KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS BREAST SELF EXAMINATION AMONG FEMALE UNDERGRADUATE STUDENTS IN SCHOOL OF HEALTH SCIENCES, USM

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UNIVERSITI SAINS MALAYSIA

2015

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BY

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Dissertation submitted in partial fulfilment of the requirements for the degree

Bachelor of Health Sciences (Nursing)

June 2015

ACKNOWLEDGEMENT

Thanks to Allah (Most Gracious and Most Merciful) for blessing and leading me throughout the study until the submission of this report. Allah blessing gives me strength, compassion, enthusiasm and health to complete my dissertation.

I am deeply grateful to my supervisor, Dr. Kasmah Wati Pardi who significantly gave constructive comments, suggestions and revised this report throughout completion of this dissertation. Without her guidance, I would not be able to progress and complete my thesis at the right time. My heartfelt appreciation goes to her for her constructive suggestion and informative guidance.

Next, my appreciation also goes to Dr. Dariah bt Mohd Yusoff, the course coordinator for research project. My deepest appreciation goes for her for her guidance and supports and consideration in the making of this thesis. I also would like to thank all the nursing lecturers and tutors for their meaningful advice and support.

Then, I also want to convey my appreciation to Dr. Kueh Yee Cheng @ Erica, the statistical consultant who guides my research methodology and data analysis. Thanks for her patience and kindness in providing a clear and useful suggestion for my data analysis and in the usage of SPSS. My deepest appreciation is owed for her considerable patience, kindness, encouragement and constructive suggestions.

I also want to convey my appreciation to the undergraduate female students from Year 1 up to Year 4 that willing to participate in this study. Their fully cooperation when answering this question really touches my heart.

Last but not least, special gratitude is offered to my loving family especially my parents for their love and support especially when I am in stressful condition. Special thank you also goes to all my friends. I hope that they will be blessed and happy throughout their life. For all who read this research thesis, thank you.

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LIST OF ABBREVIATIONS

BC	Breast Cancer
BSE	Breast Self Examination
WHO	World Health Organization
SHS	School of Health Sciences
TPB	Theory of Planned Behaviour

ABSTRACT

KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS BSE AMONG UNDERGRADUATE FEMALE STUDENTS IN SCHOOL OF HEALTH SCIENCES, USM

Background : Breast Self Examination (BSE) is one of the simple screening test that able to detect abnormality in the breast at early stage. The aim of this study was to investigate the knowledge, attitude and practice towards BSE among female undergraduate students in School of Health Sciences, USM.

Methods : A cross sectional, descriptive study was conducted in 220 respondents who age 20 and above by using structured self administered questionnaire. The simple random sampling technique was used to select the sample for this study. Statistical analysis was conducted by using the Statistical Package for Social Sciences (SPSS) version 22. Meanwhile, the descriptive analysis had been used to summarize socio demographic data of the respondents. One- way ANOVA and Independent t-test was used to evaluate the significance difference between the study variables and the socio-demographic data (age, education level, ethnicity and family history of breast cancer) with the knowledge, attitude and practice towards BSE. A p – value of equal or less than 0.05 was considered significant.

Results: In this study population, there were 181 of respondents (82.3%) had excellent knowledge towards BSE meanwhile majority of them had positive attitude (86.8%) towards BSE. Then, for practice towards BSE, most of the students (54.1%) practiced BSE in their life but not consistently practice where some of them practicing BSE rarely (58.0%) and practice it only when they remember to do it (55.9%). Educational level was found to be significantly difference with the attitude towards BSE, with p value ≤ 0.001. Then, ethnicity also had been found significantly mean difference with the knowledge and attitude towards BSE where the p value is 0.010 and 0.035 respectively. Same goes to family history of breast cancer where it also shows significant mean difference with the practice towards BSE with p value is 0.034. The two main sources of information regarding BSE are internet (27.8%) and

television (15.1%). Forgetfulness (47.3%) was the principal reason given by the respondents for not exercising BSE in their life.

Conclusion: This study reflected there was a lack of practicing aspect towards BSE although the respondents had excellent knowledge and positive attitude towards BSE. Most of respondents can perform BSE but might be practiced it incorrectly and taking into account that a lack of knowledge on how to perform BSE was the main reason why they did not examine themselves. Therefore, emphasis should be given on encouraging the respondents to practice BSE especially at earlier stage as well establishing educational programmers to teach the respondents so that BSE may help in the early diagnosis of breast cancer.

Keywords: BSE, Knowledge, Attitudes, Practice, Source of Information, Factor Influencing Frequency of Practice towards BSE

ABSTRAK

KAJIAN PENYELIDIKAN MENGENAI PENGETAHUAN, SIKAP DAN AMALAN TERHADAP PEMERIKSAAN PAYUDARA SENDIRI DALAM KALANGAN PELAJAR PEREMPUAN DI PPSK (USM)

Latar Belakang: Pemeriksaan Sendiri Payudara (PSP) adalah salah satu ujian saringan yang ringkas yang dapat mengesan keabnormalan pada payudara pada peringkat awal. Tujuan kajian ini adalah untuk mengkaji pengetahuan, sikap dan amalan terhadap PSP dalam kalangan pelajar perempuan peringkat sarjana muda di Pusat Pengajian Sains Kesihatan, USM.

Kaedah: Keratan rentas dan kajian deskriptif telah dijalankan dalam kalangan 220 responden yang berusia 20 tahun dan ke dengan menggunakan boring soal selidik kendiri. Teknik persampelan rawak mudah telah digunakan untuk memilih sampel kajian ini. Analisis statistik telah dijalankan dengan menggunakan Pakej Statistik untuk Sains Sosial (SPSS) versi 22. Sementara itu, analisis deskriptif telah digunakan untuk meringkaskan data sosio demografi responden. Ujian ANOVA ujian T-tidak bersandar digunakan untuk menilai perbezaan yang signifikan di antara pembolehubah kajian dan data demografi sosio (umur, tahap pendidikan, etnik dan sejarah keluarga yang menghidap kanser payudara) dengan pengetahuan, sikap dan amalan terhadap PSP. Nilai p yang sama atau kurang daripada 0.05 akan diterima.

Keputusan : Daripada kajian ini, terdapat 181 responden (82.3%) mempunyai pengetahuan yang sangat baik terhadap PSP. Sementara itu, 86.8% daripada mereka mempunyai sikap positif terhadap BSE. Kemudian, untuk amalan terhadap BSE, kebanyakan daripada responden (54.1%) yang mengamalkan PSP dalam kehidupan mereka tetapi kebanyakannya mereka jarang mengamalkan PSP (58.0%) dan mengamalkan ketika mereka ingat untuk melakukannya (55.9%) secara konsisten. Tahap pendidikan didapati mempunyai perbezaan yang ketara dengan sikap terhadap PSP, dengan p nilai ≤ 0.001. Kemudian, kumpulan etnik juga mempunyai perbezaan yang ketara dengan pengetahuan dan sikap terhadap PSP di mana nilai p adalah 0.010 dan 0.035 masing-masing. Begitu juga dengan sejarah keluarga yang menghidap kanser payudara di mana ia juga menunjukkan perbezaan yang signifikan dengan

amalan terhadap PSP dengan nilai *p* adalah 0.034. Sumber maklumat utama mengenai PSP adalah internet (27.8%) dan televisyen (15.1%). Kebiasaanya, lupa (47.3%) adalah sebab utama yang diberikan oleh pelajar untuk tidak mengamalkan PSP dalam kehidupan mereka.

