

**UNIVERSITI SAINS MALAYSIA**



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**THE PSYCHOLOGICAL WELL BEING OF  
BREAST CANCER PATIENTS RECEIVING  
CHEMOTHERAPY TREATMENT AT THE  
ONCOLOGY CLINIC OF HOSPITAL UNIVERSITI  
SAINS MALAYSIA  
(HUSM)**

by

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requirements for the degree  
of Bachelor of Health Sciences (Nursing)**

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**ABSTRACT**

Psychological status is one of the components of the patient's quality of life (QOL), therefore, it is important to determine the patient's psychological well being status since it is one of the indicators for the patient's QOL. Poor psychological well being could influence disease process and response to treatment. Therefore, it is important to supplement information regarding the psychological well being among breast cancer patients receiving chemotherapy treatment as chemotherapy itself would yield many distressing side effects. The objectives of this study are to determine the psychological well being status of breast cancer patients receiving chemotherapy treatment, to determine the association between the psychological well being status and the socio-demographic variables among breast cancer patients and to identify the relationship between the psychological well being status and the common side effects of chemotherapy treatment. This study is a quantitative and cross-sectional study. Sixty breast cancer patients that were receiving chemotherapy participated in this study. The instrument used is Psychological General Well Being Index with reliability alpha 0.959. Results from this study revealed that 56.7% of the subjects had poor psychological well being status and 43.3% had good psychological well being status. The findings showed a significant association between psychological well being status and the socio-demographic variables of age (0.00), marital status (0.04) and number of chemotherapy cycle (0.03). The findings also showed a significant relationship



between the psychological well being status and the common side effects of chemotherapy treatment (fatigue, alopecia and appetite alteration). As a conclusion, health care providers need to recognize certain socio-demographic factors such as age, marital status and number of chemotherapy cycle that affects the patient's psychological well being status and treatment that is most effective to prevent or treat the side effects of chemotherapy need to be determine to improve the patient's psychological well being status during chemotherapy treatment.

**KESEJAHTERAAN PSIKOLOGI PESAKIT KANSER PAYU DARA YANG  
MENDAPAT RAWATAN KEMOTERAPI DI KLINIK ONKOLOGI  
HOSPITAL UNIVERSITI SAINS MALAYSIA**

**ABSTRAK**

Status psikologi merupakan salah satu komponen yang dikaji dalam kualiti hidup pesakit. Oleh itu, adalah penting untuk menentukan status kesejahteraan psikologi pesakit kerana ia merupakan salah satu penentu kepada kualiti kehidupan pesakit. Kesejahteraan psikologi yang rendah akan mempengaruhi proses penyakit serta reaksi terhadap rawatan penyakit tersebut. Objektif kajian ini adalah untuk menentukan status kesejahteraan psikologi pesakit kanser payu dara yang mendapat rawatan kemoterapi, untuk menentukan perkaitan antara status kesejahteraan psikologi dan pemboleh ubah sosio-demografik di kalangan pesakit kanser payu dara dan untuk mengenalpsati perkaitan antara status kesejahteraan psikologi dan kesan sampingan yang biasa dialami semasa rawatan kemoterapi. Kajian ini merupakan kajian kuantitatif serta keratan lintang. Sebanyak 60 pesakit kanser payu dara yang sedang menjalani rawatan kemoterapi telah menyertai kajian ini. Instrumen yang digunakan dalam kajian ini adalah Indeks Psikologi Kesejahteraan Am yang mempunyai reliabiliti alpha 0.959. Hasil daripada kajian ini mendedahkan 56.7% daripada subjek mempunyai status kesejahteraan psikologi yang rendah dan 43.3% mempunyai status kesejahteraan psikologi yang baik. Hasil kajian ini juga menunjukkan terdapat perkaitan antara status kesejahteraan psikologi dan pemboleh-ubah sosio-demografik umur (0.00), status perkahwinan (0.04) dan bilangan kitaran kemoterapi (0.03). Selain itu, hasil kajian ini juga mendedahkan perkaitan antara

status kesejahteraan psikologi dan kesan sampingan yang biasa dialami semasa rawatan kemoterapi (keletihan, keguguran rambut dan perubahan selera makan). Sebagai kesimpulan, ahli-ahli professional kesihatan harus mengenal pasti faktor-faktor sosio-demografik seperti umur, taraf perkahwinan dan bilangan kitaran kemoterapi yang boleh mempengaruhi status kesejahteraan psikologi pesakit. Selain itu, kaedah rawatan yang paling efektif untuk merawat atau menghindari kesan sampingan rawatan kemoterapi harus ditentukan agar dapat meningkatkan status kesejahteraan psikologi di kalangan pesakit kanser payu dara semasa menjalani rawatan kemoterapi.

