THE RELATIONSHIP OF FOOD LEFTOVERS AND STUDENTS' LEVEL OF SATISFACTION WITH THE FOOD SERVED WITH THE NUTRITIONAL STATUS OF NURUL ULUM ISLAMIC BOARDING STUDENTS IN PEUREULAK, EAST ACEH

Rizki Sofiani[1*], Arnisam[2]
[1,2]*Poltekkes Kemenkes Aceh*
[*] *rizkisofiani96@gmail.com*

ABSTRACT

Nutritional status is a condition determined by the degree of food whose physical impact can be measured. Adolescents are a group that is vulnerable to experiencing nutritional problems. The prevalence of wasting among adolescents aged 16-18 years nationally is 9.4% (1.9% are very thin and 7.5% are thin). The prevalence of adolescent nutritional status in Aceh among adolescents aged 16–18 years is 7.3% thin, 12.6% fat, and 4.6% obese. Good nutritional status must be balanced with incoming and outgoing energy and protein intake. One way to measure a person's food intake is by weighing food waste. This research is descriptive and analytical in nature, using a cross-sectional approach with a total sampling of 60 people carried out in February 2019 at the Nurul Ulum Islamic Boarding School, Peureulak, East Aceh. The research variables are food waste with nutritional status and level of satisfaction with nutritional status. Descriptive data analysis included frequency distribution and percentages with the Chi-square test. The results of this study showed that 42 people (70.0%) had a normal BMI, 10 people were thin (16.7%), and 8 people were obese (13.3%). The results of female students' food waste show an average of 20.1%. Most of the female students at the Nurul Ulum Islamic Boarding School in Pereulak, East Aceh, had a lot of food leftovers, 35 people (58.3%) and 25 people (41.7%) a little food waste, and for this category, the level of satisfaction showed that the average was 68.9 The majority of those who were dissatisfied were 45 people (75%), and those who were satisfied were 15 people (25%). The results of this research concluded that there was a relationship between food waste and the nutritional status of female students at the Nurul Ulum Islamic Boarding School, Pereulak, East Aceh, marked with a P value of 0.023 or (P<0.05), while the relationship between female student satisfaction and the nutritional status of female students at the Nurul Ulum Islamic Boarding School, Pereulak Aceh East there is no relationship indicated by a P value of 0.921 or (P>0.05).

Keywords: *nutritional status, food waste, level of female student satisfaction*

INTRODUCTION

Nutritional status is a condition determined by the degree of food whose physical impact can be measured (Merryana Adriani, 2016). Based on food consumption patterns that are not the same and are influenced by many things, will cause differences in energy and protein intake received by gender, age, and body condition (Purnama, 2019).

A person's nutritional condition is a reflection of the food consumed over a long period. During adolescence, high nutritional needs are needed to meet the needs of rapid growth and development of the body. If these nutritional needs are not met, it will hamper the growth and development of the body, and can even cause the body to become malnourished and susceptible to disease. Nutritional problems in adolescents that occur due to wrong eating habits include obesity, chronic malnutrition, and micronutrient deficiencies such as nutritional anemia (Amelia, 2008).

Adolescents are a group that is vulnerable to experiencing nutritional problems. Along with the increase in the adolescent population in Indonesia, adolescent nutritional problems need

special attention because they affect the growth and development of the body as well as their impact on adult nutritional problems (Sulaiman et al., 2022). Nutritional problems that often occur in teenagers are lack of nutritional intake which results in malnutrition, namely being too thin which can trigger chronic energy deficiency (CED) and anemia due to iron deficiency (Kwasnicka et al., 2019). Malnutrition in adolescents can result in decreased body resistance to disease, increased morbidity, abnormal growth, low intelligence levels, low productivity, and stunted growth of reproductive organs (Sayekti et al., 2017).

Each person's nutritional needs are different, depending on how the body can carry out all physiological processes to ensure survival, a person must maintain a balance in energy needs. Errors in energy and protein intake can hurt nutritional status. Adolescence is a nutritionally vulnerable period because the need for nutrients is high. Based on the Nutritional Adequacy Rate (AKG), young women aged 16–18 years need 2125 kcal of energy, 59 g of protein, 71 g of fat, and 292 g of carbohydrates (Ain, 2021).