Kesimpulan: Kajian ini mencerminkan terdapat kekurangan pengamalan terhadap PSP walaupun pelajar mempunyai pengetahuan yang baik dan positif terhadap BSE. Kebanyakan pelajar boleh melakukan PSP tetapi mungkin cara yang diamalkan adalah salah dan kurangnya pengetahuan tentang bagaimana untuk melakukan PSP adalah sebab utama mengapa mereka tidak memeriksa payudara mereka sendiri. Oleh itu, penekanan harus diberikan kepada usaha dalam menggalakkan pelajar untuk mengamalkan PSP terutama pada peringkat awal selain daripada menubuhkan pengaturcara pendidikan untuk mengajar pelajar supaya PSP boleh membantu dalam diagnosis awal kanser payudara.

Kata kunci: PSP, Pengetahuan, Sikap, Amalan, Sumber Maklumat, Faktor Mempengaruhi Kekerapan Amalan terhadap PSP

CHAPTER 1

INTRODUCTION

1.1 Background of the study

Today cancer is one of the most serious diseases threatening human life, and therefore global burnout is gradually growing (Jemal et al., 2011; Yousuf et al., 2012). Basically, Breast cancer (BC) is the most common cancer type and cause mortality among women (Jemal et al., 2011; Yousuf et al., 2012) and it is a worldwide major health problem. It is estimated that more than 212,000 women and 1,700 men develop the disease and more than 41, 000 die of it annually (World Health Organization, 2006 in Okolie, 2012). In addition, it is a global health problem of both developing and developed countries (World Health Organization, 2013).

The breast cancer become worrisome in women because breast is an accessory organ of reproduction in females and it is perceived by the society as an evidance of feminity, womanhood and motherhood (Omoyeni & Oluwafeyikemi, 2014). Not only that, women breasts also associated with sexual attractiveness, sexual stimulation and feeding of babies (Omoyeni & Oluwafeyikemi, 2014). Basically, diagnosis of breast cancer begins with detection (Sarfo, Peasah, Acheampong, & Asamoah, 2013). The earlier breast cancer is detected, the better the effectiveness of the treatment and the likely of the survival. Related to this, there are lot of breast cancer screening likes breast self examination, clinical breast self examination, and mammography and this screening programs have an important place in reducing this threat (Killic, Saglam, & Kara, 2009; Erkoc, Oran, & Yorulmaz, 2011).

The incidence and mortality of cancer in the world were shown in Figure 1.1, and Figure 1.2 respectively. Hence, from this data we can conclude most of the cancer that was associated among women population is breast cancer. In Malaysia, breast cancer is most common in the Chinese, followed by the Indians and then Malays and it was commonest cancer in women who age of 20 years for 2002 and 2003 (Kurnia Malaysia, 2014). Not only that, a woman in Malaysia has a one in 19 chance of getting breast cancer in their lifetime and slightly more than half of the women diagnosed with cancer were less than 50 years old (Kurnia Malaysia, 2014).

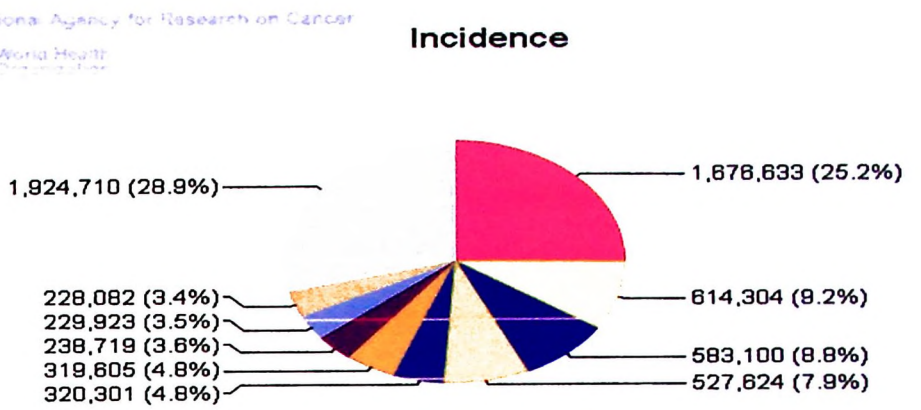

Figure 1.1 Cancer incidence in the world (Source : GLOBOCAN series of International Agency for Research and Cancer (IARC), 2012)

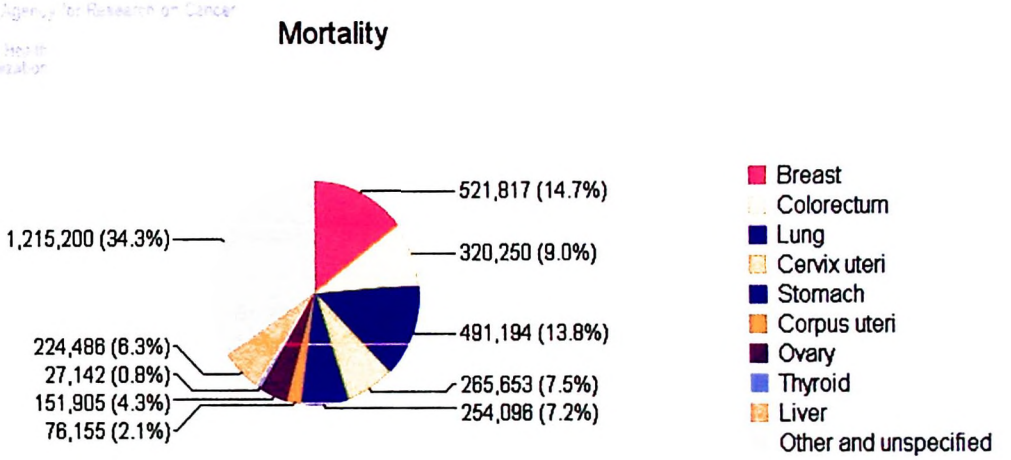

Figure 1.2 Cancer mortality in the world (Source: GLOBOCAN series of International Agency for Research and Cancer (IARC), 2012)

As stated before, one of the methods of screening for breast cancer is breast self examination (BSE). As information, BSE is a simple, cost free, non invasive adjuvant screening method for the detection of early breast cancer. Its purpose is to make woman familiar with both the appearance and feel of their breasts as early as possible. However, it appears that many women either perform it incorrectly or not at all (American Cancer Society, 2002). Basically women will examine their own breast when they had knowledge and positive attitude to do it. This is important because all these things will affect their practice in performing the BSE. Then, the women are encouraged

to do this on a monthly basis and it can take up to 15 minutes to carry out this practice (Panieri, 2012). The women are recommended to practice BSE starting their twenties (Kerlikowske et al., 2011; Smith et al., 2003; Semiglazov et al., 1999).

