ISSN 1978-6743
E-ISSN 2477-3948
Jurnal Ilmiah Kesehatan
(Journal of Health Science)
Fakultas Keperawatan dan Kebidanan | Universitas Nahdlatul Ulama Surabaya

Improving the Children' Nutritional Status and Food Technology Skills in Processing Main Food and Healthy Snacks Among Mothers with Preschool Children

Widia Shofa Ilmiah[1], *Fifin Maulidatul Azizah*[2]

[1]*Institut Teknologi, Sains, dan Kesehatan RS dr. Soepraoen Kesdam V/ Brw, Malang, Indonesia*
[2]*Stikes Hafshawaty Pesantren Zainul Hasan, Probolinggo, Indonesia*

ARTICLE INFORMATION

Received: July 14, 2022
Revised: August 25, 2022
Available online: August 2022

KEYWORDS

Technology, Main food, Healthy snacks, Nutritional status, Mother's skill, Preschool

CORRESPONDENCE

E-mail: widiashofailmiah@itsk-soepraoen.ac.id

A B S T R A C T

Indonesia's child nutrition problem was becoming a national health problem. Food technology was expected to be the solution. Five-year-old nutritional status data was malnutrition and severe malnutrition in 2013 (12.1%) and 2018 (10.2%). A preliminary study results in Al Hidayah Kindergarten showed that four of five mothers (80%) do not know how to process, serve the main food and make healthy snacks for their children. This research aimed to analyze the improvement of the children's nutritional status and food technology skills in processing main food and healthy snacks among mothers with preschool children through intervention. Methods were pre-experimental research design with one group pre-posttest design. The populations were all 42 mothers and children in Sumbersecang Kindergarten, and the samples were 16 people chosen by simple random sampling. The instruments were questionnaires, checklists, counselling sheets, and weight scales. The data were analyzed using paired t-tests with SPSS v.16. This study found that 50% of mothers have a good level of knowledge. 31.3% of mother skills increase after the intervention, 31.3% of children are obese, their weight gain after intervention decreases by 25% and does not experience weight loss as much as 6.3%. Statistical test (p-value = 0.000 <α 0.05). The technology of processing main foods and healthy snacks can improve the mother's skills and later improve the nutritional status of pre-school children

INTRODUCTION

The preschool period is the most important phase that can affect the growth and development of children in adulthood including reproductive health because the diet behavior chosen by children and children begin to learn the likes and dislikes and tastes, and the smell of food and selective in choosing food (Putri & Lasri, 2016). Preschool children are one of the groups prone to nutrition because children are often sick (Nekitsing *et al*., 2018).

Children's nutrition problems at preschool and school age are still a problem in Indonesia and various countries worldwide, both in developed and developing countries. Children's nutrition problems in developed countries such as Canada and the United States are obesity problems and children's eating menu choices in the form of fruits, vegetables, and sweet foods that contain (Lehto et al., 2016). In comparison, the problem of child nutrition in developing countries such as Indonesia is the problem of malnutrition, obesity, and children's eating choices, either by children or parents (Putri & Lasri, 2016).

The nutritional status of five-year-olds (toddlers) data in Indonesia in 2019 showed that the prevalence of stunting has decreased. The number decreased from 37.2% (in 2013) to 29% (in 2015) and 27.5% (in 2016) and rose again to 29.6% (in 2017) and then 30.8% (in 2018). In contrast, the prevalence of skinny

https://doi.org/10.33086/jhs.v15i03.3203

(wasting) from 12.1% (in 2013) dropped to 10.2% (in 2018) (Ministry of Health, 2018). Nutrition problems occur in rural areas, with a stunting percentage of 42.1% and in urban areas, with a percentage of 32.5% (Aridiyah *et al*., 2015).

Nutritional Status data with weight per age index in East Java in 2016 were: severe malnutrition (3. 36%), malnutrition (13. 94%), good nutrition (80. 68%), obesity (2. 02%), and data in 2017 began to experience improved nutrition with very malnutrition rates dropping to (2. 9%), malnutrition (12. 2%), good nutrition increased to (83. 2%) and obesity (2. 2%) (Ministry of Health RI, 2019).

Probolinggo District Health Office data in 2016 from the weighing of 79,202 toddlers reported by the Public Health Center in 2016 was known that there were 1,311 toddlers Under the Red Line (BGM) (1. 65%). While the data of Nutritional Status Monitoring (PSG) on the Prevalence of Malnutrition (BB/ U) in 2016 (1. 65%), an increase compared to 2015 (1. 59%). While the prevalence of malnutrition in 2016 was 9. 44%, an increase compared to 2015 (8. 65%). Some of the data on the nutritional status of toddlers is the nutritional status of children aged five years only who are preschool-age children (Dinkes Kab. Probolinggo, 2017).