# **CHAPTER 1**

## **INTRODUCTION**

### **1.1 Background of The Study**

Breast cancer is a malignant tumor that has developed from the cells of the breast and it is the most common cancer among women worldwide (Goldman & Hatch, 2000). In the United States, breast cancer is the number one cause of death due to cancer among women. In 2004, 186,772 women were diagnosed with breast cancer and 40,954 women died from breast cancer (National Cancer Institute, 2007). In Malaysia, breast cancer is the most common cancer that affects women and it also rated the highest mortality caused by cancer. In the second report of the National Cancer Registry: Cancer Incidence in Malaysia (2003), the incidence of breast cancer among women in Malaysia was 31.0%. The high mortality rate of breast cancer also contributed to the 10.3% of medically certified death due to cancer, which were the fourth leading deaths in Malaysia after diseases of the circulatory system, accidents, poisonings and violence and diseases of the respiratory system (Lim, 2002).

One of the important treatments for breast cancer was chemotherapy. Benefit of chemotherapy to breast cancer patients was either a curative or palliative. However chemotherapy was often associated with many negative side effects such as nausea and vomiting, hair loss, fatigue, pain, anxiety, depression and others (Smeltzer & Bare, 2004). Most of the chemotherapy side effects were perceived by the patients as distressing and many were anxious during the treatment. Both the disease and its treatment can disrupt

the lives of the women and adversely affect their quality of life (Mulders, Vingerhoets & Breed, 2008).

Quality of life (QOL) is a term that incorporates several domains of patients' lives including the physical, psychological, social and familial. QOL is a multidimensional construct that included physical health status, psychological well-being, social and cognitive functioning and impact of disease as well as treatment based on patients' life experiences (Rabin, Heldt, Hirakata & Fleck, 2008). The diagnosis of breast cancer was a particularly stressful experience for women. The disease itself and its chemotherapy related symptoms can alter a woman's QOL.

The experience of undergoing chemotherapy affects the patients physically and psychologically. For example, chemotherapy-induced nausea and vomiting affects the patient physically by altering the patient's food intake which causes weight loss and consequently high risk factor for malnutrition (Bergkvist & Wengstrom, 2006). Chemotherapy-induced alopecia affects the patient's physical appearance and consequently impaired the patient's self-esteem and body image (Frith, Harcourt & Fussell, 2007).

