INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH IN MULTIDISCIPLINARY EDUCATION

ISSN (print): 2833-4515, ISSN (online): 2833-4531

Volume 05 Issue 02 February 2026

DOI: 10.58806/ijirme.2026.v5i2n07 Impact factor- 6.748

Page No. 120-129

Factors Related to The Nutritional Status of the Elderly in the Working Area of Sapta Taruna Community Health Center, Pekanbaru City

Nurlisis Nurlisis[1*], Elmia Kursani[2], Yuni Purwanti[3], Firman Edigan[4]

[1,2,3,4]Fakultas Kesehatan, Universitas Hang Tuah Pekanbaru, Indonesia

ABSTRACT: The nutritional status of the elderly is the condition of the body which is a reflection of what we eat every day. The prevalence of malnutrition among the elderly in the world in 2019 reached 14.9%, in Indonesia in 2020 the elderly had a malnutrition status of 21.8%. Riau Province, the malnutrition status of the elderly in 2020 was 20.4%, while at the Sapta Taruna Community Health Center the malnutrition status of the elderly in 2022 was 19.1%. This research aims to determine the relationship between posyandu utilization, family support, knowledge, attitudes and eating patterns on the nutritional status of the elderly in the Sapta Taruna Community Health Center Working Area, Pekanbaru City in 2023. This type of research is quantitative with a cross sectional design. The research time is June-August 2023. The research population is all elderly people in the Sapta Taruna Health Center Work Area, Pekanbaru City with a total of 4,264 elderly people and a sample of 150 elderly people. The sampling technique is Simple Random Sampling. Data analysis was carried out univariately and bivariately with the chi-square test (α=0.05). The research results showed a significant relationship between posyandu utilization (ρ value = 0.034), family support (ρ value = 0.044), knowledge (ρ value = 0.028), attitude (ρ value = 0.040), and eating patterns (ρ value = 0.029) with the nutritional status of the elderly. Based on the research results, it can be concluded from the results of measuring body weight and height that many elderly people experience under/over nutritional status. It is recommended that the elderly be more active in participating in posyandu activities for the elderly and it is best that after the elderly know that their nutritional status is not normal, such as undernutrition and overnutrition, then the elderly can improve their nutritional status and arrange a good diet so that their nutritional status becomes normal.

KEYWORDS: Elderly Nutritional Status, IMT

BACKGROUND

Elderly (Lansia) refers to someone who has reached the age of 60 or older. As age increases, the likelihood of a person experiencing and feeling physical, mental, spiritual, economic, or social issues also increases. The most fundamental issue in old age is a health concern caused by degenerative processes. The nutritional status of the elderly is determined by the degree of physical need for energy and nutrients obtained from food, the physical impact of which can be measured. A comparison of the average nutritional needs with the amount of nutrient intake can indicate the presence or absence of nutritional problems in the elderly (Kemenkes RI, 2020). Becoming elderly is a process that is experienced and cannot be avoided. Due to the increasing age, the body's functions will also regress, making the elderly more susceptible to health issues, both physical and mental (Sofia & Gusti, 2017). The nutritional status of the elderly is categorized into three categories: overnutrition, undernutrition, and normal nutrition. The nutritional status of the elderly is generally related to their consumption patterns and lifestyle when they were younger, which will manifest in their health in old age (Fatmah, 2013).

The World Health Organization (WHO) (2019) stated that the elderly population in Indonesia is increasingly growing. In fact, Indonesia ranks 4th in terms of the largest elderly population after China, India, and the United States. In 2025, it is expected to reach 11.34% or 28.8 million people. Indonesia, as one of the countries in Southeast Asia, has a significant history of increasing elderly population along with the improvement in health quality, which impacts the increase in life expectancy. Based on the predictive data from Infodatin Kemenkes RI (2016), in 2019 there were 23.66 million elderly people in Indonesia (9.03%). It is estimated that the number of elderly people in 2020 will reach 27.08 million, and in 2025 it is expected to reach 33.69 million, in 2030 it is expected to reach 40.95 million, and in 2035 it is expected to reach 48.19 million. According to the 2021 Nutrition Planning Program data, the proportion of elderly people in Riau, especially in Pekanbaru City, is 8.34% of the total population.

Factors Related to The Nutritional Status of the Elderly in the Working Area of Sapta Taruna Community Health Center, Pekanbaru City

The prevalence of malnutrition among the elderly worldwide reaches 14.9%, with the highest prevalence in Southeast Asia at 27.3% (WHO, 2019). According to the 2020 Riskesdas data, 21.8% of the elderly in Indonesia have poor nutritional status. In Riau Province, the percentage of elderly with poor nutritional status in 2019 was 13.7%, which increased to 20.4% in 2020. In the Republic of Indonesia Law Number 13 of 1998 concerning the welfare of the elderly, what is meant by the elderly is someone who has reached the age of 60 years and above. The elderly is classified into three groups: pre-elderly, elderly, and highly risk elderly. Pre-elderly refers to those aged 45-59 years, elderly refers to those aged 60-69 years, and elderly resti refers to those over 70 years (Ministry of Health of the Republic of Indonesia, 2016).

