

## The Relationship Of Obesity Events With The Quality Of Life Of School Age Children In SDN 30 Kubu In Padang City

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### ARTICLE INFO

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### ABSTRACT

**Keywords:**

*Quality of life, obesity, school age.*

The incidence of obesity in Indonesia is increasing every year. In 2013 there were 8.8% of children with obesity in Indonesia, and the incidence of obesity in West Sumatra was 7.7%. Obese children tend to have a poor quality of life. The purpose of this study was to examine the relationship between the incidence of obesity and the quality of life of school-age children. This research is a descriptive analytic study with a cross-sectional approach. This research was conducted from February to July 2017. The samples in this study were all 4th and 5th grade students of SDN 30 Kubu Dalam Padang, totaling 110 respondents. Data collection using the Pediatric Quality of Life Inventory (PedsQL) Generic Core questionnaire version 4.0 and observation sheets to determine the classification of Body Mass Index. The prevalence of obesity in school-age children in this study was 11.8%. The prevalence of children who have a good quality of life is 75 respondents (68.2%). Based on data analysis using the chi square test, there is a relationship between the incidence of obesity and the quality of life of school-age children. This is evidenced by the p value <0.05. From this study it can be concluded that there is a relationship between the incidence of obesity with quality of life in school-age children. Therefore, it is hoped that efforts to prevent obesity are carried out by community nurses to provide health education to schools. Based on data analysis using the chi square test, there is a relationship between the incidence of obesity and the quality of life of school-age children. This is evidenced by the p value <0.05. From this study it can be concluded that there is a relationship between the incidence of obesity with quality of life in school-age children. Therefore, it is hoped that efforts to prevent obesity are carried out by community nurses to provide health education to schools. Based on data analysis using the chi square test, there is a relationship between the incidence of obesity and the quality of life of school-age children. This is evidenced by the p value <0.05. From this study it can be concluded that there is a relationship between the incidence of obesity with quality of life in school-age children. Therefore, it is hoped that efforts to prevent obesity are carried out by community nurses to provide health education to schools.

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## 1. INTRODUCTION

Quality of life is a person's self-perception of the enjoyment and satisfaction of the life he lives[1]. Quality of life (Quality of Life) is the concept of analyzing an individual's ability to get a normal life related to the individual's perception of goals, expectations, standards and concerns that are specifically related to the life experienced by being influenced by the values and culture in the environment the individual is in.[2].

Quality of life is used as an aspect to describe a person's health condition [3]. Quality of life is an important indicator to assess the success of health care interventions in addition to morbidity, mortality, fertility and disability. Quality of life should be an important concern for health professionals because it can be a reference for the success of an action, intervention, or therapy[4]. In another study Khairy[5]said Health Related Quality Of Life helps health services to create good relationships between patients and doctors and improve patient treatment outcomes. In addition, the results obtained help health services in assessing the risks experienced by patients.

Quality of life for each individual is very important as well as school-age children. Based on the theory developed by Varni since 1998, the quality of life in children is assessed from four functions. Among the physical functions include an assessment of the child's ability to walk, run, exercise, perform daily activities, pain and physical weakness. Emotionally assessed from feelings of sadness, anger, fear, difficulty sleeping, and anxiety. Social function is difficulty in getting along and socializing with other friends and school functions are assessed from the child's concentration in learning, memory, absenteeism from school due to illness or treatment[6]. School age is a time when children acquire the basic knowledge for successful adjustment to adult life and acquire certain skills[7]. Characteristics of the development of school-age children, among others, physically the child will experience a height increase of 2-3 inches or 5.1 to 7.6 cm and weight gain of 6lb or 1.4 to 2.7 kg every year. As for the child's psychosocial development, it will focus on learning useful skills and developing positive self-esteem[8]. In this period the child begins to enter the wider world and the development of the child will be influenced by the environment in his school[9]. One of the health problems that are often experienced by school-age children is obesity. Obesity is abnormal or excessive fat accumulation that can interfere with health. Meanwhile, according to the Ministry of Health 2010 obesity is a condition where a person's weight exceeds the predetermined health standards. The main factors causing obesity are usually very influential with daily living habits such as diet, physical activity, sleep patterns, psychological, and social isolation in children.[10][11]. Often consume snacks containing sugar while watching.

## 2. METHOD

### 2.1 Research Type and Design

The research design used is descriptive analytic using a cross-sectional approach. The cross-sectional approach is a research that emphasizes the time of measurement or observation of independent and dependent variable data only at one time. This study is a non-experimental type of research, namely to determine the relationship between the incidence of obesity and the quality of life in school-age children.

