RESEARCH STUDY

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Feeding Practices of School-aged Children during COVID-19 Pandemic: A Qualitative Study

Praktik Pemberian Makan pada Anak Usia Sekolah selama Pandemi COVID-19: Studi Kualitatif

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ABSTRACT

Background: Coronavirus disease-19 (COVID-19) pandemic caused the government to implement social movement restrictions affecting the household economy and school closure that will lead to change in the home food environment, parental feeding practices, and the end will influence child's eating behavior.

Objectives: This study aimed to explore the parental feeding practices among young school-aged children during the COVID-19 pandemic.

Methods: Eighteen informants consisting of mothers and a grandmother have participated in the online in-depth interview. Moreover, 4 fathers had also been interviewed to triangulate the data and to increase the meaningful insight. A question guideline was used to guide the in-depth interview process. Thematic analysis using an inductive approach was applied to analyze the transcripts.

Results: Five themes were identified around changes in food restriction, pressure to eat, giving the explanation, child involvement, and modeling.

Conclusions: During the COVID-19 pandemic, parents demand their children to have good eating behavior. However, they tend to give autonomy more often to their child to get the snacks. It would make the children lead to having poor and unhealthy eating behaviors.

ABSTRAK

Latar Belakang: Pandemi Coronavirus disease-19 (COVID-19) menyebabkan pemerintah menerapkan pembatasan sosial yang berdampak pada perubahan perekonomian keluarga dan penutupan sekolah. Hal ini dapat memengaruhi perubahan jenis dan jumlah makanan yang biasa dikonsumsi dalam keluarga serta praktik pemberian makan oleh orang tua yang pada akhirnya akan memengaruhi kebiasaan makan pada anak.

Tujuan: Tujuan studi ini adalah untuk mengeksplorasi praktik pemberian makan untuk anak usia sekolah selama pandemi COVID-19.

Metode: Delapan belas informan yang terdiri dari ibu dan nenek telah mengikuti wawancara mendalam yang dilakukan secara online. Selain itu, 4 ayah juga telah diwawancarai untuk proses triangulasi data dan meningkatkan pengetahuan peneliti mengenai praktik pemberian makan pada anak usia sekolah di masa pandemi secara lebih bermakna. Panduan pertanyaan digunakan sebagai pedoman dalam proses wawancara mendalam. Analisis tematik dengan pendekatan induksi digunakan untuk menganalisis transkrip wawancara.

Hasil: Lima tema telah teridentifikasi dalam studi ini, yaitu membatasi makan, memaksa makan, memberi penjelasan, melibatkan anak, dan modeling.



Kesimpulan: Di masa pandemi COVID-19, orang tua menuntut anak-anak mereka untuk memiliki perilaku makan yang baik. Akan tetapi, orang tua cenderung lebih sering memberi kebebasan kepada anak untuk mendapatkan jajanan. Hal ini akan membuat anak memiliki perilaku makan yang buruk dan tidak sehat.

Kata kunci: COVID-19, Anak Usia Sekolah, Studi Kualitatif, Praktik Pemberian Makan

INTRODUCTION

Coronavirus disease-19 (COVID-19) pandemic is triggering dramatic changes in every aspect of human life such as economic, healthcare, transportation, and education systems around the world¹. School closure is common due to the movement restriction during the COVID-19 pandemic. In Indonesia, nearly 60 million students are out of school due to this situation². The learning process at schools is transformed into online learning from home. The challenges that emerged from the school-from-home (SFH) program were reported by the students, teachers, and the parents as everyone is forced to accept the new learning approach but with the same hope to achieve the learning outcomes as originally expected3. School closure also affects the existing schoolbased health and nutrition programs such as school feeding, deworming, mental health management, and health/nutrition education that had to be modified or even stopped4.

The implementation of movement restrictions also influences the home food environment. To reduce the frequency of shopping trips and social exposure, families tend to purchase more foods, including greater amounts of nonperishable, highly processed foods, and fewer fresh food like fruits and vegetables. Moreover, reduced purchasing power might lead families to buy cheaper foods that are often less healthy, less nutritious⁵. These behaviors will first alter the food availability at home, they can further influence children's dietary intake.