Good nutritional status must be balanced with incoming and outgoing energy and protein intake. One way to measure a person's food intake is by weighing food waste. Energy and protein have an important role in a person's nutritional status because they are the largest contributors to the body (Rokhmah et al., 2017).

Food is said to be nutritious if it contains sufficient food substances in quantity and quality according to the body's needs. The foods we classify are protein, fat, carbohydrates, vitamins, minerals, water oxygen, and fibrous foods. Sources of energy in food can be obtained from macronutrients, namely carbohydrates, fat, and protein. Daily consumption can be divided into several groups, namely protein, fat, carbohydrates, vitamins, minerals, water and oxygen, and fibrous foods. Sources of energy in food can be obtained from macronutrients, namely carbohydrates, fats, and proteins (Beck, 2000).

Based on the results of research conducted by (Choiriyah et al., 2021) at Al-Fithyan integrated Islamic high school, Kuburaya Regency, it was found that 61% of students did not finish their food, and it was found that 89% of students had poor nutritional status. It is known that 92% of students are dissatisfied with the taste of the food served, all students are dissatisfied with the appearance of the food served, and 63% of students are satisfied with the variety of menus served. According to research (Rokhmah et al., 2016) at the At-Tauhid Islamic Boarding School in Surabaya, it is 57.5 % of female students with underweight nutritional status. And while research (Ronitawati et al., 2021) at the Al-Hidayah Grobogan Islamic Boarding School also stated that 51.1% of female students were thin. There was a tendency for female students to have poor nutritional status.

According to (Rukmin & Suranadi, 2016), the prevalence of wasting among adolescents aged 16-18 years nationally is 9.4% (1.9% are very thin and 7.5% are thin). The prevalence of adolescent nutritional status in Aceh among adolescents aged 16–18 years is 7.3% thin, 12.6% fat, and 4.6% obese. This shows that teenagers in Aceh experience nutritional problems so they need to be considered and followed up so that the prevalence does not increase.

Based on the explanation above, researchers are interested in researching the relationship between food waste and the level of female students' satisfaction with the food served with the nutritional status of female students at the Nurul Ulum Peureulak Islamic Boarding School, East Aceh.

METHOD

This research is descriptive and analytical with a cross-sectional design to see the relationship between food waste and the level of female students' satisfaction with the food served with the nutritional status of female students at the Nurul Ulum Peureulak Islamic Boarding School, East Aceh.

Place and Time of Research

This research was carried out in February 2019 at the Nurul Ulum Islamic Boarding School, Peureulak, East Aceh.

Population and Sample

Population

The population in this study were all class X female students at the Nurul Ulum Islamic Boarding School, Peureulak, East Aceh.

Sample

The sampling in this research was carried out using a non-random sampling method using total sampling where the entire population was used as the research sample. The samples were 60 class X female students at the Nurul Ulum Islamic Boarding School in Peureulak, East Aceh.

Data Type

Primary Data

Primary data consists of the student's identity consisting of name, age, food waste, student satisfaction level, and BMI data.

Secondary Data

Secondary data used in this research includes a general description of the research location and population size.

How to Collect Data

Primary Data

Primary data was taken from sample identities obtained by interview. The remaining food samples were obtained using food weighing, and the level of satisfaction of the female students with the questionnaire, and the nutritional status of the samples were obtained using an examination carried out by weighing their body weight and measuring their height.

Secondary Data

General data includes a description of the location of the Nurul Ulum Peureulak Islamic Boarding School area, East Aceh.

RESULTS AND DISCUSSION

General Description of the Research Location

Nurul Ulum Islamic Boarding School Peureulak East Aceh was founded in 1987. Nurul Ulum Islamic Boarding School is one of the Islamic boarding schools located on Jalan Medan Banda Aceh km 394 Peureulak sub-district 24453 East Aceh district. In this Islamic boarding school, there are 3 schools, namely MA, SMA, and Mtss. This high school is under the auspices

of the Nurul Hilal Foundation, Nurul Ulum Islamic Boarding School, and collaborates with the government. This high school is led by a woman named Elvianie, Ss. At the Nurul Ulum Islamic Boarding School, the girls/students are boarded with the following facilities: comfortable classrooms, male and female student dormitories, library room, public kitchen, canteen, bathroom, parking lot, badminton court, information post, prayer room.

