FACTORS ASSOCIATED WITH TOTAL SATISFACTION WITH FOOD-RELATED LIFE AMONG ELDERLY IN RUMAH SERI KENANGAN, SELANGOR

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ABSTRACT

Background: There are various factors that may alter elderly relationship with food as they get older and eventually their satisfaction with food-related life (SWFL).

Materials and Methods: A cross-sectional study was conducted to determine the associations between SWFL and socio-demographic factors, dietary intake, food access and malnutrition risk among elderly in Rumah Seri Kenangan. Socio-demographic, Mini-Nutritional Assessment (MNA), Experiences of food access (Naithani et al., 2009) and SWFL (Grunert et al., 2007) were assessed using sets of questionnaires. Dietary intake and anthropometric measurements were assessed using forms. All statistical analysis was performed using IBM SPSS version 21.

Result: A total of 57 elderly were participated in this study where 47% of them were male and 53% were female. 40.4% of the subjects were at risk of malnutrition and 12.3% was malnourished. Male subjects consumed significantly higher in total energy and protein intake than female (p=0.008 and 0.034 respectively). However, 89.5% of subjects did not achieve for both recommended energy and protein intake of RNI. Experience with food access showed that majority of subjects had greater difficulty with physical barrier domain of food access (p=0.086) and the mean total score of each items in SWFL of 4.91 which indicated that elderly was somewhat agree with their SWFL. However, socio-demographic backgrounds, dietary intake, risk of malnutrition and food access were not associated with total SWFL.

Conclusion: Majority of subjects experienced difficulties in physical barrier domain and quite satisfied with their food-related life. Thus, improvement in the nutritional status can be achieved by providing adequate nutrition and enhancing food availability and accessibility to elderly in care homes.

Keywords: Satisfaction with food-related life (SWFL), food access, malnutrition, elderly
1.0 Introduction

United Nations World Assembly on Ageing held in Vienna in 1982 defined elderly people as ‘60 years and over’ (Chen et al., 2012). This cut-off has been adopted by Malaysian policy makers to be used in planning for elderly (Rabieyah et al., 2003). By the year 2020, the elderly population in Malaysia is anticipated to increase up to 9.9% (Pala, 2005) whilst life expectancy has increased to 72 years old in males and 77 years old in females (Department of Statistics Malaysia, 2013). As people get older, many factors may affect their relationship with food and eventually their satisfaction with food-related life (Dean et al., 2009).

Food is so important in human life where it is needed as an essential component of good health and a high quality of life. Older people’s satisfaction with their quality of life significantly contributed by the type of food eaten and the social cultural context (Silverman et al., 2002). It is really important to investigate satisfaction with food-related life of older people for various reasons (Dean et al., 2009) and one of the reason which focuses on importance of food in relation to quality of life has been emphasized by American Dietetic Association (2005) in which it stated, unappetizing or unacceptable diet may cause poor food and fluid intake which results in weight loss, undernutrition and other negative health effects as food is an essential part of quality of life. This indicates that health and quality of life can vary due to eating issues especially among elderly (Seo et al., 2013). Therefore, both satisfaction and dissatisfaction in daily life can be due to food (Grunert et al., 2007) and food as a domain can be expected to be related to satisfaction with life.

Relationship between eating and subjective well being has not much being studied even though eating is one of the most frequent human behaviors (Morales et al., 2014). Furthermore, there are not much research has been done to look into people’s satisfaction with their food-related life and its relationship to overall life satisfaction as food has so far been neglected as a dimension of satisfaction (Dean et al., 2009). Plus, a lot of research that look into the effects of nutrition on physical health available but research with objective to find the effects of diet on satisfaction with life is still not much available (Veenhoven, 2008). In regard to food access, there is lack of information from the subject’s stance (Naithani et al., 2008) and even information on how organizational and environmental factors affect subject’s eating experience is still scarce (Naithani et al., 2008). Furthermore, research on malnutrition among elderly in nursing homes is still not much available (Verbrugghe et al., 2013).

2.0 Materials and Methods

A cross-sectional study was conducted to determine the associations between SWFL and socio-demographic factors, dietary intake, food access and malnutrition risk among elderly in Rumah Seri Kenangan (RSK). Ethical clearance was sought from the Ethic Committtee for Research Involving Human Subjects, Universiti Putra Malaysia and approval of the study protocol from Department of Social Welfare Malaysia. RSK is a government-funded shelter homes by Jabatan Kebajikan Masyarakat and is located about 15 to17 km from Kuala Lumpur. RSK have total residents of 185 older people with aged 60 years and
above. The residents of RSK consist of different ethnicities. The subjects who met the inclusion criteria of aged 60 years and above, male or female, permanent residents of care home, able to eat normally with or without assistance, able to speak Malay or English only, able to be interview and residents who are able to give concern were invited to participated in this study. Based on sample size calculation, 55 subjects should be participated in this study.