Parents could be modifying their feeding practices depending on their perceptions of the child's characteristics and behaviors, and specific feeding goals parents have for their children⁶. Parents were more likely to use food restrictions when they were concerned about their child being overweight. Meanwhile, parents used "pressure to eat" practice when they were concerned that their child is underweight or not consuming enough food⁷. Furthermore, parents used more food restriction and monitoring feeding practices on children's eating in girls than boys8. COVID-19 pandemic might also influence children's eating behaviors through changes in parental feeding practices due to increasing stress, depression, and food insecurity^{5,9} that might affect the parents in the use of controlling feeding practices more often such as restricting certain foods, pressuring children to eat, and using food as reward¹⁰. Thus, the changing home food environment coupled with poor feeding and caring practices can lead to an increase in children's risk of malnutrition either undernutrition or overnutrition⁵.

To date, limited studies are focusing on the feeding practices among school-aged children during the COVID-19 pandemic^{11,12}. Understanding the complexity of household strategies within the "new" setting for learning where school activities are moved to home due to the pandemic requires a qualitative study to best

capture the phenomena. Thus, the study objective is to explore the feeding strategies of households having young school-aged children during the COVID-19 pandemic.

METHODS

A qualitative study was conducted remotely considering the pandemic situation to avoid the spreading of the COVID-19 virus. In-depth interviews sessions took place between February 2021 and April 2021. This study obtained ethical approval from the faculty of Medicine Ethical Committee, Universitas Indonesia on February 26, 2021 number 86/UN2.F1/ETIK/PPM.00.02/2021.

Participants and Recruitment Process

Eligibility criteria included being a parent or caregiver who took the biggest role in caring the children aged 5-12 years old, living in Yogyakarta City and able to communicate well, while the caregiver who taking care of a child with certain comorbidities that made the child need a special diet requirement was not included in this study. The number of informants was decided based on the maximum variation and data saturation gained from the informants. The informants were selected through a purposive sampling technique. The researcher discussed with a community health volunteer/cadre about potential informants who met the eligibility criteria. A cadre was a local person who knew the background of the community so involving the cadre was considered easier and more appropriate to approach the eligible informants in this remote study. The cadre also acted as intermediaries between researchers and informants. After getting the first informant candidate, she was contacted and asked to participate in this study. The next informant candidate was selected by asking the cadre again who was the possible informants that can be participated in this study considering the maximum variations that have been determined (Table 1.). In addition, broadcasting messages in WhatsApp groups was also done by the researcher to find possible informants.

In selecting informants, maximum variations were used to get data saturation. After interviewing 18 informants, the researcher felt that there was no new information or ideas that emerged from the last two interviews so the researcher assumed the data saturation was achieved and the data collection was stopped at the 18th informant. Each informant's variation and the next informant's criteria were obtained from the discussion with the research assistant, after each in-depth interview session. Father as the key informant also was purposively interviewed to gain additional information and to triangulate the data. Triangulation was used to increase the validity of research findings by checking that different sources of the same phenomenon produce the same



results¹³. The researcher asked all the informants (the caregivers) for help to ask the willingness of her husband (who has the role of head of household) to participate in this study. After that, the informant would inform the

researcher. From 18 informants who asked their husbands to participate in this study, 4 fathers were willing to be interviewed.

Table 1. Maximum variations of the study for the respondents

No	Variations	Groups
		Low SES
1.	Socioeconomic status (SES)	Middle SES
		High SES
2.	Caregiver status	Parent
	G	Others (grandmother/relatives, etc.)
		Housewife
3.	Mother Occupation	Formal worker
		Informal worker
4.	Caregiver education level	Lower education
٦.	caregiver education level	Higher education (≥ Diploma)
5.	Number of children	Having 1 child
٥.		Having more than 1 child
6.	Type of family	Nuclear
	,	Extended

The level of household socioeconomic status is based on social assistance program ownership, such as *Program Keluarga Harapan, Program Indonesia Pintar, Program Keluarga menuju Sejahtera*, or other government assistance programs. Households who got social assistance since before the pandemic were classified as low SES and the others were classified as middle SES and high SES. Moreover, to differentiate middle SES and high SES based on the type of their jobs. Household members who have a role as a primary earner who worked in the informal sector are classified in the middle SES, while those who worked in the formal sector are classified in the high SES.

Data Collection

Questions were developed by the researchers and were pre-tested to know whether the questions can

capture all the information needed and be able to answer the research question. Questions were open-ended. The question guideline that was used is shown in table 2. In addition to testing the questions that have been developed, the researchers also tested the platforms that would be used (WhatsApp, Zoom, and Google Meet) to conduct the interview. Pre-tested the platforms were important since the in-depth interview would be conducted online, so a trial of the online interview was done to ensure that the platforms were applicable for collecting the data. Data collection was conducted using in-depth interviews. In-depth interviews were conducted for informants and key-informant. The purpose of the indepth interview activity was to dig into the individual's perception about the pandemic situation and the impact of this condition on their family related to child feeding practices. Each session was an in-depth interview was conducted either in Bahasa or Javanese language.

