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Contents

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The Nutritional Status of Children Aged 1-3 Years Old Based on Food Processing Techniques in Surabaya

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ABSTRACT

Food processing can affect the nutritional components within food. This contributes toward the status of nutrition. The objective of this research was to identify the nutritional status of children based on food processing technique. The research was carried out in Kenjeran Urban Village, Bulak Sub-District, Surabaya. The design of this research used a prospective cohort. The overall population amounted to 144 respondents using simple random sampling for the final amount of 105 respondents. The instrument of this research was a questionnaire and nutritional status measurement in accordance with the provision of Ministry of Health, of the Republic of Indonesia. The results of this research showed that there is a relationship between food processing technique and the nutritional status of children. The result of the Spearman Rho correlation analysis was that it obtained a value of r=0.001 (α<0.05). The value of the absolute coefficient correlation was 0.435 therefore the level of this relationship is an average level relationship. Those with a unfavourable daily food processing technique accounts for 18 individuals (17.1%) and a favourable technique accounts for 87 individuals (82.9%). Food processing can affect the nutritional status of children. However, nutritional status can be influenced by several other factors. The influential factors of nutritional status include the heredity factor and the passive measure of food supply.

***Keywords**: food processing technique, nutritional status*

INTRODUCTION

Nutrition is an integral part of the growth and development of an individual. The substances within food have a strong relation with health and brain ingenuity. Once nutrition goes unfulfilled, it will weaken bodily health and ingenuity simultaneously, primarily when concerning the growth and development of children [1]. The nutritional necessities for children under five is relatively bigger than when compared to adults, because at this stage, there may soar rapidly. The rapid growth and development periods, such as the prenatal period or adolescence will require a larger amount of calories and protein[2].

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According to the WHO, 42 million children under five suffer from obesity, 156 million children under five are short-bodied, and 50 million children suffer from malnutrition [3]. The result of the PSG Index BB/U shows that those with favourable nutrition are 79.7%, deficient nutrition is 14.9, malnutrition is 3.8%, and excessive nutrition is 1.5%. The Index TB/U Normal shows that 71% are normal-bodied and those who are short-bodied makes up 29.9%. Using the Index BB/TB Normal index, 82.7% are thin 8.2% are fat and those who are extremely thin make up 3.7%[4]. According to *Riskesdas*, the nutritional status of children under five is deficient by 13.9%, while malnutrition is 5.7%, being short-bodied is 19.2%, extremely short-bodied is 18.0%, thin is 6.8%, extremely thin is 6.8% and fat is 11.9% [4]. In East Java, the number of cases for malnutrition was 6,772 [5]. Malnutrition for children under five in Surabaya 282 was male: 127, female: 155 [6]. From the research of Melati integrated public health centre (*Posyandu*) in Surabaya, the amount of children under five was 85; there were 2 children with deficient nutrition and two children with excessive nutrition.

To date, the most appropriate food processing method has not yet been determined. The issue of children's nutritional status may be triggered by the ignorance when it comes to comprehending the way to organise food processing, such as organising the menu, selecting the ingredients, maintaining the food and keeping the food in a safe condition. Keeping foods from previous days or boiling vegetables above the normal duration will automatically decrease the amount of nutritious substances within the food.

Carbohydrate consumption deficiency may affect the children's growth and incline them toward being thin-bodied (KEP). If in excess, the children will grow to be fat (obesity). The lack of protein may lead to an abnormal network of growth and development, obstructing physical and mental growth, and an excess of protein will lead to obesity. A lack of fat will lead to a thin body shape while an excess of fat will lead to a fat body shape (obesity)[2].

Regarding the problems related to food management techniques as above, this will correspond to the growth and development process of the child. These factors influence the nutritional status of children. In this particular problem, in order to maintain the nutritional status of their child, parents should be informed in order to understand the appropriate nutritional fulfilment for children under five for the sake of their individual growth and development. These particular food substances are an integral part of individual growth and development. Through this education, the nutritional status of children can be well-maintained. Through the distribution of health education, it is expected that parents will be able to maintain food properly in order to prevent the nutritional substances within the food being lessened.

