

**PREVALENCE OF APPETITE LEVEL AND
QUALITY OF LIFE AMONG HOSPITALIZED
ELDERLY PATIENTS IN MEDICAL AND
SURGICAL WARDS AT HOSPITAL UNIVERSITI
SAINS MALAYSIA (HOSPITAL USM)**

by

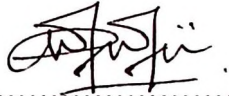
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**Dissertation submitted in partial fulfilment of the
requirements for the degree of
Bachelor of Health Sciences (Nursing)**

June 2013

DECLARATION

I certify that this thesis does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.



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CERTIFICATE

This is to certify that the dissertation entitled “**Prevalence of Appetite Level and Quality of Life among Hospitalized Elderly Patients in Medical and Surgical at Hospital Universiti Sains Malaysia**” is the bona fide record of research work done by Nur Hashamimi Binti Hashim, Matric Number 105145 during the period of September 2012 until June 2013 under my supervision. This dissertation is submitted in partial fulfillment for the degree of Degree of Bachelor of Sciences (Health) Nursing. Research work and collection of data belong to Universiti Sains Malaysia.

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LIST OF ABBREVIATIONS

1. Hospital USM = Hospital Universiti Sains Malaysia
2. SNAQ = Simple Nutritional Appetite Questionnaire
3. SPSS = Statistical Package Social Science
4. WHO = World Health Organization

**PREVALENCE OF APPETITE LEVEL AND QUALITY OF LIFE AMONG
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WARDS AT HOSPITAL UNIVERSITI SAINS MALAYSIA
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ABSTRACT

Prevalence of poor appetite may reflect the functional activities and quality of life among elderly. Elderly need to have a better quality of life in order to continue their life without any barriers that could effects their performance in continuation of life events. The aim of this study was determines the association between level of appetite and quality of life among hospitalized elderly patients in Hospital USM. The total 100 respondents who were admitted in medical and surgical ward in Hospital USM were studied. Self administered questionnaire used in this study was Simple Nutritional Appetite Questionnaire (SNAQ) and WHOQOL-BREF, which were distributed by purposive sampling method. The data was analyzed by using Statistical Package for Social Science (SPSS) software version 20. By using Pearson Chi-Square Test and Fisher's Exact Test, the finding showed no significant association between levels of appetite and quality of life among hospitalized elderly patients ($p>0.950$). Therefore, the overall results show the prevalence of poor appetite with moderate quality of life shows higher (75%) rather than good appetite (25%). As a conclusion, prevalence of poor appetite is higher in elderly patients. Thus, more study is needed to overcome the problem to improve their quality of life.

**PREVALENS TERHADAP TAHAP SELERA MAKAN DAN KUALITI
HIDUP DALAM KALANGAN PESAKIT WARGA EMAS DI WAD
MEDIKAL DAN SURGIKAL DI HOSPITAL UNIVERSITI SAINS
MALAYSIA
(HOSPITAL USM)**

ABSTRAK

Prevalens kurang selera makan akan dapat mempengaruhi aktiviti seharian dan kualiti hidup warga emas. Warga emas perlu mempunyai kualiti hidup yang bagus dalam meneruskan kehidupan seharian tanpa sebarang halangan yang boleh memberi kesan kepada mereka untuk meruskan aktiviti dalam kehidupan seharian. Tujuan utama kajian ini dijalankan ialah untuk mengenalpasti hubungan antara tahap selera makan dengan kualiti hidup dikalangan pesakit warga emas di Hospital USM. Seramai 100 orang responden yang berada di wad medikal dan surgikal di Hospital USM dipilih. Borang soal selidik yang berstruktur telah digunakan dalam kajian ini adalah WHOQOL-BREF and *Simple Nutritional Appetite Questionnaire* (SNAQ) yang diagihkan kepada responden melalui kaedah persampelan bertujuan. Data yang diperolehi dianalisis dengan menggunakan *Statistical Package for Social Science* (SPSS) versi 20. Dengan menggunakan *Pearson Chi-Square Test* dan *Fisher's Exact Test*, menunjukkan bahawa tidak mempunyai perkaitan antara tahap selera makan dan kualiti hidup warga emas ($p > 0.950$). Secara keseluruhannya, prevalens kurang selera makan dengan kualiti hidup yang sederhana menunjukkan peratus yang tinggi (75%) berbanding tahap selera makan yang bagus (25%). Kesimpulannya, kejadian kurang selera makan adalah tinggi di kalangan pesakit

warga emas. Oleh itu, banyak kajian perlu dijalankan untuk menyelesaikan masalah yang dialami dan secara langsung untuk memperbaiki kualiti hidup mereka ke tahap yang lebih baik..