Table 2. List of in-depth interview questions

Fo	For caregivers		For fathers		
1.	How is your child's eating behavior during the pandemic?	1.	What is the impact of the pandemic on your household economy?		
2.	What rules apply to your child related to the food during the pandemic?	2.	What is your opinion about your child's eating behaviors during the pandemic?		
3.	How is the child respond to the rules related to the foods that you implemented?	3.	Are you involved with implementing the feeding practices for your child? Can you elaborate more on your answer?		
4.	What would you do if your child refused to eat?	4.	How is your role as the head of household for choosing the daily family meal menu?		
5.	Are there any different feeding practices that you implement due to the pandemic situation?				

The researcher contacted the cadre to explain this study and ask her to list the informant candidate that matched with inclusion and exclusion criteria. Recruiting cadres who were already known by the researcher was done considering the data collection was conducted remotely. Remote data collection caused researchers unable to meet prospective informants directly to explain the study, thus using an acquaintance as an intermediary between researcher and informant candidate was considered easier and more appropriate for this study. The informant candidate would be contacted and explained briefly about the study. When they were willing to participate in this study, the researcher made an appointment with the informants to schedule an online meeting and to determine which platforms would be used to conduct the interview (using Zoom, Google Meet, or WhatsApp call). On the scheduled day, the informant was contacted through a mutually agreed platform. The researcher explained again about the study and the interview process was started.

Meanwhile, the interviews with the fathers were conducted through *WhatsApp chats* due to the time availability of the fathers. The questions were sent to them by *WhatsApp chat* and they answered the questions by replying to the chat in *WhatsApp*.

Data Analysis

There were two phases to analyze the data, preliminary analysis (in the field analysis) and data analysis on the desk¹⁴. Preliminary analysis was conducted after

each activity session in an in-depth interview. The findings were discussed on the same day after finishing each activity's session by the researcher and research assistant. These activities were performed to ensure data saturation and completeness of the data. It was also used to avoid missing information and to check whether a reinterview was needed, and to evaluate the interviews that have been performed, thus the next interview process would be better.

At the desk, analysis was carried out once data saturation was reached ¹⁴. In-depth interviews were transcribed verbatim in the language they were conducted in. Thematic analysis using an inductive approach was applied to the transcripts. The researchers familiarized themselves with the transcripts before independently creating codes based on the patterns of meanings in the data. Then, the codes were discussed about the coding consistency and to resolve coding discrepancies. Themes were created based on codes and using iterative processes ¹⁵. The representative quotes were selected to get a better understanding for the reader about each emerging theme or subthemes. Data were organized and analyzed using the qualitative data analysis software program, NVivo Version 12.

RESULTS AND DISCUSSION

The in-depth interviews (IDIs) were performed among 18 caregivers consisted 17 mothers and 1 grandmother. The characteristics of the informants who participated in this study are explained below (Table 2.)

Table 2. Characteristics of informants based on caregiver and children

Characteristics	n	
Caregiver	18	
Socioeconomic status (SES)		
Low SES	4	
Middle SES	11	
High SES	3	
Main caregiver		
Mother	13	
Others (grandmother/relatives, etc.)	5	
Mother's occupation		
Housewife	6	
Work in the formal sector	4	
Work in the informal sector	8	
Mother education level		
Lower education (< Diploma)	11	
Higher education	7	
Number of children		
Having 1 child	3	
≥ 1 child	15	
Type of family		
Nuclear family	8	
Extended family	10	
Children		
Child age		
5-8 years old	18	
9-12 years old	10	

Most of the informants were a mother in middle SES (n=11) and had lower education levels (n=17).

The level of household socioeconomic status was based on social assistance program ownership and the primary



earner's occupations (formal or informal worker). Eight of the informants worked in the informal sector. Most of them were food vendors and groceries sellers. The rest worked in the formal sector such as civil servants and private employees. Fifteen informants have children more than one and most of the children are male (n=20).

Feeding practices refer to the specific goal-directed behaviors used by parents to directly influence their children's eating to increase or decrease intake of certain foods¹⁶. Five types of feeding practices that emerged in this study are food restriction, pressure to eat, giving the explanation, child involvement, and modeling.

Theme 1: "I limit the consumption of snacks like *Chiki* or *Taro* (brand of packaged snacks in Indonesia) and candy for my children": **Food restriction**

Most of the informants limit snacks for their children either the amount or the type of snacks. This rule has implemented before the pandemic and has still been implemented until now.

