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# THE SOCIODEMOGRAPHIC CHARACTERISTICS DAN EATING PATTERNS OF ELDERLY PEOPLE IN THE ELDERLY COMMUNITY OF PALEMBANG CITY

Ardesy Melizah Kurniati[1*], Nur Riviati[2,3], Andra Kurnianto[1]

[1]Department of Nutrition, Faculty of Medicine, Universitas Sriwijaya, Palembang, Indonesia
[2]Department of Internal Medicine, Faculty of Medicine, Universitas Sriwijaya, Palembang, Indonesia

ardesy.gizi@fk.unsri.ac.id

## ABSTRACT

The number of elderly is increasing every year. Efforts to maintain the health of the elderly are carried out through elderly community programs. Several factors can affect the quality of life of the elderly, one of which is nutritional adequacy, The purpose of this study is to get a sociodemographic profile and eating pattern of the elderly, as a first step to recognize the risk of elderly health problems. A total of 169 elderly respondents from various elderly communities in Palembang City participated in this study. Data obtained through interviews using questionnaires. The results showed the average age of respondents was 66 years, the number of elderly women more than men, most of them were highly educated, had never worked, still had a partner, and had a good support system. Most respondents did not meet the needs of energy intake and did not consume macronutrients in a balanced manner. Nutrition education is needed to improve this condition.

**Keywords:** *sociodemographic, eating patterns, elderly, elderly community, Palembang*

## 1. INTRODUCTION

Various physiological changes occur in the elderly due to age-related decline in body functions. The elderly are less able to enjoy food and drinks properly due to decreased ability of the senses of taste and smell. This can affect the selection of food and the use of food additives in cooking. Digestive organs can experience a decrease and loss of function resulting in a less than optimal digestive system, even causing anorexia. Lack in feeling the taste of food, number of teeth, and comorbidities are factors that significantly affect the diet of the elderly.[1]

The elderly are prone to depression and anxiety. Anxiety levels also correlate significantly with the elderly's food intake and nutritional status.[2] Seniors who are depressed are nine times more likely to suffer from malnutrition.[3]

To be able to get used to a healthy diet, everyone, including the elderly, needs education to increase knowledge in choosing the right amount and type. Seniors can achieve a good quality diet if they are educated about food or directly receive healthy food services.[4]

Healthy eating patterns can prevent or improve symptoms of degenerative diseases that are generally experienced by the elderly. A plant-based diet with a specific pattern can help lower the risk of cardiovascular disease.[5] Special dietary patterns such as the Dietary Approaches to Stop Hypertension (DASH) lower the incidence of cardiovascular disease and improve blood pressure in non-diabetic patients.[6]

The proportion of weakness in the elderly was higher in the group that did not adhere to healthy diet recommendations.[7] Weakness can result from sarcopenia. Nutritional therapy can synergize with exercise to increase the positive benefits of tackling sarcopenia.[8,9]

Efforts to prevent various diseases can be done through healthy diet. Identifying the diet of the elderly is the first step in prevention. There are elderly health care programs in government health facilities, and usually the elderly are

gathered into small communities. The existence of an elderly community can facilitate data collection and evaluation of elderly health. This study aims to determine the profile of characteristics and diet of the elderly in the elderly community of Palembang city.

## 2. METHOD

This study used a cross-sectional design, which was carried out between June and November 2019. The study population is an elderly community in Palembang City who are registered as active members of the elderly community from health facilities in Palembang City. They came from the elderly community of AL-Anshor, Sematang Borang, Pusri, Muhammad Hoesin General Hospital, and the Palembang branch of the Indonesian Elderly Institute. The active elderly are those who participate in morning exercise activities according to the schedule of local health facilities. Sample inclusion criteria included a male or female over 60 years of age, able to stand and walk unaided. Seniors who are willing to participate in the research were required to sign informed consent. Seniors who had difficulty communicating and remembering, or were unwilling to participate in the study are free not to be involved.

The data collected are primary data obtained from interviews using questionnaires. The data taken include respondents' characteristics including age, gender, recent education, work history (earning a living), marital status, family support, knowledge of food and balanced nutrition, diet, and cooking and eating activities in the neighborhood.

Eating patterns were assessed using the Food *recall questionnaire* in the last 24 hours for 3 days without sequential. Food card props are used as a response aid to remember food intake. Food intake data were then processed to obtain the number of calories using the Nutrisurvey application, then calculations are carried out to determine the percentage of macronutrients from intake. All data were processed using SPSS 22, then presented in graphs/tabulations and narratives. Data was presented in the form of frequency and percentage distribution.