1.2 Problem Statement

As we know, early diagnosis of breast cancer will plays an important role in prognosis of the disease. Hence, for this reason, BSE practice among women who were in their twenties and above was highly recommended practice for years in order to increase their awareness about this (Ozdemir, Akansel, Tunc, Aydin, & Erdem, 2014). However, although BSE and clinical breast examination are not routinely suggested practices lately (Secginli, 2011), but BSE still remains an important practice since access to healthcare is somehow limited for some of the population especially in the developing country with low levels of income (Akyolcu & Ugras,2011). Other than that, there are some of the research studies shows that BSE practices among women still low due to of lack of knowledge, not considering her self in risk group, not receiving any advice to perform BSE from health practitioners. All these things become one of the factors that can influence their practice towards BSE (Ozdemir et al., 2014).

Based on the survey that was done by Gwarzo, Sabity and Idris (2008), they had revealed that there were wide gaps between the knowledge and practice of BSE despite of good attitude. Not only that, similar studies was conducted by Chie et al in Taiwan, found out that only 8.4% of 3040 randomized sampled women had been performing BSE monthly (Chie et al., 1993). Furthermore, in a two series study that were carried out in İzmir by Aydemir et al., they first found out that the level of knowledge of BSE was 24.5% while the level of practice was found to be 1.5%. Then, when they were repeated on their second study, the percentage of women who knew about BSE was 53.7% while only 39.0% were performing it. So, through this result, it clearly shows that having knowledge is not affective in transforming theory to practice itself. Not only that, through this findings, it was clearly demonstrates that practice of breast self examination is poor in their study population and this is consistent with other studies in Nigeria (Uche, 1999; Nwagbo & Akpala, 1996).

Besides, specifically in Malaysia, there limited documentation on breast cancer awareness studies especially among young women (Hadi et al., 2010). Basically, the general perception is that young women do not consider themselves at risk for developing breast cancer because they believe that it is a common disease which will affect the older women (Johnsona and Dickson-Swifta, 2008). However, in view of the aggressiveness of the cancer that occurs among young women and the relevance of BSE as a part of breast health screening, so it is aim of this study to investigate the knowledge, attitude and practice of female students in School of Health Sciences (SHS) toward BSE.

In this research study, the appropriate theory used was conceptual framework: The Theory of Planned Behaviour. In this study, the Theory of Planned Behaviour explains, the women's behaviour are under voluntary control .A major assumption underlying the theory is that women are usually rational and will make predictable decisions in well-defined circumstances .When the women have the intention to practice BSE, then the women most probably will practice it as recommended.

1.3 Research Objective

1.3.1 General Objective

To identify the knowledge, attitude, and practice of School of Health Sciences (SHS) female students in Universiti Sains Malaysia (USM) towards Breast Self Examination (BSE)

1.3.2 Specific Objectives

1. To determine the level of knowledge of BSE among female students in SHS of USM
2. To determine the attitude level of female students in SHS of USM towards BSE
3. To identify the pattern of practice of BSE among female students in SHS of USM.
4. To identify the sources of information regarding BSE
5. To identify the factor that influencing the frequency of practice towards BSE
6. To determine the significant mean difference between selected demographic data (age, ethnicity, level of education (year of university), family history of breast cancer) and knowledge, attitude and practice towards BSE among female students in SHS of USM.

1.4 Research Questions

1. What is the knowledge level of BSE among female students in SHS of USM?
2. What is the attitude level of female students in SHS of USM towards BSE?
3. What is the pattern of practice of BSE among female students in SHS of USM?
4. What are the sources of information regarding BSE
5. What are the factor that influencing the frequency of practice towards BSE
6. Is there any significant mean difference between the knowledge, attitude and practice towards BSE in SHS of USM and selected demographic variables [age, ethnicity, level of education (year of study), family history of breast cancer]

1.5 Hypothesis

1) Null hypothesis, H_0: There is no significant mean difference between knowledge of BSE and selected socio-demographic variables [age, ethnicity, level of education (year of study), family history of breast cancer].

Alternative Hypothesis, H_A: There is a significant mean difference between knowledge of BSE and selected socio-demographic variables [age, ethnicity, level of education (year of study), family history of breast cancer].

2) Null hypothesis, H_0: There is no significant mean difference between attitude of BSE and selected socio-demographic variables [age, ethnicity, level of education (year of study), family history of breast cancer].

Alternative Hypothesis, H_A: There is a significant mean difference between attitude of BSE and selected socio-demographic variables [age, ethnicity, level of education (year of study), family history of breast cancer].

3) Null hypothesis, H_0: There is no significant mean difference between practice of BSE and selected socio-demographic variables [age, ethnicity, level of education (year of study), family history of breast cancer].

Alternative Hypothesis, H_A: There is a significant mean difference between practice of BSE and selected socio- demographic variables [age, ethnicity, level of education (year of study), family history of breast cancer].

1.6 Definition of Operational / Conceptual Terms

Breast cancer – is the cancer that forms in tissues of the breast. The most common type of breast cancer is ductal carcinoma, which begins in the lining of the milk ducts (thin tubes that carry milk from the lobules of the breast to the nipple). Another type of breast cancer is lobular carcinoma, which begins in the lobules (milk glands) of the breast. Invasive breast cancer is breast cancer that has spread from where it began in the breast ducts or lobules to surrounding normal tissue (National Cancer Institute, 2014).

BSE (Breast Self Examination) – is the examination performed by the individuals to help detect any abnormalities within the breasts. It involves visually and manually inspecting the breasts for lumps, bumps and changes in the skin and nipples of the breasts. It is a useful tool for the early detection of breast cancer (Omoyeni & Oluwafeyikemi, 2014)

Female students of School of Health Science – the students in one of the school in University of Science Malaysia of Health Campus in Kubang Kerian, Kelantan other than School of Medical Science and School of Dental Science.

Knowledge – is facts, information and skills acquired by a person through experience or education, the theoretical or practical understanding of a subject or awareness about something. In this contact of study, knowledge is the information or understanding about the signs, symptoms, prevalence of breast cancer, and the steps in performing BSE (Oxford Dictionary, 2014)

Attitude – is a predisposition or a tendency to respond positively towards a certain idea, object, person, or situation. Then, attitudes itself will influences an individual's choice of action, and responses to challenges, incentives, and rewards (Bussiness dictionary, 2014).

Practice – was defined as having performed BSE ten or more times in the last 12 months. Occasional practice was 6-8 times, and 0-4 times in 12 months was defined as non – practice (Edgar, Shamian & Patterson, 2009).