"Kalau ngemil snack kemasan sering sih, cuma saya batasi. Kalau misalnya yang ada micinmicinnya gitu ya mbak ya itu saya batasi"

(My son often eats the packaged snacks, but I restrict it. I restrict the snacks that contain high monosodium glutamate (MSG)) -Mother, formal worker, high education, middle SES, extended family, has kindergarten child-

The type of restricted snacks was varied. The packaged snacks which contained high sodium were the most restricted snacks for the children. Parents prefer to give biscuits or bread as a snack for their children.

"Ya mau juga kalau kita kasih (Chiki-chikian), cuma kan tergantung kitanya, kita mau beliin atau enggak. Cuma saya lebih milih dia yang biskuit yang roti maksudnya kayak oreo, terus semisal roma, kayak gitu. Tapi kalau kita beliin ya dia mau, pasti dimakan"

(He will eat anything kind of snacks that we give including salty snacks like *Chiki*. So, it depends on us, whether we will buy it or not. But I prefer to give him biscuits for his snacks such as *Oreo, Roma* (name of biscuits snacks brand), and other kinds of that) -Mother, formal worker, high education, high SES, extended family, has kindergarten child-

Unhealthy snacks were the main reason stated by the informant to restrict some snacks for their children.

"Kalau yang chiki-chiki gitu kan terlalu banyak micin, terlalu gurih juga. Kan nggak bagus buat kesehatan anak-anak"

(The snacks kind of *Chiki* contains high MSGand too savory. It is bad for my children's health) - Mother, informal worker, low education, low SES, extended family, have 1st and 6th grade of elementary school child-

Apart from the snacking behavior, one informant also mentioned the restriction for her child's meal. She limited the portion and the meal frequency for her child related to weight control.

"Kadang tak suruh.... kadang tak suruh minum energen mbak kadang malam-malam itu. Kadang nek umpamanya dia bisa tidur jam 8. Kalau kadang tak suruh tidur itu mbak... nanti jam 7 makan, nanti jam 8 dia tidur... itu lebih aman, dia nggak terbangun untuk bilang lapar" (Sometimes I ordered her to drink Energen (one of the brands of milk and cereal drinks) when she feels hungry at night. Sometimes I ordered her to go to sleep at 8 p.m. so, at 7 p.m. she eats, and then at 8 p.m., she sleeps. It's safer because she doesn't wake up to say she's hungry) -Mother, informal worker, low education, middle SES, nuclear family, has 1st grade of elementary school child-

The informants use restrictions to limit the type and/or the number of unhealthy snacks. This finding aligns with another study in which parents limit children's access to foods or opportunities to consume certain foods, and typically used for palatable foods (high-fat and high-sugar foods commonly) rather than total caloric intake¹⁷. A study review revealed that food restriction practice harms children's eating behaviors, particularly in longitudinal studies¹⁸. Children who were exposed to food restrictions frequently were more likely to increase in consuming sugar-sweetened beverages compared to children exposed to lower levels of food restriction¹⁹. While in several cross-sectional studies found that restricting the child's intake of unhealthy foods would reduce the intake of unhealthy snack foods²⁰ and increase the consumption of fruits and vegetables.²¹ The different outcomes in food restriction practice toward a child's eating behavior might be influenced by affection and directness as the important components of parentchild communication²².

Theme 2: "For the consumption of vegetables, I force my children to eat them": **Pressure to eat**

Some informants revealed that sometimes they forced their children to eat. It occurred because their child was too fussy about food, especially vegetables. There were several ways to force the children related to eating food. First, they would feed their children until the food ran out.

"Disuapin bisa habis, karena dipaksa. Kalau makan sendiri kan udah lama, nasinya sampai mblegedrek gitu kan dia jadi nggak mau kan mbak"

(She can finish her food when I fed her because I forced her. But, if she ate by herself, it needed a long time to finish it, until the rice was mushy and she didn't want to eat anymore) -Housewife, high education, middle SES, extended family, has 2nd-grade elementary school child-

Second, the informant forbade the child to eat what they like if they didn't finish their meal.

"... karena makannya itu kalau misalkan kayak malam itu dia tetap, saya bilang tetap harus makan dulu, makan nasi dulu, baru habis itu boleh makan camilan"

(... because at dinner time, for example, I said that he has to eat rice first before eating the snacks) - Mother, formal worker, high education, high SES, extended family, has kindergarten child)

Third, one informant would be angry if her child did not obey the mother's rule related to the snacking.



