

# Mother's Perception of Overweight and Obesity in Children Aged 7-12 Years at Kabupaten Aceh Barat

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## ABSTRACT

Nutrition problems in Indonesia are already classified as multiple nutritional problems, not just nutritional deficiency problems, but the prevalence of overweight and obesity also increases. In 2010 the prevalence of overweight and obesity in Aceh province was 11.2 percent and in 2013 was 14.8 percent resulting in an increase of 3.6 percent. Mother's perception is one factor that can cause cause overweight and obesity. This study wanted to analyze the factors This study wanted to analyze the factors of mother perception in children aged 7-12 years become the cause of overweight and obesity. This study was an observational analytic study with cross sectional design aimed at assessing relationship of mother's perception on obesity-related weight status in first-fifth grade elementary school children aged 7-12 years at Kabupaten Aceh Barat. The sample size is 289 students. Determination of child obesity status using Body Mass Index based on Age (IMT/U), that is overweight and obesity if  $IMT/U > 1.0$  SD. Data of mother's perception were obtained through questionnaire. There are 51.90% of 289 respondents who had overweight and obesity. There is no relationship between mother perception of obesity with overweight and obesity ( $p=0.426$ ). But it is different when viewed specifically about the mother's perception related to the child's weight status. Wrong mother's perception of child's weight status has a risk of 4.15 times greater than the right one. There is a correlation between mother's perception of child's weight status with overweight and obesity.

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## Introduction

Nutrition in Indonesia has become a double nutrition problem. Not only is undernutrition a problem, but the prevalence of overweight and obesity is also increasing. Overweight and obesity can occur in anyone, both children and adults. Obesity in children and adolescents is a major problem in developed and developing countries and has caused concern worldwide (Gupta 2012; Franco 2010). Nationally, the problem of obesity in children aged 5-12 years is still high at 18.8 percent. The prevalence of overweight and obesity in Aceh Province was 11.2 percent and in 2013 was 14.8 percent, resulting in an increase of 3.6 percent of the 23 districts in Aceh, West Aceh is one of the

districts/cities with a very high prevalence of obesity above the province's rate (Kemenkes, 2010).

Factors that influence the incidence of overweight and obesity in addition to diet, physical activity, and family socioeconomics are the mother's wrong or lack of perception related to obesity and the mother's wrong perception of weight status. The Health Belief Model theory explains that individual perceptions are influenced by demographic and sociopsychological conditions as well as information received, persuasion, warnings, and experiences (Emilia, 2008) and perceptions influence a person in taking an action (Vallejo & Colin, 2015).

Mothers' misperceptions of obesity may hinder early detection in preventing overweight and obesity. In a

study in Mexico, 61.3 percent of mothers misperceived overweight children, they thought their children's weight status was still within normal limits (Mc Donald, Baylin, Arsenault, Plazas, Villamor, 2009). Maternal perceptions of obesity can affect the level of maternal interaction with children or preparing meals for the family (Sulistyaningrum, 2014). The participation of various parties in terms of correct maternal perceptions is needed to improve the nutritional status of children in Indonesia in general and primary school-age children in particular. This study wants to analyze the factors of mother's perception in children aged 7-12 years to be a factor causing overweight and obesity.

## Method

This study is a quantitative study with a cross sectional research design, the dependent variable in this study is the incidence of overweight and obesity and the independent variable is the mother's perception factors associated with the incidence of overweight and obesity. Data collection methods using primary and secondary data.

The samples in this study were elementary school children aged 7 to 12 years in 12 representative elementary schools and who met the inclusion and exclusion criteria. The number of samples obtained was 289 samples with the sampling technique being simple proportional sampling. Determination of children's obesity status using the indicator of Body Mass Index based on Age (IMT / U), namely overweight and obesity if  $IMT / U > 1.0$  SD and not overweight and obesity if  $IMT / U < 1.0$  SD, maternal perception data are divided from maternal perceptions related to children's weight status and maternal perceptions related to obesity which are further divided into 4 aspects, namely aspects of assessing children's weight status, aspects of obesogenic foods, aspects of obesity-related diseases and aspects of obesity risk factors. This data was obtained through a questionnaire. The analysis used was univariate and bivariate analysis (chi square).

## Results

The proportion of overweight and obese children in this study was 51.90 percent out of 289 children. The age proportion of children did not

differ much, 54.33% for children aged 7-9 years and 45.67% for children aged 10-12 years. The proportion of children's gender was almost the same at 49.83% for boys and 50.17% for girls. More than half of the respondents had highly educated parents, with 70.93% of mothers having a high level of education and 72.32% of fathers having a high level of education. Most of the children had working fathers as many as 270 (93.43%), only 19 children had fathers who did not work. Meanwhile, mothers who do not work are 64.36 percent. Children had 52.25% of parents with high income and 47.75% of parents with low income (Table 1).

**Table 1. Characteristics of the research subject**

Variable	N	%
<b>Nutritional Status Of Children</b>		
Overweight dan obesity	150	51,90
Not Overweight dan obese	139	48,10
<b>Age Group</b>		
7-9 years	157	54,33
10-12 years	132	45,67
<b>Gender</b>		
Male	144	49,83
Female	145	50,17
<b>Mother's Education</b>		
Low	84	29,07
High	205	70,93
<b>Father's Education</b>		
Low	80	27,68
High	209	72,32
<b>Mother's Work</b>		
Doesn't work	186	64,36
Work	103	35,64
<b>Father's Work</b>		
Doesn't work	19	6,57
Work	270	93,43
<b>Parental Income</b>		
High	151	52,25
Low	138	47,75

From the bivariate results showed no relationship between maternal perceptions of obesity with the incidence of overweight and obesity ( $p=0.426$ ), but statistically there is a tendency that the perception of mothers who are less obese, their children will be overweight and obesity 1.21 times greater than the perception of mothers who are both overweight and obesity (Table 2).