The utilization of Posyandu is a decision-making process that can be influenced by several factors such as attitude, knowledge, education level, perception of illness, health awareness, socio-cultural values, occupation, age, family support, distance, and the role of cadres. Elderly individuals can be considered active in utilizing the health services of elderly Posyandu if their attendance reaches 70% or ≥ 8 times in one year (Ministry of Health of the Republic of Indonesia, 2016).

There are several factors that influence the nutritional status of the elderly, including the utilization of elderly Posyandu (integrated health posts), family support, knowledge, attitudes, and dietary patterns related to balanced nutrition, which all contribute to the occurrence of nutritional status in the elderly. To achieve balanced nutrition, it is necessary for the elderly to be aware in order to maintain their nutritional status. If the elderly do not respond properly and correctly, it is feared that it will worsen their health due to the aging process. The elderly can utilize the elderly Posyandu to obtain accurate information about their status from local healthcare workers (Arisanti et al., 2014). The lack of knowledge among the elderly about their nutritional status and the low understanding of the benefits of elderly Posyandu can be obstacles for the elderly in participating in Posyandu activities. Incorrect knowledge about the goals and benefits of the Posyandu can lead to misconceptions, resulting in low visits to the Posyandu (Permatasari et al., 2014). The negative attitude of the elderly causes low participation of the elderly in Posyandu due to various physical conditions that occur in the elderly, such as being ill, the absence of family members to support the elderly, and no one to accompany the elderly to the Posyandu, resulting in an average visit per every month, the number of elderlies can be considered low (Asnaniar et al., 2018).

The report obtained from the Pekanbaru City Health Office in 2021 provided data that out of the 20 health centers in Pekanbaru City, the working area of the Sapta Taruna Health Center had the lowest number of elderly people, with 4,264 elderly individuals from January to December 2022. The nutritional status data of the elderly at Puskesmas Sapta Taruna in 2021 showed that 17.5% had poor nutritional status and 5.5% had normal nutritional status, while in 2022, 19.1% had poor nutritional status and 4.5% had normal nutritional status (Pekanbaru City Health Office, 2022).

From the initial preliminary study conducted by the researcher, out of 30 elderly individuals in the working area of Puskesmas Sapta Taruna, an initial survey and interviews about the elderly posyandu revealed that 8 elderly individuals did not know about balanced nutrition for the elderly, 6 elderly individuals had a negative attitude towards dietary compliance, 7 elderly individuals' families did not remind them to maintain a good diet, 5 elderly individuals said they had never attended the elderly Posyandu, 1 elderly individual experienced malnutrition and 5 elderly individuals experienced overnutrition based on weight and height measurements, while 4 elderly individuals said they had never attended school and therefore did not know what the elderly Posyandu was (Puskesmas Sapta Taruna Profile, 2022).

Based on the background, preliminary surveys, and interviews conducted by the researcher with the elderly in the working area of Puskesmas Sapta Taruna. From the background description above, the researcher is interested in studying "Factors Related to the Nutritional Status of the Elderly in the Working Area of the Sapta Taruna Health Center, Pekanbaru City, in 2023."

METHOD

The type of research conducted is quantitative research with a descriptive research method using a Cross Sectional design, where independent and dependent variables will be measured and collected simultaneously.

The population in this study consists of all elderly individuals in the Working Area of the Sapta Taruna Health Center in Pekanbaru City in 2023, totaling 4,264 respondents, with a sample size of 150 respondents. This study uses the Acidental Sampling technique, where samples are taken randomly, allowing the researcher to sample anyone encountered without prior planning that aligns with the research context.

RESULT

1. Characteristics of Respondents

Table. 1 Frequency Distribution Based on Respondents' Age in the Working Area of Puskesmas Sapta Taruna, Pekanbaru City

Characteristics	n	Mean	Median	SD	Minimum	Maximum
Age	150	63,94	61,00	5,687	60	83

Based on Table 1 above, the mean age of the elderly is 63.94 and the median is 61.00, with a standard deviation of the elderly age being 5.687, while the minimum age of the elderly is 60 and the maximum age of the elderly is 83.

Table. 2 Frequency Distribution Based on Gender, Education, Marital Status, Income, and Housing Occupied by Respondents in the Working Area of Sapta Taruna Health Center, Pekanbaru City

No	Characteristics	Frequency (f)	Percentage (%)
1.	Gender		
	a. Male	43	28,7
	b. Female	107	71,3
2.	Latest education		
	a. Uneducated	24	16,0
	b. Elementary school	33	22,0
	c. Junior School	36	24,0
	d. Senior High School	32	21,6
	e. University	25	16,7
3.	Marital Status		
	a. Married	33	22,0
	b. Divorced	47	31,3
	c. Divorced by death	70	46,7
4.	Income		
	a. < 3.319.000	105	70,0
	b. ≥ 3.319.000	45	30,0
5.	Occupied house		
	a. Private house	24	16,0
	b. Children’s house	106	70,7
	c. Grandfather house	14	9,3
	d. Family home	6	4,0
	Total	**150**	**100**

Based on Table 2 above, the majority of the elderly respondents are female, with 107 respondents (71.3%). The majority of the elderly respondents have completed junior high school, with 36 respondents (24.0%). The majority of the elderly respondents are widowed, with 70 respondents (46.7%). The majority of the elderly respondents have an income of less than 3,319,000, with 105 respondents (70.0%). The majority of the elderly respondents live in their children's homes, with 106 respondents (70.7%).