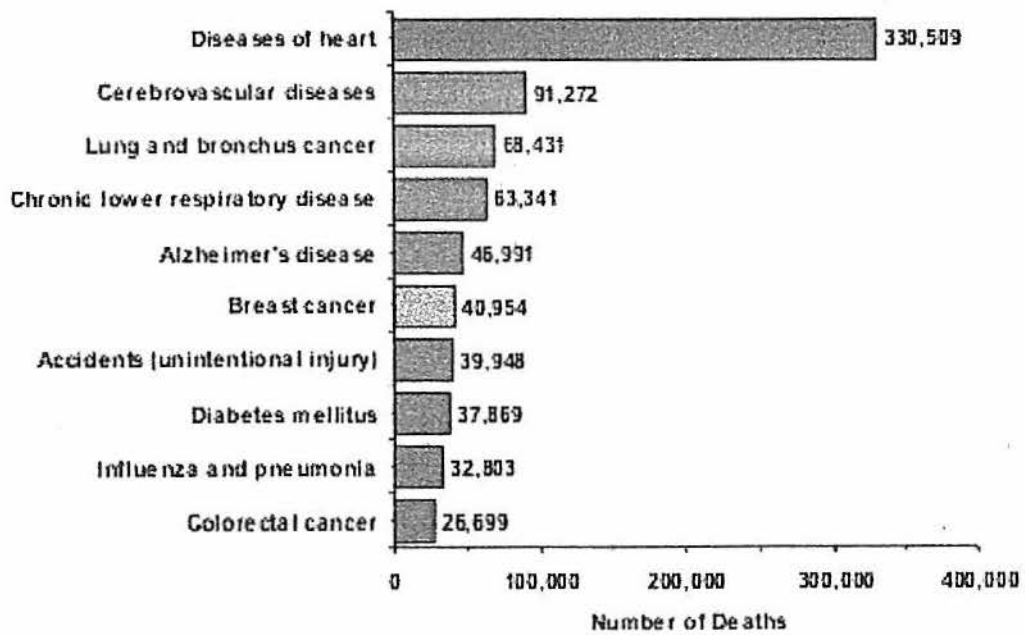
Experience of chemotherapy affects the patients psychologically by causing needle- anxiety as demonstrated by Cox and Fallowfield (2007) where 37.5% breast cancer patients in her study reported feeling anxious about intravenous injections. Development of chemotherapy-related needle anxiety not only impacts on a patient's quality of life but can delay or prevent future medical care (Cox & Fallowfield, 2007). Chemotherapy-induced fatigue is a highly prevalent condition among cancer patients undergoing chemotherapy and patients described fatigue as the most distressing

symptoms (Miller, Maguire & Kearney, 2007; Wu & McSweeney, 2007). The finding of Kim, Hickok and Morrow (2006) showed a positive significant of association between fatigue and depressive symptoms at each cycle of chemotherapy treatment. Fatigue and depression were common in cancer patients undergoing chemotherapy but only a few studies were available on depression in breast cancer patients (Kim, Hickok & Morrow, 2006; Miller, Maguire & Kearney, 2007; Wu & McSweeney, 2007). Apart from that, information available on the psychological status among breast cancer patients was lacking especially in Malaysia. According to Montazeri (2008), the most frequently reported outcomes in the bibliographic review of the breast cancer patients literature from 1974 to 2004 were health-related quality of life (54%), followed by economic analyses (38%) and patient satisfaction (14%).

Psychological status was one of the components of the patient's quality of life, therefore, it was important to determine the patient's psychological status or psychological well being since psychological status was one of the indicators for the patient's QOL (Ganz, Greendale, Peterson, Kahn & Bower, 2003). The poor psychological well being itself could influence disease process and response to treatment as proposed by Bianchi, Marchessini, Nicolino, Graziani, Sgarbi, Loguercio, Abbiati and Zoli (2005). Therefore, it was important to supplement information regarding the patient's psychological well being among breast cancer patients receiving chemotherapy treatment as chemotherapy itself would yield many distressing side effects that would effects the patient's quality of life.

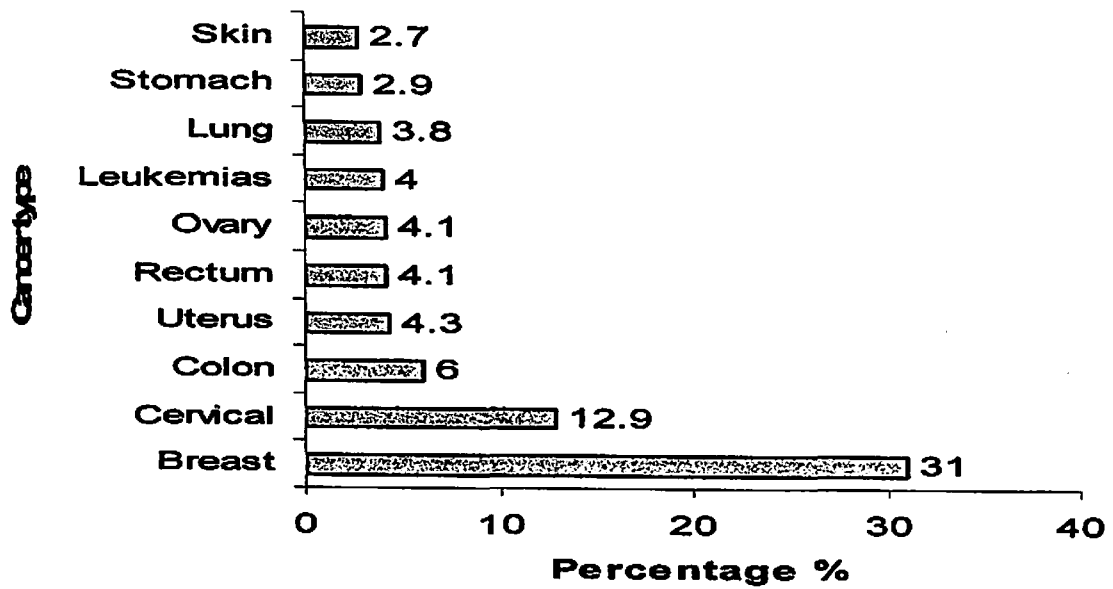
QOL of a patient can be affected by socio-demographic variables and it will also affect the patient's psychological well being. Age, marital status, level of education,

