

HOME CARE TERHADAP PENINGKATAN STATUS NUTRISI PADA BALITA MALNUTRISI DI YOGYAKARTA

*(Home Care on The an Increasing Nutritional Status
For The Children Under Five in Yogyakarta)*

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ABSTRAK

Pendahuluan. Prevalensi malnutrisi pada Balita adalah indikator dari *Millenium Development Goals* (MDGs) yang harus dicapai oleh negara-negara pada tahun 2015. Prevalensi nutrisi dasar pada BB/TB di Daerah Istimewa Yogyakarta menunjukkan bahwa prevalensi balita dengan status nutrisi sangat kurang (kurus) adalah 2,6% dan nutrisi kurang 6,5%. Keperawatan komunitas mengkombinasikan tiga pendekatan untuk menangani malnutrisi pada balita dalam intervensi komunitas, *home based treatment* pada malnutrisi balita tanpa komplikasi dan menstabilkan malnutrisi pada balita dengan komplikasi. Tujuan dari penelitian ini adalah menangani masalah malnutrisi pada balita melalui program *home care* di Yogyakarta. **Metode.** Penelitian ini menggunakan metode kuantitatif melalui intervensi *home care* untuk balita dengan malnutrisi dan diselenggarakan oleh perawat di Puskesmas. Desain penelitian adalah *pretest-posttest* dengan *control group design*. Populasi pada penelitian ini adalah seluruh balita dengan malnutrisi dengan atau tanpa komplikasi. Sampel dibagi menjadi dua kelompok, 35 balita sebagai kelompok perlakuan dan 25 balita sebagai kelompok kontrol. Analisis data menggunakan *Paired t-test* dan *independent t-test*. **Hasil.** Hasil menunjukkan bahwa sebelum dilakukan *home care* tidak ada perbedaan signifikan pada dua kelompok. Hasil setelah intervensi *home care* selama tiga bulan dengan tujuh kali kunjungan, *home care* dapat meningkatkan status nutrisi pada balita dengan malnutrisi. Nilai dari *independent t-test* pada kelompok kontrol dan kelompok perlakuan adalah $p < 0,05$. **Diskusi.** Peneliti menyimpulkan bahwa *home care* mempunyai pengaruh dalam meningkatkan status nutrisi pada balita dengan malnutrisi dan juga nilai *Z score* menunjukkan BB/TB meningkat.

Kata Kunci: *home care*, status nutrisi, malnutrisi.

ABSTRACT

Introduction. Prevalence of children under five with malnutrition is an indicator of *Millenium Development Goals* (MDGs) that should be reach in a region (Regency/City) in 2015. Prevalence of nutrition base on weight for height (WFH) in Daerah Istimewa Yogyakarta showed that children under five prevalence with very lean nutrition status was about 2,6 percent and lean about 6,5 percent. Community Therapeutic Care combining three approaches to handling under five malnutrition children including community intervention, home based treatment for under five malnutrition children without complication and stabilitation center for under five malnutrition children with complication. The aim of this research was to find out the changing of malnutrition children under five through home care program in Yogyakarta. **Method.** This research used quantitative method through home care intervention for children under five with malnutrition and was conducted by nurse in public health center. Design of this research was *pretest-posttest control group design*. The population of this research was all children under five with malnutrition or not complication. Sample divided into two groups, 35 children for the intervention group and 25 children for control group. Analysis used was *Paired t-test* and *independent t-test*. **Results.** The result showed that before home care intervention, there is no significant difference of two groups. The result after intervention for three month with 7 times of visiting, home care intervention can increase nutritional status of children under five with malnutrition. The value of *Independent t-test* for control group and intervention group was significant with $p < 0,05$. **Discussion.** The researcher conclude that Home Care has effect to increase nutrition status of children under five with malnutrition and also *Z score* value which is weight for height (WFH) was increase.

Keywords: Home Care, Nutrition status, Malnutrition.