"Ya namanya anak sebetulnya sih kepengen, tapi saya yang melotot-melotot (tertawa). Kalau udah dipelototin ibunya udah nggak berani"

(As a child, she wants (to eat certain snacks). But I glared at her (laughs). When she saw me glaring at her, she has not to dare) -Mother, informal worker, low education, low SES, nuclear family, has 1st grade, elementary school child-

The "pressure to eat" practice was used to force children to consume fruits and vegetables or to eat more foods. A study by Ayine et.al. found a negative association between pressure to eat and a child's body mass index (BMI)²³. Parents may tend to use pressure when they are concerned that their children are not consuming enough food, but are less likely to use pressure when they are concerned that their child is overweight. Moreover, another study showed that pressure to eat practice has desired effects in the short term but, over time, it causes children aversions to healthy foods they feel forced to eat²⁴. Therefore, there were two types of pressure used for children related to the foods. First, pressure to eat more food when the parents are concerned about being underweight, and secondly, pressure to eat healthy foods when the children are fussy eaters.

Theme 3: "I told them (my children) if they drink ice or pop ice more often, they can get a cough. So, they can understand": **Giving an explanation**

More than half of the informants complained that their children found it was hard to eat enough vegetables and fruits. Therefore, the informants tried to explain the benefits of fruits and vegetables for the body so that the children would be willing to eat. For informants who performed "explaining" feeding practice before the pandemic, they were easier to monitor the child's snacking behavior and to applied healthy eating habit for their child.

"... kadang juga sudah saya bilang kalau sayur itu bagus buat kesehatan, buat badan gitu-gitu. Paling yang mempan itu paling cuma wortel mbak, wortel itu bisa bikin mata cerah dek, matanya gini... dia baru mau, kayak gitu... Mungkin diterangkan dari sedikit-sedikit gitu ya mbak va..."

(Sometimes I already said that vegetables are good for your health and your body. But it's effective only for carrots' consumption. I said that carrots are good for the eyes and then she was willing to eat carrots. Yeah, something like that. Maybe we should explain little by little, right?) - Mother, formal worker, high education, high SES, extended family, have 1st and 6th-grade elementary school child-

Besides explaining the benefits of vegetables and fruits, the children also were explained about the unhealthy snacks. So, when the informant restricts some snacks to their children, they also give an explanation why the children should limit those snacks.

"... ya itu paling kalau dia jajan es, pop ice atau semacamnya gitu biasanya langsung batuk. Tapi kalau udah dibilangin ya udah kan dia udah tau. Oh, akibatnya jajan ini jadi batuk, jadi nggak jajan ini lagi"

(When he drinks ice, *Pop-Ice* (milkshake beverages), or kind of that, he usually gets coughs directly. But, when I explained to him, he would know about the effect of consuming those snacks in which he gets cough. So, he didn't buy it anymore) -Mother, formal worker, high education, middle SES, extended family, has kindergarten child-

For the low SES, sometimes they also gave explanations for their children when they could not provide foods that children wanted relating to the income limitation. Therefore, when the informants get used to explaining to their children, children could understand the situation and they did not much demand to obey what they wanted relating to the food especially in the COVID-19 pandemic situation

"Tapi orang tua kan nggak selalu punya uang to mbak. Kalau udah gitu ya saya jawab, iya besok, tapi kalau ada uang ya saya beli. Yang penting anaknya dikasih pengertian. Ini uangnya lagi dipakai untuk ini, besok kalau udah punya uang baru ibu beliin"

(But the parent didn't always have money, right? So, if I didn't have money, I promise to buy it next time. But when I have money, I will buy (the food that children want). The important thing is to give understanding to the children. "The money is being used for another purpose, next time when Mom has money, I will buy it for you") -Mother, informal worker, low education, low SES, extended family, have 1st and 6th grade of elementary school child-

"Explaining" practice was also used by several informants. They explain the benefits of fruits and vegetables or the reason their children could not eat certain snacks. It seemed to be health and nutrition education for children. Parents deliver the information to help children make informed choices about the food that they eat. It can support the child's autonomy because the information may guide them to choose the food based on the information that they got. However, the messages that they use should be adjusted to match the child's developmental stage so the children can easily understand¹⁶.

Theme 4: "When we cooked, my grandchild will join us to help to prepare the food": **Child involvement**

A few informants involved the children in positive activities so that the children got used to consuming a variety of foods and didn't become fussy eaters. For example, they let their children help to prepare the food, invite the children to plant vegetables or fruits, or involve the children to decide the menu.

