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The Effect of Feeding Red Bean Ice Cream on Weight Increasing Wasting Toddler in the Working Area of the Kawalu Health Center

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ABSTRACT

Introduction: One of the SDGs targets is that by 2030 all countries will strive to reduce the under-five mortality rate by 25/1,000 live births. In addition to the 2030 public nutrition target, all countries are working to end all forms of malnutrition, including achieving the 2025 international target which aims to reduce stunting and wasting in children under five and address the nutritional needs of adolescent girls, pregnant and breastfeeding women, as well as elderly. Malnutrition will have a negative impact on physical and mental growth which will then hinder learning achievement. During the toddler years, the growth and development of brain cells is so rapid that they require optimal and optimal nutritional intake and stimulus. Toddlers are vulnerable to nutritional disorders because at this time they need nutrition for their growth and development. Apart from that, toddlers are very passive regarding food intake so that toddlers will depend on their parents. **Objective**: The aim of this research was to determine the effect of giving red bean ice cream on increasing the weight of wasting toddlers. **Method:** This research is quantitative research, with a pre-experimental design method using a one group pretest posttest design approach. The sample in this study was 15 toddlers who experienced wasting. **Result:** The results of this study indicate that there is an influence of red bean ice cream on weight gain in wasting toddlers. **Conclusion:** Based on the research results obtained, there is an effect of giving red bean ice cream on increasing the weight of wasting toddlers.

Keywords: red bean ice, toddler, wasting

Introduction

Toddlers are children under five years of age who are characterized by a very rapid growth and development process, namely physical growth and psychomotor, mental and social development. During the toddler years, the growth and development of brain cells is so rapid that they require optimal and optimal nutritional intake and stimulus. Toddlers are vulnerable to nutritional disorders because at this time they need nutrition for their growth and development. Apart from that, toddlers are very passive regarding food intake so that toddlers will depend on their parents (Faroj, 2019).

Malnutrition is the most common nutritional problem in Indonesia. Children under five (0-5 years) are the age group that most often suffers from malnutrition or are one of the community groups that are vulnerable to nutrition. One of the problems that affects the nutritional status of toddlers is insufficient food intake and infectious diseases. Insufficient energy intake can cause a negative imbalance which will result in a lower body weight than normal or ideal. One way to increase energy intake is by providing additional food (Hasibuan, 2022).

One way to improve the nutritional status of toddlers is through providing additional food (Selistio, 2020). Additional food is provided with a variety of preparations, so that toddlers are interested in eating it, one of which is by preparing food in the form of ice cream. A type of additional food that can improve the nutritional status of toddlers is red beans. Red beans contain phosphorus, magnesium and calcium which affect the growth and strength of toddlers' bones and teeth. Providing 25 grams of red beans is the same as meeting around 10 percent of the baby's calcium needs, 40 percent of the phosphorus needs and 50 percent of the baby's daily magnesium needs (Qudsy, 2019).

Through several studies, including those conducted by Nurhidayah et al (2020), research results show that there is a difference in weight gain before and after giving red bean Modisco ice cream with a p-value of 0.001, which means that red bean Modisco ice cream can influence weight gain in toddlers. below the red line, so that research on toddlers who were given red bean Modisco ice cream met the KMS standards set by the Ministry of Health (Nurhidayah, 2020).

Objective

To find out the effect of giving red bean ice cream on increasing the weight of wasting toddlers.

Method

This research is quantitative research, with a pre-experimental design method using a one group pretest posttest design approach. In this study, only one group of samples will be given red bean ice cream. In this study, observation is carried out first to determine the nutritional status of toddlers, especially their weight before treatment, then after being given treatment the samples are observed again or compared.

The population is the entire research subject to be studied (Notoatmodjo, 2020). Of the total population in Mount Tandala Posyandu, Kawalu Health Center Working Area, 12 toddlers experienced wasting. In general, the number of samples in this study was 12 toddlers who experienced wasting, and the sampling technique used total sampling.

Result

The results of research on the frequency distribution of demographic data for wasting toddler respondents at Mount Tandala Posyandu were 12 toddlers. The results of the data processing carried out can be seen in the table below.

Table 1. Frequency Distribution of Wasted Toddler Respondents

Demographic Data	Frekuensi	Presentase
Toddler Age		
26-34 Month	4	33,4%
35-43 Month	5	41,6%
44-52 Month	3	25%
Total	12	100%
Gender		
Man	5	41,6%
Woman	7	58,4%
Total	12	100%

Table 1 The results of research on the frequency distribution of respondent data with a total of 12 respondents. Toddlers who experience wasting the most are aged 35-43 months (41.6%). The gender of toddlers who experience wasting is mostly girls, namely 7 toddlers (58.4%).