INTRODUCTION

Malnutrition is referred to as “invisible emergency” due to events such as malnutrition an like iceberg phenomenon (UNICEF, 2011). Manutrition is a major killer of children under

five years old (WHO, 2007). Every year, malnutrition accounts for approximately 40 % of the 11 million deaths of children under five in developing countries. The malnutrition rate among children in the world reached 115

million children (WHO, 2010). Anthropometric measurements showed a quarter of children under five in developing countries are experiencing less nutrition (Svedberg, Peter. 2011).

In 2007, the prevalence of children under five suffering from malnutrition is 18.4 percent, so that Indonesia was among the 36 countries in the world that gives 90 percent contribution to the world nutritional problems (BAPPENAS, 2011). In 2010 the prevalence of malnutrition decreased to 17.9 persen (RISKESDAS, 2010). Basic Health Research (Riskesdas) in 2010 showed that the prevalence of malnutrition in Yogyakarta Special Region (DIY) was 1.4 %. In 2010 the incidence of malnutrition children in the district in the Yogyakarta province are: Kulonprogo 0.88 %, Bantul 0.58 %, Gunung Kidul 0.70 %, Sleman 0.66 % and Yogyakarta 1.01 %.

The problem of malnutrition was directly influenced by factors of food consumption and infectious diseases. Indirectly affected by rearing of children, the availability and variety of food consumption, socio-economy, and cultural and political. The higher prevalence of malnutrition children was happened from the lower level of household expenditure percapita (Kepmenkes, 2011). Goudet et al (2011) gives the conclusion that the root cause of malnutrition in infants is the inappropriateness of care, supportive environment, and improper diet or not in accordance with the phase of growth and development.

The nutritional problems actually can be solved in a short time (BAPPENAS, 2010). Intervention package of activities undertaken to resolves the issue through continuous service (continuum care) on the occasion of the golden period of life. Handling of malnutrition can be addressed in two settings, residential care (hospital) or non-residential care (WHO, 1999). Residential care is the management of malnourished children in the Health Center and Therapeutic Feeding Center while malnutrition without complication treated in a non-residential care like outpatient health centers, and community based nutritional

recovery.

WHO since 2007 has socialized Community-Based Management of Severe Acute Malnutrition programs. This is motivated by several studies showing that children under five with malnutrition without complications actually can be treated in the community. Tanner & Collins (2004) states that the Community Therapeutic Care is an approach that can be done to address acute malnutrition in children under five. Sadler (2007) and Ashworth (2006) shows that the cost of home care for malnourished children was less expensive than hospital care. Additionally Asworth (2006) argued that community-based management of malnutrition for children under five can minimize the exposure to nosocomial infections.

Community Therapeutic Care combines three approaches in dealing with malnutrition children that is supplemental food, home-based treatment for children under five malnutrition without complications and stabilization center for malnourished children under five with complications (Tanner & Collins, 2004). Community-based approach that consists of three elements: community outreach, home care and inpatient care (Therry, M, 2005). Two approaches have been carried out in Indonesia, the provision of PMT and PMT-P for children with malnutrition and stabilization centers, while for the home-based approach to treatment or home care has never been done. Research conducted by Therry (2005) showed that home care effectively improve the nutritional status of malnutrition children under five.

METHODS

This research used quantitative method through home care intervention for children under five with malnutrition and was conducted by nurse in public health center. Design of this research was pretest-posttest control group design. The population of this research is all children under five with malnutrition or not complication. Sample divided into two groups, 35 children for the intervention group and

25 children for control group. All under five children with malnutrition in the intervention group who had performed the validation and appropriate intervention inclusion criteria will be given a home care nurse for 3 months.

The provision of home care interventions carried out by following the steps of nursing care from assessment to the evaluation stage. At this stage of the intervention, nurses perform a series of actions on how to feed, how to nurture, how to care, how to assess the growth and development of children by a nurse to the mother or child caregiver in the form of home visit. Intervention sessions conducted in 3 phases: intensive support, mentoring phase and the strengthening of independent stages.

At the beginning of the study (first month), Z score measured to all under five children with malnutrition either the intervention group or the control group. Measurements to obtain the response made on each unit at each time point in all groups. Measurement of the response is the value of Z score done every week two times in the first 2 weeks of intervention, further measurements were performed at the end of the first, second and third weeks.