METHOD

The type of this research was an observational analytical research through the prospective cohort approach. The data collection method was using simple random sampling and this research was commenced by informing both the personnel of the *Posyundu* (integrated public health post) and the respondents. The inclusion criteria were parents who manage to cook their own food and the children who consume the parent-made food.

This questionnaire was posed to obtain the measurement of nutritional status and body weight according to a body height and distribution questionnaire related to food processing technique.

OBJECTIVE

The general objective of this research was to identify the nutritional status of children aged between 1-3 years old based on the daily food processing technique.

RESULT

1. **Univariate Analysis:** The respondents obtained in Bulak Urban Village, Kenjeran Sub-District, Surabaya accounted for 105 respondents; 100% were willing to join the research. The results of the univariate analysis in this research were based on the age of the respondents, their last achieved education level, occupation, monthly income, and the gender of their child. Based on the results of this research, it is identified that respondents aged between 20-35 years old amounted to 89 respondents, which is larger than the amount for those aged >35 years old. The respondents from high school level amounted to 50 respondents, larger than those in middle school level. Those with a monthly income that ranged between IDR 1,500,000 – IDR 2,000,000 amounted to 66 respondents, which is higher than those with an income above IDR 2,000,000.

Table 1: Respondent's distribution based on age, education level, occupation and income

Variable	Frequency	(%)
Age (years old)		
<20	1	1.0
20-35	89	84.7
>35	15	14.3
Education		
Elementary	21	20.0
Middle School	32	30.5
High School	50	47.6
Higher Education	2	1.9
Occupation		
Private sector	23	21.9
Entrepreneur	22	21.0
Housewife	60	57.1
Income rate		
500,000-1,000,000	7	6.7
1,000,000- 1,500,000	11	10.5
1,500,000-2,000,000	66	62.9
>2,000,000	21	20.0

2. **Bivariate Analysis:** This research used a Spearman Rho correlation test which aimed to identify the relationship between the dependent variable and the independent variable. The identified variables were daily food processing technique and the nutritional status of body weight based on body height.

Table 2: The Relationship between daily food processing technique and the nutritional status of children aged 1-3 years old

Daily Food Processing Technique	Nutritional Status of Children BB/TB								Total	
	Extremely Thin		Thin		Normal		Fat			
	N	%	N	%	N	%	N	%	N	%
Poor	6	5.7	5	4.8	7	6.7	0	0	18	17.1
Good	3	2.9	9	8.6	68	64.8	7	6.7	87	82.9
Total	9	8.6	14	13.3	75	71.4	7	6.7	105	100
The value of statistic *Spearman Rho* Correlation test (r=0.001)										

DISCUSSION

Based on Table 2, it can be identified that the respondents with a favourable food processing technique had a nutritional status that was normal, which amounted to 64.8 %. Meanwhile, those who use a poor food processing technique combined with the nutritional status of their child being extremely thin amounted to 5.7%.

The attitude of health is someone's response toward a stimulus or object linked to illness and disease, the health service system, food, beverage and the environment [7]. The attitude toward the false food processing techniques will influence the substances within daily food [8]. If the attitude toward the false food processing technique is being maintained continually, then the nutritious substances within the food will be diminished or even dissolved. This factor will affect the health of the person committed to this technique.

The results of the test using the Spearman Rho correlation showed that there is a relationship between daily food processing technique and the nutritional status of children aged 1 -3 years old with a Rho valuation of 0.001 which means that the value of α<0.05. This means that food processing technique will influence the nutritional status of children under five. Therefore if a false food processing technique is performed, then it will affect the containment of nutrition within the particular food [9].