Table 2. Analysis of Differences in Nutritional Status of Respondents Before and After Intervention

Nutritional Status	Before		After		Paired T-test
Wasting	10	83,3%	1	8,3%	
Good Nutrition	2	16,4%	11	91,7%	0,000
Total	12	100%	12	100%	

Based on table 2. There were 10 (83.3%) children under five with poor nutritional status before intervention and 2 (16.4%) with good nutrition with a total of 12 respondents (100%). After the intervention, the number of children under five with poor nutritional status decreased by 1 (8.3%) and children under five with good nutritional status increased by 91.7%. The p value = 0.000 was obtained, which is smaller than the value α = 0.05, which means that there is an effect of giving red bean ice cream on the nutritional status of toddlers who experience malnutrition or wasting.

Table 3. Analysis of Differences in Body Weight Before and After Intervention

Weight	Mean	SD	SE	N	P-Value
Before	9,85	1,796	,223	12	0,000
After	10,88	1,755	,218	12	

Discussion

Based on table 1, it shows that most of the respondents were aged 35-43 months, and most were female, in line with theory (Sunarsih, 2018) that physical and motoric growth is different between boys and girls. Boys are more active compared to girls. Like growth, development has different speeds, both in physical growth and the development of organ function and development in each child. In boys, the maturation and development of the left hemisphere of the brain which is related to verbal function is less good than in girls.

Gender in a family in traditional society, the development of girls will be more hampered compared to boys, due to the view that the status of women is lower than that of men. Household stability and the development of children in harmonious families will be different compared to the development of children in less harmonious families.

Based on table 2, it shows that there is a significant difference between the nutritional status of toddlers who experienced wasting before being given red bean ice cream and after being given red bean ice cream, of the 10 toddlers who experienced wasting, 9 toddlers experienced a change in nutritional status to good, while 1 toddler still with poor nutritional status. So it can be concluded that there is a significant effect of giving red bean ice cream on the nutritional status of wasting toddlers with a paired t-test value of 0.000.

The results of this study are in line with (Nur Hidayah, 2020) with the title The Effectiveness of Providing Red Bean Modisco Ice Cream and Moringa Leaf Modisco Ice Cream on Increasing the Weight of Toddlers Below the Red Line (BGM) in the Karanganyar Community Health Center Working Area, Pekalongan Regency shows that the difference in body weight before and after giving red bean Modisco ice cream is (0, 21%), while in the Moringa leaf Modisco ice cream group (0.56%). Based on the Mann Whitney test, giving Moringa leaf Modisco ice cream was more effective in increasing the weight of toddlers below the red line (BGM) with a mean rank value of 21.50 and a p value of 0.000. This research is also in accordance with research conducted by (Nendhi Wahyunia Utami, 2017) which shows that there is a significant difference in giving red bean, peanut and soybean formula drinks to increasing nutritional status, LILA and weight of pregnant women with a p-value of 0.0001.

Utilizing local food ingredients that have high nutritional content can be used as ingredients in making additional food so that it can increase the nutritional content. The availability of red beans that are easily accessible to the public, but their use is not optimal, can be used as innovation in processing additional food products for toddlers. Red beans are a type of bean that contains high protein. The high arginine content in nuts activates growth hormone (Human Growth) which functions for muscle growth and regulates the immune system. The results of research conducted by (Calvin Ramadhani, 2023) showed that there were significant differences in color (p= 0.007), aroma (p= 0.030), and texture (p= 0.04). However, there was no significant difference in taste characteristics (p= 0.050). From the results of the acceptability ranking, nutritional content and economic value, it was found that the best formula was F2 (substitution of red bean flour 7.79% and catfish meal 7.79%. The nutritional content per 100 g of F2 formula met the protein and calcium requirements of at least 10% per day in toddlers.

Red beans contain lots of protein and carbohydrates. Another advantage is that red beans are cholesterol-free, so they are safe for consumption by all groups of people from various 11 age groups. Red bean protein can also be used to reduce LDL cholesterol levels, which are bad for human health, and increase HDL cholesterol levels, which are good for human health. The carbohydrate content of red beans is also very high, reaching 61.2 grams/100 grams. The carbohydrate component of red beans consists of 1.6% sugar, 2.7% dextrin, 35.2% starch, 8.4% pentose, 1.3% galactan and 0.7% pectin. The high levels of carbohydrates in red beans are a good source of energy, namely around 348 kcal per 100 grams. Meanwhile, the fat content in red beans is also relatively low, namely 1.5 grams/100 grams. The fat component of red beans consists of 19% saturated fatty acids and 63.3% unsaturated fatty acids. Apart from that, red beans are a good source of minerals (Astawan, 2009).