1.7 Significance of the Study

As stated, one of the major factors that were responsible for higher mortality in women population is late presentation of the patients in getting treatment. Basically, most the patients in our environment present when the disease is already advanced and then lead to poor prognosis. What most important is the common cause for late presentation to the hospital are lack of awareness of breast cancer and poor attitude towards BSE. So, it was important to assess the level of awareness towards BC and BSE as well as their attitude and practice towards BSE. If the data obtained is low, hence the information that will be obtain will enable us especially for nursing that will act as an educator one day to design culturally health education materials that will be useful in improving the knowledge, attitude and practice of BC and BSE and thus reduce the mortality incidence among women population in our environment.

CHAPTER 2
LITERATURE REVIEW

2.1 Introduction

In this chapter, the literature review contains the extent of the problem of breast cancer, incidence of breast cancer in Malaysia, survival from breast cancer in Malaysia, knowledge on breast cancer symptoms, risk factor of breast cancer, the source of knowledge about BSE, Breast Self Examination, attitudes of women towards BSE, practice of women toward BSE, and performance of BSE.

2.2 REVIEW OF LITERATURE

2.2.1 Extent of the problem of breast cancer

Globally, about 25 million people in the world are living with cancer (Harirchi, Kolahdoozan, & Karbakhsh et al., 2011). Recent estimates showed that cancer incidence will almost triple by 2030, with 20-26 million new cancer diagnoses with 13-17 millions death (Livestrong Foundation). Furthermore, cancer is the second leading cause of death in the world. More than 70% of all cancer deaths occurred in low and middle income countries (Harirchi, Kolahdoozan, & Karbakhsh et al., 2011; World Health Organization, 2011). Of all types of cancers, breast cancer (BC) is the common cancer among women both in developing and developed countries (Rabia& Sebahat, 2008; Parkin, Bray, Ferlay & Pisani, 2005). Basically, breast diseases often present as palpable masses, inflammatory lesions, nipple secretions, or mammographic abnormalities (Cotrans, Kumar & Robbins, 1994). Not only that, breast cancer is one of the few cancers which can be scanned for and for which early diagnosis is possible (Tuna et al., 2014).

Basically, the diagnosis and treatment of BC requires a multidisciplinary approach and breast cancer is a tumor for which treatment has been shown to improve survival rates (American Cancer Society, 2014; Miller et al., 2014). Not only that, experts believed that when cancer is detected in early period, the survival of patients in the first 5 years is 97% (Shahrbabaki, Farokhzadian, Hasanabadi, & Hojjatoleslami, 2012). Hence, the existing methods such as mammography screening and BSE provide the possibility of

early detection and can reduce mortality up to 25% (Joann et al., 2005) and (Kline, & Mattson, 2000). Since the prognosis in advanced stage of this disease is very bad, so it is important to note high attention because women as a wife or mother have great role and death will causes negative impact on cohesion of family (Larissa et al., 2009; Linsell et al., 2009).

2.2.2 Incidence of breast cancer in Malaysia

In Malaysia, the incidence data on cancers since National Cancer Registry (NCR) is very lacking. As information, there was 3738 new cases of breast cancer were reported to the NCR of Malaysia, giving an age standardised incidence rate (ASR) of 46.2 per 100,000 women. Hence, this means 1 in 20 women in Malaysia had chance to develop breast cancer in their lifetime (Lim and Halimah, 2004). However, the rates was differs between the three main races in our country which are Malays, Chinese and Indians. The age standardized incidence in Chinese is the highest with 59.7 per 100,000 followed by the Indians with 55.8 per 100,000 and the lowest one is among Malays with 33.9 per 100,000 (Lim and Halimah, 2004). Basically, the differences in incidence rates between the Malays and Chinese are associated with the risk factors Chinese are likely to have fewer children with shorter period of breast feeding compared to Malay women. Not only that, the incidence is higher in Chinese could be related with their higher economic status and diet, hence possibly give influence to genetics (Yip, Aishah, Taib, & Mohamed, 2006).

In addition, out of 3,738 cases of BC in Malaysia, 50% of them were below the age of 50 years, with 40-49 years olds as the prevalent age group, accounting for more than 30% of the cases (Yip et al., 2006). Basically the mean age in Malays is 48.1 years, in Chinese is 51.4 years meanwhile in Indians is 52.3 years. However, it was difficult to explain the younger age in Malay women since the older Malay women more prefer to live in the rural areas and hence it unreported (Yip et al., 2006). Moreover, reports that were made by NCR are mostly from the doctors and not from other people. Besides, another reason that could differentiate between Malays and the other race is Malay women having higher fertility rate with younger population in this country mostly belong to Malay compared to other races.

2.2.3 Survival from Breast Cancer in Malaysia

In our country, there is wide variation mortality data from breast cancer world wide. The five year survival is much higher in the richer, developed countries compared to the poorer developing countries in Asian and Africa. Meanwhile, in Malaysia, mortality data are generally unreliable because only 40% of deaths are medically certified and in the majority of cases the responsible people are laymen, such as the police and village headmen. Hence the five year survival in the whole country is generally unknown (Yip et al., 2006). However, based on the data from University of Malaya Medical Center (UMMC), the overall 5-year survival from breast cancer is poor among Malay women with 45.9%, Indians with 57.1% and Chinese with the best survival with 63.2%. The survival was also depend on the stage of the diagnosis and since Malay women basically come with later stage compared to Indian and Chinese women. Therefore, it is common that they will exhibit poorer survival compared to other races (Yip et al., 2006)

2.2.4 Knowledge on breast cancer symptoms

A previous study found that the commonest symptom of BC is breast mass. Even though, 17.7% of respondents believed that the mass expected to be malignant because of the large size and often time visible (Alharbi, Alshammari, Almutairi, Makboul, & El-Shazly, 2012). Similar study that was carried out among female school teachers in Lagos, only 53.3% knew correctly that a mass was the commonest recognised symptom of BC (Odusanya, 2001). Most of the females perceives weight loss as the major symptom as the major symptom of breast cancer followed by lump in the breast as well bleeding nipples (Regarding & Cancer, 2014).

2.2.5 Risk factor of breast cancer

Basically, there are numerous risk factors that associated with BC. Basically, being a woman is the main risk factor that increases probability of developing BC (Nemenqani, Abdelmaqsoud, Al-Malki, Oraija, & Al-Otaibi, 2014). Incidence of BC and its death rates generally increase with age (American Cancer Society, 2013). Women with family history of BC in a first degree relative are at increased risk and those with history of BC are at increased risk for developing a second BC (Collaborative Group on Hormonal Factors in Breast Cancer, 2001). Besides that, women who started early menstruation or went through menopause late have a slightly higher risk of BC (Kelsy et al., 1993;

Collaborative Group on Hormonal Factors in Breast Cancer, 2012). Other than that, it was found that obesity increases the risk of postmenopausal BC (World Cancer Research Fund, 2007). Besides, recent use of Hormonal Replacement Therapy (HRT) with combination of estrogen and progesterone also increases the risk of developing BC with higher risk associated with longer use (Rossouw et al., 2002; Chleboski et al., 2010).

