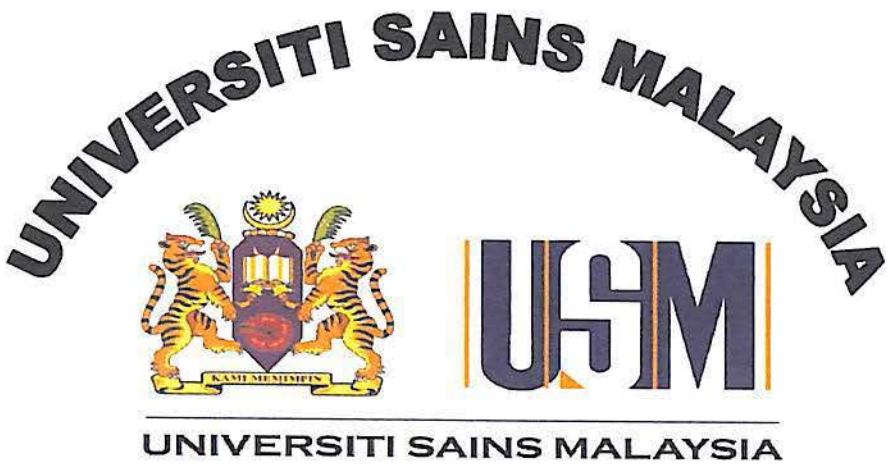

USE OF COMPLEMENTARY THERAPIES AMONG BREAST CANCER PATIENTS IN HOSPITAL UNIVERSITI SAINS MALAYSIA (HUSM)

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TABLE OF CONTENT

LIST OF TABLES AND FIGURES

LIST OF ABBREVIATIONS

CTs	Complementary Therapies
HUSM	Hospital Universiti Sains Malaysia
MAKNA	Majlis Kanser Nasional
NCCAM	National Center for Complementary and Alternative Medicine
NCI	National Cancer Institute
NCR	National Cancer Registry
SPSS	Statistical Package for Social Science
WHO	World Health Organization

USE OF COMPLEMENTARY THERAPIES AMONG BREAST CANCER PATIENTS IN HOSPITAL UNIVERSITI SAINS MALAYSIA (HUSM)

ABSTRACT

Even though there were some researchers done the studies regarding the use of Complementary Therapies among breast cancer patients, but there were still less official data in local context. There were only a few studies done regarding this topics in Malaysian. The aim of this study was to determine the current usage of the complementary therapies used in local context and how those selected socio-demographic data were associated with the perceptions towards Complementary Therapies used among breast cancer patients. Samples were taken by purposive sampling among breast cancer patients in Hospital Universiti Sains Malaysia (HUSM) either patients that were admitted to the wards or patients who came for follow up in the outpatient clinic in HUSM (n=70). Self-administered questionnaire was used to collect the data. Data was analyzed by using the Statistical Package Social Science (SPSS) software version 18.0. Majority of the samples in this study was came from the middle age group ranged from 31 to 40 years old. There were high in percentage of respondent who's already married (64.3%) compare to another marital status. The samples also majority (62.9%) came from the average level of educational level which was completed secondary school. CTs practitioner most commonly visited by the respondents was dietician or nutritionist (98.57%), and then followed by herbalist (40.0%). Overall, 100% of the respondents reported as CTs users, most frequently used was vitamins/minerals (92.8%), and then followed by herbal remedies (82.8%). Chi-square test was used to identify the association between selected socio-demographic data and the perceptions towards CTs used. For the age, the p value was 0.004 ($p<0.05$), which showed that there were a significant association between age and perceptions. For the marital status, p value was 0.019 ($p<0.05$) which also showed that there were a significant association between

marital status and perceptions. But, for the educational level, p value was not significant which p=0.473 (p>0.05), that means there were no significant association between educational level and perceptions. In conclusion, not all selected socio-demographic data had significant association with the perceptions towards CTs used.

KEYWORDS

Complementary Therapies, CTs practitioners, perception, breast cancer patient.

PENGGUNAAN TERAPI KOMPLIMENTARI DALAM KALANGAN PESAKIT KANSER PAYUDARA DI HOSPITAL UNIVERSITI SAINS MALAYSIA (HUSM)