Socio-demographic characteristics including age, sex, ethnicity, marital status, education level, past occupation, total monthly income, family members, length of stay and health problem or diseases upon admission was recorded. Mini- Nutritional Assessment (MNA) that consists of 18 items and can be divided into 4 parts which are anthropometric assessment, general assessment, short dietary assessment and subjective assessment (Guigoz., 2006) were used to assess elderly risk of malnutrition. Experiences of food access (Naithani et al., 2009) consists of 27-items with five domains which were feeling hungry (four items), physical barriers (seven items), organizational barriers (six items), food choice (five items) and food quality (five items). A Likert-like scale with four categories will be use to code the response rate. SWFL (Grunert et al., 2007) consists of five positively worded items with seven categories of Likert-like scale that was used to code the response rate of subjects (Grunert et al., 2007). Dietary intake and anthropometric measurements were assessed using forms. Pre- testing of the questionnaire was done before the scheduled data collection among 10 elderly aged 60 years old and above from RSK Cheras, Selangor who were not going to be involved as subjects in the main study. All statistical analysis was performed using IBM SPSS version 21.

3.0 Results and Discussion

3.1 Sociodemographic background

A total of 57 elderly were participated in this study where 47% of them were male and 53% were female. The mean age of the subjects was 70.84±6.938 years. The total mean for length of stay of subjects in Rumah Seri Kenangan was 31.68±16.952 months. The subjects participated in this study were majority Malays (64.9%) with the highest percentage for both male and female where 66.7% were male and 63.3% were female. The study also showed that most of the subjects were married which was 42.1% of the total subjects and the least were widowed which was 3.4%. Majority of the subjects participated in this study had education until primary school (43.9%). The past occupation of the subjects was highest (43.9%) in a work category other than housewife/husband, government employee or self-employed which was as a mechanics, waiter, cleaner, factory worker and security guard. Most of the subjects (38.6%) had previous total monthly income of less than RM1000 per month and the least of the subjects (3.5%) had previous total monthly income of more than RM 5000.

3.2 Health status

In this study, more than half of the subjects had hypertension (57.9%) followed by 42.1% of them had diabetes. Within gender, female subjects had higher percentage of having hypertension which was 66.7% than male subjects which was 48.1%. This result was consistent with a study on factors associated with chronic illness among the elderly in a rural
community conducted by Sherina et al., (2004) where they found that hypertension (22%) was the most prevalent chronic disease followed by diabetes mellitus (11.3%). Similar finding was presented by Visvanathan et al., (2005) where 9% of elderly people residing in publicly funded shelter homes in Peninsular Malaysia had diabetes, 14% hypertension, 6% asthma, 8% ischaemic heart disease, 2% cerebrovascular disease and 4% osteoarthritis. The least recorded health problems in the present study with 1.8% were dyslipidemia and urinary tract infection (UTI).

3.3 Anthropometry measurements

The mean weight of total subjects participating in this study was 60.25±12.377 kg. Within gender, male subjects have higher mean weight (63.385±13.654) than female subjects (57.420±10.548). In terms of height, the mean average was 158.538±10.079 cm. An independent-sample t-test found that male (164.223±8.894cm) were significantly taller than female (153.422±8.251cm; t (55) = - 0.906, p =0.000). The body mass index (BMI) for most of the subjects was normal with mean BMI of 24.095±4.894 kg/m2. Seong et al., (2012) study also gave the same result where most of the subjects (54.2%) had a normal BMI range. The BMI of majority of the subjects involved in this study were classified as normal (43.9%) followed by overweight (35.1%), underweight (12.3%) and the least was obese class 1 (8.8%). Meanwhile, a study of Anthropometry Dimensions of Older Malaysians: Comparison of Age, Gender and Ethnicity found that half percent of the male elderly and 60% of female elderly were categorized as overweight and obesity (Rosnah et al., 2009). This previous finding was quite similar to present study where female subjects tend to be overweight or obese than male subjects probably because female become more sedentary as they aged (Rosnah et al., 2009). Apart from that, based on BMI <18.5 kg/m2, the prevalence of undernutrition from this study was 12.3% (Seong et al., 2012). However, percentage of elderly underweight in this study (12.3%) showed slightly improvements when compared to the study of Seong et al., (2012) (17.4%) through this 3 years period. The reasons of this happenings might be due to the elderly had been able to adapt to their lifestyle and food habits in care home but still loneliness and social isolation could be the cause of reported values of underweight. Majority of the subjects had normal MUAC classification (93%) while only 7% of them were classified as having loss peripheral muscle mass when using cut off points for MUAC by Ferro-Luzzi & James (1996). 10.5% of subjects were classified as having muscle loss according to cut off points for calf circumference by Sakinah et al., (2012). According to Bonnefoy et al., (2002), when compared to other anthropometric indicator, calf circumference is a parameter that exhibits a good correlation with protein intake. Kikafunda & Lukwago., (2005) highlighted that nutritional status by hindering participation in food production, acquisition, preparation and in socialization at meals can be affected as muscle mass declined with age and contributed to decreased muscle strength.