"Tapi sekarang dia udah lebih suka itu sih, sayuran, dia suka nanam-nanam sayuran. Ada gunanya juga mbak ini pandemi ini mbak, dia jadi suka sayur sekarang"

(Now, he started to plant vegetables. There is a benefit due to the pandemic situation, miss because he started to like eating vegetables) - Mother, informal worker, high education, middle SES, extended family, have kindergarten and 4th-grade elementary school children-



Several informants sometimes involved their children in some positive activities which can lead to good eating behavior. This practice allows parents to pass down family norms and traditions and provides an opportunity for children to become more familiar with new foods¹⁶. The implementation of school closure and social restriction potentially give a positive consequence, because the family can spend more time together. It is a good opportunity to introduce healthy food to children through parent-child interactions involving food¹².

Theme 5: "Because my husband is a picky eater, maybe that was why my children are also a picky eater": **Modeling**

Peers, parents, or relatives could act as role models in the child-eating behavior, either positively or negatively. It was performed before the pandemic in which some informants acted as role models for their children related to eating behavior. When the children often see good eating behavior, they tend to follow it.

"Karena saya juga kalau makan itu 3x sehari. Memang sudah kebiasaan dari dulu itu memang kayak qitu"

(Because I also eat three times a day. Indeed, it's been a habit since a long time ago) other, formal worker, high education, high SES, extended family, has kindergarten child-

On the other hand, when they were in a less supportive environment related to unhealthy eating behavior, it could form bad eating behavior among them.

> "... susah mbak kalau makan sayur. Ndilalah saya itu jarang masak kan saya di rumah jadi memang kalau di rumah sebenarnya nasi sama lauk, nggak ada sayur"

> (... It's hard to get them to eat vegetables. Incidentally, I also rarely cook at home. Indeed, we only eat rice and side dishes at home, there are no vegetables) -Mother, formal worker, high education, high SES, nuclear family, have kindergarten and 1st-grade elementary school children-

It was confirmed by the statement from one of the fathers in the triangulation process.

"Mungkin kalau terkait sayuran atau pilih-pilih makanan karena faktor keturunan ya... karena saya sendiri orang yang sangat pilih-pilih makanan (tertawa)"

(It may be related to the consumption of vegetables or picky food habits because of the heredity factor... because myself is a person who is a very picky eater) -Father, high education-

Peers could affect children's eating behavior. Some informants conveyed that when their children ate with friends, they could eat vegetable food rather than eating alone. However, peers also could harm their children related to the snacking habit.

"Kalau ada temennya dia mau makan sayurnya. Tapi kalau sendiri di rumah paling minta yang garing-garing gitu. Iya soalnya kan kalau ada temannya kan ada yang bilang "kok nggak di maem to sayurnya? Mbok di maem sayurnya itu" Di lokke (diejek) temennya gitu lho, jadi mungkin dia malu, jadi dimakan"

(He is willing to eat vegetables when he is with his friends, but when he eats alone at home, he didn't eat vegetables. Yeah, because when he was with his friends, they said "why didn't eat the vegetables? Let's eat those vegetables". He would be teased by his friends, so maybe he was shy and then he was willing to eat the vegetables) -Mother, formal worker, high education, middle SES, extended family, has a kindergarten child-

The last of the feeding practices that emerged was modeling. This practice can give positive or negative impacts on a child's eating behavior depending on the child's environment. Children will have good eating behavior when their environment supports healthy eating behavior and vice versa. A study showed that parental modeling and parent diet was positively associated with children's dietary intake²⁵. Yet, parents are not only the ones who become the model for children. Peers and other caregivers like grandmothers also can influence a child's eating behaviors^{26,27}. During the pandemic, peers also influence a child's eating behavior, especially about the snacking behavior. School from home activities made a child more likely to play with friends more often in which when they were playing together, they tend to buy some snacks that would increase the snacking consumption.

During this pandemic, almost all of the informants reported that there was an increasing snacking frequency among their children. However, the trends of feeding practices particularly related to the child's snacking behavior during the pandemic were more likely to be permissive in which the rules and the limits were less, and also, they gave more autonomy to their child to decide what, when, where, and how much they eat snacks.