ABSTRAK

Walaupun terdapat beberapa pengkaji telah menjalankan kajian berkenaan penggunaan terapi komplimentari dalam kalangan pesakit kanser payudara, tetapi data rasmi dalama konteks setempat masih lagi berkurangan. Terdapat hanya beberapa kajian yang telah dijalankan berkenaan tajuk ini dalam Malaysia. Kajian ini bertujuan untuk mengenal pasti penggunaan terkini terapi komplimentari dalam konteks setempat dan bagaimana data latar belakang social berkait dengan persepsi terhadap penggunaan terapi komplimentari dalam kalangan pesakit kanser payudara. Sampel diambil melalui kaedah sample bertujuan dalam kalangan pesakit kanser payudara di Hospital Universiti Sains Malaysia (HUSM), samada pesakit yang berada di wad ataupun pesakit yang datang ke klinik pesakit luar untuk rawatan susulan (n=70). Soal selidik digunakan untuk mengumpul data. Data di analisa dengan menggunakan program SPSS iaitu "Statistical Package Social Science" versi 18.0. Majoriti daripada sampel di dalam kajian ini adalah terdiri daripada kumpulan umur pertengahan iaitu daripada umur 31 hingga 40 tahun. Peserta yang telah berkahwin mempunyai kadar peratusan yang tinggi (64.3%) berbanding dengan status perkahwinan yang lain. Sampel juga adalah majoriti (62.9%) terdiri daripada peserta yang mempunyai tahap pendidikan yang sederhana iaitu sekolah menengah. Pengamal terapi komplimentari yang sering dilawati oleh peserta adalah pakar diet ataupun pemakanan (98.5%), diikuti oleh pakar herba (40%). Secara keseluruhannya, 100% daripada peserta dilaporkan sebagai pengguna terapi komplimentari, terapi yang paling biasa digunakan ialah vitamin dan mineral (92.8%), diikuti oleh perubatan herba (82.8%). Ujian khi-kuasa dua

digunakan untuk mengenal pasti kaitan antara data latar belakang yang dipilih dengan persepsi pesakit terhadap penggunaan terapi komplimentari. Bagi faktor umur, nilai p ialah 0.004 ($p<0.05$), ianya menunjukkan bahawa terdapatnya perkaitan antara faktor umur dan persepsi. Bagi faktor status perkahwinan, nilap p ialah 0.019 ($p<0.05$) yang juga menunjukkan terdapatnya perkaitan yang signifikan antara status perkahwinan dan persepsi. Tetapi, bagi tahap pendidikan, nilai p tidak signifikan iaitu $p=0.473$ ($p>0.05$), yang menunjukkan bahawa tidak terdapatnya perkaitan yang signifikan antara tahap pendidikan dan persepsi. Secara kesimpulannya, tidak semua data latar belakang sosial yang dipilih mempunyai perkaitan dengan persepsi pesakit terhadap penggunaan terapi komplimentari.

KATA KUNCI

Terapi komplimentari, pengamal terapi komplimentari, persepsi, pesakit kanser payudara.

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DEFINITION OF KEY TERMS

Cancer	Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other tissues. Cancer cells can spread to other parts of the body through the blood and lymph systems (NCI, 2012)
Breast Cancer	Cancer that forms in tissues of the breast, usually the ducts (tubes that carry milk to the nipple) and lobules (glands that make milk). It occurs in both men and women, although male breast cancer is rare (NCI, 2012).
Complementary Therapies	A group of diverse medical and health care systems, practices, and products that are not generally considered part of conventional medicine. It refers to use of CAM (Complementary and Alternative Medicine) together with conventional medicine, such as using acupuncture in addition to usual care to help lessen pain (NCCAM, 2011).

CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter outlines background of the study, its rationale, problem statement, purpose of the study, aims of the study, research questions, research hypothesis and significant of the study. This chapter is important in order to know what the study is about. The study that carried out was the study regarding the use of complimentary therapies among breast cancer patient in Hospital Universiti Sains Malaysia (HUSM).

1.2 Background of the Study

Nowadays, cancer is the major cause of death among all populations in the world. According to the World Health Organization (WHO), cancer is a leading cause of death worldwide and accounted for 7.6 million deaths (around 13% of all deaths) in 2008 (WHO 2008). Based on the statistics that were retrieved from MAKNA, nearly 70 000 new cases were reported among Malaysians in Peninsular Malaysia between 2003 and 2005 (MAKNA, 2008).

NCR reported that, the cancer incidence in Peninsular Malaysia from the years 2003 to 2005 was 67 792 cases which were consist of 29,596 (43.7%) males and 38,196 (56.3%) for females (NCR 2010). NCR also stated the most frequent cancer during this period in Malaysians was breast cancer (18%) followed by large bowel cancer (11.9%) and lung

cancer (7.4%). There are some of these women who will seek the complementary therapies in order to help them to treat the disease as well as using the medical treatment.

There were a lot of studies conducted to explore the current use of complementary therapies (CTs) among women diagnosed with breast cancer. One of the studies regarding the use of CTs was conducted in Australia by Kremser and Evans. From the study, population in Australia commonly used the complementary therapies such as vitamin supplements (54.2%), support groups (49.8%), massage (41.4%) and meditation (38.7%). This study also stated that the common reasons for the usage include improving physical (86.3%) and emotional (83.2%) wellbeing and boasting the immune system (68.8%) (Kremser & Evans et al., 2008).

