

HEA-OR-008

THE INFLUENCE OF GRANTING MODISCO WITH WEIGHT CHANGES ON TODDLERS AGES 1-5 YEARS AT POSYANDU PERSADA SUMBERWARU WRINGINANOM – GRESIK – EAST JAVA - INDONESIA

Nova Elok Mardliyana¹, Sari Indrawati²

¹ *Universitas Aisyiyah Yogyakarta, Yogyakarta, Indonesia*

² *Health Faculty University of Muhammadiyah Surabaya, East Java, Indonesia*

Corresponding author's email: eloksyahdan@gmail.com, chupid86@gmail.com

Background: Malnutrition is a problem of nutrition. The nutritional problem is a problem of society, can be caused by a variety of factors, and not just because of health issues, but also problems of the economy, education, lack of knowledge, as well as insights into the society of the importance of food intake sufficient and nutritious. To prevent it one of his efforts is the grant Modisco. Objective: to know the influence of supplementary feeding on weight changes with the Modisco toddlers ages 1-5 years. Methods: The data gained by doing an observation for one month to find out the weight toddlers pre and post, and then the data in the sport by using a test sample paired t-statistics to know or no difference in average weight toddlers. Pre-experimental design using One group pre test – post test. Result: Test result statistics shows paired t-test $\alpha = 0.05$ obtained the value of $p = 0.000$ means there is the influence of the giving of the Modisco with increased weight toddlers ages 1-5 years. This study shows that is very useful in improving the modisco toddler. Conclusion: This study can increase weight toddler ages 1-5 years after the given Modisco. And expected to all parties concerned, so that other food mo disco can serve as an argument or supplemental feeding program, for the sake of growth and development of toddlers are optimal.

Keywords: Modisco, Weight Loss, Nutrition

1. INTRODUCTION

Malnutrition is a health problem experienced by Indonesia and has not had a lot of changes, and can inhibit the pace of national development, (Supariasa, IDN, 2002). In essence, the problem of nutrition is also an issue of society caused by multiple factors, and not only due to physical health problems. But also economic issues, education, lack of knowledge and insight of the importance of adequate food intake and nutritious.

FAO (Food and Agriculture Organization) estimates that in 1999 790 million people were starving around 30% of world population is comprised of infants, children, adolescents, adults, and elderly suffer from malnutrition. As many as 50% of infant mortality associated with malnutrition, (Soekirman, 2005).

Indonesia nutritional condition of children on average worse than the child's nutritional world and even from African children, (Anonim, 2006). Noted one in three children in the world die every year due to malnutrition and poor quality of food, (Anonim, 2006). World Health Organization (WHO) estimates that 54% of child deaths caused by poor nutritional status. While nutrition problems in Indonesia resulted in more than 80% of childhood deaths (WHO, 2011).

Based on data from Nutrition Surveillance System (NSS) GOL-IPR 1999-2000 collected in several major cities in Indonesia showed that the proportion of low birth weight infants who still stood at approximately 30% of the total toddlers, (Widayati, 2010).

Modisco a liquid food formula made from cow's milk (skim), oil or margarine, sugar. Modisco is more effective in weight gain rather than WFP biscuits. Based on research Widyati, 2010 states that, this is not done were given malnutrition in children under five due to supplementary feeding or weaning less precise. Circumstances such as these require the handling not only the provision of food but with a communicative approach by the level of education and the ability of communities. due to the mother unaware that after the baby is six months old require additional or complementary foods in quantity and quality is increasing by addition of infant age and ability digestion. Malnutrition, especially among children under five will increase the risk of physical growth, mental development, and intelligence.

Indonesian government's efforts to address the problem of malnutrition is the supplementary feeding program in the form of biscuit WFP (World Food Program). Besides it can also by giving mo disco, because it is very useful with a portion of the food or beverage is relatively small but high in calories and protein, easily digestible because it consists of vegetable fat and medium-chain fatty. Modisco also is an alternative for children who do not like milk, also, can increase body weight appropriately, i.e., 30-100 grams per day, (Annis, CA, 2001).

2. RESEARCH METHODOLOGY

Research to be implemented is experimental research that is by using Pre-experimental design, where design is no more variables are controlled, as well as in the sample group is not done randomly. Researchers will use the Pre-experimental design with type One group pretest-posttest design where the study was done by prior treatments or treatments given, variable observed or measured in advance (pre-test) after the intervention or treatment, and after intervention, measurements or observations (post-test) (Hidayat, AAA, 2010). In this study population was all children aged 1-5 years who are in IHC Penang on Ds. Sumberwaru district. Wringinanom - Kab. Gresik registered until December 2010 as many as 91 toddlers. Sample this study are all children aged 1-5 years who are malnourished in IHC Persada Sumberwaru village Gresik as many as ten toddlers. which becomes the criteria for inclusion are: Toddlers who reside in Ds. Sumberwaru district. Wringinanom - Kab. Gresik toddler posy and members aged 1 to 5 years, infants with less weight according to the provisions of the WHO, parents who are willing toddler respondent. When the study began on 16 May on 12 June 2011.