Last but not least ,the environmental factors such as radiation exposure and increased alcohol consumption will also increase the risk of BC (Allen, Van Groningen, Barksdale, & McCarthy, 2010). It is because an intake of one alcoholic drink or less per day can increase the risk of BC by as much as 10% in the general population (National Cancer Institute, 2008).

2.2.6 The source of knowledge about Breast Self Examination

In previous study, majority of those who were aware of breast cancer obtained their information on BSE through their friends (45%) and 22.5 % is from television (Regarding & Cancer, 2014). Similar observations were noted by a study done by Irurhe et al., (2012) in Nigeria which showed that about 30.5% of the females got aware of the BSE through television, radio and about 8.5% through friends, whereas a study done by Bala et al done in Ahmedabad showed that the main sources of knowledge were health professionals (34.4%), magazines (32.8%) and media (14%). (D.V. Bala et al., 2011). Besides all that sources, the internet also affect women's health beliefs with regard to the early diagnosis of BC in a positive way, and increase their motivation (Kim, Kim & Kim., 2001; Yi et al., 2008; Heo et al., 2013; Kratzke and Wilson, 2013). Searching for information on the internet is commonly used by the students and working women in particular and this source should be up to date so that they can keep up their interest in BSE on an internet site it can make it easier for them to carry out BSE in their live especially when all the information is ready on their fingers (Kim et al., 2001; Yi et al., 2008).

2.2.7 Breast Self Examination (BSE)

BSE is one of the screening methods that have been used in order to detect early sign of BC which involves the woman to look at herself in front of the mirror. Not only that, they also advised to feel their breast for any possible lumps, distortions or swelling.

Basically, this method should be performed monthly after the age of 20 years, and preferably after an individual's menstrual period where the breast are least swollen (Omoyeni & Oluwafeyikemi, 2014). By these means, women become familiar with the normal appearance and feel of their breasts and are better able to recognise changes and report them to their doctor for further professional evaluation (Anderson et al., 2003; Goyal, 2001; Howard & Scott- Findlay, 2006). Related to this, BSE become an important tool for early detection of breast cancer at earlier stage.

In addition, compared to other screening methods, BSE is simple, quick, cost free and non invasive procedure which help woman to know their breast and allows them to detect any changes such as masses or lumps on their breast. Unfortunately, despite the benefits of regular BSE, only women regularly practice it. In fact, majority of women do not even know the correct ways to do a BSE (Stamler, Thomas, & Lafreniere, 2000; Al-Abadi, 2001). A previous study on cancer awareness in Abakaliki showed that only one person (0.4%) knew the correct frequency of BSE out of 238 respondents (Obaji et al., 2013). Hence, it could be concluded that the level of awareness practice of BSE among women are poor.

2.2.8 Attitudes of the women towards BSE

Another major factor for late presentation of BC is that most women do not carry out breast self examination and they do not take also the advantages of the screening role like BSE (Alharbi et al., 2012). This is maybe because they never heard about BSE or they do not know the correct way to practice it. It also possible that they can carry out BSE, but the motivation to carry it out is absent (Alharbi et al., 2012). Besides, according to the study by Sarfo et al., (2013), majority of the respondents in their study portrayed a good attitude towards BC in that upon discovery of the lump in their breast, hence will encourage them to seek medical treatment within a week. Not only that, the study also stated that majority of the respondent perceives themselves at risk of for getting BC and this result is contrast to a study that was conducted by Parsa et al., (2008) where the general perception of the female secondary school teachers that do not consider themselves at risk for getting BC as they believe that it is a problem that affects the older women. Besides that, the respondents also attributed forgetfulness as a risk for not performing BSE. Hence, this may influence the attitudes, practices and life style of the patient positively.

2.2.9 Practice of women towards BSE

As we know, early detection of BC can improve mortality rates and improve the patient's prognosis and this also can be promoted by BSE. In some studies, it has been reported that women who carefully examined their breasts could find small masses of breast cancer and their prognosis became better. Other than that, it was found that those who performed BSE had reported their symptoms to health personnel sooner than the other subjects (Gwarzo, Sabitu, & Idris, 2009). Basically, women with higher educational level were more likely to be more self aware about breast cancer risk factor and hence have prior towards BSE practice (Chan et al., 2007). However, despite its advantage, the BSE practice is quite low among Asian women compared to Western counterparts (Parsa, Kandiah, Rahman & Zulkefli, 2006).

Based on the study by Kayode, Akande and Osagbemi (2005), the results shows that less than half (45.2%) of their respondents had never done a BSE while 54.8% had ever practiced BSE. This happened because some of the respondents though that they are free from breast pathology. They also claimed to have wrong or no knowledge at all about the correct procedure (Kayode, Akande & Osagbemi, 2005). Besides that, most of the respondents also claimed that why they did not practicing BSE regularly due to forgetfulness and did not put a mark on the calendar as a reminder for the next BSE (Kayode, Akande & Osagbemi, 2005).

2.2.10 Performance of Breast Self Examination (BSE)

Periodic BSE is very important for the early detection of breast cancer. According to Smeltzer and Bare (2000), BSE forms an essential part of a woman's health care and should be conducted preferably five to seven days after menstruation. The best time to examine the breast is after the menstrual period when the breast are not tender or swollen (Omoyeni & Oluwafeyikemi, 2014). Meanwhile, for menopausal women and those who do not have regular periods are advised to check their breasts on a monthly basis which is on the same day every month (Hussain, 2001). Not only that, the World Health Organisations (WHO) also recommended that women who are 20 years above should start examined their breasts regularly every month for any abnormality and lumps. Furthermore, BSE is the best option when the women cannot access to the modern diagnostic tools such as mammogram.

2.3 Conceptual Framework

The conceptual framework that for this study is based in Ajzen and Fishbein's theories of reasoned action and planned behaviour. TPB explains that people are usually rational and will make predictable decisions in well-defined circumstances. The model suggests that intention to act is the most immediate determinant of behaviour, and behavioural intention will influence the behaviour that will be performed by that individual.