The tools used home care handbook malnutrition in children compiled by researchers based on 18, 19, 20, 21, 22. The instrument used to measure body weight is a digital weight scales with a capacity of 150 kg and a precision of 50 grams; using a 3A battery as much as 2 pieces. Height measurement on respondent less than 2 years using the Length of measuring in a sleeping position. While the respondents ≥ 2 years done in a standing position using microtoise with a capacity of 2 meters and precision measuring 0.1 cm. Researchers created a guide that will serve as a guide for researchers, research assistants and nurse in a health center anthropometric measurements in children. Guideline was taken from the measurement and inspection guidelines, the Agency of Health Research and Development of the Ministry of Health of Indonesia in 2007.

RESULTS

Based on table 1, the results of a study conducted by researchers for 3 months with 7 visits as follows:

1. Data Validation to malnutrition children was conducted in the first week in January 2013, subsequent researchers conducted the first measurements of nutritional status. In the experimental group the nutritional status showed mean score was 0.11 and in the control group nutritional status was 0.00. Results of independent t-test showed t value was 1.766 significantly greater value 0.083. These results prove before the home care intervention there was no differences in the nutritional status of malnourished children.
2. Researchers conducted home care intervention on the first visit. First Post-test measurements of nutritional status in mid-January 2013, the mean score of nutritional status in experimental group was 0.29 and in the control group was 0.28. Results of independent t - test showed t value of 0.048 and a significant value of 0.962. These results prove after the first home care intervention there was no change in the nutritional status of malnourished children.
3. Second Post-test, visit performed at week 4 in January 2013. Researchers conducted home care intervention on a second visit to the measurement showed the mean score of nutritional status on experimental group was 0.59 and in the control group was 0.20. Results of independent t-test showed t value was 3.181 and a significant value of 0.002. These results prove the home care intervention after the fifth visit, there are differences in the nutritional status of experimental and control groups.
4. Post-test performed on the third visit at four weeks in February 2013. Researchers conducted home care intervention on the third visit to the measurement showed the mean score on the experimental group was 0.56 and in the control group was 0.08. Results of independent t-test showed t value of 4.292 and a significant value

- of 0.000. These results prove after home care intervention there are differences in the nutritional status of experimental and control groups.
5. Post-test four performed at week 4 in March 2013. Researchers conducted home care intervention on fourth visit to the measurement showed the mean score on the experimental group mean score was 0.59 and the control group was 0.04. Results of independent t-test showed t count was 5,181 dan significant value of 0.000. These results prove after home care intervention there are difference in the nutritional status of experimental and control groups.
 2. Post-test 2 at fifth visit performed at week 4 in January 2013. Researchers conducted home care intervention on fifth visit to the measurement of nutritional status in the experimental group showed Z score WFH was 2.6921 and in the control group was 3.3248. Results of independent t - test was 3.538 and a significant value of 0.001. These results demonstrate after the five visit of home care intervention, there is difference in experimental and control groups.
 3. Post-test 3 at sixth visit conducted at fourth weeks in February 2013. Researchers conducted home care intervention on sixth visit to the measurement of nutritional status in the experimental group showed Z score WFH was 3.0931 and in the control group was 3.3824 . Results of independent t-test was 3.852 and a significant value of 0.000. These results demonstrate after the

Based on table 2 the result are:

1. Post-test 1 at first visit showed no difference between the control group and the intervention group with a P value = 0.174

Table 1. Independent t Test for a Control and Experiment Group on The Nutritional Status of Children Under Five Malnutrition in Yogyakarta

Variable		Mean	t	Significance
Nutritional Status before the intervention Measurement 1	IG	0,11	1,766	0,083
	CG	0,00		
Post-test1 (first visit)	IG	0,29	0,048	0,962
	CG	0,28		
Post-test2 (fifth visit)	IG	0,59	3,181	0,002
	CG	0,20		
Post-test3 (sixth visit)	IG	0,56	4,292	0,000
	CG	0,08		
Post-test4 (seventh visit)	IG	0,59	5,181	0,000
	CG	0,04		

