test

by Lina Togatorop

Submission date: 17-Nov-2020 03:39PM (UTC+0700)
Submission ID: 1448805717
File name: 62796_Lina_Togatorop_test_710306_1117089926.pdf (68.87K)
Word count: 2210
Character count: 10826

THE EFFECTIVENESS OF MILK AND BUTTER MIXTURE TO IMPROVE WEIGHT OF TODDLER AT POSYANDU MELUR RT 01 RW 03 SIAK SRI INDRAPURA

Deswinda
STIKes Payung Negeri Pekanbaru
Email: thitter@gmail.com

Abstract

One of determinants of human resource quality is nutrition. Malnutrition will cause abnormal physical growth and intelligence development, decreased productivity, weaker immune system, and may cause death. Toddler malnutrition today seems to remain one of the toughest problems our government has been trying to deal with. The objective of this research is to determine the effect milk and butter mixture at improving toddlers' weight. This is a quantitative research with quasi-experimental design, using pretest and posttest control design approach. Respondents are 30 toddlers. They are divided into two groups: 15 persons in control group and 15 others in treatment group. During the one-month research, weighing scale was used as the measuring instrument. All data were analyzed using univariate and bivariate analysis method. In terms of data analysis, toddlers' average weight before consuming milk is 9,68 kg with standard deviation of 1,56, and the weight gets increased to 9,82 kg with standard deviation of 1,46. On the other hand, toddlers' average weight before consuming milk and butter mixture is 11,12 kg with standard deviation of 2,04, and the weight gets increased to 11,89 kg with deviation standard of 2,12. In conclusion, toddlers who consume milk and butter mixture have significantly different weight than those who consume only milk with p value = 0,000 < 0,05.

Keywords: butter, milk, mixture, toddler

BACKGROUND

Nutrition is one of determinants of human resource quality. Malnutrition will cause abnormal physical growth and intelligence development, decreased productivity, weaker immune system, and consequently will increase the rate of morbidity and mortality (Wong, 2004).

In a community, toddlers are a group of children who are considered prone to malnutrition. Malnutrition occurs from a lower to a higher level slowly in a long period. Nutrition status of a community describes the level of health affected by the balance of nutrition needs and consumption. Malnutrition children will have weaker immune system and have more possibility of being infected. On the other hand, children suffering any kind of infection will experience decreased appetite and, consequently, will lead to malnutrition. Malnutrition and infected children will suffer from abnormal physical growth which will bring negative effect to their health, intelligence, and productivity when they are adults (Kelsey et al, 2005).

In 2010-2014 National Mid Term Development Plan in terms of health, it is stated that one of the objectives is to

decrease malnutrition prevalence on toddlers from 18,4% (in 2008) to 15% (by 2014).

According to Provincial Health Department of Riau, there are 42 malnutrition toddlers by October 2010. The number is higher than in the previous year, 28 toddlers (Dinkes Provinsi Riau, 2010). In Siak Regency in 2009, 2% out of 636 toddlers weighed suffer malnutrition, 28% are lack of nutrition, 65% have good nutrition, and 5% are BGM (Puskesmas Siak, 2009).

Malnutrition and the lack of nutrition seems to be a tough challenge the government has been trying to deal with, although the cause of the both health problems is simply the lack of nutritious food consumption. Although the government and most community assume that it is related to the lack of food supply in particular families, there are still malnutrition cases in some regions which are considered food self-sufficiency. Before a toddler suffers malnutrition, there are some phases the child usually experiences, such as decreased weight (Depkes RI, 2007).

In accordance the malnutrition cases in Siak Regency, there should be an alternative way to overcome the situation, for example by feeding toddlers with milk and butter mixture. Butter is made of milk cream (precipitated milk) with or without adding salt (NaCl) or other allowed substance, and it contains 80% milk fat. Besides, it also has vitamin A and D, Ferrum, Phosphor, Natrium, Kalium, and Omega 3 and 6. Feeding toddlers with milk and butter mixture will bring positive effect to their weight because a glass of milk and butter mixture equals to two glasses of milk. They will like drinking more milk. Furthermore, fat and oil in butter are effective sources of energy (Astawan, 2008).

Observing the phenomenon above, the researcher is interested in conducting a study entitled "The Effectiveness of Milk and Butter Mixture to Improve The Weight of Toddler at Melur Health Center RT 01 RW 03 Siak Sri Indrapura".

The objective of this study is to identify the weight difference between toddlers who consume milk and those who consume milk and butter mixture at Posyandu Melur RT 01 RW 03 Siak Sri Indrapura.