Nurul Ulum Islamic Boarding School Nutrition Services are nutritional service activities in Islamic boarding schools to meet the nutritional needs of students, for metabolic needs in the context of preventive, curative, rehabilitative, and promotive efforts.

General Description of the Sample

The sample used was all class X female students with an average age of 16-17 years at the Nurul Ulum Islamic Boarding School in Pereulak, East Aceh.

Research Results
Characteristics of Food Waste

Table 3. Characteristics of Food Leftovers from Female Students at the Nurul Ulum Islamic Boarding School

Food Waste	n	%
Few	25	41.7
Lots	35	58.3
Total	60	100.0

In Table 3, it can be seen that from 60 female students, there was food waste in the large category, namely 35 female students (58.3%), and food waste in the small category, namely 25 female students (41.7%).

Characteristics of Food Waste

Table 4. Characteristics of Female Students' Satisfaction Levels at Islamic Boarding Schools Nurul Ulum Peureulak East Aceh

Satisfaction Level	n	%
Dissatisfied	45	75.0
Satisfied	15	25.0
Total	60	100.0

In table 4. It can be seen that out of 60 female students, 45 female students (75%) were dissatisfied and 15 female students were satisfied (25.0%)

Characteristics of the Nutritional Status of the Research Sample

Table 5. Characteristics of the Nutritional Status of Research Samples at the Nurul Ulum Islamic Boarding School in Peureulak, East Aceh

Nutritional Status	n	%
Skinny	10	16.7
Normal	42	70.0
Obesity	8	13.3
Total	60	100.0

In Table 5, it can be seen that the nutritional status of the research sample at the Nurul Ulum Islamic Boarding School in Peureulak, East Aceh, was mostly Normal, namely 42 people (70%) and 10 people (16.7%) were thin, while 8 people (13%) were obese. %)

The relationship between food waste and the nutritional status of female students at the Nurul Ulum Islamic Boarding School in Peureulak, East Aceh

Table 6. Relationship between Food Waste and Nutritional Status of Female Students in Nurul Ulum Islamic Boarding School, Peureulak, East Aceh

Food Waste	Status Gizi						Total		P
	Skinny		Normal		Obesity				
	n	%	n	%	n	%	n	%	Value
Lots	2	5.7	27	77.1	6	17.1	35	100,0	
Few	8	32.0	15	60.0	2	8.0	25	100,0	0,023
Total	10	16,7	42	70,0	8	13,3	60	100,0	

Table 6, shows that proportionally the female students whose nutritional status is obese have a lot of food waste (17.1%) and little food waste (8.0%), while the female students who have a thin nutritional status have a lot of food waste (5.7%) and little food (32%). So it can be concluded that female students who have an obese nutritional status have more food waste compared to female students who have a thin nutritional status.

From the Chi-Square test calculations carried out on the relationship between food waste and nutritional status in female students, it was found that the p-value was (0.023) <0.05. This shows that there is a relationship between food waste and the nutritional status of female students at the Nurul Ulum Islamic Boarding School in Pereulak, East Aceh.

Relationship between the level of female student satisfaction and the nutritional status of female students at the Nurul Ulum Islamic Boarding School in Peureulak, East Aceh

Table 7. Relationship between female students' satisfaction levels and female students' nutritional status in

Level of Satisfaction	Status Gizi						Total		P
	Skinny		Normal		Obesity				
	n	%	n	%	n	%	n	%	Value
Dissatisfied	7	15.6	32	71.1	6	13.3	45	100,0	
Satisfied	3	20.0	10	66.7	2	13.3	15	100,0	0,921
Total	10	16,7	42	70,0	8	13,3	60	100,0	

Table 7 shows that proportionally the female students whose nutritional status is obese are in the dissatisfied category, namely (13.3%) and those in the satisfied category, namely (13.3%), while the female students whose nutritional status is thin are in the dissatisfied category, namely (15.6%) and the satisfied category, namely (20%). So it can be concluded that female students who have a thin nutritional status are more dissatisfied than female students who have an obese nutritional status.