The first data retrieval (pre-test) was conducted on May 5, 2011 when their pos yan du Pentagon by performing measurements of the weighing toddlers. specify the position BB children by the applicable standards. Namely whether the nutritional status of children in the category of healthy nutrition, malnutrition or poor nutrition. Or at the view by using the curve at KMS, whether BB toddlers are at the curve in green, yellow or red.

Modisco supplementary food is given to toddlers at ten infants within one month, which has previously been calculated calorie needs in each - each according to his needs toddler. At the time of the initial provision of food witnessed by researchers (eaten in front of the investigator) to ensure that toddlers have consumed additional food. For the next day, researchers will visit the home or in the provision of mo disco with the aim of ensuring that mo disco was already eaten toddlers until they run out. Additional food Modisco gave two times a day (morning and evening). Giving Modisco 1 with the composition given: Full Cream or skim milk 10 grams, 5 grams sugar, 5 grams

Margarine. Modisco given within one month with a frequency of 2 times a day. Net Weight: 100 ml, per glass. The amount of energy: To mo disco I 100 Kcal

Collecting data to two (post-test) conducted the weighing back in toddler to determine the increase in weight after being given treatment mo disco administration for one month. Furthermore, after the data is collected and processed for analysis and the known effects of mo disco with weight change.

The data were analyzed by paired sample t-test with significance $\alpha = 0.05$ to determine differences before and after an individual treatment on the sample. After the data were analyzed using paired sample t-test using SPSS 16:00 with a significance value of $\alpha = 0.05$. Told effect if the percentage showing an increase in weight.

3. RESULTS AND DISCUSSIONS

3.1. Demographic Information

Table 1 Characteristics of respondents by age group of children aged 1-5 years in Posyandu Persada May 2011

No.	Age (Month)	Frekuensi	Persentase (%)
1	26 - 32	2	20
2	33 -39	-	0
3	40 - 46	2	20
4	47 - 53	3	30
5	54 - 60	3	30
Total		10	100

Table 2 Characteristics of respondents by sex in children aged 1-5 years in Posyandu Persada May 2011

No.	Sex	Frekuensi	Persentase (%)
1.	Boy	5	50
2.	Girl	5	50
Total		10	100

Table 3 Characteristics of respondents based on the nutritional status of children aged 1-5 years in Posyandu Persada May 2011

No.	Weight	Frekuensi	Persentase (%)
1.	Good Nutrition	-	0
2.	Malnutrition	10	100
Total		10	100

4th Asian Academic Society International Conference (AASIC) 2016

Globalizing Asia: Integrating Science, Technology and Humanities for Future Growth and Development

Table 4 Characteristics of respondents by the daily diet of children aged 1-5 years in Posyandu Persada May 2011.

No.	Menu Foods everyday	Frekuensi	Persentase (%)
1.	Rice and side dishes	2	20
2.	Rice, side dishes, vegetable	7	70
3.	Rice, side dishes, vegetable and	1	10
Total		10	100

Table 5 Distribution Weight before given Respondents Modisco

No.	Respondents	Weight loss after given Modisco (Kg)
1.	1	10
2.	2	14
3.	3	13,2
4.	4	9
5.	5	12
6.	6	11
7.	7	11,4
8.	8	11
9.	9	12,5
10.	10	14

Table 6 Distribution of Weight Respondents awarded after Modisco

No.	Respondents	Weight loss after given Modisco (Kg)
1.	1	10
2.	2	14
3.	3	13,2
4.	4	9
5.	5	12
6.	6	11
7.	7	11,4
8.	8	11
9.	9	12,5
10.	10	14

Table 7 Descriptive Analysis Weight before and after given Modisco

No.	Respondents	Weight before given Modisco (Kg)	Weight after being given Modisco (Kg)	The increase in body weight (kg)
1	1	9,6	10	0,4
2	2	13,5	14	0,5
3	3	12,5	13,2	0,7
4	4	8,7	9	0,3
5	5	11,3	12	0,7
6	6	10,6	11	0,4
7	7	10,9	11,4	0,5
8	8	10,5	11	0,5
9	9	12	12,5	0,5
10	10	13,1	14	0,9
		Significancy = 0,000 $\alpha = 0,05$		
		Mean	SD	SE
After		11.270	1.5254	.4824
Before		11.810	1.6563	.5238

Based on data from the above table shows that weight infants given mo disco by means 2x / day for one month showed, the lowest increase in responder 4 is 0.3 kg and the highest increase in 10 respondents, i.e., the increase reached 0.9 kg. Statistical Test T-Test one-Sample Weight above shows the before and after given Modisco, namely $p = 0.000 < \hat{I} \pm = 0.05$, then there is a weight difference before and after administration of Modisco for 1 month with giving 2x / hr in Toddlers.