3.4 Malnutrition risk

According to Saletti et al., (2000), many past studies had pointed out that malnutrition is a frequent issue among aged residents in institutional care facilities. One of a major problem among elderly was malnutrition and changes in dietary habits, poor dentition and types and amounts of food consumed were the causes of malnutrition (Mafauzy, 2000). 40.4% of the subjects were at risk of malnutrition and 12.3% was malnourished. A study conducted by Suominen et al., 2005 among residents in all nursing homes in Helsinki reported that nearly one-third (29%) of the subjects suffered from malnutrition (<17 points) and 60% were at risk.
of malnutrition (17–23.5 points) while only 11% of them had a good nutritional status based on Mini Nutritional Assessment (MNA). The result from this study was comparable to a study by Rambousková et al. (2013) which includes a higher mean age of female compared to male (86.1 ±6.15 and 81.5±7.97 years respectively) where it deduced that institutionalized women should be considered a nutritionally vulnerable population group. In contrast, Fang et al. (2013) showed that there was no gender difference in the prevalence of nutritional risk.

3.5 Dietary intake

The mean calorie intakes of subjects were 1280.52±496.347 kcal/d. The mean total calorie and protein intake was higher in male subjects compared to female subjects. Male subjects consumed significantly higher in total energy and protein intake than female (p=0.008 and 0.034 respectively). However, 89.5% of subjects did not achieve for both recommended energy and protein intake of RNI. From previous study, the average energy intake among rural elderly Malays aged 60 years and above was 1412 ± 461 kcal/d in men and 1255 ± 403 kcal/d in women which achieved only 70.2% and 70.5% of the RNI (Recommended Nutrient Intake), respectively (Suzana et al., 2007). Suzana et al., (2007) suggest that inadequate energy intake among elderly people may be due to elderly usually eat foods in small portion and less frequently than younger individuals. A study reported by Sakinah et al., (2010) showed that the nutritional status of women were a bit poor than that of men. Both biological difference between men and women and that women may be more prone to poor nutritional habits were the two reasons of the dissimilarity between genders (Sakinah et al., 2010). The factors connected with inadequacy of macronutrients intake among elderly was found that nearly half of the elderly with malnutrition probably ate only half or less from the offered food portion (Suominen et al, 2005). Plus, having an illness maybe one of the reason in which 15-20% of subjects had experienced changed in the type of food eaten, eating fewer than two meals per day and eating alone most of the time were reported having a disease (Visvanthan et al., 2005). Furthermore, from observation in present study, the variations of diet in Rumah Seri Kenangan, Cheras (RSKC) are quite small due to the central menu planning of food service and also because of limitation in supply of wet ingredients such as chicken. The RSKC had not been supplied with chicken for almost 3 months and they served elderly residents with Indian mackerel fish everyday. Most of the subjects did not eat mackerel fish as they claimed the fish was smelly while some of them claimed they feel itchy if they eat the fish and they feel bored with the same fish for 3 months. Therefore, most of them did not eat the mackerel fish and this was the reason of protein inadequacy in subjects.

