

Experiences of Ghanaian School-Aged Children Regarding Dietary Practices for Weight Management

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ABSTRACT

Introduction: Childhood obesity has become a growing public health concern globally, including in low- and middle-income countries such as Ghana.

Objective: This study explored the experiences of Ghanaian school-aged children regarding dietary practices for weight management.

Methods: Three focus group discussions involving 26 participants from three basic schools in Cape Coast, Ghana were included. Child assent was obtained prior to data collection. Qualitative data were analyzed thematically following Braun and Clarke's reflective thematic analysis framework in MAXQDA Analytics Pro 2020.

Results: Four major themes emerged: (i) health and dietary knowledge, (ii) dietary practices and preferences, (iii) influences on dietary choices, and (iv) safety and concerns. Participants exhibited a fair understanding of healthy and unhealthy foods, noting the importance of nutrients for growth and well-being. Their dietary behaviors were shaped by parents, teachers, peers, and the school food environment. Children raised concerns about the unavailability of fruits, high cost of healthy foods, and unhygienic conditions of some food vendors at their schools.

Conclusions: Our study highlights the need for participatory efforts including students, parents, teachers, and policymakers to promote healthy eating and regular physical activity among school-age children. Encouraging sound nutritional habits early in life is crucial to preventing obesity and promoting lifelong health.

Keywords: childhood obesity, dietary practices, Ghana, school-aged children

INTRODUCTION

Overweight and obesity rates are rising in low- and middle-income countries. Previously, childhood obesity was exclusively an issue in high-income countries. (Danquah et al., 2020). In 2019, about 38.2 million children under 5 years old were impacted by overweight or obesity globally. In Africa, there has been an almost 24% rise in the number of children under 5 affected by overweight conditions since the year 2000. (*Obesity and Overweight*, n.d.). The prevalence of these conditions in this age group has surged from 4% in 1975 to over 18% in 2016. This rise has been consistent among both genders, with 18% of girls and 19% of boys classified as overweight in 2016 (Obesity, 2020). In 1975, less than 1% of children and adolescents aged 5-19 were classified as obese. However, by 2016, this number had surged to over 124 million individuals, constituting 6% of girls and 8% of boys (*Obesity and Overweight*, n.d.). According to estimates made by Lobstein and Jackson-Leach in 2016, if no policy interventions are found to be successful in reversing this trend, 268 million children worldwide between the ages of 5 and 17 may be overweight by 2025, with 91 million of them being obese. (Danquah et al., 2020).

Non-communicable diseases (NCDs) are becoming more prevalent worldwide and are now considered a global health concern. (Collaboration, 2016) (Ayomoh, 2021) NCDs cause more than half of all health issues worldwide and have a major impact on morbidity and death. (Girum et al., 2020). According to the Global Burden of Disease 2013 study report, NCDs caused around 38.3 million, or roughly 70%, of the 54.9 million fatalities that occurred globally, with low- and middle-income countries accounting for about 80% of these deaths. (Danquah et al., 2020; Girum et al., 2020). Nutritional aberrations such as childhood obesity, overweight, underweight, and stunting are linked to detrimental health outcomes all the way into adulthood. (Li et al., 2023). With a focus on early intervention to address childhood obesity, the United Nations recognized the potential for negative health outcomes and made prevention and control of NCDs, a primary issue in its 2015 Sustainable Development Goals. (Cerf, 2021). In order to tackle the obesity pandemic, the World Health Organization, through the Commission on Ending Childhood Obesity, has set important recommendations that emphasize the need of physical exercise, nutritious eating, and weight management. (Organization, 2016).

Economic growth and urbanization have an impact on the rising trend of childhood obesity. (Monterrosa et al., 2020). Dietary habits have changed as a result of urbanization in both developed and developing nations. Traditional healthful diets, which are often high in complex carbohydrates and veggies, have given way to foods that are high in fat and calories. (Baker et al., 2020; Chin et al., 2019). The rise in sedentary lives is also a result of urbanization and economic development. Both industrialized and developing nations have seen a decline in physical activity. (Popkin et al., 2012). Technological advancements have made things easier to do and move around, therefore possibilities for physical activity have significantly decreased. (Infurna et al., 2020; Jackson et al., 2020). Children play video games and engage in other indoor activities when they spend more time indoors than they do outside. (Koepf et al., 2022; Segura-Martínez et al., 2021). The primary cause of the rise in obesity and overweight over the past few decades is the energy imbalance brought on by an increase in high-calorie food intake and a decrease in physical activity (Dhurandhar et al., 2021). Studies indicate that Ghana's obesity and overweight rates have risen during the previous few decades (Akowuah & Kobia-Acquah, 2020; Lartey et al., 2019; Ofei, 2005; Ofori-Asenso et al., 2016). The Ghana Demographic and Health Survey show a noticeable increase in childhood obesity between 1988 to 2008 (*Ghana DHS 2014-KIR-21_May_2015.Pdf*, n.d.). Childhood obesity and overweight prevalence rates have fluctuated, with obesity prevalence ranging from 0.7% to 47.06% and overweight prevalence from 0.8% to 33.66%. (Amoh & Appiah-Brempong, 2017; Annan-Asare et al., 2017; Atsu et al., 2017; Kwabla et al., 2018). The observed variations in prevalence are likely a result of the geographical diversity of the research

locations, as different regions of the country have distinct dietary patterns and lifestyles (Abizari & Ali, 2019; de Jager et al., 2018; Frank et al., 2014).