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

In Malaysia, the estimate proportion of elderly people will grow from 6.3 per cent in the year 2000 to 12.0 per cent or 4.9 million by the year 2030 (Rabieyah & Hajar, 2003). It occurs when growth rates of the total population are compared with growth rates of the population aged 60 years and over, a continual ageing pattern of the population is inevitable, assuming prevailing trends persist (Rabieyah & Hajar, 2003). This shows that, elderly people in Malaysia will become increasingly produced and need a lot of care and facilities towards them for their sake of good quality of life. Additionally, with the continuing growth of this population in Malaysia, there is a need to document their nutritional and health status in order to formulate strategies to promote health and prevent nutritional problems that can lead to increase risk of morbidity and illness (Suzana, Zuriati, Afaf Ruhi, Suriah, Noor Aini, Noor Ibrahim, Zaitun, Mohmad, Asnarulkhadi, 2007).

Appetite status among hospitalized elderly patients has been shown to have extraordinary importance to patient's quality of life and patient's recovery. Moreover, appetite status can lead to nutritional status of the elderly patient. Poor of appetite is one of the causes that can lead to reduction of food intake and consequently becomes malnutrition (Savina, Donini, Anzivino, De Felice, De Bernardini, Canella, 2003). Studies show the alarmingly high rate of malnutrition among elderly patients has its own

consequences for both individuals and healthcare system. The malnourished elderly patients experienced 2 to 20 times more complications such as delayed recovery time, re-admission, increase morbidity and mortality and decrease their quality of life (Jordan, Caspari & Stein 1999).

Besides that, elderly people usually have different eating profile based on individual which might be a factor that contributes to poor appetite among elderly. Eating profiles can be defined as types of clients distinguished by combination of food preferences, consumptions patterns and preferences for ambiance (Peeters, Franckie, Spreeuweberg, De Graaf & Beek, 2008). In order to fulfill the need for a fine ambiance of food consumptions of elderly patients, there are studies that have been published about food service satisfaction, food quality and quality of life in long term care facilities (Peeters *et al.*, 2008). In addition, exploring eating profiles can provide clear explanation regarding appetite problem in order to improve quality of meal so that elderly patient can eat the food that being served at the hospital.

1.2 Problem Statement

Elderly people usually tend to get malnutrition caused by increased in energy intake, inadequate food intake or poor of appetite (Savini *et al.*, 2003). Appetite problem especially reduction in appetite is the highest prevalence that cause malnutrition among elderly people (Savini *et al.*, 2003). In addition, according to (Rolls 1996) cited in (Savini *et al.*, 2003), intake reduction may depend on several factors including social factors, physical factors and psychical factors which can lead to malnutrition. They also stated

that, diseases such as Diabetes types 2, Parkinson's disease, Neoplastic disease, liver or chronic renal failure, arterial hypertension or hypothyroidism as well as certain drug include corticosteroids, ACE-inhibitors, Ca-blockers, oral-antidiabetics drug, L-dopa, coronary dilators were able to affect taste and smell. Consequently of the usage of drug among elderly patient, it may lead to poor of appetite and reduce intake of food that can lead to malnutrition and poor quality of life.

According to (Suzana & Yow, 2009) the study on Chinese population in Penang Malaysia shows that, nutrient intake of subjects were inadequate and related to poor appetite. Approximately 64.2% of subjects had poor appetite. Meanwhile, other study done in Kuala Lumpur shows the same results which are prevalence of poor appetite affected 70% of elderly subjects in their study. This is associated with advanced age, lower energy intake and lower functional status (Muhammad, Suzana, Noor Ibrahim, Noorshafarina, 2010). From previous study done, it shows that, prevalence of poor appetite is spread around the country. This trend can be seen if more research taken and done among elderly population. Research is the first step to take action for further intervention to be done. A part from that, according to (Rolls, 1996) cited in (Savini *et al.*, 2003), other parameters that usually lead to reduced in appetite which occur among elderly patient include smoking, eating between meals, taking dietary supplements and used of dentures and its performance during mastication.

Nowadays, variety of instrument was developed and it was validated to assess the appetite status especially for the elderly patients. Same goes to quality of life of patients which is important for them to continue their life to be free from any limitation and be a normal person. According to previous study done, poor of appetite may lead to reduction

in poor quality of life. So, it is important to detect early sign of poor appetite so that the consequences of the problem may be prevented early by giving early intervention.

