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**THE NEEDS ASSESSMENT OF HOSPITALIZED
CANCER PATIENTS' UNDERGOING
CHEMOTHERAPY AT ONCOLOGY WARDS OF
HOSPITAL UNIVERSITY SAINS MALAYSIA
(HUSM)**

BY

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TABLE OF CONTENT

LIST OF TABLES.....	vi
LIST OF FIGURES.....	vii
LIST OF ABBREVIATIONS.....	viii
ABSTRACT	ix
ABSTRAK.....	x
CERTIFICATE	xii
ACKNOWLEDGEMENT	xiii
DEFINITION OF KEY TERMS	xiv

CHAPTER 1 INTRODUCTION	1
1.1 Introduction	1
1.2 Background of the Study	1
1.3 Rationale for the Study.....	5
1.4 Problem Statement.....	6
1.5 Purpose of the Study	8
1.6 Aims of the Study.....	9
1.6.1 General Objective	9
1.6.2 Specific Objectives	9
1.7 Research Questions.....	9
1.8 Research Hypothesis.....	10
1.9 Significance of the Study.....	11

CHAPTER 2 LITERATURE REVIEW	12
2.1 Introduction	12
2.2 Needs assessment	12
2.3 Importance of Need Assessment of Cancer Patients	14
2.4 Cancer patients undergoing chemotherapy	15
2.5 The needs of chemotherapy patients.....	18
2.5.1 Psychological needs	19
2.5.2 Health system and information needs.....	19
2.5.3 Patient care and support needs	20
2.5.4 Physical and daily living needs	20
2.5.5 Sexuality needs	21
2.6 Definition of Terms : Conceptual/Operational	22
2.6.1 Needs assessment	22
2.6.2 Hospitalised cancer patients undergoing chemotherapy.....	23
2.6.3 Oncology wards	23
2.6.4 Chemotherapy	24
2.7 Theoretical and Conceptual Framework	25

CHAPTER 3 METHODOLOGY & METHODS	28
3.1 Introduction	28
3.2 Research Design.....	28
3.3 Population and Setting	28
3.4 Sample.....	29
3.5 Instrumentation	35
3.5.1 <i>Instrument</i>	36
3.5.2 <i>Measurement of Variables</i>	37
3.5.3 <i>Translation of Instrument</i>	38
3.5.4 <i>Issue of Rigor, Validity and Reliability of the Data Collection Instrument</i>	39
3.6 Ethical Considerations	41
3.7 Data Collection Methods	41
3.8 Data Analysis.....	43
3.9 Expected Outcome.....	44
CHAPTER 4 RESULTS	45
4.1 Introduction	45
4.2 Sociodemographic Data	45
4.3 Domain of needs	47
4.3.1 <i>Health system and information needs</i>	48
4.3.2 <i>Psychological needs</i>	51
4.3.3 <i>Physical and daily living needs</i>	53
4.3.4 <i>Patient care and support needs</i>	54
4.3.5 <i>Sexuality needs</i>	55
4.4 Preliminary Data (Checking Assumption).....	56
4.5 Significant difference between different genders needs level of hospitalised cancer patients undergoing chemotherapy.....	57
4.6 Significant difference between needs level of hospitalized cancer patients undergoing chemotherapy and different aged groups.....	58
CHAPTER 5 DISCUSSION	60
5.1 Demografic data.....	60
5.2 Domain of needs	61
5.2.1 <i>Health system and information needs</i>	62
5.2.2 <i>Psychological needs</i>	64
5.2.3 <i>Physical and daily living needs</i>	65
5.2.4 <i>Patient care and support needs</i>	66
5.2.5 <i>Sexuality needs</i>	67
5.3 Significant difference between gender and needs level of hospitalised cancer patients	68
5.4 Significant difference between different aged group and needs level of hospitalised cancer patients undergoing chemotherapy	70

CHAPTER 6 CONCLUSION AND RECOMMENDATIONS.....	72
6.1 Introduction	72
6.2 Conclusion	72
6.3 Strengths and Limitations	73
6.4 Recommendations	74
6.4.1 <i>Nursing Practice</i>	74
6.4.2 <i>Nursing Education</i>	75
6.4.3 <i>Nursing Research</i>	75
6.5 Contribution to the Theory Development.....	76
REFERENCES	78
APPENDIXES	82
APPENDIX 1 - PATIENT CONSENT FORM.....	82
LAMPIRAN 1 - BORANG KEIZINAN PESAKIT	84
APPENDIX 2 - RESEARCH INFORMATION FOR PATIENT	86
LAMPIRAN 2 - MAKLUMAT KAJIAN BAGI PESAKIT	90
APPENDIX 3- QUESTIONNAIRE	94
LAMPIRAN 3- SOAL SELIDIK.....	99
APPENDIX 4- ETHICAL APPROVAL LETTER.....	104
APPENDIX 5- HOSPITAL APPROVAL LETTER	106
APPENDIX 6 – GANTT CHART OF THE STUDY	109
APPENDIX 7– PERMISSION FOR USING SCNS-SF34.....	111

