

Mother's Knowledge in Providing Nutrition for Children in The Working Area of East Denpasar I Primary Health Care Centre

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Abstract The nutritional problem in young children particularly nutrition deficiency and over nutrition are still exist. Nutritional intake is one of the most outstanding factors in determining children's nutritional status. Providing adequate nutrition for children is influenced by their mothers' knowledge. Hence, by giving health education to mothers was expected to increase mothers' knowledge in providing adequate nutrition for their children. Regarding this, the information was delivered to mothers by using booklet as the health education media. The aim of present study was to analyze the influence of health education towards the mothers' knowledge in providing nutrition for their children. This study was a pre experimental study with one group pretest-posttest design. The population of the present study were mothers who have children aged under five years old and living in working area of East Denpasar I primary health care center. In order to decide the location (banjar) of the study, the simple random sampling was used. Meanwhile, the total sampling was used to recruit the mothers in the selected location. The Wilcoxon Test was performed since the data not normally distributed ($\alpha = 0.05$, CI = 95%). Finding showed that there was a significant difference in mothers' knowledge before and after given health education about providing nutrition for their children. Health providers particularly the primary health care centers should provide health education to mothers about adequate nutrition continuously.

Index Terms— Children nutritional intake, health education, mothers' knowledge

I. INTRODUCTION

Obesity or being overweight in terms of health is one of the diseases due to nutritional intake that far exceeds its needs. Children with obesity are at high risk of becoming obese adults and potentially experiencing diseases such as cardiovascular disease. Many factors contribute to the high incidence of overweight and obesity in children. The most important factor is excessive food intake during childhood. Some studies reported that personal factors, behavior, and environment have an important role in eating habits and activities in children. Therefore, understanding of these factors can be a guide to prevent obesity in children [1]. In addition to this, Indonesia still has problems of malnutrition and poor nutrition. The percentage of very thin children and

lean children nationally is still quite high, respectively 5.3% and 6.8% [2]. Whereas in the Bali Province, there were 10.2% of children who suffered from malnutrition and 5.5% of children who suffered from over nutrition². The prevalence of obesity in Bali was 8.8% which can be seen from the Body Mass Index (BMI) of children aged 6-12 years from nine districts or cities. Denpasar City is a city with a high amount of nutrition and obesity in children aged 6-12 years old in Bali. The number of children with over nutrition is 762 people and the number of obese is 342 people from 14,017 children aged 6-12 years in Denpasar City [3].

The nutritional status of children is greatly influenced by the provision of nutrition by parents. Feeding behavior by parents plays an important role in meeting the nutritional

needs of children. Parents are responsible for child care including meeting their nutritional needs for children's growth and development [4]. One of the factors that influence children's nutritional intake that contributes to nutritional status is the level of maternal knowledge. Low maternal knowledge affects the choice of food given to children [5].

Research conducted by Al-Lela et al on 2017 recommends the provision of health education to improve parents' knowledge and practice in providing immunizations to their children [6]. Health education delivery interventions show effective results in increasing awareness of disease control and supporting health care seeking behavior [7]. Provision of health education can increase the knowledge of parents, especially mothers in providing appropriate nutrition for their children.

The purpose of this study was to analyze the effect of providing health education to the knowledge of mothers in providing nutrition to children in the work area of the East Denpasar I Primary Health Center.

II. METHOD

The present study used One Group Pretest-Posttest Design, which aimed to determine the differences in maternal knowledge in providing nutrition to children before and after treatment. The population in this study was mothers who have children aged 2-5 years who lived in the working area of East Denpasar I primary health care center. The sampling technique was done by using probability sampling, specifically cluster sampling. The selection of villages to be selected as research samples was carried out using cluster-sampling techniques. The villages that became the research sites were Sumerta Kelod Village and Dangin Puri Village. There were six banjars included in this study, those were 3 banjars in Sumerta Kelod Village and 3 banjars in Dangin Puri Village. The respondents in this study were recruited by using total sampling technique, mothers who came to Posyandu and have children aged 2-5 years. The number of respondents in this study were 48 people. The provision of health education to respondents carried out by using print media. Information provided includes the understanding and principles of balanced nutrition, balanced nutrition messages, visual balanced nutrition, as well as examples of healthy and nutritious menus in accordance with the Balanced Nutrition Guidelines according to the Ministry of Health 2014. Maternal knowledge was assessed by using a questionnaire containing questions about providing nutrition to children which its validity and reliability has been tested. Bivariate analysis was tested by using with non-parametric test, that was Wilcoxon Test with significance value $\alpha = 0.05$ and CI = 95%.