From the Chi-Square test calculations carried out on the relationship between female student satisfaction and nutritional status, it was found that the p-value was (0.921)> 0.05. This shows that there is no relationship between student satisfaction and the nutritional status of female students at the Nurul Ulum Islamic Boarding School in Pereulak, East Aceh.

Leftover Food from Students at the Nurul Ulum Islamic Boarding School in Peureulak, East Aceh

This research shows that there is more food waste at the Nurul Ulum Pereulak Islamic Boarding School in Pereulak, East Aceh with an average value of 20.1% and it is categorized as a large amount of unconsumed food as has been obtained from the average results for each food served including 15.5% rice, animal side dishes 2.5% and vegetables 2.1%. The most leftover food is rice because the texture of the rice served is not fluffy or hard, the color is brownish, the aroma of the rice is not pleasant and the temperature at which the rice is usually served is cold. Likewise with the animal side dishes served, the texture of the fish served is hard, the color is starting to turn black, the animal side dish variants served have no changes, such as only being fried, and in terms of portion shape, sometimes some pieces are too small and some pieces are too big.

The large amount of food leftovers shows that the quality of food preparation is not yet optimal. This is because food waste is an indicator of the success of food management. Food waste is not only influenced by the taste of the food but many factors influence it, such as internal and external factors, including psychological factors caused by decreased physical activity, taste of food, appearance of food, and presentation of food. The food served is also

never evaluated by the Islamic boarding school regarding the food served, such as the taste, aroma, and texture of the food served, causing the students to prefer to ask their parents to bring food from outside to overcome their boredom.

Level of Satisfaction of Female Students at the Nurul Ulum Islamic Boarding School, Peureulak, East Aceh

This research shows that more female students are dissatisfied with the food served at the Nurul Ulum Pereulak Islamic Boarding School in East Aceh with an average score of 68.9% and are categorized as dissatisfied. There are several reasons put forward by respondents who answered that they were dissatisfied with the food served. for each category, especially for staple foods such as rice, the average result for the rice served was 13.4% or dissatisfied (72%). Respondents felt dissatisfied in the rice color category. Then, in the texture category, respondents felt dissatisfied because the rice served was not fluffy or hard due to lack of water when cooked. Apart from that, this can also be caused by uneven cooking because the food is cooked in large quantities. For the aroma and taste category, respondents who were dissatisfied were because the aroma of the food served did not arouse their appetite. For the portion size category, respondents who answered were satisfied because the portion of food provided was according to their wishes. Meanwhile, for animal side dishes, female students were satisfied with an average score of 15% in the satisfied category (76%).

Nutritional Status of Female Students at the Nurul Ulim Peureulak Islamic Boarding School, East Aceh

Based on the results of the analysis of nutritional status using the BMI indicator, the highest percentage of students with normal nutritional status was 42 people (70%) and thin nutritional status was 10 people (16.7%) while the obese nutritional status was 8 people (13.3%). %). Nutritional status is the condition of a person's body as a result of the accumulation of food consumption over time. Nutritional status cannot change quickly because the body needs time to process the nutrients it consumes. The majority of respondents have normal nutritional status, proving that their nutritional intake is quite good.

Nutritional status is a reflection of the measure of meeting nutritional needs. Partial nutritional status can be measured by anthropometry (measurement of certain parts of the body) biochemistry or clinically (Citrakesumasari; et al., 2012). Apart from that, nutritional status can be interpreted as an expression of a state of balance in the form of certain variables, or the manifestation of nutrition in the form of certain variables (Arisman, 2013). According to (Almatsier., 2015), nutritional status is a state of body health thanks to the intake of nutrients through food and drink which is linked to needs. Nutritional status is usually good and sufficient, but due to unbalanced consumption patterns, good and bad nutritional status arises.

