

## EATING HABITS OF OVERWEIGHT CHILDREN AT SEKOLAH DASAR BUDYA WACANA, YOGYAKARTA

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**Raymond Dwi Prasetya, Yoseph Leonardo Samodra, Istianto Kuntjoro**  
Faculty of Medicine Universitas Kristen Duta Wacana, Yogyakarta, Indonesia

Correspondence: roymondprasetya@gmail.com

### ABSTRACT

**Background:** Childhood obesity is related to chronic diseases in the future, which could be prevented through changes in eating habit. Strategy in eating behaviour needs an in-depth understanding on contributing factors to unhealthy eating habits in school-age children. Meanwhile, evidence on those factors, especially related increased calorie intake, is still scarce in Indonesia.

**Objective:** This study is aimed to explore the eating habit of primary school students with obesity in a private school in Yogyakarta.

**Method:** A qualitative interview involving parents of obese children was performed at Sekolah Dasar Budya Wacana in January 2020. The transcripts were analysed using a thematic approach to acquire major themes related to the cause of unhealthy eating habits.

**Results:** From 11 parents, there are two major themes developed, which are unhealthy eating habits and parental influences. There are two unhealthy eating habits discovered in this study, which are irregular mealtime and unhealthy food choices. Parental influence which commonly found in children with obesity is permissive parenting style.

**Conclusion:** This study found similar result with previous studies on unhealthy food choices. However, irregular mealtime in this study is not consistent with other literatures which shows a lack of association with childhood obesity, hence need further research to explore the relationship. Permissive parenting style, which commonly found in younger population also play an important role in children unhealthy food choice. This study revealed that health behaviour change strategy in obese children should consider focussing on healthy food preferences with support from parents and family.

**Keywords:** Paediatric obesity, Feeding behaviour, Food Preference, Parenting, Yogyakarta

## INTRODUCTION

Noncommunicable diseases are the most important public health issue in Indonesia, as it causes the highest mortality and morbidity, especially among adults.<sup>1</sup> An important and neglected contributing factor is the previous nutritional issues during childhood. In the past decade, studies of childhood obesity proved irrefutable link with adulthood obesity and chronic diseases.<sup>2-4</sup> The prevalence of childhood obesity in primary school student varies between each region; 15,36% in Semarang city and 15,79% in Denpasar.<sup>5,6</sup> This number might double in the future if there is no effective preventive action. Current prevention is focused on changes in eating habit and increasing physical activity. To achieve appropriate weight loss, preventive program should address contributing factors such as family environment, parental influences, socioeconomic status, food preferences, media influences and other obesogenic environment.<sup>7</sup> Yogyakarta is well known as a 'student city' where school-based preventive action might positively affect the obesity rate. Yet, qualitative studies to explore the parental influence, specifically related to eating habit, is quite lacking. This study is aimed to explore the eating habit of primary school students with obesity in a private school in Yogyakarta.

## METHODS

This is a qualitative study using in-depth interview for data collection with further explored with content analysis. The interview was performed in January 2020 on the parents of obese children admitted to Sekolah Dasar Budya Wacana, Yogyakarta. Obesity in children is defined as BMI-for-age at or above the

95<sup>th</sup> percentile for each gender. The interviews achieved saturation after involving 11 participants. The interviews were performed, recorded, and later transcribed by RDP. YLS and IK involved in analysis phase, confirming major themes. All transcribed data was analysed manually by RDP, YLS, and IK.

## RESULTS

Based on the interviews, there are two eating habits found in children, which related to mealtime and food choice. Both eating habits were related by indulgent or permissive parenting style exhibited by the participants.

### Eating habit #1: irregular meal timing

Participants described irregularity in mealtime each day, mostly related to skipping breakfast and even no regular mealtime arranged:

*"If (she) wakes up early, she usually had breakfast. Sometimes I pack her lunch, and sometimes I do not."* (Participant 2)

*"Nothing (no regular mealtime), (the mealtime) is up to the children. There is no menu, I have not heard (or advised) from anyone."* (Participant 8)

The other pattern is a regular mealtime, but with packed snacks time in between the large meals.

*"I taught my child that breakfast is a must... Sometimes I packed ... for his lunch at school. After school, he usually has meals... After meal, I usually gave drinks ... in the afternoon. Then, he sometimes snacking ... before dinner. He usually had dinner at 7 p.m., (I think dinner) later than 7 p.m. will upset his stomach..."* (Participant 1)

## Eating habit #2: unhealthy food choices

Most of the participants reported unhealthy food choices, with frequency more than health ones, such as instant noodles and junk foods.