A preliminary study found that four (80%) of 5 preschool children' mothers at Al Hidayah Kindergarten (TK) Sumbersecang, Probolinggo said they did not know how to process and serve main foods and healthy snacks that have nutritional value for their children. Of the four mothers who did not know how to process and serve food, two mothers (40%) had a malnutrition status child, one person (20%) had obesity, and one other person (20%) had normal nutrition according to age. In comparison, for one mother who knows how to process and serve main meals and snacks, the nutritional status of her child was normal (20%).

The results of the study (Pavilianingtyas, 2017) concluded that factors that cause the nutritional status of obese children, i.e. agent factors, host, and environmental. The agent factors include infectious diseases suffered. The host factors include gender, child health conditions, and food intake. While the environmental factors include the socioeconomic status of parents, education level, parental knowledge level, occupation, and parenting styles, including skills in making children's food, peers, tribes and environments (such as the growing number of convenience stores selling fast food and foods with preservatives. At the same time, other causes that cause malnutrition or obesity, according to research (Osera *et al*., 2012), were the level of maternal education selection of meals by mothers, including family and child diet.

Healthy, good, and correct eating behavior is a balanced, nutritional behavior consisting of carbohydrates, fats, proteins, vitamins, and minerals. Mother is expected to be able to make nutritious food according to the needs of the child's body and physique to maintain the child's health. So, the mother's role is very

https://doi.org/10.33086/jhs.v15i03.3203

important in determining the type of food consumed by children, especially at pre-school age. Therefore, it takes the mother's knowledge and skills to process food (Putri & Lasri, 2016).

The improper mother's skills in preparing children's food will impact the intake of food the child consumes. The food is unhealthy and lacks nutritional value according to the child's caloric needs. The condition will lead to the preschool child's nutritional status not matching his age or height. The nutritional status of pre-school children who are lacking, severely undernourished, and obese can affect their growth and development in later adulthood, affecting their reproductive system and learning achievements achieved by the child (Eliassen, 2011).

The food technology in manufacturing main foods and healthy snacks is increasing. Those innovations are expected to overcome the problem of maternal skills in processing and serving foods that are favored by children and varied and have nutritional value to improve the nutritional status of children. This study aimed to analyze the improvement of maternal skills in the technology of making main foods and healthy snacks, as well as the nutritional status of pre-school children.

METHOD

This study used an *experimental* design with a *pre-experimental* type *one group pretest-posttest design*.

The research population was all mothers and pre-school children in Al Hidayah Kindergarten Sumbersecang, which 42 people with the number of samples in this study as many as 16 people. The inclusion criteria for research included mothers and preschool children willing to be examined. The exclusion criteria were that the mother was not at the research site when the study took place and preschool children with a history of genetic diseases related to the digestive system and metabolism (Diabetes Mellitus, Dyspepsia).

This research sampling technique was Simple Random Sampling. This research used the simple random sampling technique. This research used questionnaires, checklist sheets, and weight scales. The data collection was conducted over a month.

On the 1st day, researchers explained the study's purpose and procedure and then distributed the informed consent sheet to the respondents. Furthermore, disseminated questionnaire including demographic data and knowledge level and explained how to fill out questionnaires and made observations using checklists about the skills of serving main meals and healthy snacks as well as measuring the nutritional status of children by weighing their weight and asking the age of the child to the mother. The researcher and the team conducted counselling and demonstration of technology for making main foods and healthy snacks. We encouraged mothers to practice it at home and provided food menus that had been made for their children. Meanwhile, on the 30th day, researchers measured the level of maternal knowledge after being

https://doi.org/10.33086/jhs.v15i03.3203

given counseling and demonstrations, as well as observing the mother's skills in serving main meals and healthy snacks, then measured nutritional status by weighing the child's weight after practice and checking the child's age.

Analysis of this research data using *paired t-test* statistics with the help of SPSS V. 16. Ethics review has been conducted by researchers before conducting research. The ethics review was conducted at STIKes Hafshawaty Pesantren Zainul Hasan with No. SK: KEPK/065/STIKes-PZH/V/2019.