A part from that, from the literature review by Muhammad *et al.* (2010) and Suzana & Yow (2009), it shows that some gaps are found in their researches. For example, previously they used Council of Nutritional Appetite Questionnaire (CNAQ) as an instrument to assess the appetite status while recent studies on screening appetite tools by Hanisah, Suzana & Lee (2012) shows that Simple Nutritional Appetite Questionnaire (SNAQ) has more reliability compared to CNAQ. Besides that, their sample size is needed to be larger so that the data is more relevant. Previous researcher also mentioned that to increase the sample size so that it can make comparison among the ethnic groups in Malaysia. So, that is why this research is important and one of the way to detect the prevalence of poor appetite as well as to determine elderly patient's quality of life. From research finding, we can develop a plan to improve elderly patient's appetite and consequently can also improve their quality of life. In fact, the research finding soon will be valuable for the future generation to practice a healthy lifestyle and have a better quality of life. For this research, Health Beliefs Model will be used in this study as a theoretical framework.

1.3 Research objectives

1.3.1 General Objective

To study the prevalence of appetite level and quality of life among hospitalized elderly patients in medical and surgical wards at Hospital Universiti Sains Malaysia.

1.3.2 Specific Objectives

- (a) To study the prevalence of appetite level and quality of life among hospitalized elderly patients
- (b) To determine the significant association between selected socio-demographic data (gender, marital status and level of education) and level of appetite among hospitalized elderly patient
- (c) To determine the significant association between disease and poor appetite among hospitalized elderly patients
- (d) To determine the significant association between appetites level and quality of life among hospitalized elderly patients

1.4 Research Questions

- a) What is the prevalence of appetite level and quality of life among hospitalized elderly patients in medical and surgical wards in HUSM?
- b) What is the significant association between selected socio-demographic data (sex, marital status, races and level of education) and appetite level among hospitalized elderly patients?
- c) Is there any significant association between disease and appetite level among hospitalized elderly patients?

d) Is there any significant association between appetites level and quality of life among hospitalized elderly patients?

1.5 Research Hypothesis

(a) Null hypothesis, H_0 = There is no significant association between selected socio-demographic data (gender, marital status and level of education) and level of appetite among hospitalized elderly patients.

Alternative hypothesis, H_A = There is a significant association between selected socio-demographic data (gender, marital status and level of education) and level of appetite among hospitalized elderly patients.

(b) Null hypothesis, H_0 = There is no significant association between disease and appetite level among elderly patients.

Alternative hypothesis, H_A = There is a significant association between disease and appetite level among hospitalized elderly patients.

(c) Null hypothesis, H_0 = There is no significant association between appetite level and quality of life among hospitalized elderly patients.

Alternative hypothesis, H_A = There is no significant association between appetite level and quality of life among hospitalized elderly patients.

1.6 Significance of the Study

Research regarding appetite among elderly in Malaysia is not so many researches were done as other developed countries. Furthermore, appetite problem is worldwide commonly issues among elderly patients. In fact, many factors that related to poor appetite among elderly patients had been studies continuously with the expert researcher out there. From the previous research finding, factors that related to poor appetite include chronic disease, medication use, oral hygiene, eating habits and etcetera which mostly it is also depend on the individual elderly. It also might be influence by the surrounding factor such as psychological support from spouse or family member and social or financial source of the elderly patients.

Apart from that, quality of life in elderly patients is important to make sure that they are able to fulfill self satisfaction in their life before their life ended. Mostly, they wanted to filled up their time with family members, friends and do what are they want to do rather than living at hospital with totally dependent on the others. Quality of life may be affected by many related factors.

Poor appetite among elderly patients may devastated their health problem and consequently reduce their quality of life. That is why this research is important to find the association between appetite level and quality of life among elderly patients to give clearer information regarding this issue. A part from that, it is the way to alert the nurses about their responsibilities which is to play as a first line health caregiver in the ward and to make sure that patient tolerated well with the food served. From the data received by

researcher, early intervention may be taken to overcome the problem that arises among elderly nowadays.

1.7 Definition of Operational Terms

(a) Quality of Life

WHO defines Quality of Life as individuals perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, level of independence, social relationships, personal beliefs and their relationship to salient features of their environment (WHO, 1996).

(b) Poor appetite

Poor means low or inferior standard or quality. For example, many people are eating a very poor diet. Besides that, it also can be defined as deficient or lacking in such as the water is poor in nutrients (Oxford Dictionary, 2012). Meanwhile a strong desire to satisfy the body needs especially appetite in food (Oxford Dictionary, 2012). According to (Chapman, 2007; Morley, 2001) cited in Mohammad *et al.*, (2010), they generally feel more full before meals, consume smaller meals more slowly, eat fewer snacks between meals and become easily satiated after eating a standard meal as compared to younger persons. In addition, they also stated that the decline in appetite and food intake commonly seen in the elderly has been described as 'anorexia of aging'. Anorexia of aging is a situation in which there is a continuous decline in appetite in the elderly until a drastic and extreme reduction in body weight occurs.