3.6 Experience with food access

Experience with food access showed that majority of subjects had greater difficulty with physical barrier domain of food access (p=0.086). Some of the subjects reported that they were unable to grip anything strongly with their hands because they feel numb and weak. They also felt dizzy and get tired faster if they were standing or sitting for long period of time. These symptoms may cause difficulties in food access as they felt it hard for them during eating.
3.7 Satisfaction with food related life

Understanding on food preferences, nutritional needs, satisfaction and dissatisfaction among elderly residents are important in providing quality nutritional care (Christina et al., 2004). The mean total score of each items in SWFL was 4.91 (Table 1) which indicated that elderly was somewhat agree with their SWFL. The mean for total Satisfaction with food-related life (SWFL) among subjects participated in this study was 24.47±5.562. Meanwhile, previous study by Jeong & Seo, (2014) found that the mean scale of 5 items in SWFL questionnaire chosen by subjects were 3.35 which was in neither agree nor disagree scale. However, from SWFL questionnaire conducted in this study, generally elderly subjects presented a positive comments partly because of this population are less likely to complain, they are unaware of the proper level of service, are afraid of reprisals that may occur in response to their opinions, or they are just thankful for any services they receive (Kane, 1997). In contrast, a few subjects were not fully satisfied with their current food habit in RSKC due to food quality. Elderly felt that the foods were not well prepared according to their expectation and they see little variety in the foods offered (Jeong & Seo, 2014). Corresponds to this, Hartwell and Edwards (2003) also showed that elderly found their food was not as good as what they anticipated. Factors that may contribute to negative perceptions and attitudes toward institutional food are food presentation, food variety, and physical setting (Hartwell et al., 2003) which may lead to dissatisfaction with food among elderly. Other findings reported that satisfaction with dining service in terms of service quality was crucial to elderly especially in staff attitudes such as kindness and courtesy (Lengyel et al., 2004). Apart from that, higher SWFL and quality of life can be seen in those elderly who can still carry out daily living activities compared to elderly who needed help (Jeong & Seo, 2014) while quality of life had a significant positive association with SWFL (Jeong & Seo, 2014). Other than that, health, living circumstances, storage facilities, and achieving goals in diet affected SWFL (Dean et al., 2008). Having healthy and variety food choices, food preferences and enjoying meals were priorities among elderly and these forms of joy and gladness may enhance elderly satisfaction with food. However, socio-demographic backgrounds, dietary intake, risk of malnutrition and food access were not associated with total SWFL. From dietary intake aspect, Catherine et al., (2003) found that positive feelings had the most steady effects on food intake where higher energy and protein intakes among elderly resulted from strong positive emotions reported by elderly patients (Catherine et al., 2003). However, the same study presented that food intake were not significantly related to satisfaction measures (service, food and overall satisfaction) in which the interconnection between elderly patient emotions and food intake by satisfaction were rejected. Low satisfaction with meals may causes inadequacy of food intake and leads to suboptimal BMI and weight loss (Galanos et al., 1994).

4.0 Conclusion and recommendation

In this present study, the top 2 diseases among elderly in Rumah Seri Kenangan was hypertension and diabetes. The BMI of majority of the subjects involved in this study were classified as normal followed by overweight, underweight and the least was obese class 1. Majority of the subjects had normal nutritional status followed by at risk of malnutrition and the least was malnourished. In terms of food access, most of the subjects experienced difficulty in physical barrier domain. As for Satisfaction with food-related life among elderly, most subjects satisfied with their food-related life. Overall, there was no significant
correlation between all the variables which was socio-demographic background, dietary intake, risk of malnutrition and experiences of food access and total satisfaction with food-related life score among subjects in Rumah Seri Kenangan, Cheras. The finding of this study cannot be generalized for all care homes in Selangor or in Malaysia since the sample size used was small where only 57 respondents were included in this present study. Since this study conducted as cross-sectional study, hence, the cause and effect of factors associated with total satisfaction with food-related life among elderly in Rumah Seri Kenangan, Cheras cannot be determined. Subjects biased might happen during the interview session. Appropriate nutrition especially essential macronutrients and micronutrients should be taken adequately for elderly well-being. Hence, the finding of this study can be used as a baseline data for further study or to implement a nutritional intervention by researcher, healthcare professionals, and also policy makers in order to improve satisfaction with food-related life among elderly. Engaging the care home administration and staffs in health promotion and expose them to findings of studies related nutrition and quality of life among elderly residents.

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Declaration

Authors of this article declare that there was no conflict of interest regarding on publication and this article was originally based on the real study conducted by the authors.

Authors contribution

Author 1: Student who collected the data
Author 2: Principle investigator

References


Amarantos, E., Martinez, A., & Dwyer, J. (2001). Nutrition and Quality of Life in Older Adults. Journals of Gerontology:SERIES A 56A (Special Issue II), 54-64.


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