2. Univariate Analysis

Table. 3 Frequency Distribution of Respondents Based on Dependent Variable and Independent in the Working Area of the Sapta Taruna Health Center, Pekanbaru City

No	Variable	Frequency (f)	Percentage (%)
	Dependent Variables		
1	Elderly Nutritional Status		
	a. Malnutrition	6	4,0
	b. Excess Nutrition	76	50,7
	b. Normal Nutrition	68	45,3
	Total	**150**	**100**
	Independent Variables		

2	Posyandu Utilization		
	a. Not Utilizing	84	56,0
	b. Utilize	66	44,0
	Total	**150**	**100**
3	Family Support		
	a. No Supported	87	58,0
	b. Support	63	42,0
	Total	**150**	**100**
4	Knowledge		
	a. Low	102	68,0
	b. High	48	32,0
	Total	**150**	**100**
5	Attitude		
	a. Negatif	89	59,3
	b. Positif	61	40,7
	Total	**150**	**100**
6	Eating Habits		
	a. Poor	95	63,3
	b. Good	55	36,7
	Total	**150**	**100**

Based on Table 3 above, out of 150 respondents, it was found that 82 elderly individuals (54.7%) experienced under/over nutrition status. The utilization of elderly posyandu that did not meet the criteria was 84 respondents (56.0%), the lack of family support for the elderly was 87 respondents (58.0%), the low knowledge of the elderly was 102 respondents (68.0%), the negative attitude of the elderly was 89 respondents (59.3%), while the poor eating habits of the elderly were 95 respondents (63.3%).

3. Bivariate Analysis

a. The Relationship Between the Utilization of Posyandu and the Nutritional Status of the Elderly

Table. 4 The Relationship Between the Utilization of Posyandu and Nutritional Status of the Elderly in the Working Area of Puskesmas Sapta Taruna, Pekanbaru City, in 2023

Pemanfaatan Posyandu	Elderly Nutritional Status						*P value*	POR (CI 95%)
	Poor / Good Nutrition		Normal Nutrition		Total			
	n	%	n	%	n	%		
Not Utilizing	39	46,4	45	53,6	84	100	0,034	0,464 (0,239-0,900)
Utilize	43	65,2	23	34,8	66	100		
Total	**82**	**54,7**	**68**	**45,3**	**150**	**100**		

From Table 4 above, out of 84 respondents who did not utilize the Posyandu, 39 respondents (46.4%) experienced under/over nutrition status, whereas out of 66 respondents who utilized the Posyandu, 43 respondents (65.2%) experienced under/over nutrition status. The results of the statistical test using the chi-square test obtained a p-value of 0.034, which means the p-value < α (0.05), indicating that there is a relationship between the utilization of Posyandu and the nutritional status of the elderly. With a POR value of 0.464 (0.239-0.900), it means that the elderly who do not utilize Posyandu serve as a protective factor for their nutritional status because the POR value < 1. The elderlies who do not utilize Posyandu have only a 0.5 times chance of experiencing nutritional issues compared to those who utilize Posyandu.

b. The Relationship Between Family Support and Nutritional Status of the Elderly

Table. 5 The Relationship Between Family Support and Nutritional Status of the Elderly in the Work Area of Sapta Taruna Health Center, Pekanbaru City, 2023

Family Support	Elderly Nutritional Status						*P value*	POR (CI 95%)
	Poor/ Good Nutrition		Normal Nutrition		Total			
	n	%	n	%	n	%		

Not Supported	41	47,1	46	52,9	87	100	0,044	0,478 (0,245-
Supported	41	65,1	22	34,9	63	100		0,932)
Total	**82**	**54,7**	**68**	**45,3**	**150**	**100**		

From Table 5 above, out of 87 respondents with no family support, 41 respondents (47.1%) experienced under/over nutrition status, whereas out of 63 respondents with family support, 41 respondents (65.1%) experienced under/over nutrition status. The results of the statistical test using the chi-square test obtained a p-value of 0.044, which means p < α (0.05), indicating that there is a relationship between family support and the nutritional status of the elderly. With a POR value of 0.478 (0.245-0.932), it means that the absence of family support acts as a protective factor for the nutritional status of the elderly because the POR value is < 1. The elderly without family support have only a 0.5 times chance of experiencing nutritional issues compared to those with family support.

c. The Relationship Between Knowledge and Nutritional Status of the Elderly

Table. 6 The Relationship Between Knowledge and Nutritional Status of the Elderly in the Working Area of Sapta Taruna Health Center, Pekanbaru City, 2023