employment status and socioeconomic status were the important demographic characteristics that had been found to be associated with a women's QOL (Freihat, 2005). Therefore it was crucial to identify the relationship of the socio-demographic variables and the patient's psychological status to improve the patient's QOL.



(National Cancer Institute, 2007)

Figure 1.1: Top 10 Causes of Death for Women in United States 2003



(Second Report of the National Cancer Registry: Cancer Incidence in Malaysia, 2003)

Figure 1.2: Top 10 Cancer for Women in Malaysia 2003

## 1.2 Problem Statements

In HUSM, the trends of the incidence of breast cancer diagnosed among women were increased yearly from 2002 to 2005. According to Medical Unit Record of HUSM (2008), the number of patients diagnosed with breast cancer in 2002, 2003, 2004, 2005, 2006, 2007 and 2008 (Jan-Aug) were 46, 66, 113, 136, 134, 117 and 124 respectively. According to the Nuclear, Radiotherapy and Oncology Medical Department of HUSM (2008), the number of cancer patients receiving chemotherapy treatment at oncology clinic in 2006 and 2007 were 743 and 1098 respectively. Among the cancer patients receiving chemotherapy, there were 325 patients in 2006 and 594 patients in 2007 were breast cancer patients. The chemotherapy was given in the day care centre in oncology



clinic which were handled by trained nurses under the supervision of the oncology specialist. Within this 2 year, there was increased in the number of breast cancer patients receiving chemotherapy. Therefore there will be more patients experiencing the negative side effects of chemotherapy. According to Mulders, Vingerhoets and Breed (2008), quantification of the impact of patients' experiences may be considered an indication of their quality of life.

Cancer patient's experience of undergoing chemotherapy had increased the exposure to the negative side effects during chemotherapy treatment which affects the patients physically and psychologically. Affective disturbance in terms of anxiety and depression during the chemotherapy treatment had become the resources that psychologically affect the patients' quality of life.

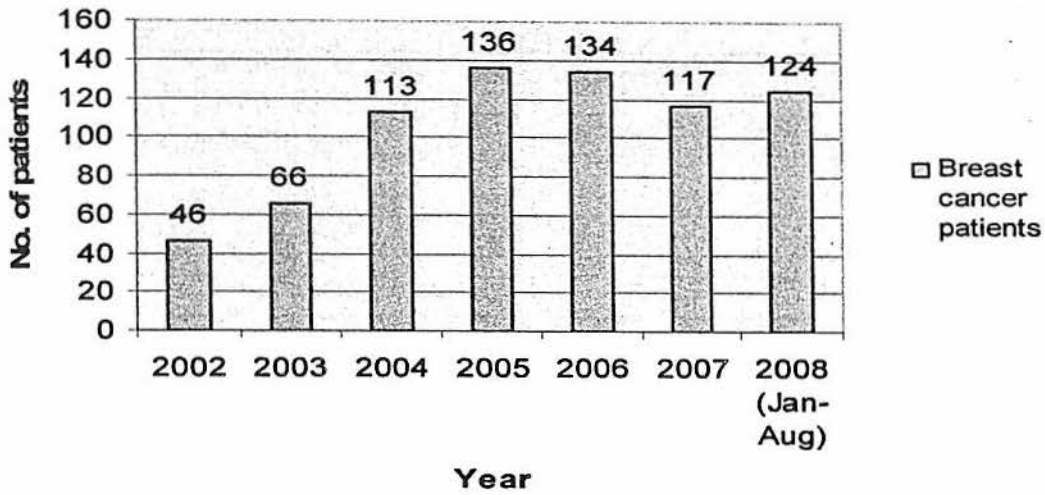
The study of Cox and Fallowfield (2007) revealed that chemotherapy experience increased the state of anxiety levels among the patients undergoing chemotherapy treatment, which was related to chemotherapy-related needle anxiety. In addition, the data suggested that patients with lower BMI and internal health locus of control were more likely to report needle anxiety (Cox & Fallowfield, 2007).

