practice of BSE. In addition, fear of people detecting a breast cancer also makes them to stay away from any alternative and searching for getting information regarding breast cancer. Foxall et al., (1998) Nahcivan & Secginli, (2007) stated that Other barriers to performing BSE include discomfort with the behavior of doing BSE, the unpleasantness of conducting monthly exams, embarrassment, not having enough privacy, and not having enough time to perform BSE. Iiknur (2008) stated that the gender of health professionals who educate the public can be important, since potential discomfort or embarrassment of women may prevent the adoption of early diagnosis practices in Turkish (or Muslim) women.

According to Champion (1991), women who felt more uncomfortable or embarrassed with BSE were less likely to engage in such practices. Basically, lack of knowledge and not clearly understand about the BSE leading towards many of women are the most potential barrier for women to perform BSE. Jarvendi, (2002), Nahcivan & Secginli, (2007), not having enough knowledge and information on BSE or breast cancer, not deeming BSE as a necessary practice, perceiving BSE as a time consuming practice, not having spousal or familial support in promoting the practice of BSE, forgetfulness, and fear of lump detection were shown as potential barriers to engaging in BSE practices.

Besides that, perceived barrier happen because mostly women do not have enough money to make access medical services and have negative perception towards breast cancer disease. According to Facione & Katapodi, (2000), stated that in

their study, not speaking the mainstream language, not having the financial resources to access medical services, not having access to transportation to obtain services, holding culturally and religiously reinforced health beliefs, illness perceptions and culturally embedded beliefs about cancer are listed among the main barriers to performing BSE.

Women who reported a greater number of barriers tended to be less through in their self-examinations, which suggest that high levels of worry may interfere with BSE performance; reported anxiety appeared to be the most frequently reported barrier to BSE (Gasalberti, 2002). On the other hand, the fewer perceived barriers women had, the more likely they were to practice BSE (Gray, 1990, Umeh et al., 2001).

Practices of BSE among women in early ages will enhance the knowledge of breast cancer and reduces the perceived barrier to make breast cancer examination. Besides that, reducing number of women feel barrier to check for breast cancer can reduces the rate of breast cancer disease among women. The increased amount of BSE practice was found to reduce the number of barriers (Petro-Nustas & Mikhail, 2002).

2.1.6 Perceived Seriousness

Perceived seriousness, also known as perceived severity, has been defined as the negative consequences an individual associates with an event or outcome (NCI, 2008). Perceived seriousness is also a key component of the health belief model. Although

breast cancer is deemed as a serious disease in the Western world, the same cannot be said for other countries. Alkhasawneh (2007) reported that 62% of Jordanian nurses did not believe that breast cancer was a fatal disease regardless of the stage and that 90% did not know that the prognosis of the disease differed with the stage of diagnosis. One explanation for this finding is that Jordanian nurses have very limited knowledge of breast cancer despite the fact that 300 new cases are diagnosed each year (Alkhasawneh, 2007).

Another explanation for this finding may lie in cultural beliefs and religious factors where the majority of Jordanian women are of the Muslim faith and in Islam, divine fatalism plays an important role in explaining the onset of disease and illness; disease is a God given condition (Alkhasawneh, 2007). Nahcivan and Secginli (2007) reported that 67% of their Turkish sample did not view breast cancer as a serious illness and almost half of the sample reported that they did not know about breast cancer.

As cited in Champion's (1993) and Fung's (1998) studies, one explanation for the inconsistent finding regarding perceived seriousness may be that the breast cancer is regarded as a serious condition by most women. Also, Hubbell (2006) found that Mexican American women reported low perceptions of severity where although women believed they could eventually develop breast cancer, they believed that they could fight it and that it would not kill them. It is interesting to see the discrepancies and obvious perceptual differences regarding the seriousness of breast cancer cross-culturally where the Western world has placed strong emphasis on fighting and curing the disease and the Eastern world does not really view breast cancer as a serious health issue or health threat.