METHOD

This is a quantitative analytic study with true experiment design using pretest and posttest group design. Samples are previously observed before given any treatment. They will be observed again after the treatment is given (Murti, 2003).

Treatment Group	01 → →X 02
Control Group	01 → →X 02

01 = Pretest X = Treatment 02 = Posttest

Figure 1: Scheme of Experimental Research Design

The study is conducted at Posyandu Melur RT 01 RW 03 Siak Sri Indrapura, which is the working area of Puskesmas Siak and also an area with the highest rate of malnutrition cases. The study is conducted from Marc 2011 to April 2011.

Population in this study consists of all toddlers at Posyandu Melur RT 01 RW 03 Siak Sri Indrapura in which 30 toddlers in total as respondents (n= 30 toddlers). It is divided into 15 toddlers in control group, and 15 others in treatment group (Lemeshow *et al,* 2004).

The study utilizes primary data obtained from the result of weighing all the respondents and performing intervention by feeding the toddlers with milk and butter mixture. Analysis implemented is univariate and bivariate with hypothesis test of independent t test.

RESULT

a. Univariate Analysis

The following tables list the result of univariate analysis on respondents' characteristics based on their weight before and after consuming milk as well as before and after consuming milk and butter mixture:

Table 1

Respondents Distribution based on Their Weight Before and After Consuming Milk at Posyandu Melur RT 01 RW 03 Siak Sri Indrapura

No	Weight before consuming milk	Weight after consuming milk	Deviation
1	12,9	12,92	0,02
2	8,7	9,0	0,3
3	9,5	9,4	-0,1
4	9,1	8,87	-0,22
5	8,9	8,75	-0,15
6	9	8,9	0,1
7	9	9,45	0,45
8	8,6	9,82	0,22
9	9,3	9,5	0,2
10	9	9,55	0,55
11	9,1	9,3	0,2
12	10,2	10,1	-0,1
13	9,0	9,4	0,4
14	9,1	9,75	0,65
15	13,9	13,65	-0,25
Total	145,3	147,06	1,76

Source: Primary Data Analysis, 2011

Table 2

Respondents Distribution based on Their Weight Before and After Consuming Milk and Butter Mixture at Posyandu Melur RT 01 RW 03 Siak Sri Indrapura

No	Weight before consuming milk and butter mixture	Weight after consuming milk and butter mixture	Deviation
1	13,2	13,17	-0,03
2	9	9,75	0,75
3	12,2	12,12	-0,08
4	15,9	16,37	0,47
5	12,1	12,97	0,87
6	9	10,1	1,1
7	8,6	9,3	0,7
8	9	9,95	0,95
9	12	13,15	1,15
10	10	10,45	0,45
11	10,4	10,82	0,42
12	12,9	15,55	2,65
13	10,2	10,87	0,67
14	10	10,77	0,77
15	12,3	13,1	0,8
Total	166,8	178,44	11,64

Source: Primary Data Analysis, 2011

b. Bivariate Analysis

Bivariate analysis is performed to identify whether there is average difference between control group (group consuming milk) and treatment group (group consuming milk and butter mixture) by applying statistical test of independent t test.

Table 3

Distribution of Average Weight of Toddlers in Control Group at Posyandu Melur RT 01 RW 03 Siak Sri Indrapura

Milk Consumption	Mean	Standard Deviation (SD)	*P* Value	N
Pre	9,68	1,56	0,002	15
Post	9,82	1,46		15

Source: Primary Data Analysis, 2011

Table 4

Distribution of Average Weight of Toddlers in Treatment Group at Posyandu Melur RT 01 RW 03 Siak Sri Indrapura

Milk and Butter Mixture Consumption	Mean	Standard Deviation (SD)	*P* Value	N
Pre	11,12	2,04	0,000	15
Post	11,89	2,12		15

Source: Primary Data Analysis, 2011

Table 5

Difference of Pretest and Posttest Average Score between Treatment and Control Group toward Toddler's Weight Gain at Posyandu Melur RT 01 RW 03 Siak Sri Indrapura

Treatment Group	Average Score		Average Deviation	Δ	Statistical Test	
	Pretest	Posttest			T-count	P Value
Milk Consumption	9,68	9,82	0,14	15	23	0,002
Milk and Butter Mixture Consumption	11,12	11,89	0,77	84	21	0,000

Source: Primary Data Analysis, 2011

DISCUSSION

The research result shows that toddlers' weight before consuming milk is 9,68 kg, and get increased to 9,82 kg after consuming milk. On the other hand, before consuming milk and butter mixture, toddlers weigh 11,12 kg, and get increased to 11,89 after the consumption. The result of independent t test shows that p value is 0,000 or <0,05. For that reason, Ha is rejected, and that means there is a significant weight difference between toddlers who consume milk and the ones who consume milk and butter mixture. Furthermore, toddlers consuming milk and butter mixture continuously gain more weight every week (above green line) as reported on their KMS.

