

CHAPTER I

INTRODUCTION

1.1 Background

Type 2 Diabetes Mellitus has been found in children and adolescents in recent years. This type 2 Diabetes Mellitus is closely related to an unhealthy lifestyle and a lack of knowledge about the disease (Wahyuningsih & Astarini, 2018). An unhealthy lifestyle such as lack of physical activity, high stress levels, and an unbalanced diet can cause children to be overweight or obese (Pangestika et al., 2022). In fact, there are many factors that cause children to develop type 2 Diabetes Mellitus. One that attracts attention is the habit of today's children's snacks whose nutritional value is unclear, such as soda drinks, boba drinks with high sugar content, melted chocolate bananas, and snacks that contain high sugar or something made from wheat flour. This condition can arise due to an unhealthy lifestyle and diet of children or adolescents, which can cause type 2 Diabetes Mellitus in children or adolescents.

Based on the latest data from the 2023 Indonesian Health Survey, the prevalence of DM based on the age of 5-14 years in East Java Province was 138,465 people. According to the 2023 SKI, it also showed that the proportion of DM control types based on diet at the age of 5-14 years was 69.7%. As many as 51.6% of the total diabetes cases were type 2 diabetes. Data from IDAI (Indonesian Pediatrician Association) 2023 showed that the prevalence

of cases of diabetes risk in children increased 70 fold in January 2023. This number increased compared to the number of diabetes children in 2010 or 0,028 per 100.000 children and 0,004 per 100.000 people in children. In January 2023, the number of children with diabetes was 2 per 100.000. The most common type of diabetes in children is type 2. Type 2 Diabetes Mellitus currently accounts for 5 to 10 percent of all childhood diabetes cases. These cases are spread across the cities of Medan, Padang, Palembang, Jakarta, Bandung, Semarang, Yogyakarta, Solo, Surabaya, Malang, Denpasar, Makassar, and Manado. Based on age, the highest prevalence of diabetes cases in children is in the 10-14 age group, accounting for 46,23 percent.

The growth and development trends of children with Diabetes Mellitus (DM) in Indonesia show a significant increase. The prevalence of Diabetes Mellitus in children is increasing dramatically, particularly type 1, and there is also a rising trend in type 2 Diabetes Mellitus in children with obesity or a family history. This surge in diabetes cases in children is a serious concern because it can disrupt growth and development and risk reducing a child's quality of life. This increase in cases is driven not only by genetic factors but also by unhealthy lifestyles, such as consuming high-sugar foods and lack of physical activity.

Many people are quickly adapting to changes in modern lifestyles, which have become secondary needs in society. This problem is also reflected in the eating habits of modern society, which prioritize convenience over health. Food is a basic need for growth and development, including for

children. A child who does not get enough food intake will disrupt their body's metabolic processes, thereby increasing the risk of disease. Children who eat too much, for example fast food, high-fat, high-sugar, and high-salt foods, usually found in snacks, without engaging in sufficient physical activity, will experience physical disorders, such as the risk of developing degenerative diseases that can lead to an increase in non-communicable diseases such as type 2 Diabetes Mellitus (Susanti & Bistara, 2018).

Diabetes is caused by impaired carbohydrate, fat, and protein metabolism, leading to a lack of insulin in the tissues. Diabetes Mellitus is also caused by the development of oxidative stress, inflammation, and pancreatic B-cell dysfunction. This disease is one of the diseases that causes increased mortality and decreased quality of life due to various serious complications. The risk factors for developing type 2 Diabetes Mellitus are diverse and are now very common in society, especially in children (Yasin et al., 2016).

Symptoms of diabetes include thirst, frequent urination, fatigue, weight loss, and increased appetite. In more severe cases, symptoms may include blurred vision and non-healing wounds (Nugroho 2015). In fact, 80% of diabetes cases are preventable, thus preventing the annual increase in cases and improving quality of life.

One way to prevent diabetes is to avoid behaviors that can increase the risk of diabetes. Today's children's irregular lifestyles put them at risk of developing diabetes later in life. Children prefer to consume fast food, snacks

from school canteens, and snacks from street vendors, which are usually high in sugar, fat, and low in fiber, vitamins, and minerals. This lifestyle needs to be prevented to avoid diabetes later in life and to live a healthy life in old age (Yusransyah et al. 2022). Today's lifestyles have undergone significant changes, from children to adolescents to adults. Instant foods are a popular choice for many. Consuming fast food can also trigger diseases such as type 2 Diabetes Mellitus (Ulya et al. 2023).

Diabetes Mellitus prevention and management include improving education, antidiabetic medication consumption behavior, exercise (physical activity), nutritional management, and regular blood glucose monitoring (Anani, Udiyono, and Praba 2021).

1.2 Problem Formulation

Based on the background above, the problem in this study is as follows:
"How is the Relationship Between Diet and The Risk of Diabetes Mellitus in Children Grades 4-6 at SDN Tasikmadu 1 Malang ?"

1.3 Research Purpose

1.3.1 General Purpose

To determine the relationship between dietary patterns and the risk of Diabetes Mellitus in children grades 4-6 at SDN Tasikmadu 1 Malang.

1.3.2 Specific Purpose

1. Identifying eating patterns in children grades 4-6 at SDN Tasikmadu 1 Malang.
2. Identifying the risk of diabetes mellitus in children grades 4-6 at SDN Tasikmadu 1 Malang.
3. Analyzing the relationship between dietary patterns and the risk of diabetes mellitus in children grades 4-6 at SDN Tasikmadu 1 Malang.

1.4 Research Benefits

1.4.1 Theoretical Benefits

This study can provide additional information regarding the relationship between dietary patterns and the risk of diabetes mellitus in children in grades 4-6 at Elementary School Tasikmadu 1 Malang.

1.4.2 Practical Benefits

1. For School Institutions

This research is expected to provide information and input to schools regarding the relationship between dietary patterns and the risk of diabetes mellitus in children in grades 4-6 at SDN Tasikmadu 1 Malang

2. For Respondents

It is hoped that this research can provide information to students about the relationship between dietary patterns and the risk of diabetes mellitus in children in grades 4-6 at SDN Tasikmadu 1 Malang.

3. For Nursing Science

This research aims to provide insight development to nursing, specifically in pediatric nursing, so that they have the skills and knowledge in subsequent nursing research.