(c) Elderly

According to (Gorman, 2000) cited in (WHO, 2012), stated that the ageing process is of course a biological reality which has its own dynamic, largely beyond human control. However, it is also subject to the constructions by which each society makes sense of old age. In the developed world, chronological time plays a paramount role. The age of 60 or 65, roughly equivalent to retirement ages in most developed countries is said to be the beginning of old age. In many parts of the developing world, chronological time has little or no importance in the meaning of old age. Other socially constructed meanings of age are more significant such as the roles assigned to older people. Furthermore, in some cases it is the loss of roles accompanying physical decline which is significant in defining old age. Thus, in contrast to the chronological milestones which mark life stages in the developed world, old age in many developing countries is seen to begin at the point when active contribution is no longer possible.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Appetite is one of a gift for each individual which is important indicator to fulfill the body's need. Nowadays, many studies have been done to assess the appetite status among geriatric people. The Council of Nutritional Appetite Questionnaire (CNAQ) and Simple Nutritional Appetite Questionnaire (SNAQ) was the first appetite monitoring instrument developed and specifically validated for the use among older adults in the United State (Wilson, Thomas, Rubenstein, Chibnall, Anderson, Baxi, Diebold and Morley, 2005). According to that, it is useful to give more reliability in determine the appetite status among elderly people. Assessing appetite status is important in geriatric patients to detect early sign of anorexia related weight loss which can have devastating consequences on quality of life, morbidity and mortality (Wilson *et al.*, 2005).

In fact, quality of life among geriatric patients has a consequence results from their nutritional and appetite status. According to Kaur, Miller, Halbert, Giles and Crotty (2008), the quality of life was declined in geriatric patients who are at risk for malnourish compared to the well nourished geriatric patients. A part from that, according to Roubenoff (2003) cited in Muhammad, Suzana, Noor Ibrahim and Nurshafarina (2010), muscle quantity was decreasing when increasing in age and consequently decrease the functional status of the elderly. Thus, the limited functional ability will in turn affect the mobility and quality of life of the elderly (Muhammad *et al.*, 2010). Meanwhile, from the

previous study done, it shows that poor appetite can lead to many consequences effect especially for the functional ability, malnourished and tends to reduced quality of life among geriatric patients.

In Malaysia, according to the study done by Muhammad *et al.* (2010), the prevalence of poor appetite was very high among elderly Malays residing in Cheras, Kuala Lumpur which is 64%. Meanwhile the same method had been done in Penang shows the higher results of poor appetite among Chinese population which are 70% (Suzana and Yow, 2009). These show that, elderly populations in Malaysia have high prevalence of poor appetite and consequently it will affect the quality of life of elderly people. This worldwide problem should never be taken as for granted and should have initiative to take an action for their sake of quality of life in elderly people.

2.1.1 Appetite among geriatric patients

Nowadays, geriatrics patients tend to reduce in nutritional intake and poor appetite due to many factors that arise depending on the length of stay in hospital. The poor prognosis for patients with poor appetite means that more research is required to increase the understanding of this symptom as well as ways to improve it (Zabel, Ash, King, Bauer, 2009). A part from that, nurses' role is important to make sure that patient under their responsibilities get enough nutritional status and good appetite along the length of stay in the ward. According to Kristensen (2000), a study of the fundamental and immediate experience of being a 'bodyself' is at the level of the individual body.

Meanwhile, the studies of appetite on this level include phenomenological analyses of the subjectively experienced and experiencing body in relation to food and eating.

In addition, appetite in geriatric patients is different among individual. Some of them increased in appetite when they are together and happy with people they knew and most of all when they are with relatives or close friends. Furthermore, they saw a mealtimes as joyful occasions when they meet and socialize, which made eating pleasant (Wikby & Fagerskiold, 2004). Meanwhile, according to Kristensen (2000), it is important of broader contextual understanding because studies at the social level show the interconnectedness between bodily experiences of appetite, social practice and cultural meaning. From the previous study done, it shows that appetite among geriatric patients is different during hospitalization and during gathering with family because mostly geriatric patient usually want to spend a lot of time with their family and friends so that they can partially fulfill their quality of life needed.

