FACTORS RELATED TO OBESITY IN CHILDREN IN WORK AREA HEALTH CENTER HARAPAN RAYA PEKANBARU IN 2014

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Abstract

Obesity will give affects to children under five, such as diabetes, high blood pressure, heart disease, asthma and psychological effect. The child receive ridicule from his friends because the child difficult to follow the movements of the teacher in the classroom. The goal of this study was to determine the factors associated with obesity in children. This study was analytical design by using case control with simple random sampling technique. The total number of samples were 70 respondents which divided into 35 samples cases and 35 samples as a control. Results of univariate analysis showed that income families were high in the cases (62.9%) than in controls (25.7%), eating poorly in the cases (54.3%) were high than in controls (28.5%), low physical activity at cases (62.9%) were high than in controls (28.5%). The results of chi square test showed that the correlation between family income and obesity (p = 0.004; 0.05), the relationship between diet and obesity (p = 0.052; 0.05), the relationship between physical activity and obesity (p = 0,008; 0.05). Recommendation of this study for preventing obesity in children by providing counseling on nutrition and motivating for mothers to provide balanced nutrition in infants.

Keywords : Diet, Family Income, Obesity, Physical Activity

BACKGROUND

Obesity is a disease of lifestyle. The term obesity is often used to refer to abnormalities in body fat. Obesity is a direct result of unhealthy eating habits and a relaxed lifestyle (Arora, 2007).

Obesity affects many children under five, as a result of obesity are diabetes, high blood pressure and heart disease. These diseases are diseases that usually affect adults, but the joint development of the times, now can attack the disease in infants and children. These diseases due to deposition of fat, cholesterol and sugar settles on the body. Besides respiratory problems or asthma also includes a disease that affects children who are obese. Respiratory problems or asthma are at greater risk experienced by children who are obese. In addition to the above diseases, children who are overweight or obese also often impaired movement and impaired growth caused by excessive fat deposits in the organs that should develop. Not to mention the psychological effects experienced by children, for example, the child often gets ribbing from his friends because his body is growing or because of the difficulty the child to follow the movements of the teacher in the classroom (Nirvana, 2012).

A data from NHANES (National Health and Nutrition Examination Survey, US) in 1994 showed that two thirds of patients suffering from obesity in children at least one of these chronic diseases and as much as 27% of them suffer from two or more diseases.

Obesity is starting to become a worldwide health problem, even WHO has stated that obesity is a global epidemic, so that obesity has a medical problem that must be addressed. The prevalence of obesity in children has increased from year to year, in both the developed and developing countries. In addition, obesity in children at high risk of becoming obese adults and potentially future metabolic disease and degenerative diseases later (Wildanul, 2012).

Based on data from the National Health Survey (NHANES) in 2010 showed that the

prevalence of obesity continues to rise in some groups of children, ie at the age of 2-5 years, the prevalence increased from 8% - 15% (WHO, 2010). Source Euromonitor International said the Asia-Pacific, obesity is increasing rapidly and the number of countries predicted to have the fastest growth rate of obesity from 2010 to 2020 namely, Vietnam 225%, 178% Hong Kong, India 100%, South Korea 80.7%, Zealand The new 52% and Indonesia 50%.

Based Health Research (RISKESDAS) in the year 2010, the prevalence of obesity in infants nationally 14%, and an increase compared to the results of research in 2007, ie 12.2%, prevalence was based on weight and height (Riskesdas, 2010).

Based on data from Pekanbaru City Health Department in 2013, of the 20 health centers in Pekanbaru Hope Health Center Health Center Raya is a high incidence of obesity in toddlers (Pekanbaru City Health Office, 2013).

One of the factors that lead to obesity in toddlers as for the main cause is genetic , the family income . Families with higher incomes can buy any food , including healthy nutritious foods , but also foods high in calories / fat / sugar , junk food , fast food , soft drinks which are major contributors to the problem of obesity . Instead families with lower income tend to consume less nutritious foods so that they deliver on the condition of malnutrition (Nurmalina , 2011) .

Research conducted Suprihatun (2007) , shows a low physical activity , includes many activities such as playing in the house watching TV / playing games at risk of obesity in children.

This study aims to determine the factors associated with obesity in children under five in Puskesmas Harapan Raya Pekanbaru 2014 .