According to TPB, human behaviour is guided by three kinds of considerations which are beliefs about the likely outcomes of the behaviour and the evaluations of these outcomes (behavioural belief). Next, belief about the normative expectations of others and motivation to comply with these expectations (normative beliefs), and the last considerations is belief about the presence of factors that may facilitate or impede performance of the behaviour and the perceived power of these factors (control beliefs). The theoretical framework of this theory is shown as figure 2.1 as below:

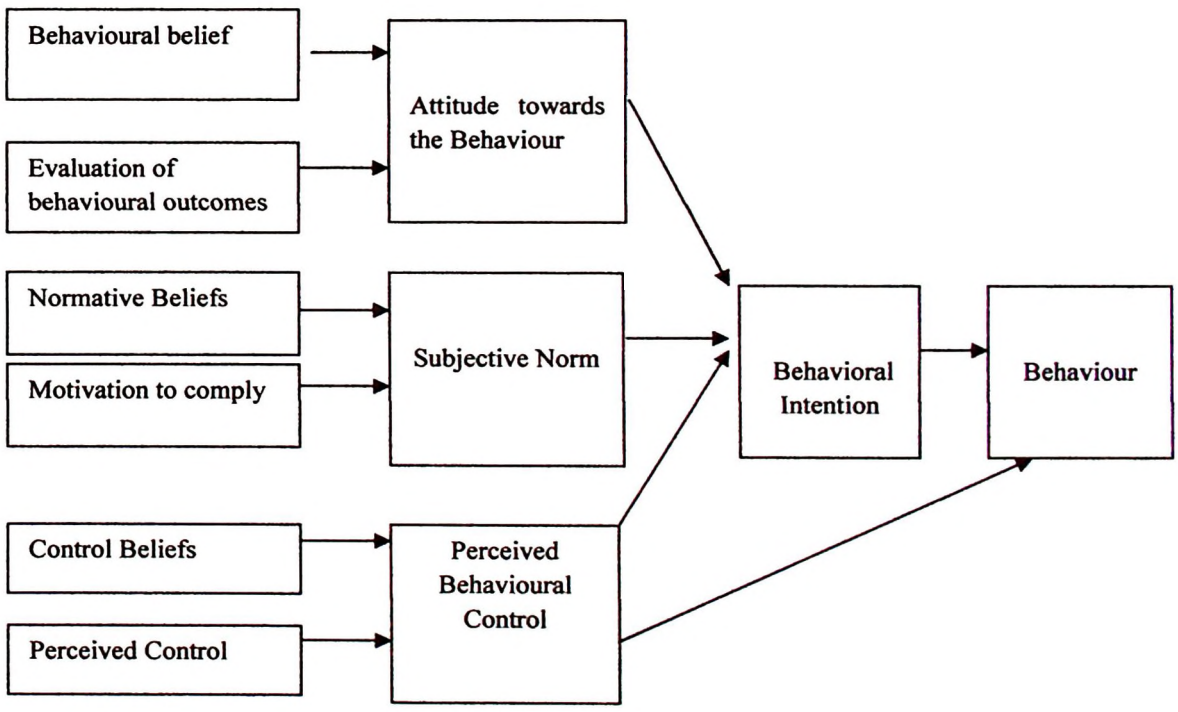

Figure 2.1 Ajzen and Fishbein's theory of reasoned action and planned behaviour

(Source: Adapted from Ajzen, 2012)

This conceptual framework will be used in this study to examine some of the psychosocial variables that may relate to the performance of BSE in young women. Furthermore, in their respective aggregates, behavioural belief will produces a favourable and unfavourable attitude toward the behaviour. Meanwhile, the normative belief results in perceived social pressure or subjective norm and control belief will give rise to perceived behavioural control (Ajzen, 1971). Other than that, the attitude toward the behaviour, subjective norm, and perception of behavioural control will lead to the formation of a behavioural intention. As a general rule, the more favourable the attitude and subjective norm, and the greater the perceived control, the stronger should be the person's intention to perform the behaviour in question (Ajzen, 1971). Hence, the attitude in this study refers to the female students' attitude towards the practice of BSE. The attitude is determined by behavioural beliefs and evaluation of behavioural outcomes. In this case, the attitude is determined by the belief of desired outcome of regularly practices of BSE and the desired outcomes will be beneficial to their health and reducing the BC incidence.

Meanwhile, subjective norms in this case relate to the female students' belief of the extent to which significant others would want him or her to perform the behaviour. Then, the subjective norms also include the motivation to comply, which means how willing the students' are to comply with these beliefs. When they know the benefits of practising BSE of the significant others, hence they will have the motivation to comply the practises regularly.

Not only that, Ajzen and others have developed this theory further by adding perceived behavioural control as a third influence on behavioural intentions. In this matter, it will be student's perception of the extent to which the internal and external factors that may facilitate or hinder the behavioural performance. The person's intention will become significantly greater if they feel that they have greater personal control over that behaviour. Hence, from this conceptual model, it would be easy to determine the predictors of the women's intention to perform BSE and how it will reflects their attitude and practice towards BSE (Figure 2.2)