Knowledge	**Elderly Nutritional Status**						***P value***	**POR (CI 95%)**
	Poor/Good nutrition		**Normal Nutrition**		**Total**			
	n	**%**	**n**	**%**	**n**	**%**		
Low	49	48,0	53	52,0	102	100	0,028	0,420 (0,204-
High	33	68,8	15	31,3	48	100		0,866)
Total	**82**	**54,7**	**68**	**45,3**	**150**	**100**		

From Table 6 above, out of 102 respondents with low knowledge, 49 respondents (48.0%) experienced under/over nutrition status, whereas out of 48 respondents with high knowledge, 33 respondents (68.8%) experienced under/over nutrition status. The results of the statistical test using the chi-square test obtained a p-value of 0.028, which means the p-value < α (0.05), indicating that there is a relationship between knowledge and the nutritional status of the elderly. With a POR value of 0.420 (0.204-0.866), it means that the elderly with low knowledge is a protective factor for their nutritional status because the POR value < 1. The elderly with low knowledge has only a 0.4 times chance of experiencing nutritional status issues compared to the elderly with high knowledge.

d. The Relationship Between Attitude and Nutritional Status of the Elderly

Table. 7 The Relationship Between Attitude and Nutritional Status of the Elderly in the Working Area of the Community Health Center Sapta Taruna City of Pekanbaru

Attitude	**Elderly Nutritional Status**						***P value***	**POR (CI 95%)**
	Poor/Good Nutrition		**Normal Nutrition**		**Total**			
	n	**%**	**n**	**%**	**n**	**%**		
Negative	42	47,2	47	52,8	89	100	0,040	0,469 (0,239-
Positive	40	65,6	21	34,4	61	100		0,919)
Total	**82**	**54,7**	**68**	**45,3**	**150**	**100**		

From Table 7 above, from 89 respondents with negative attitudes, 42 respondents (47.2%) experienced under/over-nutrition status, while from 61 respondents with positive attitudes, 40 respondents (65.6%) experienced under/over-nutrition status. The results of the statistical test using the chi-square test obtained a p-value of 0.040, which means the p-value < α (0.05), indicating that there is a relationship between attitude and the nutritional status of the elderly. With a POR value of 0.469 (0.239-0.919), it means that the elderly with a negative attitude is a protective factor for the nutritional status of the elderly because the POR value < 1. The elderly with a negative attitude has only a 0.5 times chance of experiencing poor nutritional status compared to the elderly with a positive attitude.

e. The Relationship Between Eating Patterns and Nutritional Status of the Elderly

Table. 8 The Relationship Between Eating Patterns and Nutritional Status of the Elderly in the Work Area of the Community Health Center Sapta Taruna City of Pekanbaru

Pola Makan	Elderly Nutritional Status						*P value*	POR (CI 95%)
	Poor/Good Nutrition		Normal Nutrition		Total			
	n	%	n	%	n	%		
Poor	45	47,4	50	52,6	95	100	0,029	0,438 (0,219-0,875)
Good	37	67,3	18	32,7	55	100		
Total	**82**	**54,7**	**68**	**45,3**	**150**	**100**		

From Table 8 above, from 95 respondents with poor eating habits, 45 respondents (47.4%) experienced undernutrition/overnutrition status, while from 55 respondents with good eating habits, 37 respondents (67.3%) experienced undernutrition/overnutrition status. The results of the statistical test using the chi-square test obtained a p-value of 0.029, which means the p-value < α (0.05), indicating that there is a relationship between diet and the nutritional status of the elderly. With a POR value of 0.438 (0.219-0.875), it means that a poor diet in the elderly acts as a protective factor for their nutritional status because the POR value < 1. The elderly with a poor diet has only a 0.4 times chance of experiencing nutritional issues compared to those with a good diet.

DISCUSSION

1. Research Limitations

The limitations or constraints encountered during this research were during the distribution of questionnaires to respondents. This study only focused on visits to elderly health posts and health center services for the elderly, resulting in the number of respondents not meeting the target sample size required for the research, due to the lack of direct visits to the homes of elderly respondents.

2. Discussion

Based on the research results, it was found that elderly individuals experiencing undernutrition/overnutrition amounted to 82 respondents (54.7%), while those with normal nutritional status were 68 respondents (45.3%). The prevalence of malnutrition among the elderly worldwide in 2019 reached 14.9%, while in Indonesia in 2020, the elderly had a malnutrition rate of 21.8%. In Riau Province, the malnutrition rate among the elderly in 2020 was 20.4%, whereas at the Sapta Taruna Health Center, the malnutrition rate among the elderly in 2022 was 19.1%.

The nutritional status of the elderly is a condition determined by the degree of physical needs for energy and nutrients obtained from food, the physical impact of which can be measured. The comparison of the average calculation of nutritional needs with the amount of nutrient intake can provide an indication of the presence or absence of nutritional problems (Fatmah, 2013).

The results of this study are in line with Fitriani's research (2018), where out of 100 respondents, the frequency of elderly nutritional status in the under/over category was 81% and sufficient 19%. Therefore, it can be concluded that there is a tendency for under/over nutritional status among the elderly at the Tresna Werdha Social Welfare Home.