Based on the results of Table 2 above, it obtained that 3 out of 9 respondents were equipped with knowledge of favourable food processing techniques, but their children's nutrition and body weight decreased, as shown by an extremely thin body shape. This particular issue may be driven by several factors, including the food supply factor. If the mother is not supplied properly with food, therefore the foods consumed by those particular children will be decreased. This matter is supported by the research which mentioned that parental food supply will affect the nutritional status of children under five.

CONCLUSION

For the daily food processing technique in Bulak Urban Village, Kenjeran Sub-District, Surabaya, the majority of parents frequently use a favourable food processing technique and only a minority one use a poor daily food processing technique. The nutritional status of children aged between 1–3 in Bulak Urban Village, Kenjeran Sub-District. Surabaya was that the majority of the children have a favourable nutritional status, and that there is a lesser group of children who have a deficient nutritional status. There is a relationship between the daily food processing technique and the nutritional status of children aged between 1 -3 years old in Bulak Urban Village, Kenjeran Sub-District, Surabaya.

It is expected that future research should touch upon the topic of nutritional status, focusing on the relationship between active food supply and the nutritional status of children under five, aged between 1 – 3 years old in Bulak Urban Village, Kenjeran Sub-District, Surabaya.

Conflict of Interest: None.

Ethical Clearance: The study passed ethical clearance from Ethical Committee of Sekolah Tinggi Ilmu Kesehatan Hang Tuah, Surabaya, Indonesia.

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REFERENCES

1. Ohlhorst SD, Russell R, Bier D, Klurfeld DM, Li Z, Mein JR, et al. Nutrition research to affect food and a healthy lifespan. Adv Nutr [Internet]. 2013 Sep 1 [cited 2018 Oct 17];4(5):579–84. Available from: http://www.ncbi.nlm.nih.gov/pubmed/24038264
2. Kearney J. Food consumption trends and drivers. Philos Trans R Soc Lond B Biol Sci [Internet]. 2010 Sep 27 [cited 2018 Oct 17];365(1554):2793–807. Available from: http://www.ncbi.nlm.nih.gov/pubmed/20713385
3. World Health Organization. The double burden of malnutrition: policy brief [Internet]. Geneva; 2017 [cited 2018 Oct 17]. Available from: http://apps.who.int/iris/bitstream/handle/10665/255413/WHO-NMH-NHD-17.3-eng.pdf;jsessionid=AD2C2A6B0BC8855A7166C77B51E44F4A?sequence=1
4. Board of Health Research and Development. Basic Health Research 2013. Lap Nas 2013. 2013:1–384.
5. Ministry of Health Republic of Indonesia. Indonesian Health Profile 2016 [Internet]. Jakarta, Indonesia; 2017 [cited 2018 Aug 2]. Available from: http://www.kemkes.go.id
6. Public Health Office of Surabaya. Health Profile 2015 [Internet]. Surabaya, 2015 [cited 2018 Oct 17]. Available from: http://www.depkes.go.id/resources/download/profil/PROFIL_KAB_KOTA_2015/3578_Jatim_Kota_Surabaya_2015.pdf
7. Kelly MP, Barker M. Why is changing health-related behaviour so difficult? Public Health [Internet]. 2016 Jul [cited 2018 Oct 17];136:109–16. Available from: http://www.ncbi.nlm.nih.gov/pubmed/27184821
8. Story M, French S. Food Advertising and Marketing Directed at Children and Adolescents in the US. Int J Behav Nutr Phys Act [Internet]. 2004 Feb 10 [cited 2018 Oct 17];1(1):3. Available from: http://www.ncbi.nlm.nih.gov/pubmed/15171786
9. Hammond RA, Dubé L. A systems science perspective and transdisciplinary models for food and nutrition security. Proc Natl Acad Sci U S A [Internet]. 2012 Jul 31 [cited 2018 Oct 17];109(31):12356–63. Available from: http://www.ncbi.nlm.nih.gov/pubmed/22826247

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