Adolescence is a bridging period of child and adult life that begins at the age of 9-10 years and ends at the age of 18 years. In this period there is rapid physical growth and maturation of body functions so nutritional intake in adolescents needs to be paid attention to. Adolescence (10-18 years) is a vulnerable period for nutrition for various reasons. First, teenagers require higher levels of nutrition because of the drastic increase in physical growth and development. Second, changes in teenagers' lifestyles and eating habits affect both their nutritional intake and needs (Almatsier, 2016)

Relationship between food waste and nutritional status of female students at the Nurul Ulum Islamic Boarding School, Peureulak, East Aceh

From the results of research with the variable food waste and the nutritional status of female students at the Nurul Ulum Islamic Boarding School, Peureulak, East Aceh, there was little food leftovers with thin nutritional status. 8 people (32.0%) had little food leftovers with normal nutritional status. 15 people (60.0%) had little food leftovers with normal nutritional status. obesity nutrition as many as 2 people (8.0). Meanwhile, 2 people (5.7%) had a lot of food waste with a thin nutritional status, 27 people (77.1%) had a lot of food waste with a normal nutritional status and 6 people (17.1%) had a lot of food waste with an obese nutritional status.

The results of statistical analysis using chi-square obtained a P value of 0.023 (P<0.05), this means that the level of significance is 95%, and there is a relationship between food waste and the nutritional status of the Nurul Ulum Peureulak Islamic Boarding School, East Aceh.

Food taste includes two aspects, namely the appearance of food and the taste of food. The taste of food is the second factor that determines the taste of food after the appearance of the food itself. If the appearance of the food served stimulates the nerves through the sense of sight and can arouse the appetite to taste it, then the taste of the food will be determined by the stimulation of the sense of smell and tongue (Kwasnicka et al., 2019). An attractive form of food will influence students' appetite. Just like the texture of vegetable side dishes and the texture of vegetables, the tenderness of the texture of vegetable side dishes and vegetables is not only determined by the quality of the food ingredients used but also by the cooking method (Adriani & Wirjatmadi, 2016).

According to (Almatsier., 2015) The occurrence of food waste can be caused by the food served being less attractive and people feeling bored with the food served while they live in the Islamic boarding school. This is in line with the food acceptability theory which states that food acceptability shows the results of a person's assessment of the food menu. School-age children's assessment of a menu is related to several menu characteristics, namely menu pattern, color and appearance, texture, aroma, cut shape, food popularity, and serving temperature. Apart from that, the assessment of food is also influenced by preferences.

A balanced food intake can be seen from the regularity of a person's eating schedule and the quality of the food consumed. Food consumption patterns influence a person's nutritional status. Good nutritional status will contribute to health, while nutritional problems can cause more psychosocial disorders and physical growth disorders, respiratory problems, endocrine disorders, obesity, and degenerative diseases such as hypertension, coronary heart disease, diabetes mellitus, and so on. Meanwhile, poor nutritional status will increase the risk of disease, especially infectious diseases (Nur, Abidah & Nelly, 2014).

Fulfilled nutritional needs will have an impact on the activities carried out. Nutrition is one of the most important factors in improving physical fitness, nutritional conditions are said to be good if there is a balance between life's needs for nutrients and the food consumed so that it produces energy every day that is by the energy expended in carrying out activities (Gracey et al., 1996)

Good eating behavior is daily food consumption behavior that is by the nutritional needs of each individual for a healthy and productive life. Every person can achieve nutritional balance

so they must consume at least one type of food from each food group, namely carbohydrates, animal and vegetable proteins, vegetables, fruit, and milk, or what we often call the four healthy five perfect diet (Larson et al., 2006).