Similar study was conducted in Turkey regarding the use of CTs from the year 1998 to 2002 and found herb was the common CT. The used of herbs were reported as 71.5% in a study conducted by Ceylan, (Ceylan & Hamzaoglu et al., 1998) as well as 87% as found by Samur (Samur & Bozcuk et al., 1999). Then, another study was done in 2000 by Oguz and Pinar and the prevalence of herbs used is 72.5% (Oguz & Pinar, 2000) and the study from Tas et al. in 2001, the results of herbs used is 95% (Tas & Karagol et al., 2001). In 2002, Gozum found there were 100% used of herbs as their complementary therapies among the cancer patient (Gozum & Tezel et al., 2002).

The popularity of CTs is an international phenomenon. The prevalence of CTs use is estimated at 25% among residents of the United Kingdom, 50% among German, French, and Australian populations, and 42% to 69% among residents of the United States. CTs is a major growth industry in Europe, and that trend is now mirrored in the United States, where

out-of-pocket expenditures for CTs in 1997 were estimated at $34.4 billion. In the United States between 1990 and 1997, the prevalence of CTs use increased from 33.8% to 42.1% and the number of visits to CTs practitioners increased from 427 million to 629 million visits (Richardson, 2000).

1.3 Rationale for the Study

Until now, there were abundant of studies done regarding the use of CTs among cancer patients especially among breast cancers in the western countries. For a example, the study that was done by the Heather S Boon, Folashade Olatunde and Suzanna M Zick in year 2007. These researchers also investigated the current use of CTs among breast cancer patients and they compared the use of CTs between two years which is 1998 and 2005 in Canada. In the local context however, so far it is difficult to search for an official report regarding the use of CTs among breast cancer patients. Thus, this study will provide evidence of the use of CTs among breast cancer patients in the local context.

1.4 Problem Statement

Breast cancer is common among women in Malaysia. The prevalence of breast cancer patients in 1996 is 86.2 per 100,000 women (Ministry of Health Malaysia, 1997). Chinese had the highest age-standardized rate which is 70.1 per 100,000 compared to Malays which is 41.0 per 100,000 and Indians which is 61.7 per 100,000. Breast cancer comprised 30.4% of all female cancers in Malaysia in 2002 (Lim, 2002). Breast cancer mortality rate shows an increasing trend in Malaysia from 0.61 in 1983 to 1.8 per 100,000 women in1992 (Ministry of Health, 1994).

The use of CTs nowadays are increasingly especially among cancer patients. Patients with chronic or life threatening illnesses such as cancer often will use CTs to improve their health status. Previously, there are only little attention was given to the significant of using these therapies by conventional health care providers who care for the cancer patients. This has changed due to the increased use of CTs among patients especially cancer patient. The increased of patient's expectations for professionals to support their choices and hope that the professionals health care provider able to give them some advice regarding these therapies. Due to this phenomenon, a lot of research was done in order to know the current use of CTs among cancer patients. By using this findings, the nursing and others health care providers will know how significant this finding and they will try their best to explore more regarding this therapies in order to fulfilled patient's satisfaction when patients able to consulted their health care providers about their choices.

1.5 Purpose of the Study

The ultimate purpose of this study was to identify the current use of the CTs among breast cancer patients in Hospital Universiti Sains Malaysia (HUSM). This study will also identify the current types of CTs used as compared to the previous study.

1.6 Aims of the Study

1.6.1 General Objective

To determine the current usage of CTs among breast cancer patients in HUSM.

1.6.2 Specific Objectives

1) To determine the current proportion of CTs usage among breast cancer patients in HUSM.
2) To describe the usage of CTs among breast cancer patients in HUSM.
3) To describe the perceptions towards the usage of the CTs.
4) To determine the association between selected socio-demographic data and the patient's perceptions towards the usage of the CTs.

1.7 Research Questions

1) What is the current proportion of CTs usage among breast cancer patients in HUSM?
2) What are the common types of therapies used and practitioners visited by breast cancer patients in HUSM in order to assist their medical breast cancer treatment?
3) What are the perceptions towards the usage of CTs among breast cancer patients in HUSM?
4) Is there any significant association between selected socio-demographic and the perceptions towards the usage of CTs?

1.8 Research Hypothesis

Null Hypothesis 1, H_0 1:

There is no significant association between selected socio-demographic and the perceptions of the breast cancer patient towards the usage of Complementary Therapies in HUSM.

Alternative Hypothesis 1, H_A 1:

There is a significant association between selected socio-demographic and the perceptions of the breast cancer patient towards the usage of Complementary Therapies in HUSM.

1.9 Significance of the Study

This study examined the current usage of the Complementary Therapies among breast cancer patients in HUSM and also investigated the patient's perceptions towards CTs and how the different socio-demographic data influenced the perceptions towards CTs. This study was important in order to provide the empirical evidence regarding the usage of CTs among breast cancer patient. The findings of this study will be useful for the nursing practice, nursing education and nursing research.