Based on the research findings, the elderly who experience poor nutritional status are due to low income, which forces them to work hard to earn more income to meet their daily living needs, and they cannot afford to buy nutritious food. Additionally, there is a lack of attention and support from the family regarding the dietary intake consumed by the elderly daily.

a. The Relationship Between the Utilization of Posyandu and the Nutritional Status of the Elderly

Based on the results of the statistical test using the chi-square test, a p-value of 0.034 was obtained, which means the p-value < α (0.05), indicating that there is a relationship between the utilization of posyandu and the nutritional status of the elderly. With a POR value of 0.464 (0.239-0.900), it means that the elderly who do not utilize the posyandu as a protective factor for their nutritional status because the POR value < 1, the elderly who do not utilize the posyandu have only a 0.5 times chance of experiencing nutritional status issues compared to the elderly who utilize the posyandu.

The utilization of posyandu is a decision-making process that can be influenced by several factors such as attitude, knowledge, education level, pain perception, health awareness, socio-cultural values, occupation, age, family support, distance, and the role of cadres. Elderly individuals can be considered active in utilizing the health services of the elderly posyandu if their attendance reaches 70% or ≥ 8 times in one year (Kemenkes RI, 2016).

The results of this study are in line with the findings of previous research conducted by Lestari et al. (2018), which showed a relationship between the utilization of posyandu and the nutritional status of the elderly. The more frequently the elderly visit the posyandu, the better the monitoring of their nutritional status. The results of the chi-square statistical test yielded a p-value of 0.035 (p>0.05), which means there is a relationship between the utilization of posyandu and the nutritional status of the elderly.

Based on the results of field research, the elderly who do not utilize the posyandu in this study become a protective factor because the elderly who do not utilize the posyandu have good nutritional status, so the results of this study do not show that the elderly who do not utilize the posyandu are a risk factor. Additionally, from the results of the questionnaire distribution, about 66.0% of the elderly did not attend the posyandu and did not have a KMS card (Healthy Journey Card), did not know the use of the KMS card, and the elderly also rarely had their blood pressure, height, and weight measured, because most elderly people only go to the health center/clinic to get medication and do not utilize the existing elderly posyandu activities. Therefore, the elderly who actively utilize the elderly posyandu are only a small portion.

According to the researchers' assumptions from this study, it shows a lack of willingness and activity among the elderly in utilizing the elderly posyandu, with information still unevenly distributed and minimal information absorbed. In this case, the role of cadres and health workers should be further enhanced, and more frequent information should be provided to local community leaders through WhatsApp groups, to increase the elderly's willingness to understand that being healthy is very important. Where the greater the desire of the elderly to utilize the posyandu, the more active they will be in posyandu activities.

b. The Relationship Between Family Support and Nutritional Status of the Elderly

Based on the results of the statistical test using the chi-square test, a p-value of 0.044 was obtained, which means the p-value < α (0.05), indicating that there is a relationship between family support and the nutritional status of the elderly. With a POR value of 0.478 (0.245-0.932), it means that the absence of family support acts as a protective factor for the nutritional status of the elderly because the POR value < 1. The elderly without family support have only a 0.5 times chance of experiencing nutritional issues compared to those who receive family support.

Family support is the attitude, actions, and acceptance of the family towards its members. Family members believe that supportive individuals are always ready to provide help and assistance when needed, expressing those affectionate relationships within the family constitute a happy household. Family support also plays a significant role in encouraging the interest and willingness of the elderly to participate in Posyandu Lansia activities. The family can be a strong motivator for the elderly if they always make themselves available to accompany or take the elderly to the Posyandu, remind them if they forget the Posyandu schedule, and strive to help solve any problems together with the elderly. Family is also a support system in maintaining and preserving the health of the elderly (Soewono, 2016).

The results of this study are in line with Kristyaningsih's (2019) research on the relationship between family support and health in the elderly, which shows a relationship between family support and health in the elderly with a p-value = 0.000 (P-value<α). Most of the time, the higher the family support, the better the health of the elderly. Another study conducted by Ibrahim (2017) on the relationship between family support and the nutritional status of the elderly stated that the level of family support was in the high category with a frequency of 36 people (90%). The statistical test results obtained a p-value of 0.004 < 0.05, indicating a relationship between family support and the nutritional status of the elderly.

Based on the results of field research, the elderly without family support in this study became a protective factor, which may be due to the fact that the elderly without family support have good nutritional status. Therefore, this study does not show that the elderly without family support is a risk factor. Additionally, from the results of the questionnaire distribution, nearly 73.3% of families do not remind the elderly about the posyandu schedule. The elderly greatly needs family support in fulfilling all their needs, one of which is reminding them about the posyandu schedule. Family support is also needed in the form of praise and attention for the elderly who are active in utilizing the elderly posyandu. Many elderly people live alone or only with their partners, and some elderly people also receive attention and support from their families.