Ethical approval for this study was obtained from Central General Hospital Dr. Mohammad Hoesin and the Faculty of Medicine Universitas Sriwijaya on August 2nd 2019, No. 286/kepkrsmhfkunsri/2019). This research was funded from the DIPA Budget of the Faculty of Medicine, Sriwijaya University No. 042.01.2.400953/2019 dated December 5th, 2018, in accordance with the assignment letter for Research Grant activities No. 024/UN9/1.4/PLP-PPM/PL/VII/2019.

## 3. RESULT

A total of 169 respondents were willing to participate in this study. The characteristics of respondents can be seen in the Table 1.

**Tabel 1. Profile of the elderly in the elderly community of Palembang city**

| Characteristics | n | % |
|---|---|---|
| Age (mean±SD) | 66.36 | 4.9 |
| Gender | | |
| Male | 14 | 8.3 |
| Female | 155 | 91.7 |
| Level of education | | |
| not finishing elementary | 3 | 1.8 |
| school | | 16.0 |
| elementary school | 27 | 24.9 |
| Junior high school | 42 | 33.7 |
| Senior high school | 57 | 23.7 |
| College | 40 | |
| Previous occupation | | |
| Employment | 79 | 46.7 |
| Non-employment | 90 | 53,3 |
| Marital Status | | |
| Married | 104 | 61.5 |
| Widowed | 65 | 38.5 |
| Family support | | |
| Living alone | 27 | 16.0 |
| Spouse | 97 | 57.4 |
| Others | 45 | 26.6 |

Based on the average age of respondents, most of them are in the early range of old

age. Most respondents are women and well-educate elderly. Most of them have never worked before until now. Income was obtained from their own or husband's pension salary, some get monthly money from children, and some do not get monthly money in cash but their living needs are met by children or other families. Most respondents still have a partner and live with their partner. A number of respondents received family support through living with other people in the same house, such as with children, sisters, brothers, sisters-in-law, or nieces.

The adequacy of respondents' intake calculated based on calories from the average total food consumption in three days (nonconsecutive) can be seen in Table 2. Calorie needs in a day are differentiated based on age and gender according to the Daily Value (RDA) for Indonesia. Respondents are considered sufficient if the total calories in a day's intake are in the range of 100-<130% RDA. Most respondents do not meet their calorie needs. In addition, many respondents stated that they were lazy to eat and only wanted to eat certain types of food and tended to be monotonous. Some patients restrict their eating related to their illness.

**Tabel 2. Calorie adequacy in respondents' diets**

| Energy from diet | n | % |
|---|---|---|
| Inadequate | 127 | 75.1 |
| Sufficient | 35 | 20.7 |
| Excess | 7 | 4.1 |

The balance of macronutrient intake including carbohydrates, proteins, and fats can be seen in Table 3. Respondents are considered to have a balanced intake of macronutrients if their fat intake did not exceed 25% and protein intake was not less than 10% RDA of each macronutrient. Most respondents diet were unbalanced due to excessive fat intake.

**Tabel 3. The balance of macronutrients in the respondent's diet**

| Macronutrients | n | % |
|---|---|---|
| Balanced | 12 | 7.1 |
| Unbalaced | 157 | 92.9 |

Respondents were given ten questions to find out their knowledge about nutrition, with the choice of answers to be correct. The average correct answer of all respondents was seven out of ten questions. There were only fourteen people who answered perfectly.