Based on this study, the research was conducted by using Simple Nutritional Appetite Questionnaire (SNAQ) to assess appetite status. At first, Council of Nutritional Appetite Questionnaire (CNAQ) has been developed due to lack of practical tools for objectives evaluation of appetites in geriatrics people. This short and simple instrument for appetite assessment has been developed and validated in Netherland (Wilson, 2005).

2.1.2 Factors that influence poor appetite among geriatric patients

Prevalence of poor appetite among geriatric patients has its consequences from several factors that contributed to it. According to Suzana & Yow (2009), poor appetite

was associated with low energy intake, depression and insomnia. Meanwhile, according to Kivela, Nissinen, Tuomilehto, Pekkanen, Punsar, Lami and Puska (1986) cited in Suzana & Yow (2009), poor appetite and depression were interrelated and related to insomnia. In addition, early studies also reported that 22% elderly who were depressed have poor appetite.

Besides that, the losses in taste and smell that occur with advance of age can lead to poor of appetite, inappropriate food choices as well as decreased in energy consumption. According to (Schiffman, 1983, 1993, 1997; Doty *et al.*, 1984; Stevens *et al.*, 1995; Cain & Gent, 1991; Murphy, 1993), cited in Schiffman & Graham (2000), the laboratory studies of taste and smell perception indicate that there are significant chemosensory losses with age. In fact, psychophysical test done indicated that these losses consists of elevated thresholds for taste and smell, reduced intensity of suprathreshold stimuli, diminished ability to discriminate among suprathreshold stimuli, deficits in ability to identify odors and tastes on the basis of taste and smell and distorted taste and smell (Schiffman & Graham, 2000). Meanwhile, according to Schiffman (1997), medical nomenclature for these chemosensory impairments was developed which are ageusia (absence of taste), hypogeusia (diminished sensitivity of taste with elevated thresholds and reduced ability to perceive suprathreshold stimuli, dysgeusia (distortion of normal taste, anosmia (absence of smell), hyposmia (diminished sensitivity of smell and reduced ability to perceive suprathreshold stimuli and dysosmia (distortion of normal smell). In fact, the study done in most cases shows that, the sense of taste is not totally absent in the geriatric but rather it reduced or distorted (Schiffman & Graham, 2000).

Taste dysfunction in the elderly generally results from normal aging and certain disease states such as cancer, medications, surgical interventions, malnutrition, and environmental exposure. Cancer and its treatment impair the ability to detect the presence of basic tastes, reduce the perceived intensity of suprathreshold concentrations of tasters, and reduced the ability to discriminate and identify tastes and smells (Schiffman & Graham, 2000).

Anatomically, the number of taste cells which are clustered into buds scattered on the dorsal surface of the tongue, tongue cheek margin, base of the tongue near ducts of the sublingual glands, the soft palate, pharynx, larynx, epiglottis, uvula and first third of the esophagus. According to Mistretta (1984), cited in Schiffman & Graham (2000), it concluded that the taste losses in the elderly are due to changes in the cell membranes such as altered functioning of ions channels and receptors rather than losses of taste buds. In addition, taste cells constantly replicate with a life-span and however it can be compromised by malnutrition or cancer therapy which can caused taste sensitivity may be severely impaired.

For unmedicated healthy elderly, threshold increases for common tastes such as sucrose (sweet), NaCl (salty), quinine HCl (bitter), and citric acid (sour) are modest. However, for elderly individuals who take a moderate number of medications, greater losses in taste sensitivity at threshold levels have been found.

A part from that, poor appetite can be due to taste ability which is significantly impaired in hospitalized elderly with decayed teeth, high growth of oral bacteria associated with carries, poor oral hygiene and dry mouth (Solemdal, Sandvik, Willumsen,

Mowe & Hummel, 2012). In addition, study shows that, dry mouth was associated with impaired taste due to reduce salivary flow. It is proven because according to Mese & Matsuo (2007) cited in Solemdad *et al.*, (2012) hospitalized elderly patients frequently use a high numbers of drugs daily which may induce xerostomia and hyposalivation. In fact, again according to Matsuo (2000) cited in Solemdal *et al.*, (2012), saliva is necessary for bringing food particles and taste stimuli to taste buds in the oral cavity.

Furthermore, the latest studies prove that there was no difference in taste scores between patients with full dentures and patients with natural dentition. It is because some studies claimed that people with dentures have higher taste threshold and also elevated retronasal flavour threshold, than people without dentures (Solemdad *et al.*, 2012). They conclude that, maybe the test done using different instrument and that is why the results is not the same.

In addition, according to Holst, Rasmussen & Laursen (2010) the amount of medication, especially tablets, was mentioned as a barrier for appetite, and as a reason for bad taste. Some experienced that painkilling medication had made it quite impossible for them to eat.