In terms of nursing practice, there was still lack of information regarding the CTs among the nurses. This will result in knowledge deficit about the importance of the CTs towards breast cancer patients. For nursing practice, this study will help the nurses in understanding what types of CTs used by their patients and the perceptions towards CTs. It will help the nurses to plan their nursing care for such patients that used the CTs. When the

nurses know what are the type of CTs use, the nurses will be able to plan the nursing care to provide that complementary therapies as needed. So, the patient's satisfaction will improve towards the nursing care provided.

This study also provides a lot of contributions to the nursing education. Although there were a lot of study done regarding the CTs, but that study not so focus to the nursing disciplines. For nursing education, this information regarding the usage of the CTs will help the nurses to educate the patients who need the CTs but did not know the information about CTs. The nurses will be able to inform the patient regarding the prevalence of the CTs used.

In terms of nursing research, there is also lacking of empirical evidence regarding the CTs in the local context. It is because, there are a lot of previous studies done regarding this topics in the western, but there were not apply in the local context. For the nursing research, this result of study will help the nurses to continue the research to get the current CTs usage in order to do the improvements in the nursing care.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Literature review is an essential component in the research. By reviewing the literature, the researcher will become familiar with the current body of knowledge on the topic before undertaking the research. By reviewing the literature also, the researcher's understanding will be improved regarding that issue. The review will provide a 'comprehensive understanding of the topic which helps the researcher to be more aware of what is known and what questions need to be answered' (Gorard & Roberts et al., 2004).

2.2 Breast Cancer

2.2.1 Definition of Breast Cancer

Breast cancer is the unregulated growth of abnormal cells in breast tissue (LeMone & Burke, 2008). Based on the definition from NCI, breast cancer was defines as cancer that forms in tissues of the breast, usually the ducts which is the tubes that carry milk to the nipple; and the lobules which is the glands that produce milk. It occurs in both men and women, although male breast cancer is rare (NCI, 2012).

2.2.2 Incidence and Prevalence of Breast Cancer

Breast cancer is the most common cancer in women and the second leading cause of death in women in the United States. It is estimated that 207,090 women will be diagnosed with breast cancer and 39,840 women will die of cancer of the breast in 2010. NCI state that from 2004 to 2008, the median age at diagnosis for cancer of the breast was 61 years of age. Approximately 0.0% was diagnosed under age 20; 1.9% between 20 and 34; 10.2% between 35 and 44; 22.6% between 45 and 54; 24.4% between 55 and 64; 19.7% between 65 and 74; 15.5% between 75 and 84 and 5.6% for women with 85 years old and above (NCI, 2011).

2.3 Complementary Therapies

2.3.1 Definition of Complementary Therapies

A lot of researchers try to define the words of complementary therapies. There is no uniform, clear and specific definition of complementary therapies. This term usually refers to therapies that are used as an adjunct to conventional treatment (Verhoef & Hilsden et al., 1999). Other terms in use in the cancer literature include unproven, unorthodox, unconventional, ineffective and questionable therapies. These terms emphasize that many such therapies remain unproven by the standard scientific method. Complementary therapies also defined as it is a type of treatment that is administered together with the conventional methods by the medical world for treatment of a disease (Synder & Lindquist, 2001). Complementary therapy also refers to a group of therapeutic and diagnostic

disciplines that exist largely outside the institutions where conventional health care is taught and provided (Zollman, 1999).

2.3.2 Prevalence of the use of Complementary Therapies

The use of complementary therapies all over the world has increased dramatically in recent times and its use by the patients living with cancer is particularly common. These therapies usually come together with the conventional medical care to help them to manage the disease. There are a lot of study done in order to proved that almost all kinds of cancer were used the CTs such as prostate, lungs, colorectal, gynecological cancer and many more. From the study that was done by the Gulbeyaz, the bone cancer and urological cancer was the highest percentage (100%) of the CTs users in Turkey, followed by lung cancer (96.6%), and breast cancer was in third place (94.7%) (Gulbeyaz, 2009). However, there were difference results in the study done by the Ernst. In this study, the advance breast cancer was the highest percentage (73%) of the CTs used, followed by gynaecological cancer (50%) (Ernst, 2003).

There are a lot of misunderstanding exist surrounding the use of complementary therapies for patients with cancer. When these kinds of misunderstanding exist, it will prevent the patients from receiving these potentially beneficial treatments to help the patients to enhance their quality of life. From a study that was done by Stevensen and Kassab, they found that there are seven common misunderstanding regarding the CTs used. Almost all misunderstanding that were stated in this study happened in our community. These misunderstanding finally will result in decreasing of usage of CTs in our community. (Stevensen & Kassab, 1996).