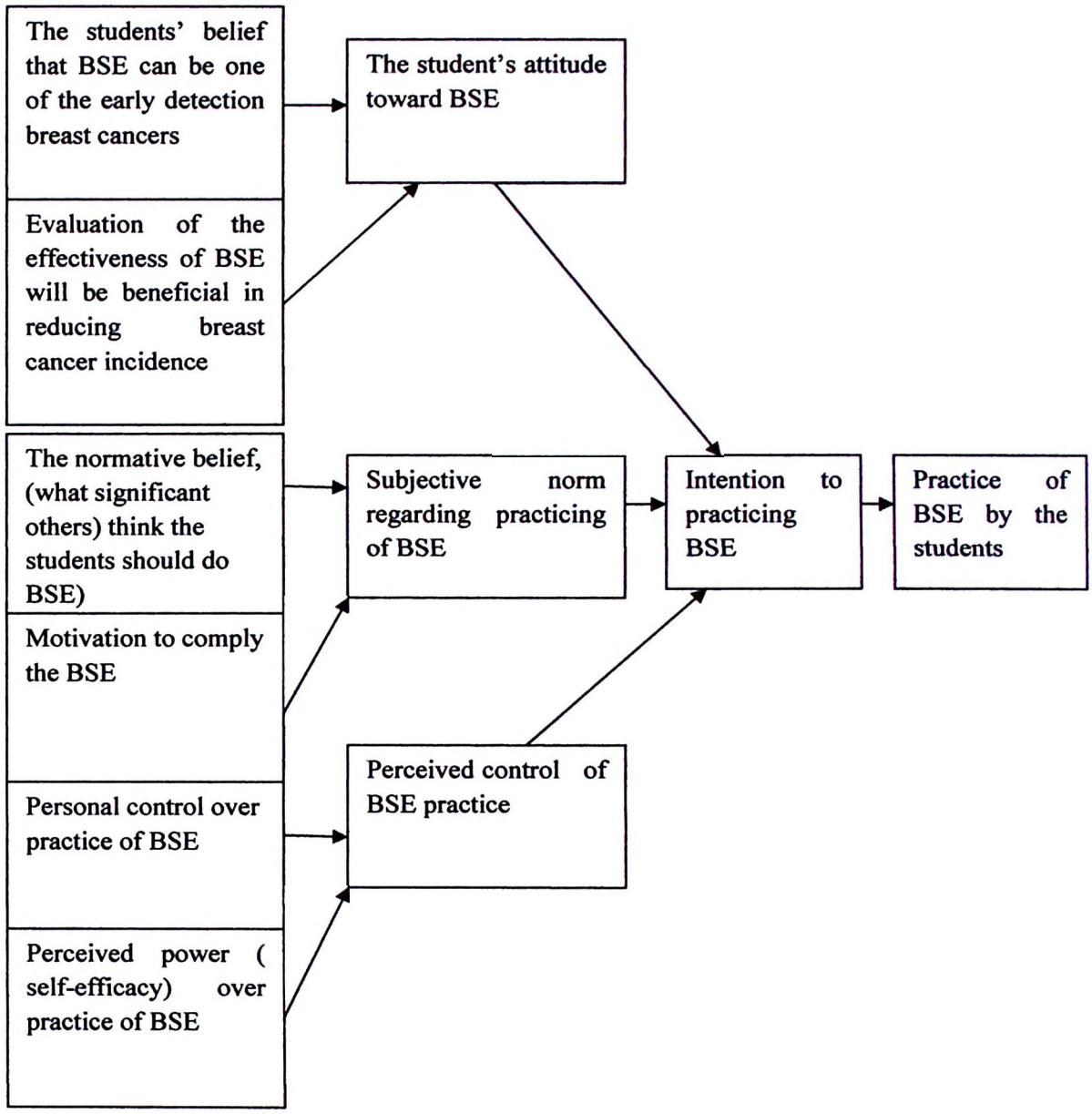

Figure 2.2 Schematic diagram based on the Theory of Planned Behaviour

CHAPTER 3

METHODOLOGY AND METHODS

3.1 Research Design

This is a descriptive and cross-sectional study. The objective of choosing this design is to explore the information on the knowledge, attitude and practices of the female SHS's students who are 20 years and above towards Breast Self Examination (BSE) as one of the screening method in detecting the breast cancer in early stages.

3.2 Population and Setting

The study was conducted on all SHS's undergraduate female students for all courses in Universiti Sains Malaysia, Kubang Kerian, Kelantan. However, this study was focus on the student who age 20 years and above where it is a recommended age to carry on this non-invasive screening test.

3.3 Sampling Plan

3.3.1 Sample

Inclusion Criteria

- Female students from all degree courses in PPSK who age above 20 years
- Students who understand English language
- Willing to participate in this study

Exclusion Criteria

- Students from degree and diploma of nursing from all years
- Male students
- Those students who were unavailable during the study.
- Post graduate students

3.3.2 Sampling Method

In this study, the female degree students in SHS that meet the inclusion criteria were selected to answer the questionnaire. Simple random sampling was used for this study. Sampling is concerned with the selection of a subset of individuals from within a statistical population to estimate characteristics of the whole population. The Excel software program was used to randomly allocate the participants. The reason for using this software was due to the ability to generate a random number from zero to one from the previous selected number range. Random sampling was used because it give all students an equal chance of selection to be included in this study as well can prevent bias.

3.3.3 Sample Size

The population size of this study is 426. This total population are excluded from nursing coursesstudents, male and post graduate students. The researcher used Raosoft sample size calculation software to calculate the sample size and to ensure the accuracy by avoiding sampling error during representatives and parameters of the sample.

To determine the sample size, an analysis are conducted by using Raosoft with a confidence level 95% and a margin of error that can be tolerated is 0.05, thus the recommended sample size for female students are 240.

Then, to drop out for this study, 10% of calculated sample size is recorded. Therefore, the total students involved for this study were:

$= 240 \pm$ drop out 10%

$=240 \pm 24$

~ 264 of students

3.4 Variables

In this research study, the major types of variables that need to be manipulated, measured, described, or controlled are dependent variables (DV) and independent variables (IV).

3.4.1 Variables Measurement

The aim of this study is to investigate the knowledge, attitude and practice towards BSE among female students in School of Health Sciences. The independent variables were selected socio- demographic characteristics such as age, ethnicity, educational level (year of university), and family history of breast cancer. The dependent variables are students' knowledge, attitude and practice towards BSE. For the independent variable, the students were asked to report their age .The ethnicity that will be asking is whether Malay, Indian, Chinese or other ethnic meanwhile the educational level is categorized by year of study in university from Year One up to Year Four. Then, the students also were asked about the family history of the breast cancer. Table 3.1 below will illustrated the measurement of variables of this study.

Table 3.1 Measurement of Variables

Variables	**Description**
Independent	The socio demographic characteristics such as age, ethnicity, level of education (year of university), family history of breast cancer
Dependent	The students' knowledge, attitude and practice towards BSE

Altogether, this section has scaled questions in section B, C, and D which assess their knowledge of breast BSE, about their attitude towards BSE and practice towards BSE respectively. Then, the scales were calculated by computing the sum of these items in the scales (range 1-3). For section B, the scale score will be going from 1 (for incorrect answer), 2 (I don't know answer) and 3 (for correct answer). The maximum obtainable score is 12 and the least is 4. The women with excellent knowledge on BSE will have a score of 10-12; average will have score 5-9 while poor knowledge will have score of 0-4. For section C, will concern about the attitude towards BSE. A negative attitude will attracts 1 mark, indifferent attitude will attract 2 marks and positive attitude will attract 3 marks. The total score is 12, therefore women with positive attitude will have total score 10-12, indifferent attitude will have a score between 5-9 while negative attitude will be score 0-4 (Omoyeni & Oluwafeyikemi, 2014).

With regard to practice, there was no specific score for this item. However, this was classified as a good practice if the respondents practice BSE monthly and poor practice if they rarely practice of BSE. The association were evaluated between knowledge, attitude and practice towards BSE with socio- demographic characteristics (Omoyeni & Oluwafeyikemi, 2014). This part also consist factor that influencing the students for not practising BSE.

3.5 Instrumentation

In this study, data were obtained by using the knowledge, attitude and practice (KAP) questionnaire. This questionnaire had been developed by Omeyeni and Oluwafeyikemi (2014). According to these researchers, this questionnaire is a self structured, self administered questionnaire and validated .Cronbach's alpha was measured as an indication of the internal consistency of the questionnaire. The value of Cronbach's alpha which obtained 0.8 and above will indicate good internal consistency.

3.5.1 Instrument

The questionnaire are categorize into six sections named section A-D.

Section A: Contained 4 questions items on demographic data include age, level of education (year of university), ethnicity, and family history of breast cancer. The age will be filled by the students based on the last birth age. Level of education will be filled based on the year of study in degree level meanwhile the ethnicity covered Malay, Chinese, India and others. Then, for family history of breast cancer, the students will briefly state the answer 'yes' or 'no' to the relationship if they had family history with breast cancer.

Section B: For this section, correctly answer question attracts '3 'marks, I don't know attracts '2' marks, and incorrect answer attract '1'marks. The maximum obtainable score is 12 and the least is 4. Therefore, women with excellent knowledge of breast self examination will have a score of 10-12. An average knowledge of breast self examination will have a score of between 5-9 while poor knowledge of breast self examination will have score 0-4.

Section C: Four different questions about their attitude towards BSE. A positive attitude attracts '3' marks, indifferent attitude attracts '2' marks, and negative attitude

attracts '1' marks. The maximum obtainable score being 12 and least being 4, therefore women with positive attitude to BSE will have a total score of 10-12; indifferent attitude will have a score in between 5-9, while negative attitude will be a score 0-4 .