2.1.3 Quality of life and appetite among geriatric patients

According to Xavier, Ferraz, Marc, Escostegus & Moriguchi (2003), the quality of life depends on the emotional interpretation about the subject given based on the facts and events. They also stated that, quality of life is increasingly acknowledged as an assessment which strongly dependent on the person's subjectivity. In facts, they found

that the individual concepts can have a determinant influence in the perception and valuation people have about their condition of health.

The findings of the study showed that chronic diseases including diabetes mellitus, hypertension, joint problem or arthritis and stroke were common health problems among elderly were consistent with other studies among residents of old folks homes in Taiwan (Chen et al. 2007) and Italy (Zanocchi et al. 2008). According to (Zanocchi et al. 2007) cited in (Schiffman & Graham, 2007), chronic diseases had detrimental effect on quality of life of elderly people. A part from that, decreased energy consumption can be associated with impaired protein and micronutrient status and may induce subclinical deficiencies that directly impact function (schiffman & Graham, 2000). Consequently, it will give affects to quality of life in elderly due to reduced in functional ability associated with impaired nutrition status.

WHOQOL-BREF has been developed to provide a short form quality of life assessment that looks at domain levels profile using data from the pilot WHOQOL assessment and all available data from the Field Trial Version of the WHOQOL-100 (WHOQOL Group 1998). The WHOQOL-BREF able to produces a quality of life profile. For this questionnaire, it had been derived into four domain scores which included physical health, psychological health, social relationship and environments. Meanwhile, two items was examined separately which were question 1 asks about individual overall perception of quality of life and question 2 asks about an individual perception of quality of life in each particular domain.

2.2 Theoretical Framework

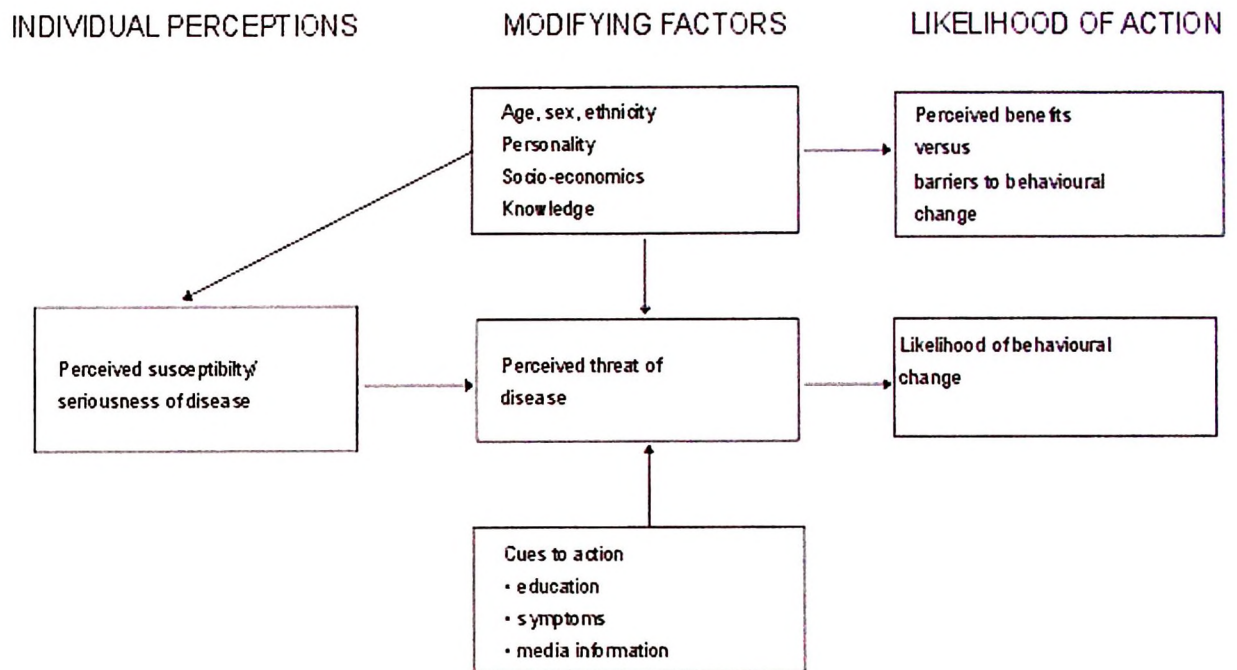


Figure 2.2: Basic element of Health belief model

Source: Glanz, K., Rimer, B.K. & Lewis, F.M. (2002). *Health Behavior and Health Education. Theory, Research and Practice*. San Francisco: Wiley & Sons – cited in University of Twente, 2012

The Health Belief Model (HBM) is a psychological model that attempts to explain and predict health behaviors. This is done by focusing on the attitudes and beliefs of individuals. The HBM was first developed in the 1950s by social psychologists Hochbaum, Rosenstock and Kegels working in the U.S. Public Health Services. The model was developed in response to the failure of a free tuberculosis (TB) health screening program. Since then, the HBM has been adapted to explore a variety of long- and short-term health behaviors.