*“... He likes \*noodle brand\* instant noodles ...” (Participant 3)*

*“... He eats instant noodle two or three times (a week). For fried foods, like the one served at \*fried chicken restaurant chain\*, (I allow) for once a week...” (Participant 4)*

*“... He loves eating instant noodles, so I always allow him (to have instant noodles). But I give a break (between each noodles meal). Like, if yesterday I allowed him having instant noodles, he can have the instant noodle two days after. But, if he stays with his granny, he usually eats (instant noodle) there... “ (Participant 5)*

Some of the parents tried to include fruits and vegetables in the menu with various portion and frequency.

*“It is seldom (having vegetable for meals), two or three times a week may be. For fruits, usually he eats banana, or apple. Only those fruits. For vegetables, usually he has vegetable soup...” (Participant 6)*

*“For snacks, he often has sweet treats. Sometimes he ate chips and biscuits.” (Participant 7)*

*“... He usually had rice, with eggs or some veggie for breakfast... I packed bread and carton milk for him. After school, he usually has meals with rice, veggies, chicken, or satay; there must be meat in the meals. After meal, I usually gave probiotic drinks like \*yoghurt brand\*, then fruit juice like guava or avocado... He only likes those fruits. Then, he sometimes snacking with crackers or white bread... For*

*dinner, he eats satay or any food he wants” (Participant 1)*

## Permissive parenting style and children eating habits

Permissive parenting style was found in some of the participants, which highlight the freedom to choose food and meal timings.

*“Nothing (no regular mealtime), (the mealtime) is up to the children. There is no menu, I have not heard (or advised) from anyone.” (Participant 8)*

*“... He is free to choose the (dinner) menu. (But) I arranged the breakfast and lunch menu.” (Participant 1)*

Even some parents could not watch the food choices if the children were not at home.

*“... But, if he stays with his granny, he usually eats (instant noodle) there... “ (Participant 5)*

*“... I usually give her daily allowance, she buys snacks at school, I don't know (what is she buying) ...” (Participant 2)*

## DISCUSSION

### Eating habit: Irregular mealtime

There are two patterns of irregularity of meal timing in this study, which are complete irregularity and regular main meals with irregular snack time. In general study population, a study in Finnish population showed that irregular mealtime is less found in children with unhealthy food choice.<sup>8</sup> In addition, in Malaysian children, there is no difference of calorie intake between regular and irregular meal group, although irregular meal group had lower micronutrient intake compared to the regular one.<sup>9</sup> These findings imply that irregular mealtime would be less likely to contribute to obesity, which contradicts with our study finding. This suggests that meal irregularity in our findings most likely

associated with other factors, in which it is not a standalone factor. The contradiction with our findings needs further exploration, especially when most of research on the association between meal irregularities and poorer health outcomes usually found in adult population.<sup>10</sup>

### **Unhealthy food choices**

This study discovered unhealthy food preferences such as instant noodle and sweet snacks. This is consistent with previous studies which proved that children usually prefer sweet and salty flavours, as they are more palatable compared to bitter and sour food which is found in fruits and vegetables.<sup>11</sup> Food preference might also be influenced by cultural background, such as hot and spicy flavour in Sulawesi cuisine or salty and greasy food in Sumatran cuisine. In addition, obesogenic environment would affect children food choices, such as the availability of modern fast foods, high-calorie snacks, and sweetened beverage, especially in the urban dwellers.<sup>12</sup> Media and advertising also play a negative role in inducing children and families to choose food with fast and easy preparation, especially in younger productive parents.<sup>13</sup>

### **Parenting style**

Family and parents have an important role in children eating habit. This study showed that permissive style was a common parenting style found in children with obesity, including uncontrolled food intake in unsupervised situation (e.g., at the school, at the grandparents' house). Some studies support this finding, in which family environment and parents could influence children eating habit.<sup>14</sup> Obese children usually do not have 'healthy environment', with lack of positive attitudes related to healthy lifestyle, as the family and parents do not practice healthy

lifestyle. Disruptive family function might also contribute to children perception on healthy eating. Previous evidence showed that authoritative parents induced self-control and self-discipline in the children, which further prevent overt food intake and obesity.<sup>15</sup> Interestingly, similar to the finding in this study, there is an increased prevalence of snack food intake in unsupervised situation, such as when the children under the grandparent's care.<sup>16</sup>

### **Limitation of study**

Although the study involved adequate samples, unfortunately we did not cover other important factors contributing to eating habits in children, such as psychosocial environment, early feeding practice and media influences. Otherwise, the interview had discovered an essential point of view from urban population with moderate to high income background.

## **CONCLUSION**

This study explored the meal pattern, food preference and general parents influence on the children eating habits, which influence further strategies to support change into healthier options and further decrease childhood obesity. In the future, studies on meal irregularities and more comprehensive contributing factors should be performed to optimise the preventive strategy in eating habit modification for children with obesity.

## **CONFLICT OF INTEREST AND FUNDING RESOURCES**

The authors declare no conflict of interest, and this study is funded privately.

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