Note: CG (Control Group), IG (Intervention Group)

Table 2. T Test Independent to Z Score WFH Of Children Under Five Malnutrition In Yogyakarta

Variable	Group	Mean	T count	Significancy
Z score WFH	IG	-3,0931	1,375	0,174
Post-test1 (visit 1)	CG	-3,3824		
Post-test2 (fifth visit)	IG	-2,6921	3,538	0,001
	CG	-3,3248		
Post-test3 (sixth visit)	IG	-3,0931	3,852	0,000
	CG	-3,3824		
Post-test4 (seventh visit)	IG	-3,0931	3,762	0,000
	CG	-3,3824		

Note: CG (Control Group), IG (Intervention Group)

six visit of home care intervention, there is difference in experimental and control groups.

4. Post – Test 4 at seventh visit conducted in the fourth week in March 2013. Researchers conducted home care intervention on seventh visit to the measurement of nutritional status in the experimental group showed Z score WFH was 3.0931 and in the control group was 3.3824. Results of independent t - test was 3.762 and a significant value of 0.000 . These results prove after seven visit of home care intervention, there is difference in experimental and control groups.

DISCUSSION

This study was conducted to determine the effect of home care to the increasing nutritional status of children malnutrition in Yogyakarta. In this research, design model used is the pretest - posttest control group design.

Results of Pre-Test of The Control Group and The Experimental Group

The results of the experimental and control group pretest showed that while prior to home care there is no difference between the intervention group and the control group. The first visit in the first week in January 2013, subsequent researchers conducted the first measurements of nutritional status . The mean score of nutritional status of experimental group was 0.11 and WFH was 3.0931, while the mean score of nutritional status in the control group was 0.00 and WFH was 3.3824. Results of independent t-test showed t value was 1.766 significantly greater value 0.083. These results prove before the home care intervention both groups had similar nutritional status, meaning there is no difference between the two groups.

Nutritional status between the two groups there were no differences, these results illustrate that the malnutrition children in Yogyakarta in the fulfillment of nutrition have the same relative nutritional status. Intervention like PMT (supplementary food) was provide to for two groups. Research by Ayu (2008) showed that the mass interventions

more appropriate given for less nutrition, whereas for malnourished infants required more personalized intervention. Malnutrition can be caused from the inadequate food or can be caused by disease (RCN, 2006). There are two factors causes of malnutrition is the direct and indirect causes. The immediate cause is the lack of quantity and quality of food consumed, infectious disease, birth defects and cancer disease. Children who got the food quite good but often attacked or fever eventually suffer malnutrition. The cause is not immediately such as household food availability, behavior, and health services (Correa, et al., 2009: Goudet, S. et al. 2011)

The results showed that in term of income, 60 % of parents who have children are malnourished have income below the minimum wage. This shows a lack of household food availability. This problem may be overcome by the provision of supplementary food, but the results of the study by Syadzswana (2012) showed that the PMT effective given to infants with malnutrition status.

Results of Post-Test Results of The Control Group and The Experimental Group

Researchers conducted home care intervention on the first visit. First Post–test measurements of nutritional status in mid-January 2013, the mean score of nutritional status in experimental group was 0.29 and in the control group was 0.28. Results of independent t-test showed t value of 0.048 and a significant value of 0.962. These results prove after the first home care intervention there was no change in the nutritional status of malnourished children.

The lack of difference in the first treatment due to the effects of home care is yet to be seen, because the intervention is only carried out for one hour to give counseling and guidance by nurses to mothers and caregivers in improving the nutritional status of the children. Researchers will conduct home care on an ongoing basis on subsequent visits and monitor the development of nutritional status of children in order to determine whether home care can improve the nutritional status of children under five.

Post-test 2 at fifth visit performed at week 4 in January 2013. Researchers conducted home care intervention on fifth visit to the measurement of nutritional status in the experimental group showed Z score WFH was 2.6921 and in the control group was 3.3248. The Result of independent t-test was 3.538 and a significant value of 0.001. These results demonstrate after the five visit of home care intervention, there was difference in experimental and control groups.