Toddlers are also considered necessary to consume side dish because it is more than a nutrition source for them. Toddlers need fewer calories than protein in terms of their weight gain. Calcium and phosphor also have important role for bones growth. Toddlers need at least 2 portion of milk (480 g) on a daily basis to fulfill their need of protein, calcium, riboflavin, vitamin A and vitamin B12. They need milk products to improve fatty acids intake (Astawan, 2008).

Butter is a kind of soft solid food product made of fat or milk cream with or without adding salt (NaCl) which at least contains 80% of milk fat which help gain children's weight (Lukman, 2008).

As mentioned before, toddlers consuming milk and butter mixture has significantly different weight than those others who consume only milk. This gain is affected by the nutrition a portion of butter contains, milk and fat. Butter also contains vitamin A, D, ferrum, phosphor, natrium, kalium, and omega 6. Feeding toddlers with milk and butter mixture will bring positive effect to their weight because a glass of milk and butter mixture equals to two glasses of milk. They will like drinking more milk. Furthermore, fat and oil in butter are effective sources of energy.

A research conducted by Aistiani (2006) on the correlation of side dish consumption with malnutrition child's weight improvement shows that there is a correlation between side dish consumption and child's weight improvement (p value = 0,021), which means that Ha is accepted. A research by Manalu (2008) on similar topic also shows that Ha is accepted with p value = 0,015.

There are several factors affecting children's weight: eating habit, eating portion, digestive organs activity, and disease they are suffering from. As found in this study, some toddlers have difficulty

with milk and butter mixture, which then causes them to queasy and vomit.

CONCLUSION

Toddlers' average weight before consuming milk is 9,68 kg and get increased to 9,82 kg after consuming it. On the other hand, their average weight before consuming milk and butter mixture is 11,12 kg and get increased to 11,89 after consuming it. In terms of data analysis, the result of independent t test shows that there is a difference between group of toddlers who consume milk and the other one who consume milk and butter mixture (*p* value = 0,000).

REFERENCES

Astawan. (2008). *Jangan Takut Mengkonsumsi Mentega dan Margarine*. POM. MUI. Retrieved: September 24, 2010. From: http://www.depkes.go.id

Depkes RI. (2007). *Klasifikasi Status Gizi anak di bawah Lima Tahun (Balita)*. Jakarta.

Kelsey, Thomson, Evan. (2005). *Methods in Observational Epidemiology*. New York: Oxford University Press.

Lemeshow, S., Hosmer, JR., D.W., Klar, J., & Lwanga, S.K. (2004). *Besar Sampel dalam Penelitian Kesehatan*. Penerjemah: Pramono, D. Yogyakarta: Gadjah Mada University Press.

Lukman. (2008). *Mentega vs Margarine*. Buletin Perspektif Okayama. Retrieved: September 24, 2010. From http://www.depkes.go.id

Murti. (2003). *Prinsip dan Metodologi Riset Epidemiologi*. Yogyakarta: Gadjah Mada University Press.

Rosner. (2004). *Fundamentals of Biostatistics*. Harvard University.

Saleh. (2007). *Dasar Pengolahan Susu dan Hasil Ikantan. Program Studi Produksi Ternak*. Fakultas Pertanian Universitas Sumatera Utara.

Wong. (2004). *Pedoman Ilmu Keperawatan Pediatric*. Jakarta: EGC.

test

ORIGINALITY REPORT

8%	7%	1%	0%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	www.mitrariset.com Internet Source	4%
2	www.semanticscholar.org Internet Source	1%
3	zombiedoc.com Internet Source	1%
4	Matthew J. Lozier, Molly Boyd, Christina Stanley, Laurie Ogilvie, Ewa King, Colleen Martin, Lauren Lewis. "Acetyl Fentanyl, a Novel Fentanyl Analog, Causes 14 Overdose Deaths in Rhode Island, March–May 2013", Journal of Medical Toxicology, 2015 Publication	1%
5	ejurnal.ikippgribojonegoro.ac.id Internet Source	<1%
6	akper-adihusada.ac.id Internet Source	<1%
7	fr.scribd.com Internet Source	<1%

Exclude quotes	On	Exclude matches	Off
Exclude bibliography	On		