2.3.3 Common types of Complementary therapies used

There are a lot of types of complementary therapies such as vitamin supplements, support groups, massage, meditation, diets, yoga, herbal remedies, juicing, Reiki, acupuncture, exercise, reflexology, homeopathy, art therapy, Tai chi, Chinese medicine, Dragon boating, Bach flower, Naturopathy, shark cartilage, prayer and many more. Every country has their own pattern of use these types of therapies. There are maybe the culture and beliefs are varies in each country.

From the study done in Australia, the highest complementary therapy used is vitamin supplement (54.2%). Then, followed by the support groups (49.8%), massage (41.4%), meditation (38.7%), diets (23.7%), yoga (21.8%), herbal remedies (18.7%), juicing (16.2%), Reiki (15.0%), acupuncture (13.7%), exercise (10.3%), reflexology (8.1%), homeopathy (7.5%), art therapy and Tai Chi (both 5.3%) (Kremser & Evans et al., 2008). Reiki is a Japanese word meaning Universal Life Energy, an energy which is all around us. Reiki will flow to the individual areas of need, soothing pain and supporting the body's natural ability to heal itself. Reiki is not a replacement for conventional medicine but can work alongside all other forms of treatment, both orthodox and complementary, to support and enhance their effects.

Another study was done to know the common complementary therapies that were used among breast cancer patient. Their result finding is the most common used is dietary therapies which are 26.6%, including megavitamins. Then, followed by spiritual healing (23.7%), herbal remedies (12.9%), physical methods (14.2%) and psychology methods (9.2%) (Tagliaferri & Cohen et al., 2001).

2.4 Complementary Therapies and Breast Cancer

Complementary therapies and breast cancer was a study that was done in Australian regarding the use of complementary therapies by Australian breast cancer women and the result is 87.5% had use the complementary therapies , with many using four or more therapies (Kremser & Evans et al., 2008). The breast cancer patient who used the complementary therapies after cancer diagnosis is 16.5% and only 8.7% used these therapies before (Crocetti & Crotti et al., 1998).

In Canadian women, breast cancer is a common malignant neoplasm, with a lifetime risk calculated as 1 in 9. The rate of breast cancer mortality in Canada is steadily declining due to the mammographic screening, early detection of the disease, and the improvement of the therapies (Boon, 2007). The local study was done regarding the risk factor of breast cancer in Kelantan including overweight, had family history of breast cancer and oral contraceptive pills (Norsa'adah & Rusli et al., 2005).

2.5 Perceptions towards Complementary Therapies among breast cancer patients

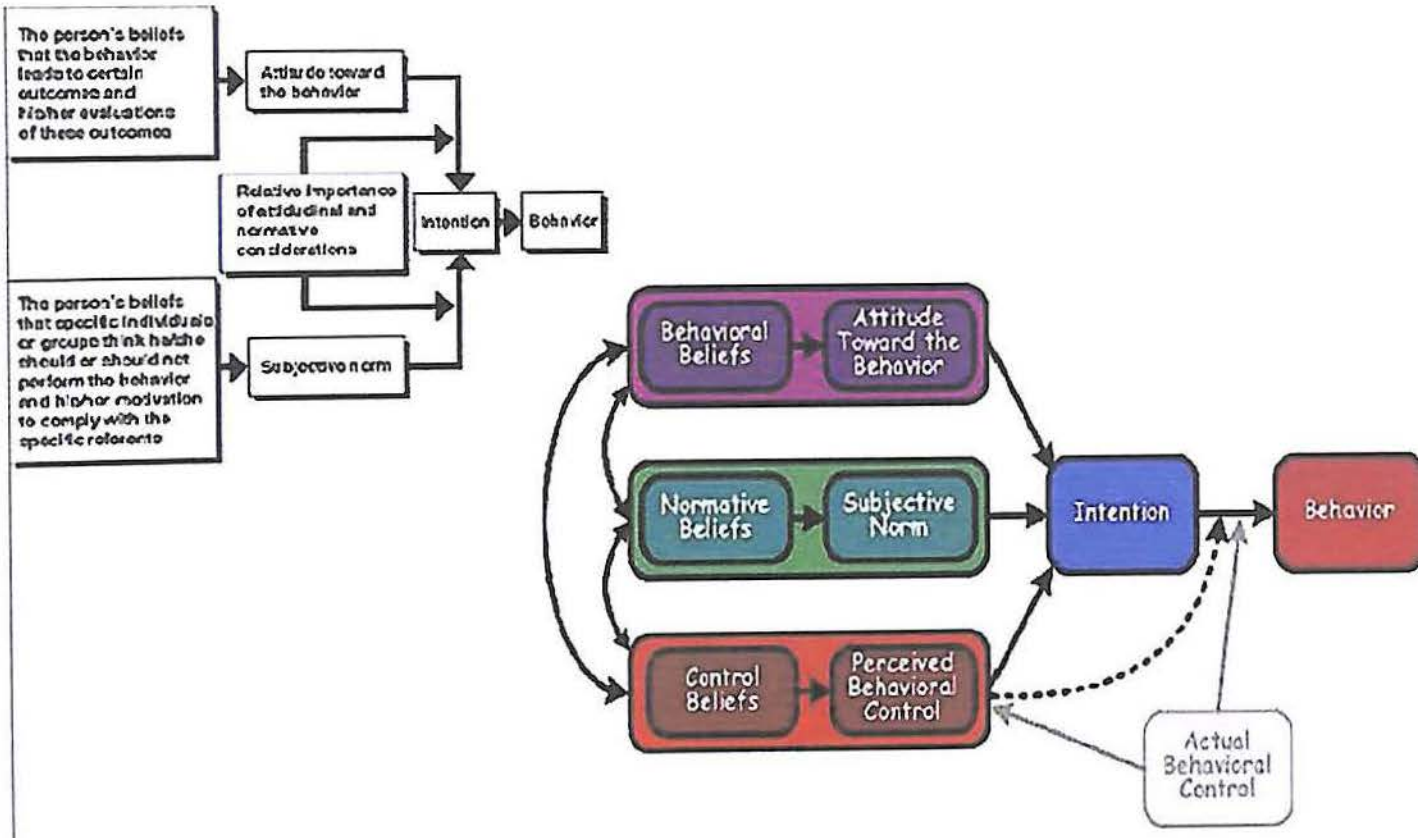
A variety of perceptions have been implicated as mediating variables in the decision to use CTs. The negative perceptions towards CTs may influenced by the lack of exposure regarding the effects of CTs towards their breast cancer. Another factor that will influence the perceptions towards CTs may due to the different culture and beliefs in each country.