In the qualitative study conducted by Bergkvist and Wengstrom (2006) which was aimed to acquire a deeper understanding of cancer patients experiences on nausea and vomiting during chemotherapy, the informants were also included their experiences of being diagnosed with cancer and the relief of starting treatments. The time before diagnosis and start of treatment was filled with worries about what would happen and lack of control. Some women felt that it was a very long and excruciating period and it was so psychologically and physically hard. The days before the treatment were a

stressful period and some of the informants experienced anxiety. The psychological reactions to chemotherapy treatment were perceived as strong from the first cycle of chemotherapy (Bergkvist & Wengstrom, 2006).

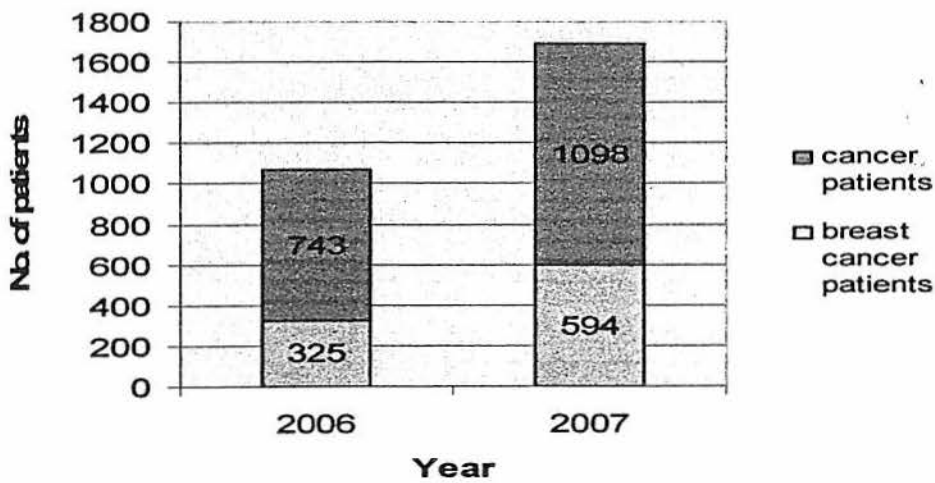
The QOL of breast cancer patients receiving chemotherapy treatment in western populations had been extensively investigated and their psychological well beings were assessed too (Montazeri, 2008). In contrast, not much information exists regarding the QOL of breast cancer patients receiving chemotherapy in Malaysian Women. In HUSM, previous research done by Yong (2006) provided information regarding the patient's quality of life among breast cancer patients receiving chemotherapy in oncology clinic, HUSM. However, data regarding the number of patients that were anxious and depressed during chemotherapy as well as the patient's psychological well being was lacking.

It was important to know the psychological well being of breast cancer patients receiving chemotherapy since chemotherapy was known to have many distressing side effects. The physical well being of the patients can be seen and noticed by health care provider but their psychological well being cannot be seen by others. Poor psychological well being will affect the patient's quality of life. This information would help health professionals to plan the management strategies that would make the patient's psychological well being better or maintain so that breast cancer patients could have good quality of life during chemotherapy treatment.