3.2. Achievement of Program Outcomes

Based on the tables of Weight under five suffering from malnutrition. Poor nutrition is a shortage of food consumption relative or absolute for a particular period (Supariasa, I.D.N., 2002). Nowadays, in general, malnutrition can occur not only quiet family economic status. Families who have a high economic status may also suffer from the problem of hunger. Issues of malnutrition in children under five are caused by many factors, such as the age of the children were more active and began to understand his favorite foods. So as caregivers should pay more attention to safe and nutritious food for toddlers. Providing a variety of foods and making meals in a more unique so that the toddler more than happy to eat it. With more attention in feeding infants, potential malnourished problems would not exist.

Based on the tables of Weight Toddlers after giving Modisco for one month with the administration of 2 times per day showed weight changes, where 100% of children under five has increased. Modisco is a drink that is highly nutritious, easily digestible rich in calories and protein. Modisco (Modified Disco) is a modification of the 'Disco 150', a high-calorie drinks (100 cal) formula is comprised of 7.85 g skim milk, 4.73 g of sugar, and 5.93 g of cottonseed oil, which is used to treat child malnutrition and severe malnutrition. Giving Modisco for children effectively, because the portion of the food or beverage is relatively small but in calories and high in protein, easy to digest because it consists of vegetable fat and fat chain being, is an alternative for children

who do not like milk, can also increase the BB quickly, i.e., 30-100 grams per day (Annis, CA, 2009). The resulting increase in body weight indicates that parents of toddlers also play an active role in supporting the growing weight infants. By supporting the provision of Modisco in infants during the first months of the administration of 2 times one day. Reducing the delivery of less nutritious foods, e.g., ice, chocolate, snack. Set the break toddlers and also keep toddlers food hygiene and the environment so that the health of infants is maintained. With that, the growth and development of toddlers running optimally, especially the increase in weight.

According to the table showing the results of the analysis conducted indicated that there are differences in weight before and after giving mo disco. The data is obtained, no difference in scores before treatment and after treatment, so in other words obtained, there is an increase in weight before and after treatment.

Having analyzed using t-test statistical test $\alpha = 0.05$ p-value = 0.000 or $\alpha < 0.05$, which means Modisco effect on body weight of children aged 1-5 years.

From the above results indicate that there is a weight gain of malnourished children after being given extra food Modisco. In this case due to the high possibility efforts of parents to be consistent in providing additional food Modisco accordance with the recommendation of the investigators. Also, several factors determine the growth of normal nutrition and health status at the time. Both of these are determined by how much the efforts of parents to provide extra nutrition and food quality, one of which is the provision Modisco and minimizing unhealthy feeding and resting toddler set so that optimal growth. With that, the incidence of malnutrition can be solved.

4. CONCLUSIONS

The results showed that there is a weight gain of malnourished children after being given extra food Modisco.

CITATIONS AND REFERENCES

1. Anonim, (2006), Profil Kesehatan Provinsi Jawa Tengah, Retrieved Februari, 2012, from http://www.depkes.go.id/downloads/profil/prov_jateng.pdf
2. Departemen Kesehatan, (2004), Gizi Dan Promosi. <http://www.promosikesehatan.com/>
3. Hidayat, A.A.A, (2010), (Metode Penelitian Kesehatan : Paradigma Kuantitatif), Salemba Medika, Jakarta
4. Hidayat, A.A.A, (2007), (Metode Penelitian Keperawatan dan Teknik Analisis Data), Salemba Medika, Jakarta
5. Marimbi, Hanum, (2010), (Tumbuh Kembang, Status Gizi, dan Imunisasi Dasar pada Balita), Nuha Medika, Yogyakarta
6. Nursalam, (2003), (Konsep Dan Penerapan Metodologi Penelitian Ilmu Keperawatan), Salemba Medika, Jakarta
7. Puskesmas mojo agung, (2008), modisco-modifikasi-alternatif-makanan- untuk-mengurangi-angka -gizi-buruk-bag-1, <http://.wordpress.com>, 16-08
8. Ekasari, Wendy, (2010), modisco-atau-makanan-penggemuk, <http://puspa-notes.blogspot.com>, 01
9. Riafirman, (2008), modisco_10, <http://www..co.cc>, 06
10. Soetjningsih, (1995), (Tumbuh Kembang Anak), EGC, Jakarta
11. Sugiyono, (2009), (Statistik Untuk Penelitian), ALFABETA, Bandung
12. Supriasa, I.D.N, (2002), (Penilaian Status Gizi), EGC, Jakarta
13. Syams, Asy, (2009), Mother+And+Baby&y=CyberwomanC473, <http://cyberwoman.cbn.net.id>,
14. Unijianto, Bambang, (2011), Gizi-Buruk-capai-184-persen-dari-18-juta-balita, http://suamerdeka.com/v1/index.php/read/news_23
15. Waryana, (2010), (Gizi Reproduksi), Pustaka Rihama, Yogyakarta

4th Asian Academic Society International Conference (AASIC) 2016

Globalizing Asia: Integrating Science, Technology and Humanities for Future Growth and Development

16. Widyyati, M.L, (2010), Efektifitas Pemberian Biskuit WFP dan Modisco Terhadap Peningkatan Berat Badan Balita KEP di Wilayah Kerja Puskesmas Bandaran Kab Pamekasan, (Skripsi), 09