



## Knowledge of Students on about the Impact of Ice Cream Consumption on Blood Sugar

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### ABSTRACT

The purpose of this study is to find out how often adolescents consume ice cream, increase the insight of readers and compilers about the impact of sugar consumption on the body, and find out the information which adolescents consume ice cream products know the impact from the consumption of too much ice cream products. This research is motivated by the rapid development of the ice cream industry spread in Indonesia as well as the increase in the number of people with diabetes at the age of children and adolescents in Indonesia lately. Excessive sugar consumption in the long term results in various diseases spreading later in life, attracting us to conduct research related to ice cream consumption among adolescents. High sugar consumption has an impact on health as well as sugar high blood pressure. The method used in this study is a qualitative method by distributing questionnaires or questionnaires. The result of this study was that most students do not know the impact of the consumption of ice cream products on the increase in blood sugar in the body. This data can be used to give knowledge concerning food and public health.

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### ARTICLE INFO

#### **Article History:**

*Submitted/Received 08 Feb 2023*

*First Revised 12 Mar 2023*

*Accepted 08 Jun 2023*

*First Available online 09 Jun 2023*

*Publication Date 01 Dec 2023*

#### **Keyword:**

*Blood sugar,  
Health,  
Knowledge,  
Mixue,  
Student.*

## 1. INTRODUCTION

The tea and milk industry in Indonesia is increasingly popular today many tea and milk brands have been widely known in Indonesia, people are competing to open business outlets engaged in food and beverage (Ong et al., 2021). One of which is currently popular in Indonesia, namely the mixue franchise originating from Zhengzhou, Henna China, which was founded in 1997. To date, in 2023 at least 21,581 mixue outlets have been operating in China and other countries. In Indonesia, mixue has been present 2020 with its first outlet, namely in Cihampelas Walk, Bandung, and currently has more than a thousand outlets spread throughout Indonesia.

Mixue serves several drink menus and also ice cream products that are diverse at affordable prices, good facilities, and places Mixue is widely known to the public, especially among teenagers and children. Many teenagers like mixue products. One of the most popular mixue products for teenagers is ice cream. Currently, mixue offers ice cream flavor variants with three flavors, namely, vanilla, strawberry, and coffee. In addition, the packaging offered is attractive and unique, this is what makes mixue much popular.

The sweet mixue ice cream product contains a fairly high sugar content, attracting us to conduct research related to mixue consumption among adolescents. High sugar consumption has an impact on health such as blood sugar which affects the health of the human body (Kelm et al., 2011; Misra et al., 2016). Here, we reported a SWOT analysis of a mixue company in the field of ice cream and tea culinary. We discussed the strengths, weaknesses, opportunities, and threats in the mixue business in the field of ice cream and tea culinary intended for the company. We conducted knowledge of Indonesian students about the impact of mixue consumption on blood sugar. We also discussed knowledge of the consumption of mixue in blood sugar intended for consumers. The results of this study are expected to conclude student knowledge about the impact of the consumption of mixue products.

## 2. METHODS

### 2.1. Analysis Method

A qualitative research method is a way or method of research that emphasizes analysis or descriptive (Mayer, 2015; Firestone, 1987). In a qualitative research process, things that are subject perspectives are highlighted and the theoretical foundation is used by researchers as a guide. Thus, the research process is following the facts encountered in the field when conducting research. Qualitative research methods aim to explain a phenomenon in depth and are carried out by collecting in-depth data.

The qualitative method prioritizes phenomena and examines more into the substance of the meaning of the phenomenon. Analysis and acumen of qualitative research greatly affect the strength of the word or sentence used. For additional information, we conducted research with qualitative methods, focusing more on human elements, objects, and institutions, as well as relationships or interactions between these elements, in an attempt to understand an event, behavior, or phenomenon.

The purpose of using qualitative methods when conducting research is to understand how a community or individuals accept certain issues. Researchers must also understand and understand and have adequate knowledge related to the problems they will research. If the researcher does not understand what he wants to research, then a study does not qualify as qualitative research.

## 2.2. Research Instruments

Research is the process of finding the truth of a problem using the scientific method. One of the stages in conducting the scientific method is data collection. Collecting instrument data is very important in research because the instrument is a measuring instrument and will provide information about what we are researching. We took a research instrument using a questionnaire or questionnaire instrument. A questionnaire is a tool used to collect data containing written questions that must be answered by respondents. The questionnaire is a research instrument that is generally used for research with a quantitative approach that is arranged in such a way about research variables.