According to the researchers' assumptions from this study, the elderly greatly needs attention and praise from their families to influence their activity in posyandu activities, as well as the need for family support to accompany or remind the elderly to come to the posyandu. The better the family support, the better the fulfillment of nutritional needs for the elderly. Where the family functions as a support system for its members.

c. The Relationship Between Knowledge and Nutritional Status of the Elderly

Based on statistical tests using the chi-square test, a p-value of 0.028 was obtained, which means the p-value < α (0.05), indicating that there is a relationship between knowledge and the nutritional status of the elderly. With a POR value of 0.420 (0.204-0.866), it means that the elderly with low knowledge is a protective factor for the nutritional status of the elderly because the POR value < 1. The elderly

with low knowledge has only a 0.4 times chance of experiencing poor nutritional status compared to the elderly with high knowledge. Knowledge is the result of knowing, and this occurs after a person perceives a certain object. Low knowledge about the benefits of elderly posyandu can be an obstacle for the elderly in participating in posyandu activities. Incorrect knowledge about the goals and benefits of elderly posyandu can lead to misconceptions, resulting in low attendance at the posyandu. Low knowledge about the benefits of visiting the posyandu can be derived from personal experiences in daily life when attending activities at the elderly posyandu. At the elderly posyandu, the elderly will receive counseling on how to live a healthy life despite the limitations or problems they may have (Bukit, 2019).

The results of this study are in line with the research conducted by Fiti (2018), which states that there is a relationship between knowledge and the nutritional status of the elderly. The statistical test results obtained a p value of 0.000 < 0.05. Knowledge itself is greatly influenced by the education of the elderly and the information they receive from their surrounding environment. Based on the results of field research, the elderly with low knowledge in this study became a protective factor, which may be due to the fact that the elderly with low knowledge have good nutritional status. Therefore, the results of this study do not indicate that the elderly with low knowledge are a risk factor. Additionally, from the results of the questionnaire distribution, it was found that most respondents in this study had low knowledge in the category of healthy and nutritious food for the elderly. However, some of them had nutritional status categorized as abnormal (underweight and overweight). This is observed based on the calculation of the Body Mass Index that has been conducted by the researcher. Knowledge about nutritional status is very important in determining a person's behavior in choosing the type of food. Similarly, education from healthcare workers/posyandu cadres is needed regarding the benefits of the KMS provided to the elderly.

According to the researchers' assumptions from this study, factors such as eating habits, taste, and preferences towards food can affect the nutritional status of the elderly. In addition, nutritional knowledge in the elderly can also be influenced by the environment where they live, lack of appetite, lack of enthusiasm, and beliefs (taboos) regarding certain foods that are believed to cause illness if consumed. Where there is a need for the active role of healthcare workers/cadres in explaining various activities of the elderly posyandu and the benefits of the KMS provided to the elderly. In this case, the better the knowledge of the elderly, the better they will be at determining the types and amounts of food needed for their bodies. If nutritional needs are met, the tendency for the elderly to achieve good nutritional status will be even higher.

d. The Relationship Between Attitude and Nutritional Status of the Elderly

Based on statistical tests using the chi-square test, a p-value of 0.040 was obtained, which means the p-value < α (0.05), indicating that there is a relationship between attitude and the nutritional status of the elderly. With a POR value of 0.469 (0.239-0.919), it means that there is a relationship between attitude and the nutritional status of the elderly. With a POR value of 0.469 (0.239-0.919), it means that the elderly with a negative attitude is a protective factor for the nutritional status of the elderly because the POR value < 1, the elderly with a negative attitude have only a 0.5 times chance of experiencing nutritional status issues compared to the elderly with a positive attitude.

Attitude is the readiness or willingness to act, and it is not the execution of a specific motive. Attitude is not yet an action or activity, but rather a "pre-disposition" of actions or behavior. Attitudes are still a closed reaction, not an open reaction (Notoatmodjo, 2014). Based on the research results by Fadilla et al. (2020), it shows that there is a difference in the proportion of negative attitudes (85.2%) among respondents who do not utilize the elderly posyandu and (70.3%) who have a positive attitude towards utilizing the elderly posyandu. The statistical results also obtained a p-value of 0.018, which means there is a significant relationship between attitudes and the utilization of the elderly posyandu.

Based on the results of field research, the elderly with negative attitudes in this study became a protective factor because the elderly with negative attitudes has good nutritional status. Therefore, this study does not show that the elderly with negative attitudes is a risk factor. Additionally, from the results of the questionnaire distribution, it can be seen that the elderly with positive attitudes is not unrelated to the education level of the respondents. This is evident from the respondents' answers, as many elderly individuals do not utilize medical treatment during the scheduled elderly posyandu, and there is still a low willingness among the elderly to engage in physical activities such as morning exercises. This leads to many elderly individuals still relying on medical treatment at clinics or hospitals.