2.2 Conceptual Framework

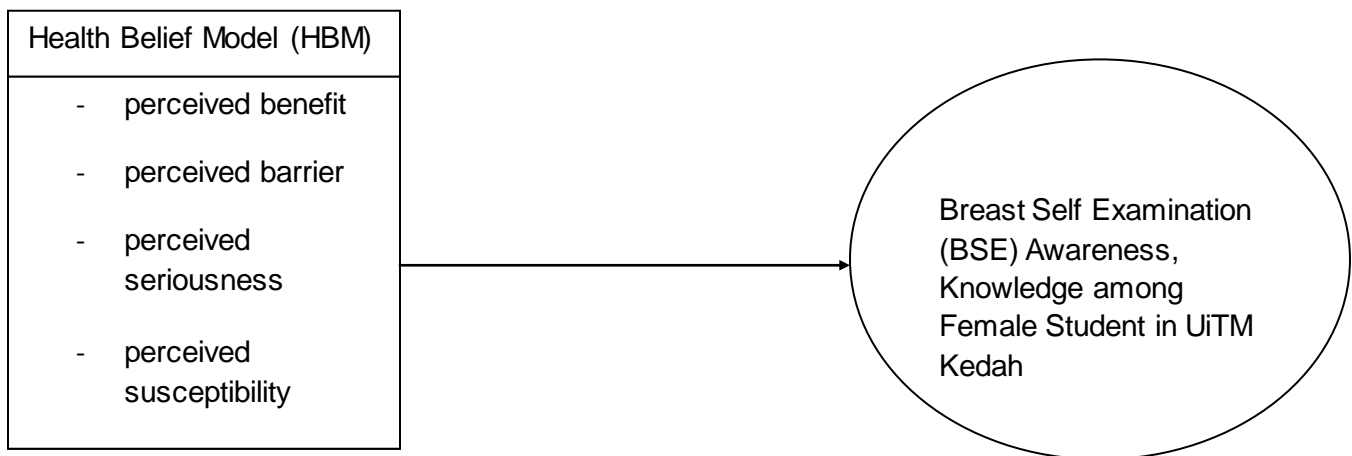


Figure 1: The relationship between independent variable (Health Belief Model) and the dependant variable (Breast Self Examination (BSE) awareness, knowledge among female student).

2.2.1 Independent Variable

Health Belief Model is the model has been used which is to study people awareness on Breast Cancer Disease. Health Belief Model (HBM) that will effect towards Breast Cancer Examination (BSE) awareness and knowledge among female student.

2.2.1.1 Perceived susceptibility

According to the HBM, perceived susceptibility is about one's opinion of chances of getting a condition which can be measure by risk level towards them to engage towards the preventive action (Austin, Farah Ahmad, McNally & Stewart, 2002). It can be said, perceived susceptibility is referring to women who believe that they are susceptible to breast cancer are more likely to perform BSE and have mammography. Hence, the risk knowledge is important in order to will increase the awareness of the women and become susceptible towards the disease. The statement been supported by Areej K. Othman (2009) stated that it is postulated that perceived susceptibility and severity have a strong cognitive component that is dependent on knowledge and the influence of structural factors such as knowledge and demographics both condition individual perception of threat and benefits minus barriers of preventive action.

2.2.1.2 Perceived benefits

According to Wood (2008), a disease or other health threat may predict adherence behavior which perceived benefits is one of the belief that various actions or behaviors taken by an individual will be effective in reducing a threat. It is aligning with the theoretical context of HBM, adherence is determined by individual's perception of health threat and the value of a behavior to reduce the threat which weighed against the perceived benefit. It is important to know the benefits for every action taken. This statement had been supported by, AL-Khasawneh (2002) stated that the women who had increased the perception of benefits and knows the seriousness of the disease perform BSE frequently. Additionally, the combined levels of susceptibility and severity provide the

energy force to act, while the outcome of perceived benefits minus barriers provides a preferred path for action (AL-Khasawneh, 2002).

2.2.1.3 Perceived Barrier

Jong, (2011) finding show that, more than 30% of women simply did not feel that breast cancer screening was necessary, followed by “too busy” in 16% of women. It would be important to provide systematic health education at worksites to encourage breast cancer screening practices by changing such perceptions. In addition to public health education, government effort to expand the accessibility of screening practices should be employed. Almost half of the participants replied that they “don’t have a chance” for the screening practice which is “too expensive” or “not convenient”. In China, the importance of cancer screening practices has been emphasized through mass media advertisement (Y. Chen et al., 2007).