(Medical Record Unit, HUSM, 2008)

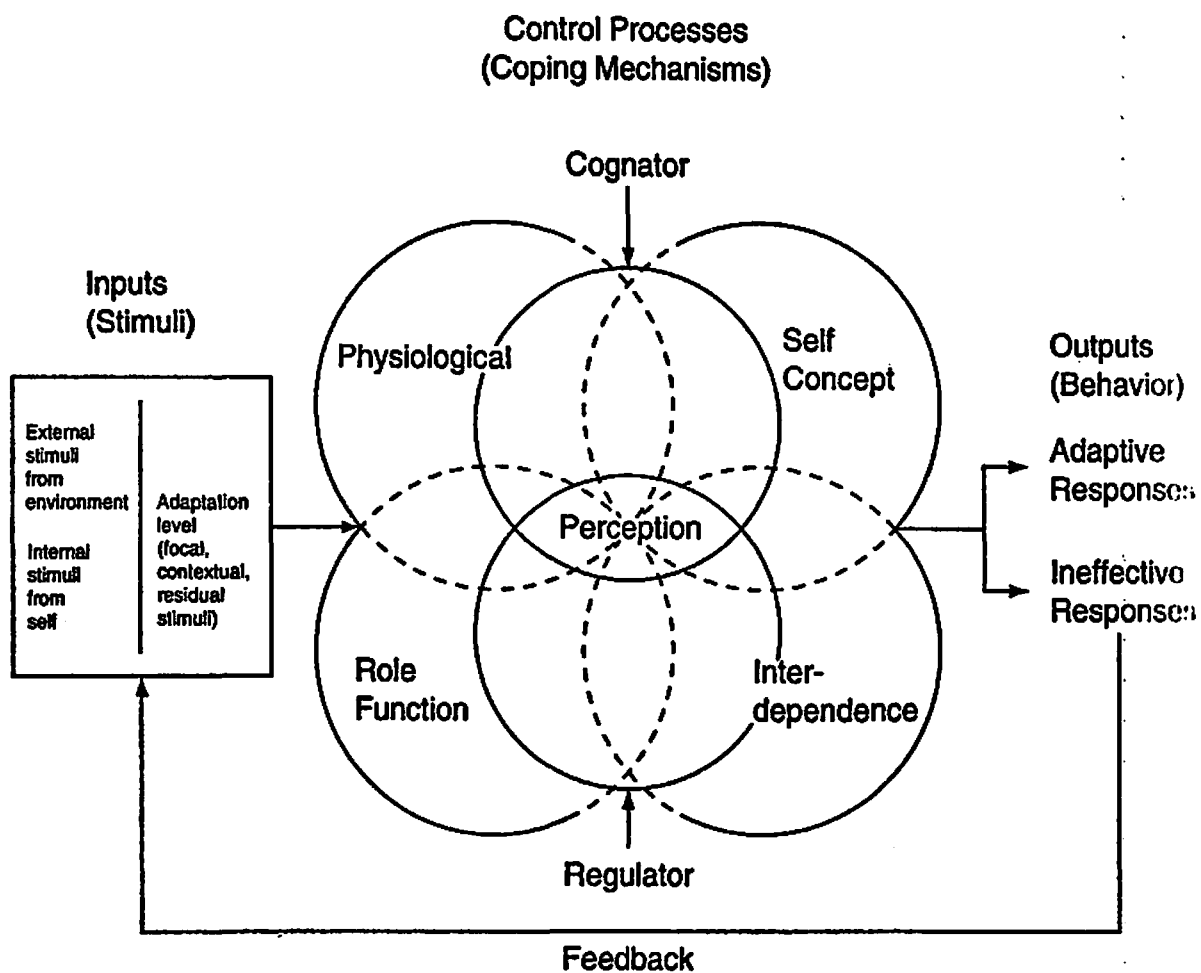
Figure 1.3: Number of Patients Diagnosed with Breast Cancer in HUSM from 2002-2008 (Jan-Aug)



(Nuclear, Radiotherapy and Oncology Medical Department, HUSM, 2008)

Figure 1.4: Number of Cancer Patients Receiving Chemotherapy Treatment in Oncology Clinic, HUSM

The Roy's Adaptation Model of Nursing was used to explain the researcher's theoretical framework which was shown in figure 1.5. The explanations of the model were done in chapter 2.