METHODS

In this study, researchers used quantitative research design analytic approach which case control study design comparing between the case group and control group to determine the proportion of events based on whether there is any history of exposure. The design of this retrospective study is designed to wake up with looking back on an event that is associated with the incidence of pain studied, namely to determine the factors associated with obesity in children under five in Puskesmas Harapan Raya Pekanbaru 2014 (Hidayat, 2007). The population in this study are all mothers who have children in Puskesmas Harapan Raya Pekanbaru with a population of 300 mothers. The sample in this study consisted of 35 mothers with toddlers obesity (cases) and 35 mothers with toddlers who are not obese (control). The sampling technique in this research is to use a technique case the total population, whereas the control samples are taken randomly using simple random sampling that met the inclusion criteria. The criteria for inclusion in this study is bu, who has a toddler who is willing to be the respondent and reside in Puskesmas Hope Kingdom. This research was conducted in at Puskesmas Harapan Raya Pekanbaru on 20-27 September 2014. The data collection tool was a questionnaire given directly to respondents. Data was analyzed by univariate and bivariate (chi square).

RESULTS
Univariate Analysis
The results showed that in the majority of cases are in the category of family income as high as 22 respondents (62.9 %) , while in the control of family income as high as 9 respondents (25.7 %) . diet in most cases are in the category of poor diet that is 19 respondents (54.3 %) , while the control diet deficient ie 5 respondents (14.2 %) . physical activity in the majority of cases are in the category of physical activity as high as 22 respondents (62.9 %) , while in the control of physical activity as high as 10 respondents (28.5 %) .

Bivariate Analysis
Bivariate analysis is to look at the relationship between independent variables (family income , diet and physical activity) with Dependent variables (obesity) . Bivariate test results can be seen in Table 1 , 2 and 3 .

Table 1
Relationship Income Families With Obesity In Toddlers in Puskesmas Harapan Raya Pekanbaru

Income Families	Obesitas				Total		P value
	Yes		No				
	n	%	N	%	N	%	
High	2 2	71,0	9	29,0	3 9	10 0	0.004
Low	1 3	33,3	2 6	66,7	3 1	10 0	
Total	3 5	50,0	3 5	50,0	7 0	10 0	

Results of analysis of family income relationship with obesity found that of 35 mothers who have obese children , 22 (71,0,9 %) of high-income respondents , while 35 mothers who do not have obese children , 9 (29.0) respondents high -income families . The statistical results obtained value P value (0.004) < (0.05) . It can be concluded there is a significant relationship between high-income families with obesity in children .

Table 2
Relationship Diet With Obesity In Toddlers in Puskesmas Harapan Raya Pekanbaru

Dietary Habit	Obesitas				Total		P value
	Yes		No				
	n	%	N	%	N	%	
Not Balanced	1 9	65,5	1 0	34,5	2 9	10 0	0,052
Balanced	1 6	39	2 5	61,0	4 1	10 0	
Total	3 5	50,0	3 5	50,0	7 0	10 0	

Results of analysis of the relationship with obesity diet showed that of 35 mothers who have obese children , 19 (65.5 %) of respondents who have young children with unbalanced diet , while 35 mothers who do not have obese children , 10 (34 , 5 %) of respondents who have children with unbalanced diet . The statistical results obtained value P value (0.052) (0.05) . It can be concluded there is a significant relationship between diet that is not balanced with obesity in children .

Table 3
Physical Activity Relationship With Obesity In Toddlers in Puskesmas Harapan Raya Pekanbaru

Physical Activity	Obesitas				Total		P value
	Yes		No				
	n	%	N	%	N	%	
Low	2 2	68,8	1 0	31,2	3 2	10 0	0,008
High	1 3	34,2	2 5	65,8	3 8	10 0	
Total	3 5	50,0	3 5	50,0	7 0	10 0	

Results of analysis of the relation of physical activity to obesity found that of 35 mothers who have obese children , 22 (68.8 %) of respondents who have children with low physical activity , while 35 mothers who do not have obese children , 10 (31.1 %) of respondents who have balitya with low physical activity . The statistical results obtained value P value (0.008) < (0.05) . It can be concluded there is a significant relationship between physical activity and obesity in children .