RESULT

The study was conducted for one month. This study found that most of the mothers aged between 21-40 years (mean 36.8 years) (68.8%), were elementary school educated (43.8%), were housewives (81.3%), and had family income between 500,000-1,000,000 per month (56.2%). Most mothers were from Madurese and Javanese tribes (50%). They had good knowledge (50%), and (37.5%) needed more knowledge of balanced nutrition food for children. Maternal skills in making main meals and healthy snacks before intervention were less (31.3%) and good enough (68.7%). In comparison, maternal skills after intervention improved which is quite good (62.5%) and good (37.5%). The result of the child's nutritional status level did not change, but there was an increase in the child's weight during 1 month of intervention that is (56.3%) (mean 2.31) (Table 1).

Cross-tabulation results on improving maternal skills in the technology of making main foods and healthy snacks in mothers who previously had fewer skills to be good enough (31.3%) and the results of statistical tests *Paired t-test* (p= 0.00) (Table 2). The level of nutritional status of children was normal (62.5%) with the results of the statistical test *Paired t-test* (p= 0.00) (Table 3).

Table 1. Characteristics of Respondents

Characteristics (n=16)	n (%)
Age (years)	
<20	1 (6.3)
21-40	11 (68.8)
41-60	3 (18.8)
>60	1 (6.3)
Mean	36.8
Level of Education	
Elementary school	7 (43.8)
Junior high school	5 (31.3)
Senior high school	4 (25.0)
Collage	0 (0)
Employment	
Housewife	13 (81.3)
Labor	0 (0)
Farmer	1 (6.3)
Entrepreneur	1 (6.3)
Private job	1 (6.3)
Civil servants	0 (0.0)
Household Income (per month)	

https://doi.org/10.33086/jhs.v15i03.3203

IDR <500,000	5 (31.3)
IDR 500,000-1,000,000	9 (56.2)
IDR >1,000,000	2 (12.5)
Ethnic	
Madurese	8 (50.0)
Javanese	8 (50.0)
Mother's level of knowledge about nutrition for children before intervention	
Very low	0 (0.0)
Low	6 (37.5)
Middle	8 (50.0)
Good	2 (12.5)
Maternal skill before intervention	
Low competence	5 (31.3)
Middle competence	11 (68.7)
Good competence	0 (0.0)
Maternal skill after intervention	
Low competence	0 (0.0)
Middle competence	10 (62.5)
Good competence	6 (37.5)
Level Nutrition of preschool before intervention	
Very underweight	0 (0.0)
Underweight	1 (6.3)
Normal	10 (62.5)
Fat	5 (31.3)
Obesity	0 (0.0)
Level Nutrition of preschool after intervention	
Very underweight	0 (0.0)
Underweight	1 (6.3)
Normal	10 (62.5)
Fat	5 (31.3)
Obesity	0 (0.0)
Improvement of the weight of preschool after intervention	
Loss	4 (25.0)
Stagnant	3 (18.8)
Increase	9 (56.3)
Mean	2.31

Table 2. Cross Tabulation of Improving Mother's Skills in The Technology of Making Main Foods and Healthy Snacks

Skill before intervention	Skill after intervention						Total	
	Low competence		Middle competence		Good competence			
	n	%	n	%	n	%	n	%
Low competence	0	0.0	5	31.3	0	0.0	5	31.3
Middle competence	0	0.0	5	31.3	6	37.5	11	68.8
Good competence	0	0.0	0	0.0	0	0.0	0	0.0
Sum	0	0.0	10	62.6	6	37.5	16	100
p-*value* = 0.000 < α 0.05								

Table 3. Cross Tabulation of Improving the Nutritional Status of Pre-School Children

Level Nutrition before intervention	Level Nutrition after intervention										Total	
	Very underweight		Underweight		Normal		Fat		Obesity			
	n	%	n	%	n	%	n	%	n	%	n	%
Very underweight	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Underweight	0	0.0	1	6.3	0	0.0	0	0.0	0	0.0	1	6.3
Normal	0	0.0	0	0.0	10	62.5	0	0,0	0	0.0	10	62.5
Fat	0	0.0	0	0.0	0	0.0	5	31.3	0	0.0	5	31.3
Obesity	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

https://doi.org/10.33086/jhs.v15i03.3203

Sum	0	0,0	1	6.3	10	62.5	5	31.3	0	0.0	16	100
p-*value* = 0.000 < α 0.05												

DISCUSSION

This study result showed an improvement in the mother's skills in making the main food and healthy snacks and an increase in the child's weight as an indicator of the improved nutritional status.