Population is each subject (eg humans, patients) who meet the specified criteria. The population in this study were students in grades IV and V of SD SDN 30 Kubu Dalam totaling 110 students. The sample is the object under study and is considered to represent the entire population. In this study using the total sampling method. Total sampling is where the number of samples is equal to the total population. The inclusion criteria of this study are: Grade IV students and VSDN 30 Kubu Dalam; Willing to be a respondent; The exclusion criteria from this study are:

- 1) Uncooperative student
- 2) Class IV and V students who were not present during the study
- 3) Students who have other chronic diseases

### 2.2 Research Variables and Operational Definitions

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Research variables are measures or characteristics possessed by other members of a group. Based on the functional relationship between the variables with each other, the variables are divided into two, namely the dependent and independent variables. The independent variable in this study is obesity, while the dependent variable is the quality of life in school-age children.

Table 1. Operational Definition

No	Variable	Definition	Measuring instrument	How to Measure	Scale
1.	Obesity	The condition of excess body fat which is often expressed in terms of excess body weight	Observation sheet with tools for measuring height and treading weights. General provisions for using anthropometric standards from the Ministry of Health 2010 to classify salted BMI.	Observing and weighing height and weight.	ordinal
2.	Quality of Life.	The child's view of life is related to goals and expectations which are described in four dimensions, namely physical, emotional, social and environmental dimensions	Pediatric Quality of Life Questionnaire of Life (PedsQL) Inventory 4.0 Generic Core Scales Consists of 23 questions	Questionnaire	interval

### 2.3 Research Instruments

Research instruments are tools used for data collection. The research instruments used were obesity observation sheets and questionnaires about quality of life. The supporting tools needed are tread scales, height measuring devices (microtoise). The data collected in the observation sheet include subjective identity, weight, height. The questionnaire to assess the quality of life in children used was the Pediatric Quality of Life Inventory (PedsQL) Generic Core version 4.0. This questionnaire is a standard generic questionnaire that has been validated and tested for reliability in various studies with a value of = 0.88 (Varni, 2001). Therefore, in this study the validation of the questionnaire was not tested. There were 23 closed questions consisting of four domains. The first domain contains 8 questions about physical activity. The second domain contains the emotional function of children which consists of 5 questions, the third domain about social functions which consists of 5 questions and the fourth domain of the function of the school environment which consists of 5 questions. Ratings are given with 0-4 each item. 0 if there is never a problem with the statement item, 1 if there is rarely a problem with the statement item, 2 if sometimes there is a problem with the statement item, 3 if there is often a problem with the statement item and 4 if there is always a problem with the item question. In each question answer is converted on a scale of 0-100 for standard interpretation 0 = 100, 1 = 75, 2 = 50, 3 = 25, 4 = 0. Quality of life is said to be good if the average score of answers is 78 (mean).

Primary data is data obtained directly from respondents. Primary data in this study were collected by researchers by distributing observation sheets containing data on the respondents' initials, age, gender, class, weight, height. And filling out a questionnaire containing 23 questions. Secondary data as research supporting data. In this study, secondary data were obtained from the Padang City Health Office regarding the number of obese children and the Padang City Education Office regarding the number of students. The way of collecting data is by giving questionnaires to respondents and filling out observation sheets for students' weight and height. Then the respondent fills out the questionnaire sheet with a check mark

Univariate analysis is an analysis of one variable. Univariate analysis aims to explain or describe the characteristics of each research variable. In general, this analysis produces a frequency distribution, and the percentage of each variable. Bivariate analysis is to analyze the research

variables in order to test the research hypotheses and to see the average picture between the research variables. Analysis of the data used is statistical analysis in the form of chi square test with a confidence level of 95% or 0.05. If the p value <0.05, it can be interpreted that there is a significant relationship between the independent variable and the dependent variable.

### 3. RESULTS AND DISCUSSION

SDN 30 Kubu Dalam is one of the public elementary schools located in the working area of the Andalas Public Health Center, Padang City. This elementary school has facilities including a field, canteen, UKS, prayer room, classroom, teacher's room, principal's room, library, restroom. The classroom consists of 6 classes and students are divided into 2 study shifts, namely morning and afternoon. Each grade level is divided into class A and class B. The average number of students in the class is approximately 27 students. There are not so many extracurricular activities at SDN 30 Kubu Dalam. The school health unit, however, does not run optimally to check the health of students and other health programs.