Relationship between the level of female student satisfaction and the nutritional status of female students at the Nurul Ulum Islamic Boarding School in Peureulak, East Aceh

From the results of research with the variable level of satisfaction with nutritional status at the Nurul Ulum Peureulak Islamic Boarding School, East Aceh, 7 students were dissatisfied with their thin nutritional status (15.6%), 32 students (71.1%) who were dissatisfied with their normal nutritional status and dissatisfied with their normal nutritional status. The nutritional status of obesity was 6 people (13.3%). Meanwhile, 3 people (20.0%) were satisfied with their thin nutritional status, 10 people (66.7%) were satisfied with their normal nutritional status and 2 people (13.3%) were satisfied with their obese nutritional status.

The results of statistical analysis using chi-square obtained a P value of 0.921 (P<0.05), this means that the level of significance is 95%, and there is no relationship between female student satisfaction and nutritional status at the Nurul Ulum Peureulak Islamic Boarding School, East Aceh.

By what was explained by Uyani, et al 2014, the level of satisfaction greatly influences the acceptance of food which is determined by the stimulation and senses of sight, smell, taste, and hearing. Food taste assessment or often known as organoleptic assessment. The main factors that are assessed in terms of taste include appearance which includes color, aroma, texture, and taste. Acceptance of food can be determined through acceptance tests, one of the acceptance tests carried out is the verbal scale hedonic test. The hedonic test expresses a person's response about whether they are happy or not with the quality of the food being assessed.

This research is not in line with (Briefel et al., 2009) regarding the description of macronutrient intake, nutritional status, and the level of satisfaction of students with the food delivery system at the Ummul Mukminin girls' boarding school in Makassar with the results that the average female students were satisfied with the food. which is served at the Islamic boarding school. Meanwhile, in this study, an average score of 68.9% was obtained in the category of dissatisfaction with the food served at the Nurul General Islamic boarding school, Pereulak, East Aceh.

Satisfaction can be interpreted as an effort to fulfill something or make something adequate. Satisfaction is the level of state a person feels which is the result of comparing the appearance of the product they feel about someone's expectations (Briefel et al., 2009).

CONCLUSION

The nutritional status of female students is in the Normal category, namely 42 people (70.0%), 10 people are thin (16.7%), and 8 people are obese (13.3%). Most of the average food waste is 20.1%. The remaining food in the large category is 35 people (58.3%) and the remaining food in the little category is 25 people (41.7%). Most of the average level of satisfaction is 68.9%. The level of satisfaction in the dissatisfied category was 45 people (75.0%), and the satisfied category was 15 people (25.0%).

There is a relationship between food waste and the nutritional status of female students at the Nurul Ulum Peureulak Islamic Boarding School, East Aceh, marked with a P value of 0.023

or (P<0.05). There is no relationship between student satisfaction and the nutritional status of students at the Nurul Ulum Peureulak Islamic Boarding School, East Aceh, marked by a P value of 0.921 or (P>0.05).

REFERENCES

Adriani, M., & Wirjatmadi, B. (2016). Pengantar Gizi Masyarakat. In *Prenadamedia*.

Ain, K. (2021). Analisis Penyelenggaraan Makanan, Tingkat Kecukupan Energi, Dan Status Gizi Pada Siswi Yang Tinggal Di Asrama Smp-Sma Semesta Bilingual Boarding School. *Nutrition and Food Research*, *44*(1).

Almatsier., S. (2015). Prinsip Dasar Ilmu Gizi Edisi ke-9. *Jakarta: PT. Gramedia Pustaka Utama.*, *13*(3).

Almatsier, S. (2016). Prinsip-Prinsip Dasar Ilmu Gizi. *Gramedia*, *4*(2).

Amelia, F. (2008). *Konsumsi Pangan, Pengetahuan Gizi, Aktivitas Fisik, dan Status Gizi pada Remaja Di Kota Sungai Penuh Kabupaten Kerinci Propinsi Jambi*.

Arisman. (2013). Gizi dalam daur kehidupan buku ajar ilmu gizi. *Buku Kedokteran EGC*.

Beck, M. E. (2000). Ilmu Gizi dan Diet Hubungan dengan Penyakit-penyakit untuk Perawat Dokter. *Yogyakarta: Yayasan Ensentia Medica*.

Briefel, R. R., Wilson, A., & Gleason, P. M. (2009). Consumption of low-nutrient, energy-dense foods and beverages at school, home, and other locations among school lunch participants and nonparticipants. *Journal of the American Dietetic Association*, *109*(2), S79–S90.