Based on the study that was done by the H. Boon, M. Stewart, M.A. Kennard, R.Gray, C. Sawka, J.B. Brown, C. McWilliam, A. Gavin, R.A. Baron, D. Aaron, and T.H. Kamka in year 2000, they found that the CTs users believed that conventional cancer treatments were more likely than were CTs treatments to cure the cancer, prevent the spread of cancer, have side effects, weaken the body's natural reserves, prevent a recurrence of the cancer, and increase their quality of life. On the other hand, CTs users believed that CTs treatments were better at assisting the body's natural forces to heal, provided more of boost to the immune system, and were safer than conventional treatments (Boon et. al., 2000).

There was also other study that was done to determine the perceptions regarding the CTs towards their breast cancer treatment which is the study done by the L.G. Balneaves, L.J. Kristjanson and D. Tataryn in 1999. This study found that their respondents beliefs about conventional care and CTs. Rather than perceiving conventional medicine and CTs as being on opposite ends of the treatment spectrum, the majority of women held positive beliefs related to the outcomes of conventional care and the supportive nature of CTs. Although these beliefs did not appear to influence treatment decisions, their co-existence highlights the open-mindedness and flexibility with which women living with breast cancer consider multiple treatment options and choose those most relevant to their health care and support needs (L.G. Balneaves, et.al., 1999).

2.5 Theoretical Framework

In order to make a better understanding on how the breast cancer patient's belief about the complementary therapies, the theory of planned behavior will explain it. In this theory, Ajzen divided factor that induced ones behavior into three considerations. First are behavioral beliefs, second is normative belief and lastly is control belief. In behavioral beliefs, it will produce a favorable or unfavorable attitude towards the behavior. Then, the normative beliefs will result in perceived social pressure or subjective norm. The last one is control belief that will give rise to perceive behavioral. When these three components were combined, attitude toward the behavior, subjective norm, and perception of behavioral control lead to the formation of a behavioral intention (Ajzen, 1991). Below is a figure to describe this theory.



Ajzen, I. (1991). The theory of planned behavior.

Figure 2.1 The theory of planned behavior

This theory provides a conceptual framework in order to explain how the belief will lead to decision to use the complementary therapies. The theory of planned behavior will examine the association between the subject attitudes, subjective norms, intentions and behaviors. In this study, the positive response from the respondents towards the complementary therapies will be regarded as a behavioral intention. The positive response means that these respondents take at least one type of complementary therapies and used them in their life for a specific reason. When the respondents use it, they will consider show a positive response. Then, the behavioral intention is determined by the attitude towards the behavior and the subjective norm regarding that behavior. This attitude can be positive or negative. Attitudes reflect the participant's beliefs about the consequences of participating in the behavior, and evaluations of these consequences.

When a respondent believes that a specific complementary therapy will help them to improve their health status, the attitude towards that therapy is positive. The subjective norms also have an important role in order to make a decision. The subjective norms are the perceptions of what important others are perceived to think about a certain subject. For the example, if a respondent believes that significant others approve the choice to participate in a particular therapy, there will be a stronger intention to participate in the therapy. So, when the respondent beliefs about the benefits of the complementary therapy (behavioral beliefs) in addition that this respondent show a positive response towards the complementary therapy (attitude toward the behavior), this can lead to the intention and finally will result in behavior. Behavior means that if the respondent shows a positive response, they will result in positive behavior (respondent will use this therapy) and vice versa.