#### 3.1 Univariate Analysis

Table 2. Frequency Distribution of Respondents Characteristics (n = 110)

Characteristics of Respondents	Category	(f)	(%)
Gender	Man	42	32.8
	Woman	68	61.8
Age	9 years	28	25.5
	10 years	41	37.3
	11 years old	34	30.9
	12 years old	7	6.4
Class	IV	66	60.0
	V	44	40.0

Table 2. shows that more than half of the respondents are female (61.8%). The most respondents were 10 years old, amounting to 41 students (37.3%)

Table 3. Frequency Distribution of Body Mass Index in Children (n=110)

BMI Classification	f	%
Thin	11	10.0
Normal	68	61.8
Fat	18	16.4
Obesity	13	11.8
Total	110	100.0

Table. 3 shows that more than half of the respondents have a normal body mass index, namely 68 respondents (61.8%), while a small proportion of respondents have an obese body mass index, which is 13 respondents (11.8%).

Table. 4 Frequency Distribution of Quality of Life in Children Age (n=110)

Quality of Life	f	%
Well	75	68.2
Not good	35	31.8
Total	110	100.0

Based on the results of the research conducted, it was found that more than half of the respondents had a good quality of life, as many as 75 respondents (68.2%).

#### 3.2 Bivariate Analysis

To see the analysis of the relationship between the incidence of obesity and quality of life in school-age children in 2017, a statistical test was carried out, namely the chi square test. Based on the

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research that has been done, 75 respondents with thin and normal BMI have a good quality of life. Meanwhile, 31 respondents with overweight and obese BMI had poor quality of life. This can be seen from the p-value of 0.000 which means that there is a significant relationship between the incidence of obesity and the quality of life of school-age children in 2017. Based on research that has been conducted, 75 respondents with thin and normal BMI have a good quality of life. Meanwhile, 31 respondents with overweight and obese BMI had poor quality of life. This can be seen from the p-value 0.

### 3.3 Discussion

Based on the results of the research conducted in 2017, it shows that more than half of the respondents have a normal Body Mass Index classification, namely 68 respondents (61.8%). A small proportion of respondents have a body mass index classification of obesity as many as 18 respondents (16.4%). The results of this study are in line with research conducted by Khodijah, et.al, in 2013 that a small proportion of adolescents are included in the obesity body mass index calcification, which is 4.95%. In a study conducted by Khodaverdi, also found a small proportion of respondents with obesity body mass index calcification (14.6%). Based on the decision of the Ministry of Health in 2010 children are said to be obese if they have a threshold of more than 2 elementary schools. Measurement of the Body Mass Index of children is different from the measurement of the Body Mass Index of adults. Measurement of Body Mass Index in children is interpreted according to the sex and age of the children. Obesity in children is the result of calorie intake (energy) that exceeds the number of calories released or burned through metabolic processes in the body. Body Mass Index measurement is done by dividing the value of body weight (kg) by the square of height (m)<sup>2</sup>, then adjusted to the 2010 Ministry of Health regulations for the categorization of Body Mass Index. Based on the researcher's analysis, the incidence of obesity mostly occurs in children aged 9 years, as many as 7 respondents (6.36%). Of the 13 children with obesity, 7 of them are male. The percentage incidence of obesity (11, 8%) greater than the incidence of obesity in West Sumatra in 2013 which was 7.7%. For this reason, it is very necessary to take action to prevent the increasing incidence of obesity in school-age children.

### 4. CONCLUSION

Based on the results of research that has been carried out regarding the relationship between obesity incidence and quality of life in school-age children in 2017, the following conclusions can be drawn. 4%), and obesity (11,8%). Meanwhile, more than half of the children's nutritional status were classified as normal BMI (61.8%); More than half of the respondents have a good quality of life, as many as 75 respondents (68.2%), and another small portion, namely 35 respondents (31.8%) have a poor quality of life; There is a significant relationship between the incidence of obesity and the quality of life in school-age children with  $p < 0.05$ , which is 0.000. Based on the results of research that has been carried out regarding the relationship between obesity incidence and quality of life in school-age children at SDN 30 Kubu Dalam Padang City in 2017, there are suggestions as follows: For schools, schools are advised to provide programs that help improve the quality of life of obese children. Improving the quality of life can be done by providing services and counseling such as providing health education regarding balanced nutrition and a healthy diet to lose weight; Launching programs that increase physical activity such as leisurely walks, marathons, dancing, scouting activities, and other light sports; Provide counseling guidance to increase children's confidence; Provide attention and support for children who experience social problems and learning achievement.

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