DISCUSSION
1. Relationship Income Families With Obesity In Toddlers in Puskesmas Harapan Raya Pekanbaru
The result showed that there is a relationship between family income and obesity in infants. This is consistent with the theory that in theory one of the factors that lead to obesity is the family income. Families with higher incomes can buy any food, including healthy nutritious foods, but also foods high in calories / fat / sugar, junk food, fast food, soft drinks which are major contributors to the problem of obesity. According to Irianto Arita (2000), higher family income or spending more for food in the family does not necessarily guarantee more

diverse and bermutunya food consumed by the family. This is due to food expenditure is more used to buy food that is more delicious, fast, faster and more fats, oils and other materials that can cause obesity. The results are consistent with the results of research conducted by Rendy reynaldy titled family income relationship with the incidence of obesity in primary school children in the city of Manado. The magnitude of the effect of childhood obesity tinggiterhadap income indicated value OR = 3.8 (95%) have a high income amounted to 3 times the risk of becoming obese than children who have a family with low income. Statistical test results obtained by value p = 0,000, mean at alpha 5% can be concluded that there is a significant relationship antarapendapatan families with obesity.

2.   Relationship Diet With Obesity In Toddlers in Puskesmas Harapan Raya Pekanbaru
The result showed that there was a significant relationship between diet and obesity in infants in Puskesmas Harapan Raya Pekanbaru. The eating habits of children has now shifted away from healthy foods (such as fruits, vegetables, wheat, and rice) into dependence on risky foods such as ready meals, processed snacks and sugary drinks. These foods tend to be high in fat and calories. Other patterns that lead to obesity is eating habits when children are not hungry and eating while watching television or playing games (Nurmalina, 2011). According to the researchers assuming that an unbalanced diet that caused obesity in young children, this is caused by a growing number of fast food such as snacks which are often consumed by children every day without eating fruits and vegetables it will be increasingly at risk of obesity. Obesity trigger foods are foods tend to be high in fat and calories when continuous consumption of the increasing accumulation of fat that leads to obesity. This is consistent with the theory that consumption of high-calorie

foods such as fast food, high-fat foods are usually high in calories, drinking soft drinks and candy also can promote weight loss because calories and high sugar (Misnadiarly, 2007). The results in this study according to the results of research conducted by Luthfiana Arifatul Hudha (2006) entitled factors that cause obesity in children, stating there is a correlation with obesity diet. Relationship to diet and physical activity with obesity at 80.1% while the remaining 19.9% is influenced by other factors outside of the study.

3.   Physical Activity Relationship With Obesity In Toddlers in Puskesmas Harapan Raya Pekanbaru.
The result showed that there was a significant relationship between physical activity and obesity in children in Puskesmas Harapan Raya Pekanbaru. This is consistent with the theory that in theory the lack of physical activity also contribute to weight increase beyond normal limits. In the past, children have spent some time with a variety of physical games that require them to run, jump, or perform other movements. However, with the advanced technology of the modern age, as now, there kecendungan most children spend their free time watching television, playing video games, linger in front of the computer playing online games, which was coupled with snacking snacks filled with preservatives and artificial flavorings (MSG). The activities they do in the time space tersebuat making body is rarely move, while the calories in larger than is used. Then the possibility of an inevitable obesitaspun (Akhmad, 2011). According to the researchers the assumption that lack of physical activity among less energy balance is the trigger that most causes of overweight and obesity. Energy balance means that the incoming energy equals the energy that comes out, so that when physical activity is low, the likelihood of obesity increases. The results are consistent with the results of research conducted by Budi

(2010) with the title of relationship lack of physical activity with obesity in children. showed that a decrease or an increase in physical activity and behavior sedentarian (sedentary) has an important role in weight gain and obesity.

CONCLUSION

Based on the research results are a significant relationship between family income and obesity in infants with a P value of 0.004 , there is a significant relationship between diet and obesity in infants with a P value of 0.052 and a significant relationship between lack of physical activity and obesity in children with a P value 0.008 . See the analysis of the results of this study need to be advised for regular counseling to mothers having children about the causes of obesity and the impact diakibat by the obestas in infants. So that mothers who have children can provide balanced nutrition , diet and activity are good for babies .

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