In this research, we only considered that the use of Complementary Therapies is a result from normative belief. The belief will be stronger when their mind influenced by their ancestors. So, the theory was modified and takes only the part of normative beliefs influence the perceptions and intention. Below is a figure of adapted theory of Planned Behavior:

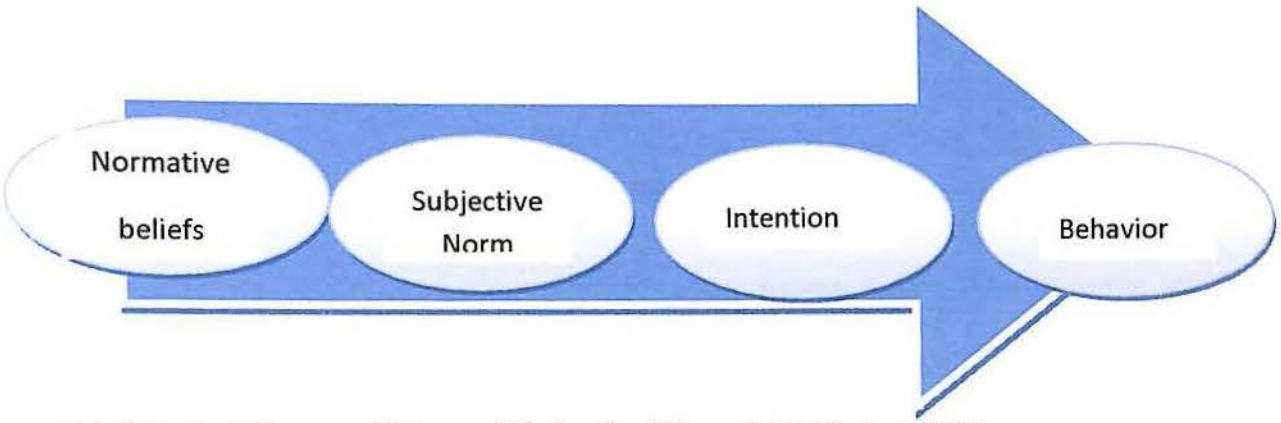


Figure 2.2 Adapted Theory of Planned Behavior (Ajzen & Fishbein, 1970)

CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter outlines methodology of the study. It includes description on the research design, population and setting, sample, and instrumentation. Issue of rigor, validity and reliability of the data collection, ethical considerations, method of data collection, analysis of the data and the expected outcomes also are discussed.

3.2 Research Design

The research design that was chosen for this study was quantitative and cross-sectional. The advantage of cross-sectional design was quick to carry out because the respondents will be only interviewed once. This design was very useful to measure the prevalence of the CTs use and also what were the common types of CTs used and the highest ranking of CTs practitioners visited by the respondents. This design used survey method via self-administered questionnaire.

3.3 Population and Setting

Population is defined as every individual whom the researcher wishes to make statements about (Atkinson, 1996). The populations of this study involved all stages of breast cancer patients who attend the surgery clinic at HUSM in Kelantan and also breast cancer patient that were admitted to surgical (3 Utara) and oncology wards (1 Timur Depan). HUSM was chosen because it was the centre for oncology treatment in east cost of Malaysia.

3.4 Sample

The samples were determined based on sample size calculation and sampling method as follows.

3.4.1 Sample Size

Objective 1: To determine the current proportion of CTs usage among breast cancer patients in HUSM.

The sample size for objective number 1 was calculated based on the proportions or prevalence using the following formula.

$$(1.96/\Delta)^2 p(1-p)$$

Δ=precision (0.05-0.08) and p=prevalence from journal.

From the journal by Suhaina Sulaiman entitled The Use of Complementary and Alternative Medicine Among Malay Breast Cancer Survivors, the prevalence of CTs user is 0.64. With the precision 0.08, the sample size would be:

= (1.96/0.08)2 p (1-p)

= (600.25) [0.64(1-0.64)]

=600.25 (0.2304)

=138.3

=138

So, the sample size for the objective number 1 is 138.

Objective 4: To determine the association between selected socio-demographic data and the patient's perceptions towards CTs usage.

The researcher used the Power and Sample size calculation (PS) software to calculate the sample size.

1) *Marital status*

By using the PS software with the control group, P_0 (patient who had breast cancer who still single but did not used the CTs) is 0.07, P1 is decided to be 0.45, and the sample size would be 20. This value we need to multiply by 4 because we had 4 groups which is single, married, divorced and widowed. So, the sample for marital status is 80.