2.2.1.4 Perceived seriousness

Women usually had been perceived risk which is tend to not aware Breast Cancer. Basically, public perceptions towards the potential risk on harmful radiation lead to many of women tend not to aware on Breast Cancer disease. According to Ludwig & Turner, (2002), the basis for conducting such research was that healthcare providers are aware of the radiation dose and associated health risks of a particular medical procedure, yet many care providers struggle to

sufficiently and clearly address concerns posed by patients due to the patients' misunderstanding—or lack thereof—of dose/medical terminology.

2.2.2 Dependent Variable

2.2.2.1 Awareness of Breast Self Examination Knowledge

BSE awareness and knowledge is most important tools that will reduce the rate of mortality Breast Cancer disease among women. The awareness of BSE based education to background which is people who have higher education will have more knowledge and awareness on BSE. According to Balogun (2005), found that the women who had tertiary education were more knowledgeable about Breast Self Examination (BSE) while those who had primary education were the least knowledgeable ($p=0.045$). BSE awareness and knowledge are important for women to early detection any sign of Breast Cancer and take prevention action. Basically, women tend to be aware during at the middle age because Breast Cancer usually infected during the middle age.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter enlighten about the methodology used in this study. This chapter will explain about research design, unit of analysis, sample size, sampling technique, measurement, data collection and data analysis.

3.2 Research Design

The purpose of this research study is the hypothesis testing where these researchers carry out and explain the relationship between independent variable and independent variable. In this study correlation study will be use as a type of investigation. This research also uses the cross sectional study where the data is gathered just once a period of days, weeks and month. This method was selected because of high degree of reliability, low cost and short timing (Sekaran, 2006). In this research the questionnaire will be distributed to the respondent to answer the question

3.3 Unit of Analysis

Unit analysis refers to the level that is focus of the study. Unit of analysis refer to level of aggregation of the data collected during the subsequent data analysis (Sekaran,2003). It can be from individual, duo, group, division, organization, industry and country. In this research, the unit of analysis is individual. The individual refer to the female students from all of the faculties in UiTM Kedah from part one until part six.

3.4 Sample Size

The sample size is the actual number of subject chosen as a sample to represent the population characteristics. The population of this research is 420 which is the total population of

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female student. The sample size of this research is 90, the researcher has using the formula has been used which is sample size $50 + (8 \times \text{number of independent variable})$ according to Pallant (2005) as cited in (Tabachnick & Fidell, 2007). Besides that, the sample size also had satisfied the requirement made by Roscoe (1975), the general recommendation is that sample sizes be at least 30 and need not be larger than 500 (at 500, sample error will not exceed 10 percent of the standard deviation about 98 percent of the time).

3.5 Sampling Technique

In this research, the population will be choosing based on stratified sampling techniques. It is a good choice when differentiated information is needed regarding various strata within the population. The population will be divided into strata according to the faculty and part. After that female students in each faculty which is from part 1 until 3 are selected to distribute the questionnaire. The researcher chooses student part 1 until 3 female students because most of them are fresher at the university and most significant adopted as a respondent.

3.6 Measurement / instrumentation

3.6.1 Nominal Scale

A nominal scale is one that allows the researcher to assign subjects to certain categories or groups (Sekaran, 2010). Nominal scale is used for obtaining personal data. The researchers use the nominal scales in this research for the question in Part A which is the age, faculty and part of study in the UiTM Kedah.

3.6.2 Interval Scale

An interval scale allows the researcher to perform certain arithmetical operations on the data collected from the respondents (Sekaran, 2010). Under the interval scale, the researcher measures the elements of variables through Likert Scale. The Likert scale is designed to observe how strongly subjects agree or disagree with statements on a four-point scale in the section B, section C, section D, section E and section F.

Figure 3.1: Likert Scale uses to determine how strongly agree or disagree with the statement

Strongly Disagree	Disagree	Agree	Strongly Agree
1	2	4	5

Section A will cover the background of the respondent using the nominal scale while section B, section C, section D, section E and section F were using the Likert scale. Section B to Section F will be the question of independent and dependent variables. The questionnaires distributed personally by the researcher to the respondent.