(Adapted from Roy & Andrews, 2003)

Figure 1.5: The Roy's Adaptation Model of Nursing

### **1.3 Objectives of the study**

General objective was to determine the psychological well being of breast cancer patients receiving chemotherapy treatment at the oncology clinic HUSM.

#### **1.3.1 Specific objectives:**

- 1) To determine the psychological well being status of breast cancer patients receiving chemotherapy treatment.
- 2) To determine the association between the psychological well being status and the socio-demographic variables among patients with breast cancer.
- 3) To identify the relationship between the psychological well being status and the common side effects of chemotherapy treatment.

### **1.4 Research Questions**

- 1) What is the psychological well being status of breast cancer patients receiving chemotherapy treatment?
- 2) Is there any association between the psychological well being status and the socio-demographic variables among patients with breast cancer?
- 3) Is there any relationship between the psychological well being status and the common side effects of chemotherapy treatment?

### **1.5 Hypothesis**

$H_0$  - There is no association between the psychological well being status and the socio-demographic variables among patients with breast cancer.

**H<sub>A</sub>** - There is an association between the psychological well being status and the socio-demographic variables among patients with breast cancer.

**H<sub>O</sub>** - There is no relationship between the psychological well being status and the common side effects of chemotherapy treatment.

**H<sub>A</sub>** - There is a relationship between the psychological well being status and the common side effects of chemotherapy treatment.

At the 5% level of significance, all H<sub>O</sub> is rejected if  $p < \alpha$  (0.05).

Independent variables are

- Socio-demographic variables
- Common side effects of chemotherapy treatment

Dependent variables are

- Psychological well being status

## **1.6 Definition of Terms**

### **1.6.1 Socio-demographic variables**

Socio-demographic variables were variables that described the standard feature or vital statistics of a population. It was operationally defined as age, marital status, level of education, employment status and socioeconomic status (Freihat, 2005).

### **1.6.2 Common side effects of chemotherapy treatment**

The three most common side effects of chemotherapy treatment among cancer patients that receiving chemotherapy treatment in oncology unit, HUSM as identified by Yong (2006) were fatigue (60%), alopecia (54%) and appetite alteration (50%).

### **1.6.3 Psychological well being**

Psychological well being was the representations of intrapersonal affective or emotional states reflecting a sense of subjective well being or distress (Revicki, Leidy & Howland, 1996).

### **1.7 Significance of the Study**

The finding of this study would contribute to the followings: Health care professional such as nurses would gain more insight and become more aware on the psychological well being of a breast cancer patients receiving chemotherapy. With this awareness, it was hoped that nurses could plan the management strategies that would make the patient's psychological well being better or maintain so that breast cancer patients would have good quality of life during chemotherapy treatment.

One of the objectives of this study was to determine the relationship between the psychological well being status and the socio-demographic variables among patients with breast cancer, by knowing its relationship, nurses could identify which socio-demographic variables that could influence the patient's psychological well being most. This information may help nurses to plan an action to help the patient manage or overcome the socio-demographic factors that affects their psychological well being.

Another objective was to identify the relationship between the psychological well being and the common side effects of chemotherapy treatment. The findings of this objective may help the nurses to determine which chemotherapy side effects that affect the patients' psychological well being most. Therefore, nurses could use this information

to take a measurement to reduce or prevent the occurrence of the chemotherapy side effects that will be experienced by the patient.

This finding would also provide a basis for further research in the psychological health status among breast cancer patients receiving chemotherapy. For example, the finding of the third objective in this study would give information related to the relationship between the psychological well being status and the common side effects of chemotherapy treatment. With this information, nurses could conduct a further research to identify what treatment or strategies that can be useful or most effective to improve the psychological well being of a breast cancer patients that was most affected by the common side effects of chemotherapy treatment.

Furthermore the finding in this study would contribute to the knowledge in the oncology nursing education. For example, a patient education for breast cancer patients should include the relationship of their psychological well being status and the common side effects of chemotherapy treatment so the patients could have adequate information regarding the side effects of chemotherapy and how it would affect them. With this information, the patients could prepare themselves before experiencing the side effects and this may reduce their anxiety level.