2) *Educational level*

For educational level, the control group would be patient who has the university as the highest level of education that did not use the CTs is 0.14 and P1 decided to be 0.57. Then the samples are 18 and multiply with 4 due to 4 groups which are primary, secondary, diploma and degree. So, the sample size would be 72.

Based on the sample size that was calculated in each specific objective, the largest sample size was used to determine the sample size for this study. So, the largest sample size was 138. So, the sample size that was used in this study was 138 respondents.

3.4.2 Sampling Method

The sampling method that used in this study was the non-random method via purposive sampling. For this sampling method, only the samples that meet the criteria were selected. For this study, the samples that were diagnosed with breast cancer were required. The patient who did not diagnosed with breast cancer or unconfirmed got the breast cancer did not have the chance to be selected. This sampling method was selected because it is suitable for this study.

3.4.2.1 Inclusion and Exclusion Criteria

In conducting this research, certain inclusion and exclusion criteria for sampling are applied.

Inclusion criteria

1) Patients diagnosed at all stages of breast cancer.
2) Patients attend to HUSM clinic for follow up and also admitted to female surgical wards (3 Utara) and oncology wards (1 Timur Depan).
3) Have permission and volunteer to participate in this study.
4) Able to read and understand the Malay language.

Exclusion criteria

1) Patient undiagnosed as breast cancer.
2) Patient who are unconfirmed to have breast cancer.
3) Patient who did not attend the HUSM clinic and also not admitted to wards in HUSM.
4) Not willing to participate in this study.

3.5 Instrumentation

3.5.1 Instrument

The questionnaire used in this study was a questionnaire created by Dr.Heather Boon, et.al. in 2000. Their study entitled Use of Complementary/Alternative Medicine by Breast Cancer Survivors in Ontario: Prevalence and Perceptions. Prior used this questionnaire, the author permission was being obtained. This questionnaire was consists of 2 parts which is part A and part B. Part A is the respondent's information or known as socio-demographic data. In this part, the items that will be asked are respondent's name, age, occupation, when were their first diagnosed with breast cancer, stage of breast cancer, current marital status, level of education, and finally is current income.

Part B comprised of the use of complementary therapies. This part consists of four items which are the questions regarding the patient's experience of visiting the given practitioners. Next questions are the experience of using the a few types of complementary therapies. Third questions are the patient's perception regarding the reasons of CTs usage. There consisted of seven questions by using 4 point Likert Scale which is not agree (1 mark), slightly agree (2 mark), agree (3 mark) and strongly agree (4 mark). Last question in this part is the sources that patient get about CTs.

3.5.2 Measurement of variables

To determine the association between the selected socio-demographic data and the patient's perceptions towards CTs usage, independent variable was selected demographic data whereas the dependent variable is the patient's perceptions towards CTs. In order to measure the variables, the likert scale was used in the questions number3 in part B. While, the rest of the questions just need a response from the respondents either they used or not.

3.5.3 Translation of Instrument

The original English questionnaire build up from Heather Boon that is used in his research entitled Use of Complementary/Alternative Medicine by Breast Cancer Survivors in Ontario: Prevalence and Perceptions was translated into the Malay language because all the respondents were familiar with this language. They would be able to understand the instruction and easier to answer that questionnaire. Then, the translated questionnaire was validated by the three expertises of nursing lecturers before applied in pilot study.

3.5.4 Issue of Rigor, Validity and Reliability of the Data Collection Instrument

Regardless of the data collection method used, the researcher must strive to ensure the rigor of the process and ensure that the participants are treated ethically (Ary & Jacobs et al., 2009). In order to ensure that the respondents are treated ethically, the validity and reliability are important in the data collection instrument. The questionnaire was validated by the three nursing lecturers that are experts in the content of the questionnaire. To ensure the

reliability, the validated questionnaire will be pilot tested. This pilot test is important to know that the questionnaire is easy to answer or not. If that questionnaire is easy to answer, the questionnaire is reliable to conduct.

The pilot test was done by using the 30 respondents from the oncology wards and female surgical wards (1 Timur Depan and 3 Utara). From the reliability test by using the SPSS, the Cronbach's Alpha was 0.693. This shown that the respondents able to understood the questionnaire given. So, the questionnaire was reliable to use and there was no modification of the questionnaire.

3.6 Ethical Considerations

To protect the rights of participants, the guidelines of the Social and Behavioral Research Ethics (Human) Committee, Universiti Sains Malaysia will be fully observed. This study was conducted after the permission was granted by the Ethical Research Committee Healthy Campus, Universiti Sains Malaysia. The participants also were guaranteed that they will not get any risk and not to suffer from harm. Formal permission was taken from the sister of each ward in HUSM that are involved in the study. Then, for the participants, the verbal and written consent were taken from them before answering the questionnaire. All information which were gathered in this study will remain confidential and used for the purpose of academic research. All results of this study will belong to Universiti Sains Malaysia.