Choiriyah, S., Sholichah, F., & Widiastuti, W. (2021). SISTEM PENYELENGGARAAN MAKAN PAGI DAN STATUS GIZI SANTRIWATI PONDOK PESANTREN PUTRI MBAH RUMI. *Penelitian Gizi Dan Makanan (The Journal of Nutrition and Food Research)*, *44*(1). https://doi.org/10.22435/pgm.v44i1.3204

Citrakesumasari;, Susilowati;, D., Suriah;, & Bohari. (2012). Program Studi Ilmu Gizi Fakultas Kesehatan Masyarakat Universitas Hasanuddin Makassar 2013. *Digilib.Unhas.Ac.Id*.

Gracey, D., Stanley, N., Burke, V., Corti, B., & Beilin, L. J. (1996). Nutritional knowledge, beliefs and behaviours in teenage school students. *Health Education Research*, *11*(2), 187–204.

Kwasnicka, D., Dombrowski, S. U., White, M., & Sniehotta, F. F. (2019). 'It's not a diet, it'sa lifestyle': a longitudinal, data-prompted interview study of weight loss maintenance. *Psychology & Health*, *34*(8), 963–982.

Larson, N. I., Perry, C. L., Story, M., & Neumark-Sztainer, D. (2006). Food Preparation by Young Adults Is Associated with Better Diet Quality. *Journal of the American Dietetic Association*, *106*(12). https://doi.org/10.1016/j.jada.2006.09.008

Merryana Adriani, S. K. M. (2016). *Peranan gizi dalam siklus kehidupan*. Prenada Media.

Nur, Abidah, D., & Nelly, M. (2014). Riwayat Pemberian Air Susu Ibu dengan Penyakit Infeksi pada Balita Breastfeeding History with Infectious Disease in Toddlers. *Jurnal Kesehatan Masyarakat Nasional*, *9*(9).

Purnama, N. L. A. (2019). Perilaku makan dan status gizi remaja. *JPK: Jurnal Penelitian Kesehatan*, *9*(2), 57–62.

Rokhmah, F., Muniroh, L., & Nindya, T. S. (2016). Dengan Status Gizi Siswi Sma Di Pondok Pesantren Al-Izzah Kota Batu. *Media Gizi Indonesia*, *11*(1).

Rokhmah, F., Muniroh, L., & Nindya, T. S. (2017). HUBUNGAN TINGKAT KECUKUPAN ENERGI DAN ZAT GIZI MAKRO DENGAN STATUS GIZI SISWI SMA DI PONDOK PESANTREN AL-IZZAH KOTA BATU. *Media Gizi Indonesia*, *11*(1). https://doi.org/10.20473/mgi.v11i1.94-100

Ronitawati, P., Fujima, M., Sitoayu, L., Sa'pang, M., & Dewanti, L. P. (2021). Hubungan Tingkat Kepuasan Dan Kualitas Pelayanan Makanan Terhadap Biaya Sisa Makanan Dan Zat Gizi Yang Hilang Pada Pasien Di Rumah Sakit Umum Daerah Koja Jakarta. *Gizi Indonesia*, *44*(1), 77–86.

Rukmin, L., & Suranadi, L. (2016). Ketersediaan Zat Gizi Siswi di Yayasan Pondok Pesantren Nurul Hakim Kediri Kabupaten Lombok Barat. *Jurnal Gizi Prima*, *1*(1).

Sayekti, RR. N. S., Istikomayanti, Y., & Mitasari, Z. (2017). Pendidikan Perilaku Makan Sehat Melalui Pengembangan Kantin Sehat di SMP/MTs Kota Malang. *JAPI (Jurnal Akses Pengabdian Indonesia)*, *2*(1).

Sulaiman, Y., Sebba, A. K., Dina, D., Rifai, A., Alawiyah, T., Putri, S. A., & Wulandari, E. (2022). *Dasar-Dasar Ilmu Gizi*. Yayasan Penerbit Muhammad Zaini.