Early childhood experiences shape eating patterns, which typically last into adulthood and show continuity throughout time (Montaño et al., 2015). While it can be difficult to directly change children's eating habits and weight, parental feeding practices seem to be a viable area for intervention to stop children from developing bad eating habits and becoming overweight (Finnane et al., 2017). Over a child's life, the complexity and diversity of their environment gradually increase. (Cuellar et al., 2015). Children's eating experiences and food settings are greatly influenced by their parents. When it comes to eating habits, lifestyle decisions, eating attitudes, and emotions of contentment or dissatisfaction with their bodies, children frequently imitate their parents (Scaglioni et al., 2018). When employing socio-ecological frameworks, the intrapersonal level of children's dietary choices is notably shaped by factors such as knowledge, skills, taste preferences, and familiarity with food (Scaglioni et al., 2018). (Baird et al., 2017), (Krølner et al., 2011). Interpersonal influences often emanate from families and peers (Yee et al., 2017), (Ragelienė & Grønhøj, 2020), while community factors encompass school settings (Wafa & Ghazalli, 2020) and the physical environment, including the proximity of food stores (Townshend & Lake, 2017). Macrosystem influences extend to policies, media, and advertisements (Scaglioni et al., 2018). (Ragelienė & Grønhøj, 2020).

In recent years, there has been a growing interest in qualitative studies involving children, as their responses have been found to be more comprehensive and accurate compared to reports provided by parents (Ogden & Roy-Stanley, 2020; Vereecken & Maes, 2014). This approach has proven particularly valuable in uncovering new insights into the various determinants of dietary behaviour and understanding culture-specific influences (Rathi et al., 2016). Furthermore, research indicates that children aged 7 and older not only enjoy expressing their opinions but also provide reliable and useful information for guiding interventions (Adler et al., 2019). Despite these advancements, the majority of studies exploring children's perceptions have been conducted in North America, Europe, the UK, and Australia (Holsten et al., 2012), with a noticeable lack of such studies in the Ghanaian context (Ishak et al., 2020). A more in-depth understanding of the dietary strategies employed by children themselves can offer valuable insights for designing interventions to support sustainable behavioural change. This qualitative study aims to investigate children's perspectives on dietary practices and weight management in Ghana for the prevention and management of obesity and overweight, utilizing focus group discussions (FGD).

METHODS

Research Design

This study employed a qualitative interpretive research design to explore children's perspectives on dietary behaviours and strategies for preventing and managing obesity. The qualitative approach was utilized to generate an in-depth understanding of how children make meaning of their food choices and the contextual factors influencing their eating habits. This approach was well suited for eliciting insights from children in late childhood, a period marked by increasing autonomy in food-related decision-making. The study was conducted in co-educational primary schools located in Cape Coast in the Central Region of Ghana.

Study Participants and Recruitment Strategy

Participants were primary school children aged 8–12 years enrolled in Primary 4 to 6. This developmental range was purposefully selected to capture perspectives during a critical stage of social and cognitive development that shapes children's eating practices. Children were eligible to participate if they were within the specified age range and provided both parental consent and child assent.

Recruitment was carried out between December 2023 and January 2024 through classroom distribution of information sheets containing consent and assent forms. A total of 54 students received the materials, and 26 returned completed forms expressing interest in the study. The final sample included 12 boys and 14 girls.

Data Collection Procedures

Data collection was conducted in December 2023 and involved three focus group discussions (FGDs), each comprising 8–9 participants. A semi-structured FGD guide served as the primary data collection instrument. The guide contained two sections: (1) demographic questions on age, sex, and class level, and (2) open-ended items designed to elicit children's perspectives on dietary behaviours, body weight concerns, and strategies for preventing and managing obesity adapted from Sylvetsky's study (Sylvestsky et al. 2013). The guide incorporated child-friendly prompts and visuals to promote engagement and comprehension. FGDs were held during first and second school breaks in quiet settings, either classrooms or shaded outdoor spaces, to minimize noise and distractions. Study participants had no prior relationships with the research team, reducing the likelihood of response bias. A familiar teacher was present only at the initial introduction for comfort but did not participate in the discussions. Each session was facilitated by a trained moderator and supported by a note taker who documented nonverbal cues, group dynamics, and contextual details. Before data collection, facilitators and note takers underwent training delivered by the research team, focusing on child-centered interviewing techniques, ethical conduct, and adherence to the study protocol. At the beginning of each FGD, the facilitator reviewed the study purpose, established ground rules, highlighted confidentiality, and explained the use of audio recording. An icebreaker activity, where children introduced themselves and named foods beginning with a randomly selected letter, was used to build rapport and ease participants into the session. The discussions followed a semi-structured format, supplemented with interactive activities such as sorting picture cards depicting commonly consumed foods and body image illustrations. These activities helped maintain attention, foster participation, and support expression among younger children. Each FGD lasted 45–60 minutes and was recorded. Data collection continued until thematic saturation was reached, indicated by the repetition of similar ideas and the absence of new insights across groups.