In the first treatment, there was no difference in both groups, but at the second treatment there was significant difference. It is proved the existence of home care treatment can help improve the nutritional status of children under five. These results are in accordance with previous research study conducted by Ali Kurularum in 2002 under the title The relationship between the mother 's role in the provision of complementary feeding in infants aged 0-4 months with nutritional status in health centers Mergangsan Yogyakarta. the Result showed that the age of first complementary feeding it gives impact on the nutritional status of infants.

The results of the study on second visit by doing basic home care that still supports research conducted by Thery (2005) with the title of home -based treatment of severe malnutrition in Kabul. The results showed that effective home care program improves the nutritional status of malnourished children under five and mothers do not have to leave a job caring for children.

Malnutrition in children can be caused by parental knowledge and parent do not understand about nutrition needed for children, disenfranchised neighborhoods and intake of unhealthy food. According to inaccuracy care, Faith (2003) said that caused of malnutrition are unsupportive environment and eating improper or not in accordance with the phase of growth and development. Other factors that also affect the low food accessibility (the ability to always meet household food needs of its members) threatening decrease in food consumption varied, nutritionally balance, and safe at the household level.

Malnutrition in children can cause various problems, such as decreased of immune system, and the development of less than the maximum. Lives of severely malnourished infants may experience a decrease in intelligence (IQ) of up to 10 percent. This situation indicates that essentially poor nutrition or less will decrease the quality of human resources.

The efforts to do for improving nutritional status by providing home care services to clients. Home care services can certainly influence because the service provided will be more perfect , holistic and comprehensive and gives independence parents. Effort to cope with the number of malnourished children under five can be done in various ways including the additional feed that contains many nutrients and iron, regularly bringing a child into posyandu to monitor progress, provide intensive care and also do home care. Home care can provide many benefits including improving strong support system, encouraging normal growth and development of all family members, as well as providing health education to families about health promotion and prevention of children who suffer from malnutrition.

Post-test performed on the third visit at four weeks in February 2013. Researchers conducted home care intervention on the third visit to the measurement showed that the mean score on the experimental group was 0.56 and in the control group was 0.08. Results of independent t-test showed t value of 4.292 and a significant value of 0.000. These results prove after home care intervention there are differences in the nutritional status of experimental and control groups

In the second treatment and followed by intervention on the third visit there was significant difference. It is proved the existence of treatment conducted home care nurses have appeared to help improve the nutritional status of children under five. Nurses provide home care interventions and explanations to parents and caregivers about complementary foods rich in nutrients, so as to provide independence.

Post-test four performed at week 4 in March 2013. Researchers conducted home care

intervention on fourth visit to the measurement showed the mean score on the experimental group mean score was 0.59 and the control group was 0.04. Results of independent t-test showed t count was 5, 181 dan significant value of 0.000. These results prove after home care intervention there are difference in the nutritional status of experimental and control groups

In the second treatment until the fourth visit to the intervention there was significant difference. It is proved the existence of treatment conducted home care nurses are in accordance with the nutritional status and able to sustain improved nutritional status. According Nuryandari (2004), mentioning that the general purpose of enhancing efforts to promote home care, preventive, curative and rehabilitative, reduce the frequency of hospitalization, increasing the efficiency of time, cost, effort and thought.

Home care interventions conducted by researchers to increase, maintain, or maximize and minimize the level of independence as a result of the disease to achieve optimal individual ability as long as possible are done in a comprehensive and sustainable.

The main purpose of home care is to prevent disease and promote health through health promotion client (Stanhope, M., Lancaster, J. 2004; Clark, Mary, J., 2003). and education that focuses on the client's independence and family (Potter & Perry, 2005). The results of this study prove after the intervention, there is the effect of home care on improving nutritional status, body weight and height in under five children with malnutrition in Yogyakarta.

CONCLUSION AND RECOMMENDATION

Conclusion

Home care intervention can increase nutritional status of children under five with malnutrition after intervention for three month with 7 times of visiting.

Recommendation

This study can be used as a reference for further research on family nursing, and home care services not just for malnutrition problem but for all health problem in community.

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