HBM is based on the understanding that a person will take a health action to improve quality of life if that person feels that a poor quality of life due to poor appetite can be avoided. In addition, a person has a positive expectation by taking a recommended action, he or she will be avoided a negative health condition that affects their quality of life. In fact, a person believes that he/she can successfully take a recommended action such as practice good appetite and good nutritional intake for a better quality of life. The HBM was spelled out in terms of four constructs representing the perceived threat and net benefits such as perceived susceptibility, perceived severity, perceived benefits, and perceived barriers.

These concepts were proposed as accounting for people's "readiness to act." An added concept, cues to action, would activate that readiness and stimulate overt behavior. A recent addition to the HBM is the concept of self-efficacy, or one's confidence in the ability to successfully perform an action. This concept was added by Rosenstock and others in 1988 to help the HBM better fit the challenges of changing habitual unhealthy behaviors, such as being sedentary, smoking, or overeating (University of Twente, 2012)

HBM is suitable for this study because its element can give a guide for a person to stay healthy or change unhealthy lifestyle to a healthy lifestyle. It can be implementing to the elderly patients to make them become more energetic to undergo a happy lifestyle and increase the quality of life as well as self satisfaction in their life. A part from that, a guide promotion practice provided in the HBM can give a clear concept to perceive a good quality of life.

Table 2.2: Conceptual Framework “Theory at Glance: A Guide for Health Promotion Practice” (1997)

Adapted and adopted from: Glanz, K., Marcus Lewis, F. & Rimer, B.K. (1997). *Theory at a Glance: A Guide for Health Promotion Practice*. National Institute of Health – cited in University of Twente, 2012.

Concept	Definition	Application
Perceived Susceptibility	Elderly patients’ belief that poor appetite may lead to poor quality of life.	Hospitalized elderly patients believe that they are at risk of poor quality of life if their appetite status is decreasing. It may be associated with physical, psychological or environmental condition of the elderly patients.
Perceived Severity	Elderly patients’ belief that there have serious consequences of poor appetite.	Elderly patients’ belief that poor appetite has a consequence effect on quality of life.
Perceived Benefits	Elderly patients’ belief that identifying the factor that affecting poor appetite play important role in improving appetite status and quality of life.	Elderly patients’ belief that identifying the factor that affecting poor appetite would give benefit to them and then possibly increased appetite status for a better quality of life.
Perceived Barriers	Elderly patients identify their barriers to prevent from getting poor appetite and explore the way to eliminate or remove these barriers.	Elderly patients identify the barriers to prevent from getting poor appetite such as lonely at ward and find way to eliminate the barriers such as encourage family members of neighborhood to pay a visit at hospital.
Cues to Action	Elderly patients receive a reminder the cues of action such as informed meal time and type of food serving.	Elderly patient will receive the information about the meal time, type of food serving and awareness from the healthcare providers such as doctor, nurses and dietitian. Family members also have important role to give moral support to the elderly patients.
Self-Efficacy	Elderly patients have a confident level to improve their appetite status.	Elderly patients receive guidance from doctor, nurses and dietitian regarding to take a proper meal and continue monitoring the patient’s progress in health and appetite status.

CHAPTER 3

METHODOLOGY & METHODS

3.1 Research Design

This study were conducted by using the quantitative, descriptive and cross sectional designs in order to identify the quality of life related to poor appetite among hospitalized elderly patients in medical and surgical wards at Hospital Universiti Sains Malaysia (HUSM). The study had been conducted over a period of a month started on January 2013 until end of February 2013.

3.2 Population and Setting

This study was conducted at Hospital Universiti Sains Malaysia (HUSM) and the elderly patients who were admitted to medical and surgical ward for any acute and chronic medical and surgical illness were the target population for this study. Four wards that were selected are 7 Utara, 7 Selatan, 2 Intan and 3 Utara.

3.3 Sampling plan

Sample of elderly patients were collected at medical and surgical ward at Hospital Universiti Sains Malaysia (HUSM) such as 7 Utara, 7 Selatan, 3 Utara and 2 Intan. The probability sampling methods have been used in this study.