In the research we are currently analyzing, we use google forms as a questionnaire facility that respondents will fill out. The Google form that we created contains several questions with the approach (yes) (no) or (sometimes) and provides a column for additional answers. The questionnaire that we make contains the identity of the respondents and an explanation of the purpose of the research that we will observe as well as distributing the questionnaire to students which later we will conclude the completed questionnaire.

Research is an activity that is carried out systematically. As a systematic activity, research must be carried out with a certain method called the research method, which is a scientific way carried out to obtain data with certain purposes and uses. This scientific method must be based on scientific characteristics, namely rational, empirical, and systematic. The existence of research instruments is a very integral part also included in the research methodology component to carry out a research activity because research instruments are tools used to collect, examine, and investigate a problem being studied.

Research instruments are tools that are used to obtain and collect research data, as a step to find results or conclusions from research while still paying attention to and using good instrument-making criteria. The instrument we want to use is a questionnaire or questionnaire that is applied with the use of google forms. A questionnaire is some written questions used to obtain information from respondents in the sense of reports about their personality, or things that respondents know. There are several advantages of using questionnaires that are considered for us to use. First, the questionnaire can be carefully arranged in a calm situation so that the questions contained in it can follow systematically from the problem we examined. Second, the use of questionnaires allows us to capture data from many respondents in a relatively short period.

## 2.3. Data Retrieval Techniques

Data collection is carried out to obtain the information needed to achieve research objectives. Before conducting research, a researcher usually has a guess based on the theory he uses, the conjecture is called a hypothesis. To prove a hypothesis empirically, a researcher needs data collection to be investigated in depth.

The data collection process is determined by the variables present in the hypothesis. Data collection is carried out on samples that have been done before. Data is something that has no meaning to the recipient and still requires processing. Data can have various forms, ranging from images, sounds, letters, numbers, language, symbols, and even circumstances. All of these things can be referred to as data as long as we can use it as material to see the environment, objects, events, or concepts.

Our data collection method is questionnaires. The questionnaire is a method of data collection carried out by giving a set of questions or written questions to respondents to answer. Questionnaires are a more efficient data collection method when researchers know exactly what variables will be measured and know what is expected of respondents. In

addition, questionnaires are also suitable for use when the number of respondents is large enough and spread over a large area.

The form of questionnaire questions can be divided into 2 types, namely open and closed. An open questionnaire is a questionnaire that gives freedom to the object of study to answer. Meanwhile, a closed questionnaire is a questionnaire that has provided answer choices to be selected by the object of research. Along with development, some current studies also apply questionnaire methods that have a semi-open form where answer choices have been given by researchers, but objects are still given opportunities according to their wishes.

The stages of this research are (1) Identification and selection of research problems, (2) Determining titles, (3) Research preparation stage. (4) Choosing the sampling procedures and techniques used, (5) Creating and distributing questionnaires or questionnaires with Google form-filling media by respondents, (6) Data collection, (7) Conducting data analysis, (8) Making research results report, and (9) Making conclusions from the research.

## 2.4. Research Subjects

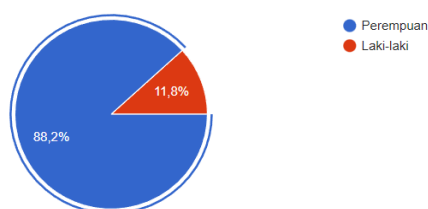
Research subjects are parties who are used as samples in a study. The research subjects also discuss the characteristics of the subjects used in the study, including explanations of the population, samples, and sampling techniques (random/non-random) used. In this study, the research subjects we took were students of the Indonesian University of Education batch 2021 and 2022, consisting of 35 respondents from 4 faculties, namely the Faculty of Technology and Vocational Education (FPTK), the Faculty of Language and Literature Education (FPBS), the Faculty of Education (FIP), and the Faculty of Social Sciences (FIPS) at the Bumi Siliwangi campus, Bandung, Indonesia.