Conclusion

Most of the toddlers who experienced wasting were girls and from the results of giving red bean ice cream, 11 toddlers experienced good nutrition and only one toddler still experienced wasting. There is a significant effect of giving red bean ice cream on the nutritional status of toddlers who experience wasting.

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References

1. Astawan, M. (2009). *Sehat Dengan Hidangan Kacang dan Biji-Bijian.* Jakarta: Penebar Swadaya.
2. Calvin Ramadhani, A. C. (2023, Juli-Desember). Penggantian tepung kacang merah dan tepung lele dalam semprong: dampak terhadap daya terima, kandungan gizi, dan nilai ekonomi sebagai makanan tambahan balita. *Jurnal SAGO: Gizi dan Kesehatan*, 88-96. doi:http://dx.doi.org/10.30867/gikes.v5i1.1300
3. Faroj, M. (2019). Pengaruh Substitusi Tepung Ikan Teri (Stolephorus commersonii) dan Tepung Kacang Merah (Vigna angularis) Terhadap Daya Terima dan Kandungan Protein Pie Mini. *J Media Gizi Indonesia 14(1): 56- 65*, 56-65.
4. Hasibuan, K. (2022). PKM (Pengabdian Kepada Masyarakat) Penyuluhan Tentang Pemberian Makanan Pendamping ASI (MPASI) pada Balita. . *J Pengabdian Masyarakat Aufa* , 89-93.
5. Kemenkes. Hasil Survei Status Gizi Indonesia (SSGI) 2022. 2023;1–7
6. Layli, A. N. 2019. Kajian Kadar Protein, Kadar Kalsium Dan Daya Terima Makanan Pendamping Asi (Mp-Asi) Pada Bahan Tepung Kacang Tolo (Vigna Unguiculata L.) Tepung Kacang Merah (Phaseolus Vulgalis L.) Dan Tepung Beras Merah (Oryza Nivana). Jrunal Info Kesehatan, 9(2) : 180–185
7. Nendhi Wahyunia Utami, T. H. (2017). Pemberian minuman formula kacang merah, kacang tanah, dan kacang kedelai terhadap status gizi ibu hamil kurang energi kronis. *Jurnal Gizi Klinik Indonesia, 14, No 1*, 1-9.
8. Nur Hidayah, D. A. (2020). Efektivitas Pemberian Es Krim Modisco Kacang Merah dan Es Krim Modisco Daun Kelor terhadap Peningkatan Berat Badan Balita Bawah Garis Merah (BGM) di Wilayah Kerja Puskesmas Karanganyar Kabupaten Pekalongan. *Journal of Applied Health Management and Technology, 2, No 2*, 50-58.
9. Nurlita, N. dan Hermanto, H. 2017. Pengaruh Penambahan Tepung Kacang Merah *(Phaseolus vulgaris L)* dan Tepung Labu Kuning *(Cucurbita moschata)* Terhadap Penilaian *Organoleptik dan Nilai Gizi Biskuit. Jurnal Sains dan Teknologi Pangan. 2 (3) : 562-574* at: https://scholar.google.com/scholar?cluster=17065178732123725768&hl=en&oi=scholarr.
10. Rahmiati, B.F., Hidayah, N., Ardian, J., Jauhari, M.T., Wijaya, F.W. 2021. Workshop Menu MP-ASI untuk Menjaga Status Gizi Balita di Kota Mataram. J Pengabdian dan Pemberdayaan Masyarakat 1(2): 65–70. doi.10.30812/adma.v1i2.1004 (Kemenkes, 2023)

11. Selistio, D., Nurhamidah, N., Ilham, D. 2020. Makanan Tambahan untuk Balita dari Variasi Kacang Kedelai (Glycinemax (L) merril) dan Kacang Merah (Vigna angularis). Sainstek : Jurnal Sains dan Teknologi. 12(1) : 29. doi: 10.31958/js.v12i1.2062
12. Sunarsih. (2018). *Tumbuh Kembang Anak.* Jakarta: PT. Remaja Rosdakarya.
13. Qudsy, S. P., Fajri, R., dan Lisnawati, N. 2019. Pengaruh Penambahan Kacang Merah (Phaseolus Vulgaris L.) Terhadap Daya Terima dan Kandungan Zat Besi (Fe) Biskuit Untuk Wanita Hamil. Journal Of Holistic And Health Sciences, 2(2) : 49–55