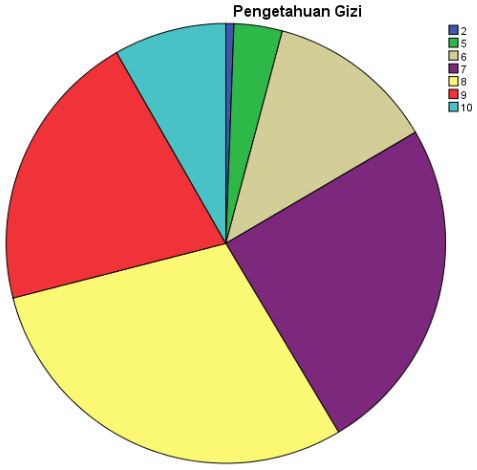


**Figure 1. Diagram of the proportion of the number of correct answers of the patient**

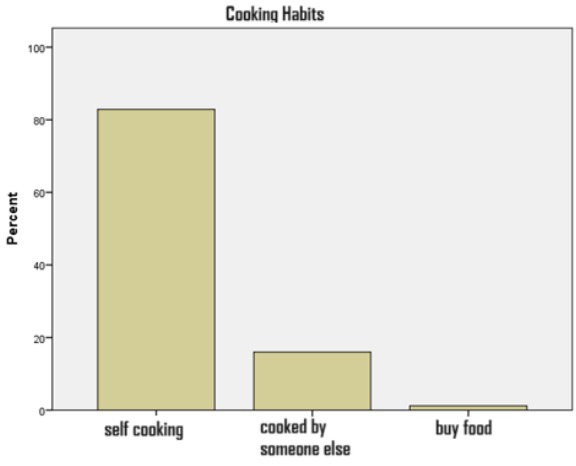


**Figure 1. Respondents' cooking activities**

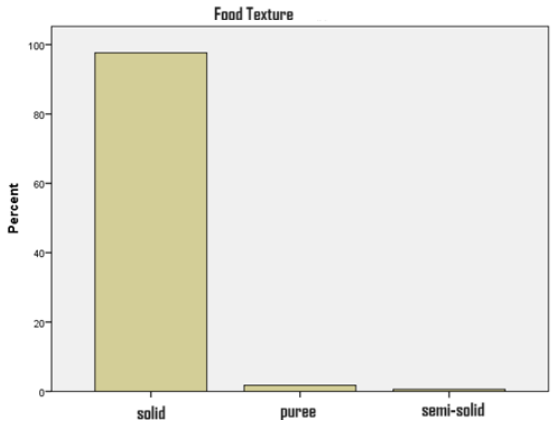


**Figure 2 Respondents' eating activities based on food texture selection**

Respondents were asked about cooking habits in their households and food habits in the form of food textures that respondents could eat. Most respondents (82.8%) are able to cook their own food, according to the number of most respondents, namely housewives and women. Most respondents (97.6%) were able to eat food with regular textures.

## 4. DISCUSSION

Gender differences affect the quality of life of the elderly. Elderly women are more vulnerable to mental problems, abuse, and tend to have limited access to health services.[10] Elderly women also feel lonelier than men. This loneliness increases with age, and is higher in widowed women.[11] But, in previous study, it turns out that they can still have a good quality of life through their own productive activities.[12] This means, making elderly women remain empowered with daily physical activities is one approach to maintain the health of elderly women.

Total tooth loss is associated with poor self-rated health of the elderly.[13] Elderly with tooth loss have a greater risk of malnutrition than the elderly who have adequate dentition and oral function.[14] Most respondents in this study were able to eat food with regular textures. Although in old age, tooth loss becomes sometimes a problem in eating activities, but it can be circumvented by the use of dentures.

Most respondents do not meet their nutritional intake needs and their macronutrient intake is not balanced. Physiologically, increasing age leads to some deterioration in the condition of the body, including the sense of taste. Appetite according to metabolism, slows down, causing respondents to have no appetite, or do not eat much.[1] Assistance in preparing meals may be needed in some elderly people.

Most respondents in this study still have a partner and live with a partner or family, so they are considered to have a good support system. Reviewing the distribution of respondents who cook themselves was quite high, it is hoped that they can meet nutritional needs according to their tastes. It is also thought to be due to the much higher number of female respondents in this study. Most respondents did not work in the first place and became housewives. However, this study does not discuss about the sources and amounts of income that may affect access to food selection or health services.

Most of the elderly in this study had a high level of education. Nutrition education in the elderly is expected to be more easily accepted and applied. Providing nutrition education to the elderly at risk of malnutrition has proven effective in improving their nutritional status.[15]

The population of this study included the elderly who were physically active, and in general can be said to have a fairly good level of health compared to the elderly their age. This can be seen from the ability of most elderly people to do their activities independently. But beyond this population, there are still many elderly who have a low quality of life, physically and mentally.

The number of the world's population aged 60 years and over is expected to increase from 1.4 billion in 2020 to 2.1

billion in 2050.[16] Preparing healthy, productive, independent elderly, through good diet and social involvement in the community, is a target that must be achieved. Providing a support system, ranging from families, communities, and access of health services is an effort that can be done to improve the quality of life of the elderly.

## 5. CONCLUSION

The average age of respondents was 66 years. Most of them are female, highly educated, had never worked, still had a partner, and had a good support system. Most respondents do not meet the needs of energy intake and the macronutrients was unbalanced. Nutrition education is needed to improve this condition, taking into account their characteristics.

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