According to the researchers' assumption from this study, respondents who have a positive attitude but are less active in utilizing the posyandu are due to laziness and physical conditions that are less supportive, such as hypertension, aches, cramps, osteoporosis, rheumatism, and paralysis, which prevent the elderly from utilizing the posyandu. In addition, the attitudes of the elderly are also influenced by family support and the lack of information they receive regarding their nutritional status. Therefore, the elderly still prefers to seek treatment directly at clinics or hospitals rather than utilizing the elderly posyandu/community health center.

e. The Relationship Between Eating Patterns and Nutritional Status of the Elderly

Based on statistical tests using the chi-square test, a p-value of 0.029 was obtained, which means the p-value < α (0.05), indicating that there is a relationship between diet and the nutritional status of the elderly. With a POR value of 0.438 (0.219-0.875), it means that the elderly with a poor diet is a protective factor for the nutritional status of the elderly because the POR value < 1. The elderly with a poor diet has only a 0.4 times chance of experiencing nutritional issues compared to the elderly with a good diet.

Diet is a way to regulate the type or amount of food in accordance with the body's needs to maintain health, nutritional needs, and prevent the occurrence of diseases. A good diet includes staple foods, side dishes, fruits, and vegetables, and is consumed in sufficient amounts according to needs. A good diet and a variety of foods can ensure the sufficiency of energy sources, building substances, and regulating substances for a person's nutritional needs, thereby improving a person's nutritional status and strengthening the body's resistance to disease attacks. Factors that influence consumption patterns include the availability of time, peer influence, the amount of money available, and factors such as preferences, knowledge, and nutrition education (Aisyah, 2018).

The results of this study are in line with the research conducted by Fiti (2016), which stated that there is a relationship between eating habits and the nutritional status of the elderly. The statistical test results obtained a p value of 0.002 < 0.05. A person's nutritional status depends on their own eating habits.

Based on the results of field research, the elderly with poor eating habits in this study became a protective factor, possibly because the elderly with poor eating habits had good nutritional status. Therefore, this study did not show that the elderly with poor eating habits were a risk factor. The impact of aging significantly affects the eating behavior, food choices, nutrition, and health status of the elderly. The effects of aging on eating behavior, food choices, nutrition, and health status indicate that the elderly eat less and make different food choices as they age, along with the impact of reduced physical activity (exercise), leading to malnutrition and excessive nutritional status.

According to the researchers' assumptions from this study, a good diet will affect the nutritional status of the elderly because they eat according to their preferences without considering nutritional value, families provide food that everyone can eat, even though many elderly people do not have intact teeth, different tastes, and accompanying diseases, such as NCDs (Non-Communicable Diseases). In addition, the work of the elderly can also affect their nutritional needs and adequacy, as well as changes in the social environment such as retirement. Loss of a partner, depression as a result, causes the elderly to lose their appetite and will impact the decline in their nutritional status. In this case, family support plays a crucial role in achieving normal nutritional status for the elderly by paying attention to their daily eating patterns and the affection provided by the family.

CONCLUSION

1. The existence of a relationship between the utilization of posyandu and the nutritional status of the elderly in the Working Area of the Sapta Taruna Health Center, Pekanbaru City
2. The existence of a relationship between family support and the nutritional status of the elderly in the Work Area of the Sapta Taruna Health Center, Pekanbaru City
3. The relationship between knowledge and the nutritional status of the elderly in the Working Area of the Sapta Taruna Health Center, Pekanbaru City
4. The existence of a relationship between attitudes and nutritional status of the elderly in the Working Area of Sapta Taruna Health Center, Pekanbaru City
5. The relationship between dietary patterns and the nutritional status of the elderly in the Working Area of the Sapta Taruna Health Center, Pekanbaru City

REFERENCES

1) Afreliyaningsih. (2017). *Hubungan Sikap Lansia dengan Pemanfaatan Posyandu di Kelurahan Genuksari Kecamatan Genuk Kota Semarang. Jurnal Keperawatan. Vol 1 No 1*. http://repository.unissula.ac.id /14497/8/Lampiran.pdf. Diakses 1 April 2023
2) Almatsier, S. (2019). *Prinsip Dasar Ilmu Gizi*. Jakarta : PT Gramedia Pustaka Utama
3) Aprilla, V., Afandi, D. & Putri Damayanti, I. (2019). *Faktor Yang Berhubungan Dengan Kunjungan Lansia Ke Posyandu Lansia Tahun 2019*. Excellent Midwifery Journal, 2(2). Available at: http://jurnal.mitrahusada.ac.id/ index.php/emj/article/view/91. Diakses 10 Februari 2023
4) Arisanti., Husin, S., & Febry, F. (2014). *Gambaran Asupan Energi dan Zat Gizi Pada Lansia di Panti Sosial Tresna Werdha Warga Tama Indralaya Tahun 2009*. Jurnal Ilmu Kesehatan Masyarakat, 5(1), 25–32. https://ejournal.fkm.unsri.ac.id/index.php/jikm/article/view/127/93. Diakses 21 Februari 2023