For section D, the respondent were asked to report do they practice BSE, how often they practice BSE, at what time they practising it and what pattern they use to practice BSE. Based on the original author, they said that there is no specific score for this section. They only asked specific questions in relation to practice and discuss the finding in line with what other researchers have found out. This part also consist a question that asking the factor that influencing the respondents for not practising of BSE.

Hence, all the gathered data then will be analysed by using the Statistical Package for Services Solutions (SPSS) version 22.

3.5.2 Translation of Instrument

The questionnaire of knowledge, attitude and practices of BSE was originally developed in English version by the original author, Mr Omeyeni and Oluwafeyikemi (2014). Hence, the questionnaire that will be used in this study will be maintain in English version due to the background of the student which is well educated and can understand the simple English very well.

3.5.3 Validity and Reliability of the Data Collection Instrument

In order to make sure the respondents are threat ethically when participate in this research, hence the validity and reliability are important in the data collection instrument. Validity can be defined as the ability of the instrument to measure what it's supposed to measure. Meanwhile, reliability is the ability of the instruments to consistency and accurately measure the concept under study (Wood & Ross- Ker, 2011). In this study, to be valid and reliable, the instrument must provide an accurate measure of the study on students' knowledge, attitude and practice of BSE. The instrument developed by Omeyeni and Oluwafeyikemi (2014) was previously used to study on assessment of knowledge and practice of breast self examination among female cleaners in Obafemi Awolowo University Ile Ife, in Nigeria. Then, the pilot study was test in students to ensure the reliability and the test was required 10% from the sample population. The Cronbach's alpha Knowledge questions are 0.600; for Attitude questions were 0.794; and Practice questions were 0.770.

3.6 Ethical Considerations

Ethical approval was sought from the Research Ethical Committee (Human), Universiti Sains Malaysia (USM). The permission for data collection is obtained from Dean of USM. Then, written consent was obtained from the respondents who are prior to answering the questionnaire that they have agree to participate in the study. Besides, they were received an explanation what are the purposes of the study and how they will be involved. They will be informed that they have the right to stop or discontinue for any reason. The researcher must inform the participant about the researcher identity before get any permission for them to participate in this research. The respondents were also being informed that the study will not give any harm to them since there is no invasive procedure involved. The researcher must keep all the information given by the participants as a secret and their identity is remaining confidential. Not only that, the permission for using the questionnaire had accepted from the original author, Mr.Omeyemi and Oluwafeyikemi (2014) regarding the knowledge, attitude and practice towards BSE.

3.7 Data Collection

Following the planning stages of the study and the granting approval from the ethical committee, the data collection of this study was collected between December 2014 and February 2015. The data was collected through self administered structured questionnaire: knowledge, attitude and practice (KAP) survey. The process explaining the nature and purpose of the study and the right of students were included. This questionnaire takes about 20 minutes to be completed and collected once the students finished answering it. Figure 3.1 illustrated the data collection process.

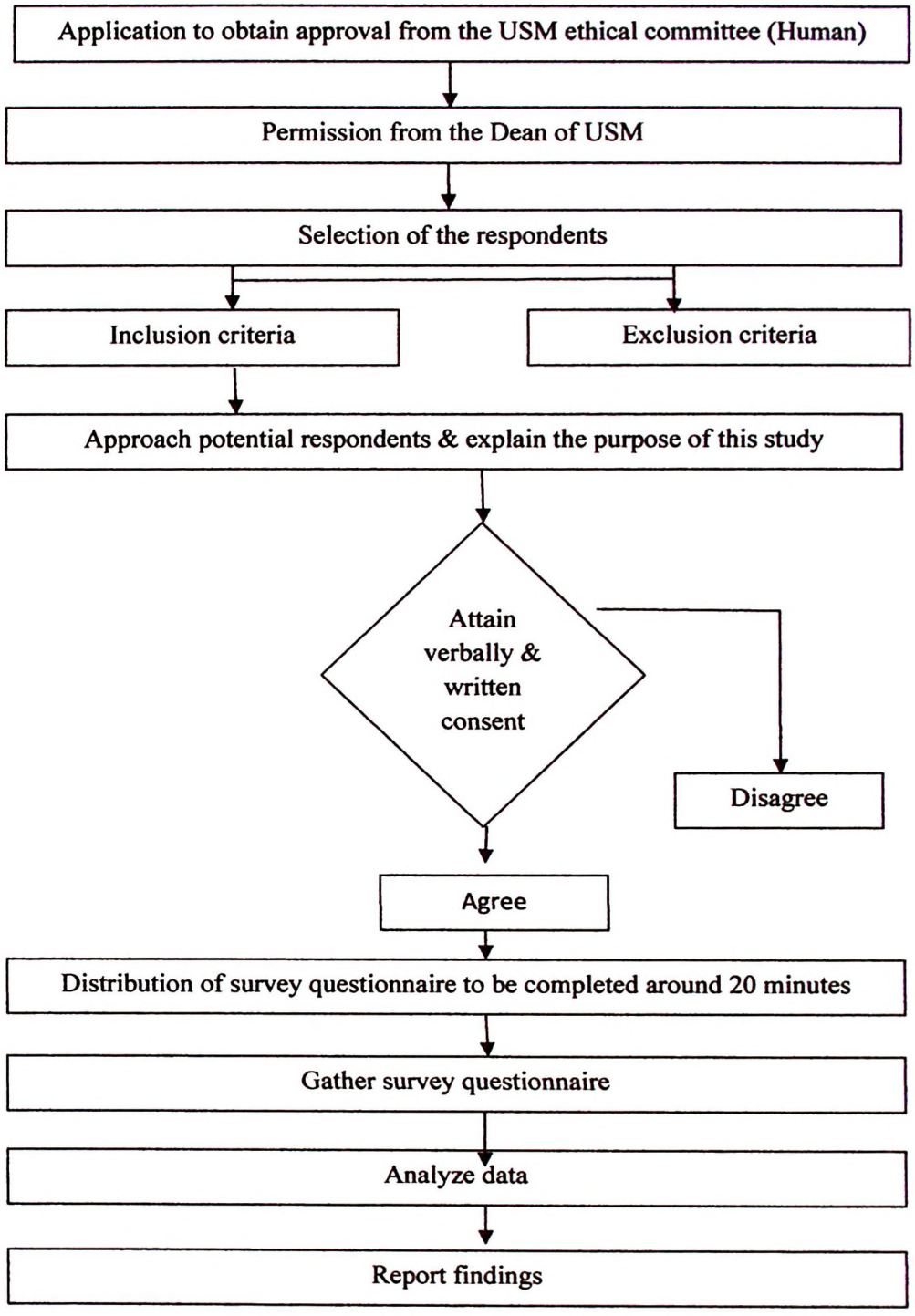

Figure 3.1 Flow Chart of Data Collection