The primary healthy food is a staple dish consisting of a complete menu eaten in the morning, day, and night. The main characteristic of healthy food according to that has a balanced nutritional value with the elements of carbohydrates, fats, proteins, vitamins, and minerals. It does not contain many flavorings and harmful dyes (Nurhayati *et al*., 2012). In comparison, healthy snacks are snacks that contain low calories, high in protein and vitamins or minerals. Characteristics of healthy snacks do not contain any flavorings or harmful dyes (Amar, 2014).

The technology of primary food and healthy snacks processing is a strategy that is carried out by converting raw materials into more nutritional value (Center for Human Resources Education health, 2017). It extends the time and number of available foodstuffs, facilitates storage and distribution, and increases economic added value in the form of benefits and social added value, obtaining more attractive products, such as appearance, taste, and other physical properties. Simple food technology mothers can do is about how mothers can process and serve food with balanced nutrition that is interesting, varied, and preferred by the child. Food can survive for several hours or is not quickly.

Maternal skills are proficiency in manufacturing main meals and healthy snacks for children, including less-skilled, quite skilled, and skilled. Factors that affect maternal skills include age, education level, knowledge, experience, maternal attitude, motivation, skills or skills serving food, and the environment (Scaglioni *et al*., 2018) and (Osera *et al.*, 2012). In addition, factors that affect it are the existence of tools that facilitate mothers in regulating the child's diet, for example using *the Fuzzy Sugeno Inference System* method or manual methods that are easy to practice in calculating the nutritional needs of children according to age (Wachdani *et al*., 2012).

Based on this study's results, factors of maternal skills in food technology and the nutritional status of preschool children were indirectly influenced by factors such as maternal age, education level, occupation, income, ethnicity, and the level of maternal knowledge about nutrition.

This study (table 1) showed that the average maternal age was 36.8. This result indicated that the mother's age was in the early adult stages. In this range, mothers had enough experience cooking, serving food, or regulating the child's diet. These findings were supported by the study that significantly influences her cooking skills, attitudes, and quality of diet that will be given to their child which will further influence the selection of food by the child. Likewise, the study's results (Eliassen, 2011) showed that what mothers

https://doi.org/10.33086/jhs.v15i03.3203

eat was an example of what a child would eat. Motherhood became very important as the primary caregiver of the child. Young adult mothers tended to behave at will, including the way of feeding their children. It was also associated with maternal education and previous knowledge of providing healthy food and snacks for her pre-school children.

Furthermore, this study found that 43.8% of mothers had an elementary or low education and an income of less than 1,000,000 per month (56.2%). It will significantly affect the mother's skills in choosing a meal menu for the child, either the main meal or a healthy snack. The lower the level of maternal education, the selection of food menus for children tended to be unhealthy and had low nutritional value. This study's results are supported by Gacek (2019), which stated that mothers with a low level of education were associated with less knowledge about their child's balanced nutrition. Mothers tended to obey the child's will in choosing food according to the child's taste, without informing the nutritional value of the child, either main meals or healthy snacks. Furthermore, Scaglioni *et al*., (2011) said the mother was the most powerful control and an example for her child compared to environmental factors and shared experiences with children about healthy food.

This research studied: the children eating behavior; the mother's level of education who did not understand the nutritional needs of children, including their growth and development needs. This study also studied the socioeconomic status of the mother or father's attention to the child and parenting patterns and family eating behaviors: the mother's ignorance about the importance of balanced nutrition for her child was presented in the main menu and snacks.

A prior study (Russell *et al*., 2014) concluded that mothers with low socioeconomic status or who had incomes below per capita wage tend to choose food based on the price so that the nutrients present in the food were ruled out and would be the factors that affect the quality of the child's diet.

The level of mother knowledge about child nutrition in this research before intervention showed that 50% of mothers had a fairly good level of knowledge, and 37.5% had insufficient knowledge. These results showed that most mothers still needed to understand healthy nutrition for their children, its benefits, and the short-term and long-term impacts on their health and children's learning achievements. Furthermore, the mother's knowledge level would affect the mother's perception and attitude about the child's healthy food. It was stated that the mother's poor perception of healthy food would affect the child's chosen food. The child would imitate their mother's or parent's habits (Russell *et al*., 2014).