"Terus sekarang ini juga ada tetangga yang buka warung jajan-jajan itu... wah jaaan... anak jadi main, pulang, terus "ibuk beli jajan". Iya tiap hari jajan"

(Currently, there are new stalls that sell some snacks in my neighborhood, so, my son often plays outside, and when he back to our home, he would say "Mom, I want to buy snacks". Yeah, so every day he buys some snacks) -Mother, formal worker, high education, middle SES, extended family, has a kindergarten child-

Although most of the informants implemented the "restriction foods" practice for the snacking behavior, they were more likely to only restrict the type of snacks (what they eat). While, the number of snacks, when they eat, and where they eat was less considered by informants. Whereas, the parent or caregiver is responsible for what, where, and when their child eats, and the child is responsible for how much he or she eats¹¹. By this theory, the parent should explore the important boundaries for their child related to snacking behavior. But the child is still responsible for the amount of food that they eat. Giving autonomy to the child more often related to the child's snacking behavior may be influenced by the increasing parental stress due to the COVID-19 pandemic situation¹¹ in which this situation gives a big impact on their life including the household economy and increasing their workload²⁸.



Since this study used online interviews, the most challenges were found to be related to the limited platform in which the informants can use for the interview (i.e. WhatsApp video call). The use of this platform hindered the original plan for having a participatory method and focus group discussion (as an effort for triangulation). In addition, it was also challenging to agree on a schedule for focus group discussion (as an effort for triangulation). However, we included data from fathers to increase meaningful insights of the findings from the informants (i.e. caregivers) even though it was done through WhatsApp chats rather than an actual interview. Despite those limitations, this study provides important and timely data on the parental feeding practices carried out during the COVID-19 pandemic. For further research, an exploratory study using face-to-face in-depth interviews coupled with participatory focus group discussions is recommended to allow a more comprehensive understanding of parental feeding practices when caring for school-aged children.

CONCLUSION

There were 5 emerging themes related to the feeding practices for school-aged children during the COVID-19 pandemic: food restriction, pressure to eat, giving an explanation, child involvement, and modeling. The results in this study showed that the majority of informants demand the children have good eating behavior although using different feeding practices. However, they tend to give more autonomy for their children to consume the snacks during the COVID-19 pandemic. The parents' response towards a child's snacking behavior through implementing fewer rules and limits during the pandemic would lead to influence their child's eating behaviors in which a child would have poor eating behaviors. We recommend further study to explore parental stress during unprecedented situations such as a pandemic condition that might affect parental feeding practices.

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REFERENCES

- Nicola, M., Alsafi, Z., Sohrabi, C., Kerwan, A., Al-Jabir, A., Iosifidis, C., Agha, M. & Agha, R. The socio-economic implications of the coronavirus pandemic (COVID-19): A review. *Int. J. Surg.* 78, 185–193 (2020).
- UNICEF. COVID-19 and children in Indonesia: An agenda for action to address socio-economic challenges. (2020). at https://www.unicef.org/indonesia/reports/covid-19-and-children-in-indonesia
- 3. Akseer, N., Kandru, G., Keats, E. C. & Bhutta, Z. A. COVID-19 pandemic and mitigation strategies:

- implications for maternal and child health and nutrition. *Am. J. Clin. Nutr.* **112,** 251–256 (2020).
- Bundy, D. Why Nutrition in School Age Children Is Important, and Even More Important as a Consequence of the COVID-19 Epidemic? Am. Soc. Nutr. (2020). at https://nutrition.org/why-nutrition-in-school-age-children-is-important-and-even-more-important-as-a-consequence-of-the-covid-19-epidemic/
- Adams, E. L., Caccavale, L. J., Smith, D. & Bean, M.
 K. Food Insecurity, the Home Food Environment, and Parent Feeding Practices in the Era of COVID-19. Obesity 28, 2056–2063 (2020).
- 6. Ventura, A. K. & Birch, L. L. Does parenting affect children's eating and weight status? *Int. J. Behav. Nutr. Phys. Act.* **5,** 15 (2008).
- Mais, L. A., Warkentin, S., Latorre, M. do R. D. de O., Carnell, S. & Taddei, J. A. A. de C. Parental Feeding Practices among Brazilian School-Aged Children: Associations with Parent and Child Characteristics. Front. Nutr. 4, 6 (2017).
- Yamborisut, U., Visetchart, P., Thasanasuwan, W., Srichan, W. & Unjana, R. Parental feeding practice is associated with child's body mass index in Thai school-aged children: A case study in Don Tum district, Nakhon Pathom, Thailand. J. Health Res. 32, 82–94 (2018).
- Panchal, N., Kamal, R., Orgera, K., Cox, C., Garfield, R., Hamel, L., Muñana, C. & Chidambaram, P. The Implications of COVID-19 for Mental Health and Substance Use. Kais. Fam. Found. (2020). at https://www.kff.org/coronavirus-covid-19-for-mental-health-and-substance-use/
- Birch, L. L., Fisher, J. O., Grimm-Thomas, K., Markey, C. N., Sawyer, R. & Johnson, S. L. Confirmatory factor analysis of the Child Feeding Questionnaire: a measure of parental attitudes, beliefs and practices about child feeding and obesity proneness. *Appetite* 36, 201–210 (2001).
- Philippe, K., Chabanet, C., Issanchou, S. & Monnery-Patris, S. Child eating behaviors, parental feeding practices and food shopping motivations during the COVID-19 lockdown in France: (How) did they change? *Appetite* 161, 105132 (2021).
- Jansen, E., Thapaliya, G., Aghababian, A., Sadler, J., Smith, K. & Carnell, S. Parental stress, food parenting practices and child snack intake during the COVID-19 pandemic. *Appetite* 161, 105119 (2021)
- Nightingale, A. J. in *Int. Encycl. Hum. Geogr. Second Ed.* (ed. Kobayashi, A.) 477–480 (Elsevier, 2020). doi:10.1016/B978-0-08-102295-5.10437-8
- Ulin, P. R., Robinson, E. T. & Tolley, E. E. Qualitative Methods in Public Health: A Field