LIST OF TABLES

Table		Pages
Table 3.1	Specific question and its domain of needs	37
Table 4.1	Socio-demographic characteristics among chemotherapy patients	46
Table 4.2	Mean score, median and standard deviation of domain of needs among cancer patients undergoing chemotherapy at oncology wards, HUSM (n=73)	47
Table 4.3	Mean, standard deviation and range of needs level for health systems and information needs	48
Table 4.4	Mean, standard deviation and range of needs level for psychological needs	51
Table 4.5	Mean, standard deviation and range of needs level for physical and daily living needs	53
Table 4.6	Mean, standard deviation and range of needs level for patient care and support needs	54
Table 4.7	Mean, standard deviation and range of needs level for sexuality needs	55
Table 4.8	Kormogorov-Smirnov test and Shapiro-Wilk test for the data distribution	56
Table 4.9	Independent T test result presentation of hospitalised cancer patients undergoing chemotherapy in HUSM	57
Table 4.10	One way ANOVA test result presentation of hospitalised cancer patients undergoing chemotherapy in HUSM	58

LIST OF FIGURES

Figure		Page
Figure 1.1	Hospitalised cancer patients undergoing chemotherapy in HUSM (2010)	3
Figure 1.2	Hospitalised cancer patients undergoing chemotherapy in HUSM (2011)	4
Figure 2.1	Maslow Hierarchy of Needs Theory	25
Figure 2.2	Conceptual framework adapted from Maslow Hierarchy of Needs Theory (Maslow, 1970)	27
Figure 3.1	Flow Chart of Data Collection	42

LIST OF ABBREVIATIONS

CHOP	-	Cyclophosphamide, Doxorubicin, Vincristine, and Prednisone
HUSM	-	Hospital Universiti Sains Malaysia
SCNS-SF34	-	Supportive Care Needs Survey-Short Form
SPSS	-	Statistical Package for Social Sciences
USM	-	Universiti Sains Malaysia

ABSTRACT

Determined the need of hospitalized cancer patients undergoing chemotherapy is crucial in order to provide a holistic nursing care. From the researcher knowledge, there have been no published studies to determine the needs of hospitalized cancer patients undergoing chemotherapy in Malaysia. The aim of this study was to assess the needs of hospitalised cancer patients undergoing chemotherapy at oncology wards of Hospital Universiti Sains Malaysia (HUSM). Significant difference between gender and different aged groups towards needs level also was determined. A cross sectional survey on cancer patients undergoing chemotherapy (n=73) at oncology wards of HUSM was done by using a self-administered structured questionnaire. Data was analyzed using the Statistical Package Social Science (SPSS) software version 19.0. From this study population (n=73), 39 were male (39%) and 34 were nurses (46.6%). The Independent T-test had been performed. However, from the finding, there were no significant difference ($t(71) = 1.91, p = 0.060$) was found between male (mean = 87.74, S.D.= 13.52) and females (mean = 80.53, S.D. = 14.19) in terms of their needs level. The finding suggests that there are no sex differences in the level of needs for the hospitalized cancer patients that undergoing chemotherapy. Result finding from One way ANOVA showed that, the needs level among the six aged group were significantly different $F(5,67) = 3.16, p = 0.01$. Since the probability of error is < 0.05 , the null hypothesis is rejected. The mean score for group 31-40 years was the lowest compared to the other aged group. Therefore, the patients within the aged 31 to 40 years had the lowest needs level. While the mean score for group 61-70 years ($M=90.27, S.D = 8.40, n=22$) was the highest compared to the others aged group. The finding show that hospitalized cancer patients undergoing chemotherapy among the aged 61 to 70 years had the highest needs level.

ABSTRAK

Mengenalpasti keperluan pesakit kanser yang dihospitalisasi dan menjalani kemoterapi sangat penting dalam memberi perawatan yang menyeluruh. Dalam pengetahuan penyelidik, tidak terdapat kajian yang diterbitkan dalam mengenalpasti keperluan pesakit kanser yang dihospitalisasi dan menjalani kemoterapi di Malaysia. Matlamat kajian ini adalah untuk mengenalpasti keperluan pesakit kanser yang dihospitalisasi dan menjalani kemoterapi di wad onkologi, Hospital Universiti Sains Malaysia (HUSM). Kaitan antara jantina dan kumpulan umur yang berlainan dengan tahap keperluan pesakit telah dikenalpasti. Satu tinjauan ke atas pesakit kanser yang menjalani kemoterapi ($n=73$) di wad onkologi, HUSM telah dijalankan dengan menggunakan soalan soal-selidik. Maklumat tersebut telah dianalisis menggunakan Pakej Statistik Sains Sosial (SPSS) versi 19.0. Berdasarkan populasi yang dikaji, ($n=73$), terdapat 39 pesakit lelaki (39%) dan 34 pesakit perempuan (46.6%). *Independent T-test* telah dijalankan. Walaubagaimanapun, berdasarkan keputusan kajian, tidak terdapat perbezaan yang signifikan ($t(71) = 1.91$, $p = 0.06$) antara pesakit lelaki (mean = 87.74, S.D. = 13.52) dan pesakit perempuan (mean = 80.53, S.D. = 14.19) dalam konteks tahap keperluan mereka. Hasil kajian tersebut menunjukkan tidak terdapat perbezaan jantina dalam konteks tahap keperluan pesakit kanser yang dihospitalisasi dan menjalani kemoterapi. Keputusan kajian *One way ANOVA* pula menunjukkan tahap keperluan antara enam kumpulan umur adalah berlainan secara signifikan $F(5,67) = 3.16$, $p = 0.01$. Oleh sebab kemungkinan ketidaktepatan adalah < 0.05 , hipotesis nul telah ditolak. Skor min bagi kumpulan umur 31-40 tahun adalah paling rendah berbanding kumpulan yang lain. Oleh itu, pesakit dalam lingkungan umur 31 hingga 40 memerlukan tahap keperluan untuk pertolongan yang rendah. Manakala, skor min bagi kumpulan umur 61-70 tahun