3.6 Data Collection

The data for this study will be collected by distributing questionnaires to the respondents. The questionnaire is a pre formulated written set of questions which respondents will record their answer. Besides, this part comprised of a surveying review on relationship between HBM and

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BSE awareness and knowledge of female student at UiTM, Kedah. The researcher use questionnaire because questionnaire is the efficient data collection mechanism when the researcher knows exactly what is required and how to measure the variables of interest (sekaran, 2009). There are two types of questionnaires which are personally administered questionnaires and mail questionnaires. In this study, the researcher chooses to use the personally administered questionnaires because the survey only conducted to a local area. Besides, researcher can collect data in a short time when researcher using questionnaires method. There will be three main parts in the questionnaires. Section A is demography section where the researcher will examine about the background of the respondents. Section B is regarding the independent variable which is about BSE awareness and knowledge of female student. This section researcher has used the closed-ended questions which allow respondent to answer in any way from the answer given. An example, I know how to perform breast self-examination, I am confident I can perform breast self-examination, breast self examination will be embarrassing to me and many more which the answer will be measure in the 4 point of scale (4=Strongly agree; 3=Agree; 2=Disagree; and 1=Strongly disagree).

Section C in the questionnaire related with the dependent variable based on HBM which is perceived severity, perceived barrier, perceived belief and perceived susceptibility. It also has four sections in this part. Only Section I is consists with the negatively and positively worded questions such as the risk of getting breast cancer increase with age the answer provided by researcher will be yes or no.

3.7 Data Analysis

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The data will be analyzed using statistical software tool. (SPSS 18.0) The researchers choose to use SPSS because it is most appropriate software to analyze the data collection using the quantitative data. Besides, SPSS can analyze all the needs of researcher which decided to use quantitative methods in the case study. SPSS also can compute all the data analysis which is chart, plot, frequencies and list. researcher conducted data analysis to testing the goodness of data, getting feel for the data and testing the hypothesis develop for the research whether the hypothesis have the correlation between dependent variable and independent variable.

Testing the goodness of data can be measured by conducting the reliability test, validity test and hypothesis test which the analysis which indicates the goodness of data. Then, the data had been through independent variable and dependent variable obtained and analyzes through SPSS. Reliability test conducted by the researcher to indicates how well the items measuring the concept hang together with the concept. Cronbach's Alpha is a reliability coefficient is computed in term of average inter correlations among the item in measuring the concept (sekaran, 2009). The closer the reliability coefficient gets 1.0, the better.

Descriptive statistics analysis also had been conducted in the research such as maximum, minimum, means, standard deviations, and variance were obtained for the interval-scaled independent, and dependent variables. Descriptive statistic analysis help researcher to summarize data collection or the raw data that involve in the research. Besides, there are also chart and histogram that can make researcher more easily visualize and presenting the data collection. Descriptive statistical analysis also provides information about the immediate group of data which presented in the form of mean, median, variance or standard deviation.

The Pearson correlation matrix obtained to analyzes the correlation between the independent and dependent variable which should be analyzes through the hypothesis before it will be conducting a Pearson correlation matrix to indicate the direction, strength, and significance of the bivariate relationships among all the variables that were measured using interval or ratio scale (Sekaran, 2009)..The correlation could range between (-1.0) and (+1.0), this will shows that the correlation between two variables is significant or not. The significance of $p=0.05$ is the generally accepted.

The lastly is to test the hypothesis is by using the multiple regression analysis. Multiple regression analysis is a suitable because for this study the researcher has been used more than one independent variable which is perceived benefit, perceived seriousness, perceived barrier and perceived susceptibility to explained variance in the dependent variable which is Breast Self Examination (BSE) awareness knowledge of female student. Sekaran (2009), the regression coefficients indicates the relative importance of each of the independent variable in the prediction of the dependent variable.

No	operationalizati on	Objectives	Variables	Scale	Measurement	Statistic
1		To examine the relationship between Health Believe Model and Breast Self	Perceived susceptibility, perceived benefit,	Likert scale,	Interval	Descriptive analysis, Pearson correlation,

		Examination awareness knowledge of female student.	perceived severity, perceived barrier , (HBM), BSE awareness and knowledge			
2		To quantify the most significant factor in Health Belief Model (HBM) lead to Breast Self Examination awareness knowledge of female student.	Perceived susceptibility, perceived benefit, perceived severity, perceived barrier , (HBM), BSE awareness and knowledge	Liket scale, nominal scale	Interval	Multiple Regression analysis