5) Asnaniar, W. O & Asfar, A. (2018). *Analisis Status Gizi Lansia Berdasarkan Indeks Massa Tubuh (IMT) Dan Mini Nutritional Assesment (MNA).* Jurnal Ilmiah Kesehatan Diagnosis, 12(3), 285–290. http://ejournal. stikesnh.ac.id/index.php/jikd/article/view/321. Diakses 14 Februari 2023
6) Badan Pusat Statistik. (2021). *Jumlah Angkatan Kerja 2011-2020*. Retrieved from Badan Pusat Statistik Provinsi Jawa Tengah: https://jateng.bps.go.id /indicator/6/82/4/jumlah-angkatan-kerja.html
7) Bahri, A.S., Putra, F. A & Suryanto, M. S. (2017). *Hubungan antara tingkat Pengetahuan asupan Gizi Lansia Dengan Status Gizi Di Posyandu Lansia Sedyowaras Rw Iv Kelurahan Sumber Surakarta*. Jurnal Ilmu Keperawatan Indoensia Vol. 10, No. 1. https://jurnal.usahidsolo.ac.id/index. php/JIKI/article/view/182/142. Diakses 22 Maret 2023
8) Bukit, R. (2019). *Faktor-Faktor Yang Mempengaruhi KunjunganPosyandu Lansia Di Puskesmas Tenayan Raya Pekanbaru tahun 2018*. Jurnal Kesehatan. Akademik Kebidanan Dharma Husada, Riau, Indonesia. ISSN 2615-3068, Vol: 2, No 1. http://ojs.husadagemilang.ac.id /index.php/kebidanan/article/view/27/19. Diakses 22 Maret 2023
9) Isnaini, c. (2021). *Faktor-faktor yang mempengaruhi pemanfaatanposyandu lansia di Wilayah Kerja Puskesmas Dolok Masihul Kabupaten Serdang Bedagai*. Jurnal Keperawatan. Vol 1 no 3. http://repository.uinsu.ac.id/13018/1/SKRIPSI%20CINDI%20ISNAINI%20%280801163100%29%20FKM.pdf. Diakses 22 Februari 2023
10) Kementerian Kesehatan RI. (2016). *INFODATIN Pusat Data dan Informasi Kementerian Kesehatan RI Situasi Balita Pendek*. Jakarta Selatan.
11) Komisi Nasional Lanjut Usia. (2017). *Pedoman Pelaksanaan Posyandu Lanjut eUsia*. Jakarta.
12) Notoatmodjo, S. (2014). *Ilmu Perilaku Kesehatan*. Jakarta: Rineka Cipta.
13) Nur'Ain, A. (2017). *Hubungan Tingkat Pengetahuan Tentang Posyandu Lansia Terhadap Keaktifan Kunjungan Lansia di Posyandu Kenanga RW I Kelurahan Muktiharjo Lor Semarang*. Jurnal Keperawatan. Vol 1 No 1. http://repository.unissula.ac.id/23844/1 /092070037_Fullteks.pdf. Diakses 1 April 2023
14) Nurgahayu., Nganro, S & Bur, N. (2021). *Faktor yang berhubungan dengan pemanfaatan pelayanan kesehatan posyandu lansia di Puskesmas Wara Selatan Palopo*. Window of Public Health Journal, Vol. 1 No. 5. http://jurnal.fkm.umi.ac.id/index.php/woph/article/view/woph1517. Diakses 22 Maret 2023
15) Permatasari, A. D., & Taviyanda, D. (2014). *Peningkatan Aktivitas Posyandu Meningkatkan Kualitas Hidup Pada Lansia Terhadap Depresi*. Jurnal STIKES RS Baptis Kediri. Vol 7, NO 2. https://jurnal.stikesbaptis.ac.id/index.php/STIKES/article/view/97. Diakses 19 Februarii 2023
16) Puskesmas Sapta Taruna. (2023). *Profil Puskesmas Sapta Taruna.* Pekanbaru: Riau
17) Rahayu, A. (2017). Hubungan Dukungan Keluarga Dengan Kektifan Dalam mengikuti posyandu lansia. Di Posyandu Di Dukuh Krajan Desa Grogol, Kecamatan Sawoo, Kabupaten Ponorogo. Jurnal Keperawatan. Vol 1 No 1. http://eprints.umpo.ac.id/3399/9/LAMPIRAN.pdf. Diakses 1 April 2023
18) Sari, P. P. (2022). *Faktor-Faktor Yang Berhubungan Dengan Perilaku Makan Beresiko Hipertensi Pada Lansia di Wilayah Kerja Puskesmas Tambang*. Jurnal Olahraga dan Kesehatan. Vol 1 no 3. https://doi.org/10.56466/orkes/Vol1.Iss2.56. Diakses 12 Februari 2023
19) Shai, N.P. (2018). *Pola konsumsi zat gizi dan penyakit infeksi kaitannya dengan kejadian kek pada ibu hamil di wilayah kerja Puskesmas Selat Kabupaten Karangasem*. Jurnal of Nutritional Science, 7(3). http://ejournal.poltekkes-denpasar.ac.id/index.php. Diakses 22 April 2023
20) WHO. (2019). *Maternal mortality key fact*. https://www.who.int/news-room/fact-sheets/detail/maternal-mortality