($M=90.27$, $S.D =8.40$, $n=22$) adalah paling tinggi. Hasil kajian tersebut menunjukkan pesakit kanser yang dihospitalisasi dan menjalani kemoterapi dalam lingkungan umur 61 hingga 70 memerlukan tahap keperluan untuk pertolongan yang tinggi.

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DEFINITION OF KEY TERMS

- | | |
|----------|---|
| Cancer | - “A group of diseases where normal cells change into abnormal cells that grow out of control, invade surrounding tissues and organs, and may spread to distant sites in the body (metastases)” (Amgen, 2011). |
| Infusion | - “A process of delivering medications, fluids, or blood products into the body through the bloodstream. A needle is used to gain access through a vein, and a catheter with tubing is used to deliver the fluid” (Amgen, 2011). |
| Regimen | - “A plan of treatment, including doses, scheduling, and duration of treatment” (Amgen, 2011). |
| Stage | - “Staging is a method of determining the extent of the cancer, or how far the disease has spread. The stage is determined after performing a series of diagnostic tests, which may include x-rays, CT/CAT scans, and sometimes surgery. Knowing the stage of the cancer will help your doctor decide the best treatment course” (Amgen, 2011). |

CHAPTER 1 INTRODUCTION

1.1 Introduction

This chapter consists of background of the study, rationale for the study, problem statement, purpose of the study, aims of the study, research questions, research hypothesis and the significant of the study. This study is all about the needs assessment of the hospitalised cancer patients' undergoing chemotherapy at the oncology wards of Hospital Universiti Sains Malaysia (HUSM). This study is important as nowadays, there is increase number of cancer patients undergoing chemotherapy. Therefore, the study had been focused only on cancer patients who undergo chemotherapy as a target group.

1.2 Background of the Study

World Health Organization (WHO), defines cancer as a generic term for a large group of diseases that can affect any part of the body. Other terms used are malignant tumours and neoplasms. One defining feature of cancer is the rapid creation of abnormal cells that grow beyond their usual boundaries, and which can then invade adjoining parts of the body and spread to other organs. This process is referred to as metastasis.

In 90's the highest prevalence of cancer is in North America, with 1.5% of the population above age 15 affected by the disease. This corresponds to over 3.2 million individuals affected. Cancer prevalence in developed countries is very similar in men and women. On average, in developed countries 0.3% (309 and 287 every

100,000 men and women, respectively) of the adult population is undergoing treatment for cancer, 0.5% is under clinical follow-up and 0.4% is in remission (Pisani, Bray, & Parkin, 2002).

The cancer site that had high prevalent in both high and low income countries is breast cancer in female. Breast and gynaecological cancers account for 52% of prevalent cases in women in both high- and low income countries. Breast cancer account for 35% of the cases followed by 7% for endometrium, 6% cervix and 4% ovarian cancer (Pisani, Bray, & Parkin, 2002). The second most prevalent site is prostate cancer with overall 220 cases per 100,000 population diagnosed within 5 years and representing about 10% of all prevalent cases in men. For men in developing countries, the stomach is the single most common site (13%) followed by lung (10%) and colorectal cancer (9%) (Pisani, Bray, & Parkin, 2002).

There were various treatments for cancer. However, the most common one was chemotherapy. There were a lot of patients undergoing chemotherapy throughout the world. According to Barrett et al (2000), there were data and record of 2719 patients receiving 3206 courses of cytotoxic chemotherapy in United Kingdom. Among these number of patients, 878 had breast cancer, 856 had cancer of ovary, 772 had lung cancer and 213 had cancer of testis.

In Malaysia, the probability that a Malaysian will get cancer in his or her life time is 1 in 4 people (Lim, et al., 2002). In addition, the chemotherapy became one of the common treatments chosen by cancer patients. The total number of cancer

patients undergoing chemotherapy in Hospital Universiti Sains Malaysia for example, had increase each year.

