

## ABSTRACT

Childhood obesity is one of the most serious public health problems of the 21<sup>st</sup> century. Factors that evolve the incidence of obesity in school children's home, school, and social environment. One of the factors that affect overweight and obesity is the status of household food security. Household Food-insecurity is 10.2 times more likely to be obese in children. The purpose of this study is to analyze the relationship between household food security status, consumption pattern (energy dense), and energy intake of snack with overweight/obesity in school-age children in Ploso I-172 Elementary School Tambaksari District Surabaya. The study included an observational analytic study with case-control design, where the disease group was overweight/obesity, and the control group was a normal nutrient. The sample consisted of 56 students of case group, and 56 students of control group, taken randomly using simple random sampling. Data collection included measurement of body weight and height, food recall 2x24 hours, FFQ of snacks (energy dense), interview with food security instrument, food availability, and food expenditure. The analysis used was linear regression test. The results showed that there were correlation between energy intake ( $p=0.002$ ), fat intake ( $p=0.005$ ), consumption pattern (energy dense), and energy intake of snack ( $p=0.006$ ) with overweight/obesity in schoolchildren. There were no correlation between protein intake ( $p=0.093$ ), carbohydrate intake ( $p=0.146$ ), income parents ( $p=0.771$ ), food expenditure ( $p=0.563$ ), food availability ( $p=0.622$ ), and food security ( $p=0.429$ ) with overweight/obesity in school children. The conclusions of this study are high energy intake, fat intake, and consumption patterns of snack (energy dense), and energy intake of snacks can cause overweight/obesity in children. Should be given nutrition education to children about the choice of food and food snacks are good and nutritious, and for elementary school need to provide healthy and nutritious food in the school environment.

**Keywords:** food security, overweight, obesity, food snacks, consumption patterns