Furthermore, the results of this study were known to mothers after being given interventions had improved skills in the manufacture of main foods and healthy snacks (31.3%) (p=0.000), normal child nutritional status (62.5%) and child weight increased (mean 2.31). Cooking skills interventions could positively impact knowledge of food mainly developing confidence in the cooking skills of fruit and

https://doi.org/10.33086/jhs.v15i03.3203

vegetables in groups with low socioeconomic status. The success of the skilled mother in cooking and preparing daily meals would affect the main types of foods and snacks given to her child and could affect their growth and development. The measure of growth, in this case, was the weight loss to the child's age that can form the child's nutritional status (Garcia *et al*., 2016). So, in this study, interventions given to the mothers impact the children's nutritional status.

Children who were obese, underweight and very underweight would be able to influence their academic achievements. Obese children tended to choose foods high in calories and fat and low in fiber. According to Hermina & Prihatini S, 2016 on Individual Analysis Food Consumption Survey (SKMI) in 2014, the toddlers in Indonesia as many as 86.2% did not like to consume vegetables, and as much as 35.7% did not like fruit consumption. In comparison, the child who was underweight very underweight due to the consumption of foods low in protein and calories or fat, and the amount of intake was less.

Children had nutritional problems caused by a lack of nutrients in the consumption needed by the brain, including balanced elements of carbohydrates, proteins, fats, vitamins, and minerals. In addition, other impacts would affect the children's reproduction health in adolescence and later in adulthood. This result follows a prior study (Nekitsing *et al*., 2018) that the child's development was influenced by the intake of nutrients consumed that will later affect the health status in adulthood, including their reproductive health. Therefore, it is important for parents, especially mothers, as the people closest to the child to pay attention to the child's healthy food needs both main meals and healthy snacks. Mothers should also prevent children from skipping their mealtime, especially preschool-age children, which can affect their nutrition status (Mary *et al*., 2019).

CONCLUSION

Providing training or demonstration was effective in improving the mother's skills in the technology of making main foods and healthy snacks and later could improve the nutritional status of children with indicators of increasing the child's weight according to their age. However, this study has the weakness of the absence of a control group as a comparison and the need for further research by adding several respondents, the duration of the study, and methods of calculating the child's diet by non-manual methods or using applications that are easy to practice by the mother.

REFERENCES

Amar, rer. nat. A. (2014). Dasar-dasar Teknologi Pangan. In *Institut Teknologi Indonesia*. Repository Universitas Teknologi Pangan. http://repository.ut.ac.id/4561/1/PANG4212-M1.pdf.

Aparício, G., Cunha, M., Duarte, J., Pereira, A., Bonito, J., & Albuquerque, C. (2013). Nutritional status in preschool children: Current trends of mother's body perception and concerns. *Atencion Primaria*,

45(SUPPL. 2), 194–200. https://doi.org/10.1016/S0212-6567(13)70022-2

Aridiyah, F. O., Rohmawati, N., & Ririanty, M. (2015). The Factors Affecting Stunting on Toddlers in Rural and Urban Areas. *E-Jurnal Pustaka Kesehatan*, *3*(1), 163–170.

Damen, F. W. M., Luning, P. A., Fogliano, V., & Steenbekkers, B. L. P. A. (2019). What influences mothers' snack choices for their children aged 2–7? *Food Quality and Preference*, *74*(December 2018), 10–20. https://doi.org/10.1016/j.foodqual.2018.12.012

Dinkes Kab. Probolinggo. (2017). *Profil Kesehatan Kabupaten Probolinggo Tahun 2016* (Issue Juli 2017).

Eliassen, E. K. (2011). The Impact of Teachers and Families on Young Children ' s Eating Behaviors. In *The Impact of Teachers and Families on Young Children's Eating Behaviors* (Issue March, pp. 84–89). Concordia University. http://suskinder.suscooks.eu/user_uploads/Module5/Be_Impact kindergarten teacher_families_young children behaviour.pdf

Gacek, M. (2019). Selected determinants of eating behaviours among preschool children from the Kraków environment. *Roczniki Panstwowego Zakladu Higieny*, *70*(2), 137–145. http://www.embase.com/search/results?subaction=viewrecord&from=export&id=L628415078

Garcia, A. L., Reardon, R., Mcdonald, M., Vargas-garcia, E. J., Reardon, R., & Mcdonald, M. (2016). Community Interventions to Improve Cooking Skills and Their Effects on Confidence and Eating Behaviour. *Current Nutrition Reports*, *5*, 315–322. https://doi.org/10.1007/s13668-016-0185-3

Hermina, & Prihatini S. (2016). Gambaran Konsumsi Sayur dan Buah Penduduk Indonesia dalam Konteks Gizi Seimbang: Analisis Lanjut Survei Konsumsi Makanan Individu (SKMI) 2014. *Buletin Penelitian Kesehatan*, 44 (3), 205–218. https://doi.org/10.22435/bpk.v44i3.5505.205-218

Kemenkes RI. (2018). Situasi Balita Pendek (Stunting) di Indonesia. In *Kementerian Kesehatan RI* (Issue Semester I).