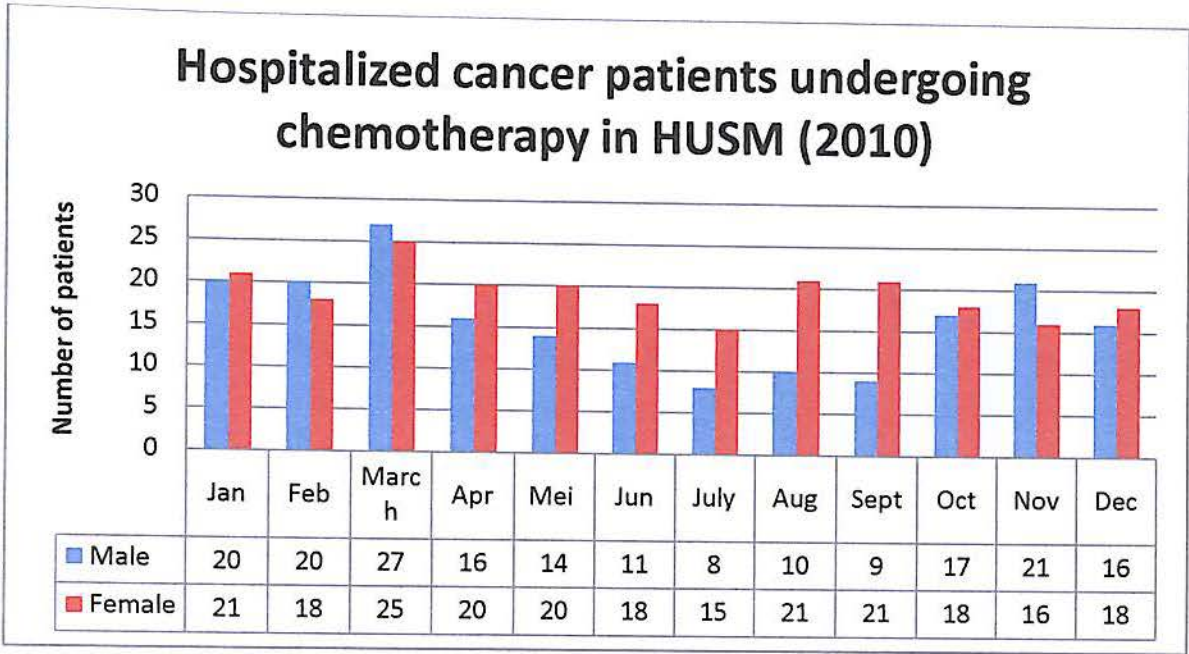


Figure 1.1 : Hospitalised cancer patients undergoing chemotherapy in HUSM (2010).

Sources : Medical Record Unit, HUSM

Based on data obtained from Medical Record Unit, Hospital Universiti Sains Malaysia (2011), in 2010 the total numbers of hospitalized cancer patients receiving chemotherapy were 420 patients. There were almost equal numbers of male and female patients receiving chemotherapy for an inpatients setting as shown in figure 1.1. However, the total number for female patients in that year was higher compared to the number of male patients, with the number of 231 female compared to 189 male.

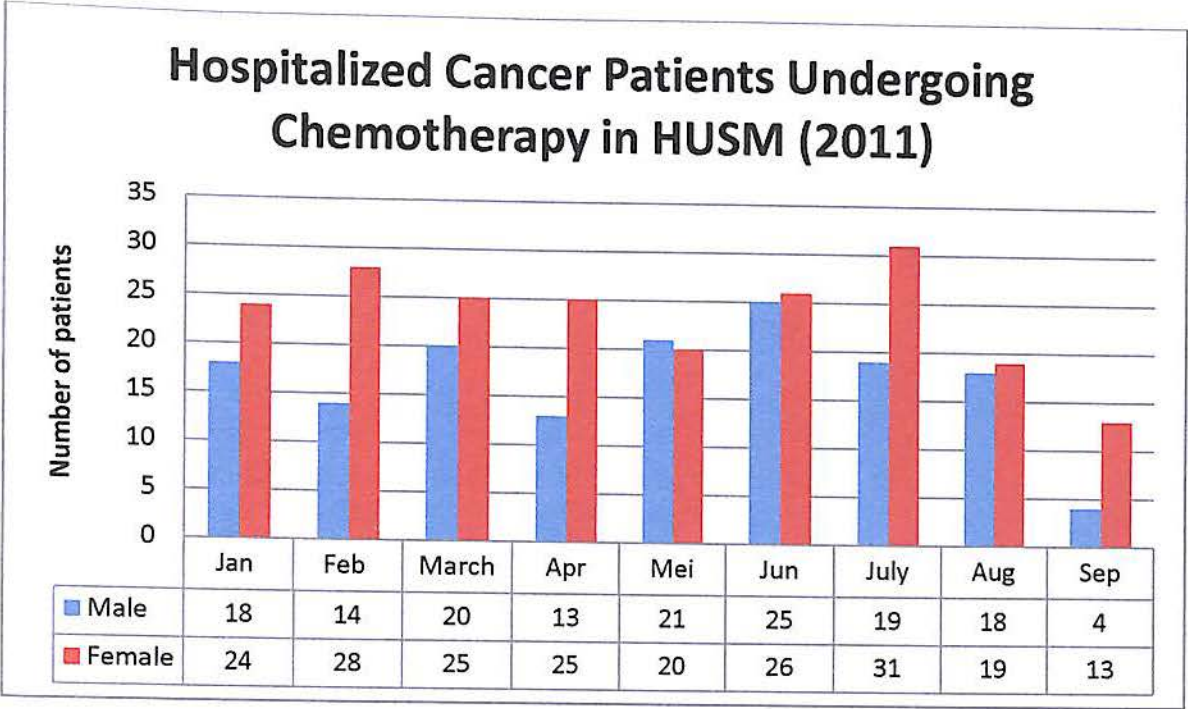


Figure 1.2 : Hospitalised cancer patients undergoing chemotherapy in HUSM (2011)

Sources : Medical Record Unit, HUSM

In 2011, the data are available only from January until September due to the time frame of the study. In 2011, the total number of hospitalised female patients receiving chemotherapy also higher compare to male patients with the total number of 211 female and 152 male patients. Figure 1.2 show the number of hospitalized cancer patients undergoing chemotherapy in Hospital Universiti Sains Malaysia (HUSM) starting from January to September 2011.