## 3. RESULTS AND DISCUSSION

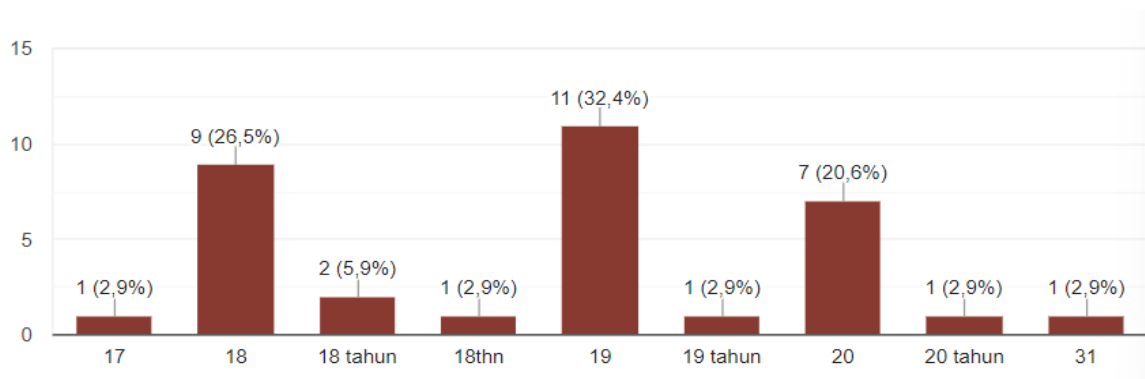
This research was carried out at the Bumi Siliwangi campus, Universitas Pendidikan Indonesia for all students of the 2021 and 2022 batches. The data collected in this study was data obtained from questionnaires regarding the knowledge of Indonesian University of Education students regarding the impact of mixue consumption on blood sugar. The results of the research that have been obtained, researchers are described factually based on data that has been collected through questionnaires. From the results of data collection with structured questionnaires spread using google forms, 35 respondents were obtained. These obtained data have been verified in advance to discard invalid data that will affect the results of the research data analysis. The profile of respondents in this study was observed to give an idea of what the sample of this study looked like.

### 3.1. Respondent Profile

Based on gender (see **Figure 1**), there were 30 people (88.2%) female respondents and 4 male respondents (11.8%). This shows that female respondents are more involved in this study than men. Based on age groups 9 age groups can be seen from the following diagram in **Figure 2**. Based on the distribution of respondents' residences, in this study, the distance of respondents' residences to mixue shops was about 200 m.



**Figure 1.** Respondent's gender.



**Figure 2.** Age of respondents.

### 3.2. Research Results

Based on the questionnaire that has been conducted, it can be concluded that:

- (i) Within a week respondents consumed mixue products most often as many as 3 times.
- (ii) Reasons respondents consume mixue include: price, the large volume of products, desire to consume sweet, cold, and fresh dishes, variations in the types and flavors of products available, the distance of the shop that is close to campus and boarding houses, easy to reach anywhere because of the many shop branches, the taste of each trusted product is delicious, fast mixue service, and the way of thinking for mixue as a dish that accompanies daily activities and can improve mood
- (iii) Respondents never found out about the nutritional content in the mixue products they consumed, reaching 88.20% do not know.
- (iv) Respondents speculate that mixue products can raise blood sugar, but they still consume mixue products at least 1 time a week. Some respondents still think it doubtful that mixue products can raise blood sugar in the body. This shows the lack of knowledge of respondents about mixue products consumed. Respondents' knowledge about the increase in blood sugar caused by the consumption of mixue products is 79.4% know and 20.6% maybe.
- (v) As many as 64.7% of respondents think that consuming mixue products can affect their diet, while 35.3% of respondents think otherwise. This shows that there are still quite a lot of respondents who think that their daily consumption of mixue can still be done because it does not affect their diet.
- (vi) Respondents balanced the consumption of mixue products with the consumption of nutritious food (70.6% selects yes).

### 4. CONCLUSION

This research was conducted based on data and research that we have carried out. Researchers can conclude that students of the Indonesian University of Education do not

know what is contained in mixue products and do not know the sugar content contained in mixue, respondents also do not know the portion of dishes consumed and the nutritional content contained in mixue products, nor have they been able to balance the consumption of mixue products with the consumption of nutritious food every day. Respondents did not understand the impact of mixue consumption on blood sugar in the body and the impact of mixue consumption on the daily diet.

## 5. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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