Kementerian Kesehatan RI. (2019). Profil Kesehatan Indonesia 2018. In *Kementerian Kesehatan RI*. https://doi.org/10.1136/jcp.40.5.591-b

Lavelle, F., Spence, M., Hollywood, L., Mcgowan, L., Surgenor, D., Mccloat, A., Mooney, E., Caraher, M., Raats, M., & Dean, M. (2016). Learning cooking skills at different ages : a cross-sectional study. *International Journal of Behavioral Nutrition and Physical Activity*, *13*(119), 1–11. https://doi.org/10.1186/s12966-016-0446-y

Lehto, R., Roos, G., Roos, E., Ray, C., & Suvi, M. (2016). In fl uencing factors of children ' s fruit , vegetable and sugar-enriched food intake in a Finnish preschool setting e Preschool personnel's perceptions. *Elsevier*, *103*, 72–79. https://doi.org/10.1016/j.appet.2016.03.020

Mary, O. O., Jerffson, O. K., & Abiodun, O. J. (2019). Nutritional status and eating patterns of preschool children in a community in south-west Nigeria. *Nigerian Journal of Nutritional Sciences*, *40*(2), 30–37.

Nekitsing, C., Hetherington, M. M., & Blundell-birtill, P. (2018). Developing Healthy Food Preferences in Preschool Children Through Taste Exposure , Sensory Learning , and Nutrition Education. *Current Obesity Reports*, *7*, 60–67. https://doi.org/https://doi.org/10.1007/s13679-018-0297-8 psychological

Nurhayati, A., Lasmanawati, E., & Yulia, C. (2012). Pengaruh mata kuliah berbasis gizi pada pemilihan makanan jajanan mahasiswa program studi pendidikan tata boga. *Penelitian Pendidikan*, *13*(1), 1–6. http://jurnal.upi.edu/file/1-ai.pdf

Osera, T., Tsutie, S., Kobayashi, M., & Kurihara, N. (2012). Relationship of Mothers' Food Preferences

and Attitudes with Children's Preferences. *Food and Nutrition Sciences*, *3*(10), 1461–1466. https://doi.org/10.4236/fns.2012.310190

Pavilianingtyas, A. (2017). Faktor agen, pejamu, dan lingkungan kejadian obesitas pada anak usia 5-6 tahun. *Jurnal Gizi Indonesia (The Indonesian Journal of Nutrition)*, *5*(2), 105–111. https://doi.org/10.14710/jgi.5.2.105-111

Pusat Pendidikan Sumberdaya Manusia Kesehatan. (2017). *Ilmu Teknologi Pangan* (pp. 1–201). Kemenkes RI. http://bppsdmk.kemkes.go.id/pusdiksdmk/wp-content/uploads/2017/11/Ilmu-Teknologi-Pangan-Final-Sc.pdf

Putri, R. M., & Lasri. (2016). Pekerjaan,Tingkat Pendidikan dan Pengetahuan Ibu Pra Sekolah Tentang Gizi Seimbang. *Care*, *4*(3), 78–87.

Russell, C. G., Worsley, A., & Liem, D. G. (2014). Parents ' food choice motives and their associations with children ' s food preferences. *Public Health Nutrition*, *18*(6), 1018–1027. https://doi.org/10.1017/S1368980014001128

Scaglioni, S., Arrizza, C., Vecchi, F., & Tedeschi, S. (2011). Determinants of children's eating behavior. *The American Journal of Clinical Nutrition 2*, *11*(94), 2006–2011. https://doi.org/10.3945/ajcn.110.001685.1

Scaglioni, S., Cosmi, V. De, Ciappolino, V., Brambilla, P., & Agostoni, C. (2018). Factors Influencing Children's Eating Behaviours. *Nutients*, *10* (706), 1–17. https://doi.org/10.3390/nu10060706

Wachdani, R., Abidin, Z., & Yaqin, M. A. (2012). Pengatur Pola Menu Makanan Balita Untuk Mencapai Status Gizi Seimbang Menggunakan Sistem Inferensi Fuzzy Metode Sugeno. *Matics*, *June 2016*, 1–7. https://doi.org/10.18860/mat.v0i0.2007