Recent research said that meeting the needs of patients with any type of cancer is an important aspect for their satisfaction with care and possibly their quality of life (Walker, 2003). However, it was impossible to occur without understanding and identification of patient needs. Once those needs were identified, appropriate intervention can be implemented.

1.3 Rationale for the Study

The assessment of the needs of cancer patients' undergoing chemotherapy was important in order to plan and implement appropriate interventions. Needs assessments directly assess and identify specific issues for patients, as well as the perceived magnitude of those needs (Afaf, 2010). Needs assessment enables patients with higher levels of needs to be identified and targeted with appropriate early interventions.

In this study, hospitalised cancer patients at oncology wards had been selected rather than outpatients setting due to several reasons. First, inpatients were more dependent and need help from health care providers, especially nurses. Thus, identifying their needs can lead to improvement in their care. Second, hospitalised cancer patient may have less family support or social needs. Therefore, identifying their social needs can prevent and reduce any serious consequences.

This study was crucial as nowadays, chemotherapy was one of the common treatments for cancer patients. Determination of their needs was important in order to provide holistic nursing care. Furthermore, as there was no published data available on Malaysian hospitalised cancer patients' undergoing chemotherapy needs exists, thus it led the researcher to conduct this study. Since limited data existed, a survey was considered necessary.

1.4 Problem Statement

Although numbers of cancer patients undergoing chemotherapy are increasing each year, studies that focusing on the needs of cancer patients undergoing chemotherapy are lacking particularly in the local context. Many studies on the needs of cancer patients were conducted to find the needs of the cancer patients in general. These included studies done by Bonevski (2000), Tamburini (2000), Boyes et.al (2009) and Whelan (1997). Therefore, little is known about the needs of chemotherapy patients. Meanwhile, literature reveal that chemotherapy patients frequently faced with many problems related to adverse effect of the chemotherapy (Barrett, 2000 & Burtrend, 2002).

Study done by Tamburini (2000), had been evaluated the informative, psychological, social and practical needs of Hospitalized cancer patients by means of the Needs Evaluation Questionnaire (NEQ). The aim of the study was to assess cancer patients in general and does not focus on cancer patients undergoing chemotherapy as the target group. Meanwhile, other study focus on the specific types of cancer and focus on certain types of cancer patients. For example, study done by Steginga, et al. (2001) assessed the supportive care needs of men with prostate cancer.

Based on Kuang (2004), most of health care providers, especially nurses are unable to identify patient's needs. This can be due to the beliefs that certain problem cannot be avoid with cancer or that nurses do not wish to address them as evidenced by the absence of their inquiry and concern required to develop a meaningful dialog (Kuang, 2004).

Besides that, patient's needs may be different according to their condition, disease and treatment being received. Unable to identify patients needs, will soon result in poor nursing care. Therefore, there is growing interest in improving needs assessment (Richardson, et al., 2007). Needs assessments are required in order to guide care planning.

In addition, there was lacking of assessment related to patients needs by the health care providers, especially nurses particularly in the wards and clinics. According to the Claire (2007), the issues patients most want help with may not be the issues that health care professionals feel most able to address. Therefore, it will soon result in poor nursing care as the patients' needs were unable to identify. The possible consequences include worsening of symptom and condition as the study done by Snyder et.al (2008), stated that there were several consistent relationships among symptoms, supportive care needs and function.

1.5 Purpose of the Study

The main purpose of this study was to assess the needs of cancer patients undergoing chemotherapy based on five aspects of needs. The aspects include psychological needs, health system and information needs, patient care and support needs, physical and daily living needs, and sexuality needs. The arrangement domain of needs was important to be identified. According to the Harrison et.al (2009), effective and high quality cancer care was currently viewed as involving more than just the delivery of anti-cancer therapy. Instead, the health care providers were required to address patients' needs.

Besides that, this study also had been identified possible gender differences in the needs of cancer patients undergoing chemotherapy for an inpatient setting. It is important as health care providers can provide care and give more attention to the group with high level of needs.

In addition, the significant different between the needs and different aged group also had been determined. It is important to identify patient's needs in order to provide supportive care and ensure their satisfaction with their care. Patient-centred care is now recognised as a benchmark of quality care for people who are affected by chronic condition such as cancer (Harrison, et al., 2009).

1.6 Aims of the Study

1.6.1 General Objective

The general objective of this study was to assess the needs of hospitalised cancer patients undergoing chemotherapy at oncology wards of Hospital Universiti Sains Malaysia (HUSM).

1.6.2 Specific Objectives

- To identify the needs of hospitalised cancer patients undergoing chemotherapy at oncology wards of HUSM
- To determine the significant difference of needs level between different genders of hospitalised cancer patients undergoing chemotherapy.
- To identify the significant difference between needs level of hospitalised cancer patients undergoing chemotherapy and different aged group.