- Guide for Applied Research: *Med. Sci. Sports Exerc.* **37**, 1249 (2005).
- Vaismoradi, M., Turunen, H. & Bondas, T. Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nurs. Health Sci.* 15, 398–405 (2013).
- Vaughn, A. E., Ward, D. S., Fisher, J. O., Faith, M. S., Hughes, S. O., Kremers, S. P. J., Musher-Eizenman, D. R., O'Connor, T. M., Patrick, H. & Power, T. G. Fundamental constructs in food parenting practices: a content map to guide future research. *Nutr. Rev.* 74, 98–117 (2016).
- Fisher, J. O. & Birch, L. L. Restricting access to palatable foods affects children's behavioral response, food selection, and intake. *Am. J. Clin. Nutr.* 69, 1264–1272 (1999).
- Loth, K. A. Associations Between Food Restriction and Pressure-to-Eat Parenting Practices and Dietary Intake in Children: a Selective Review of the Recent Literature. *Curr. Nutr. Rep.* 5, 61–67 (2016).
- Park, S., Li, R. & Birch, L. Mothers' Child-Feeding Practices Are Associated with Children's Sugar-Sweetened Beverage Intake1234. J. Nutr. 145, 806–812 (2015).
- Gevers, D. W. M., van Assema, P., Sleddens, E. F. C., de Vries, N. K. & Kremers, S. P. J. Associations between general parenting, restrictive snacking rules, and adolescent's snack intake. The roles of fathers and mothers and interparental congruence. Appetite 87, 184–191 (2015).
- 21. Wang, L., Dalton 3rd, W. T., Schetzina, K. E., Fulton-Robinson, H., Holt, N., Ho, A., Tudiver, F. & Wu, T. Home Food Environment, Dietary Intake, and Weight among Overweight and Obese

- Children in Southern Appalachia. *South. Med. J.* **106,** 550–557 (2013).
- Pesch, M. H., Appugliese, D. P., Miller, A. L., Rosenblum, K. L., Lumeng, J. C. & Bauer, K. W. Approaches to restrictive feeding: Associations with child weight and eating behavior. *Eat. Behav.* 31, 74–79 (2018).
- 23. Ayine, P., Selvaraju, V., Venkatapoorna, C. M. K. & Geetha, T. Parental Feeding Practices in Relation to Maternal Education and Childhood Obesity. *Nutrients* **12**, 1033 (2020).
- Gregory, J. E., Paxton, S. J. & Brozovic, A. M. Maternal feeding practices predict fruit and vegetable consumption in young children. Results of a 12-month longitudinal study. *Appetite* 57, 167–172 (2011).
- Pearson, N., Biddle, S. J. & Gorely, T. Family correlates of fruit and vegetable consumption in children and adolescents: a systematic review. Public Health Nutr. 12, 267–283 (2009).
- Ragelienė, T. & Grønhøj, A. The influence of peers' and siblings' on children's and adolescents' healthy eating behavior. A systematic literature review. Appetite 148, 104592 (2020).
- Marr, C., Reale, S., Breeze, P. & Caton, S. J. Grandparental dietary provision, feeding practices and feeding styles when caring for preschool-aged grandchildren: A systematic mixed methods review. *Obes. Rev.* 22, e13157 (2021).
- 28. Ehsan, S. Md. A. & Jahan, F. Analysing the impact of COVID-19 on the mothers of Bangladesh: hearing the unheard. *Z. Gesundheitswissenschaften* 1–14 (2021). doi:10.1007/s10389-021-01501-5