**Table 2. Cross-tabulation of factors associated with the incidence of overweight and obesity**

Variable	Overweight /Obesity (n=150)	Normal (n=139)	Total (n=289)	P	OR	95% CI
<b>Perception obesity</b>						
Less perception(<47)	63(54,78)	52(45,22)	115(100,00)	0,426	1,21	0,73-1,99
Good perception(>47)	87(50,00)	87(50,00)	174(100,00)			
<b>Mother's perception of the child's weight status</b>						
Not exact	104(67,97)	49(32,03)	153(100,00)	<0,001*	4,15	2,46-6,99
Exact	46(33,82)	90(66,18)	136(100,00)			

There is a significant relationship if the perception of the mother is only seen from the perception of the mother associated with the child's weight status with a value of  $OR=4.15$ , meaning that the mother's perception of the child's weight status is 4.15 times greater chance that her child will be obese compared with the mother's perception.

## Discussion

There was no significant relationship between maternal perception score and obesity incidence. This is because between mothers who have children who are normal and obese have perceptions that are not much different related to obesity, namely having a wrong perception of obesity with a value of  $OR=1.21(95CI=0.73-1.99)$  which means that the perception of mothers who lack these four aspects have a tendency for their children to be 1.21 times greater risk of being overweight and obese compared to the perception of good mothers.

This is in accordance with the results of research Elisa (2014) which states that there is no relationship between maternal perception with the incidence of obesity. In this study, most of the respondents' mothers still agree that obesogenic foods such as KFC, full cream milk Group, and sweet foods are classified as healthy foods. In the aspect of perception of nutritional status, there are still many parents of respondents who consider that obesity is still very reasonable and even view that obese children are funny. The majority of the mothers perceived the weight of their overweight and obese child inaccurately and considered him/her at a normal weight. Mothers who were aware of the fact that their child was overweight or obese performed various applications to solve the child's weight problem (Colak, Kahriman & Meral, 2021). In fact, when viewed from the total percentage of mothers with good perception, there are more than mothers with less perception, namely 60.21 percent and there is still the assumption that "it is natural that children are fat, because later in adolescence they will be thin" (Namsyah, 2008). On Research Jessica stated that high prevalence of maternal misperception of child's nutritional status. Moreover, highly educated mothers, mothers of boys, and mothers of non-overweight children were more likely to underestimate child's nutritional status (Jessica, Natacha, & Muriel, 2017).

But it is different when viewed specifically the perception of mothers related to the child's weight status. The mother's incorrect perception of the child's weight status has a risk 4.15 times greater than the right one. Seen from the percentage of respondents who have mothers whose perception is not right as many as 104 respondents (67.97%). This is also in accordance with the results of a study in Mexico states that 61.3 percent of mothers incorrectly perceive overweight children, they consider the child's weight status is still within normal limits so that it can affect the level of

interaction of mothers with children or preparing food for family (Eckstein, 2006 ; Huriyati, 2004). Child weight may influence maternal feeding practices through weight perception and concern (Jian dkk, 2022). Parental misperceptions of overweight and associated health risks constitute unfavorable conditions for preventive actions (Petra & Katja, 2012).

Parents who are unable to correctly recognize the child's obesity status or do not feel that the child has been obese, resulting in Unpreparedness in conducting interventions related to the Prevention of obesity in children (Huriyati, 2004). This lack of concern makes early interventions challenging as parents are in the "pre-contemplative" stage of behaviour change and may see public health campaigns or clinicians' attempts to address their child's weight as irrelevant or unhelpful (Kathleen, Jaso, karen, & Kirsty, 2022)

Likewise, the mother's perception of the child's weight status is also influenced by the place of residence with a high and low prevalence of obesity (Humaroh, 2013). The proportion of children who are overweight and obese in this study was 51.90 percent, this can also affect the perception of the mother's weight status of children when the community of obese children has increased. This can also be associated with parental income; it can also affect parent's perception of their children's food intake so that it has an impact on the child's weight status. The mother's perception of the child's weight status will also be related to the way the mother provides food intake to her child and the activities that will be carried out by the child. Some of the mother's misperceptions about the child's weight status will have an impact on the mother's mistakes in regulating the child's diet and activities, such as mothers who still think that children are still very naturally fat because they will be thin by themselves when adult (Sulistyaningrum, 2014).

The role that parents play in feeding their child and their concern for their child's health is critical. Understanding parental views about their children's overweight and obesity is a key step in forming effective liaisons between health professionals and parents (Debra, Glenda, Judy, Pat, & Angela, 2005)) Children with more sedentary and light activity and excessive energy intake will be more at risk of becoming obese, as well as children whose high sedentary activity is accompanied by a mother's wrong perception of the child's weight status will be more at risk of their child becoming obesity.

## Conclusion

The mother's perception of the child's weight status is related to the incidence of overweight and obesity. Based on the results of this study, the Department of health should further improve the activities of programs related to obesity. For example, health promotion activities related to overweight and obesity and education on nutrition education to

parents. For schools can add programs to weigh the weight and measure the height of the child as well as nutrition education that can straighten the mother's perception of the child's weight status to the child and parents, for example, when there is a meeting of parents.

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