1.7 Research Questions

- What are the needs of hospitalised cancer patients undergoing chemotherapy in oncology wards of HUSM?
- What is the significant difference of needs level between different gender of hospitalised cancer patients undergoing chemotherapy?
- What is the significant difference between needs level of hospitalised cancer patients undergoing chemotherapy and different aged group?

1.8 Research Hypothesis

1. H_0 : There is no significant difference of needs level between gender of hospitalised cancer patients undergoing chemotherapy

H_A : There is a significant difference of needs level between different gender of hospitalised cancer patients undergoing chemotherapy

2. H_0 : There is no significant difference between needs level of hospitalised cancer patients undergoing chemotherapy and different aged group.

H_A : There is a significant difference between needs level of hospitalised cancer patients undergoing chemotherapy and different aged group.

1.9 Significance of the Study

Significant of this study can be described in terms of nursing knowledge, nursing practice and nursing research. First and foremost, in nursing knowledge, this study may provide additional knowledge to all health care providers including nurses. The result from this study soon will provide information to the nurses about the needs of hospitalised cancer patients undergoing chemotherapy. Lacking of knowledge about patient's condition and needs will result in poor nursing care (Lemone & Burke, 2008).

Secondly, is the significant of the study in nursing practices. Since assessment is an important element in nursing care, this study is crucial in providing a holistic nursing care for hospitalised cancer patient undergoing chemotherapy. Assessment is the first step followed by nursing diagnosis, planning, implementation and evaluation (Lemone & Burke, 2008). Therefore, identify patients needs may improve patients quality of life and soon will improve their satisfaction.

Thirdly, is the significant of the study in nursing research. This study will provide information about the needs of hospitalised cancer patients undergoing chemotherapy. Furthermore, it will also determine the association of the needs between different gender and different aged group. Although this study only focus on chemotherapy patients as a target group, it will give an initial platform for further identification of patients needs in various conditions as there is no similar study done in Malaysia before. Therefore, it will give a guideline in order to manage cancer patient that receiving chemotherapy.

CHAPTER 2 LITERATURE REVIEW

2.1 Introduction

In this chapter, the literature review consist of the needs assessment, chemotherapy treatment, cancer patients undergoing chemotherapy, the needs of chemotherapy patients, definition of terms, theoretical framework and conceptual framework.

2.2 Needs assessment

Needs assessments gave several numbers of advantages. According to Billie (2000), the benefit of needs assessments are as followed. First, they enable direct assessment of patients' perceived needs for help. Second, they allow the identification of the magnitude of need for help. Therefore, it will give benefit for the nurses in order to manage the patients. During planning of the nursing care, the prioritization for certain patients can be determined. Third, needs assessment enables the identification of patients with higher level of needs. Therefore, the complication or consequences can be prevented through appropriate early intervention.

Research on the needs of patients with cancer had identified high levels needs and a difference in the types of needs depending on the cancer population studied. For example, high levels of information needs have been reported in studies with mixed cancer patients, breast carcinoma patients, and melanoma patients (Newell, 1999). Other studies of cancer patients undergoing treatment for cancer have reported high levels of physical or daily living needs.

Recently, several tools and instruments had been developed in order to systemize the assessment of needs experienced by patients for help, care and support. These including Needs Evaluation questionnaire (NEQ) that being develop by Tamburini (2000), Supportive Care Needs Survey Long Form (SCNS-LF54) that being develop by Bonevski (2000), Supportive Care Needs Survey Short Form (SCNS-SF34) that being develop by Boyes et al (2009) and Sheffield Profile for Assessment and Referral to Care (SPARC) that being developed by Ahmedzai (2004). However, in this study, the researcher will used SCNS-SF34 in order to identify the needs of hospitalised cancer patients undergoing chemotherapy.

SCNS-SF34 was chosen by the researcher as the questionnaire was a valid tool for assessing the needs of patients with cancer. Broad domains of needs as well as the specific issues faced by different group of cancer patient also can be determined. In addition, the questionnaire was simple and easily to use in clinical practice as it was quick to be completed. In other words, it reduced the burden for the cancer patient. Furthermore, based on Boyes et.al, (2009) the Cronbach alpha coefficient was exceed 0.8 in all domains and item-to-total score correlation coefficients for all items exceed 0.55.

2.3 Importance of Need Assessment of Cancer Patients

Most of the non hospitalized cancer patients may experience unmet needs for a variety of reasons, the most frequent of which is caregiver burden, that is, family and friends have been overwhelmed by the increasingly complex and demanding requirements of caring for a seriously ill patient (Christ & Siegel, 1990). Therefore, as demands of the illness increase and grow more complex, caregivers experience greater difficulty coping with the patient's needs.

The most common barriers to deliver services for non hospitalised cancer patients were their lack of information about the services that exist and their inability to obtain help from others (Christ & Siegel, 1990). Less common barriers were the patient's reluctance to accept assistance, limited financial resources that made the patient unable to pay for the needed assistance, or insurance that did not provide coverage for the assistance.

On the other hand, hospitalised cancer patients receiving chemotherapy for the treatment of cancer may require certain needs. According to Aistars (1987), chemotherapy patient may become fatigue that may arise as a result of the disease, the chemotherapeutic drugs employed, or as a result of the psychological distress generated through their diagnosis. Therefore, it is important for the health care providers to determine their needs in order to provide holistic care for them.