3.3.1 Sample

3.3.1.1 Inclusion criteria

1. Elderly patient at age 60 years and above
2. Elderly patient in medical and surgical wards (7 Utara, 7 Selatan, 2 Intan and 3 Utara).
3. Able to understand and speak Bahasa Malaysia.
5. Volunteer to participate in this study.

3.3.1.2 Exclusion criteria

1. Patient below age 60 years old.
2. Unconscious elderly patients.
3. Elderly patient who unable to understand and speak in Bahasa Malaysia.
4. Disagree to participate in this study.

3.3.2 Sampling Method

The purposive sampling method was used in this study. In addition, only hospitalized elderly patients with age 60 years and above with any illness based on medical and surgical condition have been recruited in this study.

3.3.3 Sampling size

The calculation of sampling size was done by using Raosoft method. The margin error used in this calculation was 5%. The margin of error is the amount of error which can be tolerated. Lower margin of error requires a larger sample size. In addition, 95% of confident level was used in this calculation.

With a confidence level of 95%, it would be expected that for one of the questions, the percentage of people who answer *yes* would be more than the margin of error away from the true answer. Higher confidence level requires a larger sample size. Response distribution used is 50%. From calculation of the sample size, the population size that were used in this study was 127 respondents.

3.4 Variable

3.4.1 Variable measurement

The appetite assessment was the independent variables in this study, while dependent variables were quality of life of elderly patients. All the variable data were collected through self-administered questionnaire which involves demographic data and 5-points Likert Scale Questionnaires.

Appetite assessment scale was measured by using Simple Nutritional Appetite Assessment Questionnaire (SNAQ) which has a 5-point (A to E), verbally labeled and Likert-type scale. All respondents were asked to complete the questionnaire by circling the correct answers and then tally the results based on the numerical scale which are A=1, B=2, C=3, D=4, E=5. The overall score were in the ranges of 4-20, where if the SNAQ score is less than 14, there is significant risk of poor appetite and weight loss (Wilson et al, 2005).

Quality of life assessment scale was measured by using WHOQOL-BREF. It includes 4 domains characteristics such as physical domain, psychological domain, social

domain and environment domain that consist of 5-points Likert-type scale. In addition, two items from the Overall QoL and General Health facet have been included which are question 1 ask about an individual's overall perception of QoL and question 2 asked about an individual's overall perception of their health. The four domain scaled in a positive direction, was to say that higher score indicate higher quality of life. Quality of Life score was derived from the total of transformed score for each domain in WHOQOL-BREF. Quality of life score was derived into three categories which include poor quality of life (below than 133 score), moderate quality of life (score 133 to 267) and good quality of life (267 score and above) (Akbulut & Ersoy, 2008). The minimum score of respondent are 176 while the highest score are 376.

3.5 Instrumentation

This study was conducted by using quantitative study and the data were collected by using self administered questionnaires with enquiring and explaining about the existence and persistence of phenomena understudy by the researcher as a basis of maintaining the true meaning and reliability in the research (Dora Liu Ha Lian, 2010). The questionnaire consists of 38 questions, which were 8 questions from selected socio-demographic data, 26 questions from WHOQOL-BREF questionnaires, and 4 questions from Simple Nutritional Appetite questionnaires (SNAQ).

3.5.1 Instrument

This research study was conducted by using the combination between demographic data, Simple Nutritional Appetite Questionnaire (SNAQ) and World Health Organization Quality Of Life (WHOQOL-BREF) questionnaire.

Therefore, the questionnaire in this study was divided into 3 parts, which were:

PART A: Demographic data questions which consisted of gender, age, race, marital status, level of education and financial source.

PART B: Simple Nutritional Appetite Questionnaire (SNAQ) which consist of 4 items to be measured using 5 points Likert scale. CNAQ comprises 8 item single domain questionnaires. Then, CNAQ were separated out to form a shorter tool, hereafter referred to as the SNAQ which consists of 4 items single domain questionnaires. Responses were scored by using a 5 point (A to E), verbally labeled, Likert-type scale. The score for each domain is the sum of the scores on the individual item, with lower score indicating deterioration of the appetite.

PART C: World Health Organization Quality of Life (WHOQOL-BREF) which 26 items to be measured using 5 Likert scale. WHOQOL-BREF has been developed to provide a short form quality of life assessment that looks at domain levels profile using data from the pilot WHOQOL assessment and all available data from the Field Trial Version of the WHOQOL-100 (WHOQOL Group 1998). The WHOQOL-BREF contains a total 26 questions which one item from each of the 24 facets contained in WHOQOL-100 and two items from the Overall Quality Of Life and General Health facet have been included. The WHOQOL-BREF able to produces a quality of life profile. For this