III. RESULT AND DISCUSSION

TABLE I
MOTHER'S KNOWLEDGE LEVEL BEFORE AND AFTER BEING GIVEN HEALTH EDUCATION

Knowledge Level	Frequency (n)		Percentage (%)	
	Before	After	Before	After
Low	3	2	6.3	4.2
Moderate	33	9	68.8	18.8
High	12	37	25.0	77.1
TOTAL	48	48	100	100

Based on Table 1, it is reported that the majority of maternal knowledge before being given health education about nutrient intake in children had a moderate level of knowledge was 68.8% and after being given health education about nutrient intake in children having a high level of knowledge was 77.1%.

Analysis of Differences in Knowledge of Mothers Before and After Being Given Health Education

TABLE II
MOTHER'S KNOWLEDGE LEVEL AFTER BEING GIVEN HEALTH EDUCATION ABOUT NUTRITION INTAKE FOR CHILDREN

Knowledge Level	Mean	Standard Deviation	P-Value
Before	64.42	17.11	<0.01
After	86.60	16.93	

Based on Table 2, it is reported that based on statistical tests using the Wilcoxon Test, the value of p was less than 0.01, which means there was a significant difference between the level of knowledge of the mother before and after health education about nutrition intake in children.

Analysis of Relationship between Mother Characteristics and Difference in Level of Knowledge Before and After Providing Health Education

TABLE III
RELATIONSHIP BETWEEN MOTHER CHARACTERISTICS AND LEVEL OF KNOWLEDGE ABOUT NUTRITION INTAKE IN CHILDREN

Variables	p-Value
Age	0.957
Education Level	0.439
Occupation	0.827

Based on Table 3, it reported that the p-value of the respondent's characteristics, including age, level of education, and occupation was more than 0.05, which means there was no significant relationship between the characteristics of the respondent with the level of knowledge before and after health education about nutrition intake in children.

Knowledge is the result of obtaining information through sensing an object. The results of this study indicate that health education provided to mothers significantly increase mother's knowledge about providing nutrition to children. The provision of health education, which carried out using booklet media, can increase mothers' knowledge. This result supported by research on providing health education to

nursing mothers showing that mothers who get health education show better knowledge, attitudes, and actions about early breastfeeding, giving colostrum, and providing sustainable breastfeeding. Health workers have an important role in increasing knowledge and motivating mothers to breastfeed⁸. Research conducted by Sillah, Hsin-Jung, & Chao, stated that mothers who are given health education about diarrhea management have good knowledge in managing diarrhea [9]. The education provided specifically enhances parental knowledge and helps parents change behavior to implement environmental changes in their families [10].

Health promotion will increase a person's ability to take certain actions. The influence of the external environment can also influence the desire to participate in behaviors that promote health. Health education provided increases the understanding of parents in providing nutrition to children. Increased understanding of parents will be followed by changes in the actions of parents in providing nutrition. Continuity of action and compliance is closely related to trust in the effectiveness of actions taken. It is important to convince families about the benefits of the recommended actions [11].

The level of acceptance of information provided is influenced by the media used. The media used will greatly assist in the delivery of information provided and the recipient of the information will receive information more clearly and precisely [12]. This study uses a booklet as a medium for health education. The use of print media was chosen in this study because print media have the advantage of being well designed, easy to read, and can reach all people because of the relatively low cost. Moreover, research on providing information through booklets can increase the knowledge of children and parents of children receiving heart transplants. Thus, Provision of information continuously and the ease of accessing information will increase knowledge [13].

Provision of health education can affect the level of knowledge and attitudes of respondents, which the knowledge of respondents who have less experience can increase to be having good knowledge. Factors influencing the increase in knowledge are information when counseling is conducted on respondents with the lecture method and the respondent's attitude rises to either category [12]. The results of this study are also supported by study conducted by Saragih's, that reported there was an increase in maternal knowledge in the provision of healthy food and balanced nutrition to be better than the number, type and schedule of meals compared to before being given nutrition counseling.

There was no significant relationship between respondent knowledge with age, education level, and occupation. Mothers who were respondents in this study mostly had secondary education (high school). Research conducted by Sillah, Hsin-Jung, & Chao, reported that the level of education has no relationship with the knowledge and

actions of parents⁹. Age has no relationship with respondents' knowledge and attitudes [14]. A person's cognitive abilities are not a primary factor that influences health behavior. People who have different cognitive abilities if given the same health education will still show increased health behavior [15].

IV. CONCLUSION

There was a significant difference between the levels of knowledge of respondents before and after being given health education about nutrition intake for children. It is suggested that health professionals particularly in the Puskesmas are expected to provide scheduled health education programs in every Posyandu so that they can always remind parents, especially mothers, about their role in supporting the provision of appropriate nutrition for children. Parents are also expected to always pay attention to the principle of providing balanced food to meet the nutritional needs of children in accordance with their age.

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