There are several reasons related to unidentified patient's needs. The nurses may be unable to capture accurately what patients are trying to tell them or may be

due to inadequate assessment. This can be due to the beliefs that certain problem cannot be avoid with cancer or that nurses do not wish to address them as evidenced by the absence of their inquiry and concern required to develop a meaningful dialog (Kuang, 2004). As a result of inadequate understanding of patient needs, patients will experience the consequences.

2.4 Cancer patients undergoing chemotherapy

Most cancer patients now undergo various treatments such as the surgical removal of the cancer, radiotherapy, chemotherapy, and hormone therapies. Although these treatments have the potential to cure some cancers, and to prolong the lives of patients with other cancers, they are associated with a wide range of physical and psychosocial problems.

Chemotherapy may be given through an intravenous and doctor may suggest an implanted vascular access device (VAD), such as an implanted catheter or port. VADs are surgically placed in a large vein near the heart and can stay in place for long periods of time (Amgen, 2011). Chemotherapy was given in cycles, with rest periods between the cycles. A cycle can be last one or more days and the cycle are given every 1, 2, 3, or 4 weeks. It all depends on the treatment regimen that prescribes by doctor.

Chemotherapy is given to the cancer patients due to several purposes. According to Murray et al (2007), the chemotherapy was given for neoadjuvant, primary therapy, adjuvant, and palliative therapy. Neoadjuvant refer to treatment to shrink tumours and reduce the need for major surgery such. Meanwhile, primary therapy is the sole treatment for haematological malignancies. While, adjuvant is to reduce the chance of relapse such as in breast and bowel cancers. Lastly, palliative is the treatment to provide relief from symptomatic metastatic disease and possibly to prolong survival.

Besides of its benefit, chemotherapy also had their adverse effect. For example, according to Fisher (1993), Cyclophosphamide, Doxorubicin, Vincristine, and Prednisone regime (CHOP) had causes 1% of the patient experienced fatal toxicity and an additional 31% developed grade 4 life threatening toxicities. In addition, CHOP has also been associated with anxiety, rash, and decreased sexual interest (Uyl-de Groot, 1995).

According to research done by Czuczman and Dallaire (1999), most of the adverse events were attributed to CHOP chemotherapy compare to other regime. According to Sonneveld (1995), CHOP regimen is the standard of treatment for younger and elderly patients with cancer. As for the oncology wards of HUSM for example, CHOP regime of chemotherapy, is quite common.

Therefore, more comprehensive services should be provided to all cancer patients at any stage of their illness. The term supportive care in oncology has traditionally been used to describe dimension that directly support patients'

anticancer therapy, such as antiemetics, transfusion, and antibiotics, or the care of symptomatic patients with advanced disease (Whelan, et al., 1997). It was important to determine and planning supportive care strategies for hospitalized cancer patients undergoing chemotherapy.

In addition, supportive care can be defined as care ‘that helps the patient and their family to cope with cancer and treatment of it, from pre-diagnosis, through the process of diagnosis and treatment, to cure, continuing illness or death into bereavement (Richardson, et al., 2007). Therefore, it helps the patient to maximize the benefits of treatment and to live as well as possible with the effects of the disease. The broad aspects of need addressed by supportive care include physical, emotional, spiritual, environmental, social, sexual, financial and cultural (Richardson, et al., 2007).

2.5 The needs of chemotherapy patients

Cancer patients may require certain needs that should be identified. The needs include psychological, health system and information, patient care and support, physical and daily living, sexuality needs and so on. Example of psychological well being may include depression, anxiety, adjustment to illness, coping, fear, self esteem, life satisfaction, body image and sexuality (Richardson, et al., 2007). On the other hand, example of social are partner relationships, family relationship, coping with children, ability to carry out hobbies, interests and leisure activities (Richardson, et al., 2007).

According to Christ & Siegel (1990), women reported more unmet needs than men. On the other hand, widowed, divorced, and separated individuals reported more unmet needs than either married or single patients. In addition, nonwhites reported more unmet needs than whites. More unmet needs were also reported by patients with lower incomes, patients living alone, patients with a diagnosis of breast cancer; and patients reporting more symptoms (Christ & Siegel, 1990).

On the other hand, needs for the older cancer patients were reported slightly higher compared to the younger patients (Sanson-Fisher, et al., 2000). This is due to the aging process and declining in body function (Orem, 1991). Therefore, needs assessment was really importance in providing nursing care towards these group of patients.

2.5.1 *Psychological needs*

Cancer patients receiving chemotherapy may also require psychological needs as a result of complication and side effect of chemotherapy. Communication, staff attitude and empathic behaviour had great significance to the patient's psychological wellbeing. Unfortunately, ignorance of psychological needs appears common towards cancer patients. Poor communication among oncology nurses can be seen by avoidance, poor appreciation of patients' needs and a small amount of information giving.

A literature on the psychological support role of the oncology nurses concluded that a low level of attention is generally given to the social and psychological aspects of illness. This is particularly worrying in the chemotherapy context, as the experience is associated with a range of psychosocial problems such as anxiety and depression. The side effect of the chemotherapy such as hair loss also may be resulted in low self esteem due to disturbance in body image and may soon develop other serious consequences if their needs being continuously neglected.

2.5.2 *Health system and information needs*

It is undoubtedly that information about the disease, treatment, complication and other related information had been considered important for cancer patients. Being diagnose with cancer may result in uncertainty, fear, and loss that can be alleviated by information. Research has indicated that the vast majority of cancer patients want to be informed about their illness (Meredith, et al., 1996)

On the other hand, lacking of information regarding treatment being received and its complication also may also result in fear and stress. According to Graydon (1997), information about treatment may include information on various cancer treatments, how they work, how they are performed, sensations that may be experienced and possible side effects. Research done by Tamburini (2000), reveal that most of the cancer patients wanted to know more about their future condition, diagnosis, examination and treatment, with the result of 74%, 56%, 52%, and 51% respectively.

2.5.3 *Patient care and support needs*

Hospitalised cancer patients undergoing chemotherapy may also require patient care and support needs. Receiving chemotherapy treatment in the ward required social needs such as support from family members and nurses due to prolong time of hospitalization. In nurses' perspective, these include drug administration and management of side-effects (Tanghe, et al., 1994). Effective management of side-effects is important to both the patient's quality of life and to compliance. Patient's compliance is determined by the patient's ability to cope, which is largely influenced by the support provided by health care providers, especially nurses.

2.5.4 *Physical and daily living needs*

According to the research that had been done previously, at least 70% of patients receiving chemotherapy experience abnormal levels of fatigue (Nail, et al., 1991). Fatigue will be altered patients' capacity for self-care (Fernsler, 1986). Self-

care can be defined as the range of activities that individuals personally initiate and perform on their own behalf to maintain life, health and wellbeing (Orem, 1991). Tiredness and weakness are the two symptoms which interfered most with patients' lives. Therefore, patients will need help and assistant in order to perform their activity of daily living (ADL).

2.5.5 *Sexuality needs*

Patients ages 31–70 years were more likely to report need for help compared with those ages 71–90 years, but those ages 18–30 years did not significantly differ in their reported of needs compare to those ages 71–90 years. (Sanson-Fisher, et al., 2000). Younger people age 31–70 years may be more amenable to disclosing such needs, in contrast with older adults, who may believe that they should be able to cope and hence keep their needs more private.

On the other hand, women were significantly more likely to report some need for help than men (Sanson-Fisher, et al., 2000). Patients who received only chemotherapy or only immunotherapy in the last month were significantly more likely to report sexuality needs than patients who received more than one type of treatment (Sanson-Fisher, et al., 2000). According to Boyes, et al. (2009) it is not expect any differences in mean scores on the sexuality domain between patients in remission and patients not in remission.

2.6 Definition of Terms : Conceptual/Operational

2.6.1 *Needs assessment*

Needs can be defined as the requirement of some action or resource that is necessary, desirable, or useful to attain optimal well-being (Sanson-Fisher, et al., 2000). In addition, needs assessments directly assess and identify specific issues of need for patients, as well as the perceived magnitude of those needs (Billie, 2000). In this study, needs of hospitalised cancer patients on chemotherapy are assessed from five domain of needs.

Based on Christ & Siegel (1990), patients were defined as having “No Need” if they could independently perform a particular activity and say they did not need help. Patients were defined as having a “need” if they could not perform a particular activity independently. “Met Need” referred both to people who could not perform the activity independently, but who had sufficient assistance available, as well as to people who said they had never performed the activity, but that someone else had always done it for them as part of the household division of labor.

On the other hand, “unmet Need,” referred to people who could not perform the activity independently. They may already have had some help but needed more, or they may have attempted to perform the activity independently but reported needing help and not having it.

2.6.2 *Hospitalised cancer patients undergoing chemotherapy*

In this study, hospitalised cancer patients are referred to patients that had been diagnosed with cancer and admitted at oncology ward of HUSM for their treatment. The cancer patients include various types and stage of cancer.

This study aimed to determine the need of hospitalised cancer patient undergoing chemotherapy at the oncology wards of HUSM. In this study, chemotherapy included various regime of chemotherapy. Since needs can be viewed from a variety of perspectives, in this study, hospitalised cancer patient needs had been assessed based on five perspectives by using Supportive Care Need Survey-Short Form (SCNS-SF34). The needs referred to psychological needs, health system and information needs, patient care and support needs, physical and daily living needs, and sexuality needs.

2.6.3 *Oncology wards*

In this study, oncology wards referred to the wards that provide treatment for cancer patients including chemotherapy and other related treatments. The wards referred to 1 Timur Depan and 3 Selatan.

2.6.4 *Chemotherapy*

According to Medical Dictionary for Health Sciences and Nursing (2008), chemotherapy can be defined as treatment of disease by means of chemical substances or drugs. It involves the use of cytotoxic medications to cure some cancers, to decrease tumour size, adjunctive to surgery, and prevent or treat metastasis. In this study, chemotherapy is referred to various regime of chemotherapy.

‘Chemotherapy can be given in a variety of time arrangements, such as daily, weekly, or monthly. Chemotherapy is generally given in cycles. A cycle can last 1 or more days but usually lasts 2, 3, or 4 weeks.’ (Amgen, 2011). In this study, the hospitalised cancer patients on chemotherapy may receive several cycle of chemotherapy depending on their cancer.