Data Analysis

Qualitative data were analyzed using MAXQDA Analytics Pro Version 2020, guided by the reflexive thematic analysis framework outlined by Braun and Clarke (2014). The analytic process involved familiarization with the transcripts, systematic coding, development of initial themes, and iterative refinement to ensure coherence and depth. Field notes captured by the note taker were integrated into the analysis to enrich interpretation and strengthen contextual understanding.

Ethical Considerations

Ethical approval for the study was granted by the University of Cape Coast Institutional Review Board (IRB/CoHAS/2022/24). The study's purpose, procedures, and voluntary nature were thoroughly explained to parents and children. Written informed consent was obtained from parents or guardians, and assent was obtained from all participating children. Participants were assured of confidentiality, informed of their right to withdraw at any time, and reminded that there were no consequences for declining to answer any question. During analysis and reporting, personal identifiers were removed and replaced with unique codes to protect participants' privacy.

Research Team and Reflexivity

The research team consisted of lecturers and graduate researchers in Nutrition and Dietetics who had experience working with children's health. None of the researchers had any prior relationship with the participants, which helped reduce bias during the discussions. Before data collection, the facilitator and note taker introduced themselves, explained the purpose of the study, and emphasized that there were no right or wrong answers. Although the team had strong knowledge of healthy eating, they remained conscious of how their own beliefs could influence the children's responses. To minimize this, they used neutral language, followed a structured interview guide, and avoided leading questions or reactions that might affect children's answers. Reflexivity was maintained throughout the study to ensure that the findings represented the children's true opinions and not the researchers' expectations.

RESULTS

Sociodemographic Characteristics

Most of the pupils were between 9 and 11 years old, with a median age of 9 years (IQR: 9–11). Slightly more than half of the participants were female (53.8%), and the rest were male (46.2%). Almost half of the children were in Primary 4 (42.3%), with others in Primary 5 (30.8%) and Primary 6 (26.9%). All participants resided in urban communities within the Cape Coast Metropolis.

Table 1. Demographic Characteristics of Participants (N = 26)

Characteristics	n (%)
Age (years)	
Median (IQR)	9 (9–11)
Range	8–12
Sex	
Male	12 (46.2)
Female	14 (53.8)
Class Level	
Primary 4	11 (42.3)
Primary 5	8 (30.8)
Primary 6	7 (26.9)
Residence	
Urban	26 (100)

Three overarching themes were identified from the focus group discussions: (1) Health and Dietary Knowledge, (2) Dietary Practices and Preferences, and (3) Influences on Dietary Choices and Its Impact, representing children's understanding, behaviors, and perceived facilitators of healthy eating and obesity prevention. Table 2 summarizes the themes, subthemes, and illustrative quotes.

Health and Dietary Knowledge

Children demonstrated varied understanding of healthy eating and the components of a balanced diet. Many described balanced meals as foods that help them grow well, prevent illness, and provide vitamins, minerals, carbohydrates, and proteins. When explaining food groups, they correctly

associated mixed dishes such as rice with stew and banku with protein-rich accompaniments with their nutrient contributions. At the same time, children questioned the healthiness of some commonly consumed foods. They expressed concerns about high-sugar snacks and drinks, queried whether instant noodles contained harmful substances, and recognized that cooking practices, such as using too much oil, could make meals unhealthy. There were also notable awareness of obesity and its consequences. Children linked overweight and obesity to frequent consumption of junk foods, excess carbohydrates and fats, late-night eating, lack of exercise, and inadequate dietary fibre. They mentioned both health risks (e.g., kidney disease and heart failure) and social consequences such as teasing, and expressed a desire to avoid obesity through healthier choices.

Dietary Practices and Preferences

Children reported diverse fruit and vegetable preferences shaped by taste, availability, and previous experiences. Many enjoyed fruits such as apples, oranges, and mangoes, while some avoided particular fruits because of discomfort or negative reactions, such as itching from pineapple or vomiting after eating mango. Vegetables like carrots and onions were often described as "nice" or "sweet," whereas green pepper, ginger, and garlic were rejected for being bitter or causing mouth pain or loss of appetite. Frequency of fruit and vegetable intake ranged from daily to occasional and was largely dependent on whether these foods were available at home. Physical activity patterns also varied. Several children described active play, including football, running, jumping, and playing with siblings, especially when they were not preparing for exams. Others spent more time in sedentary pursuits such as watching television, using YouTube, listening to music, or reading storybooks, suggesting a mix of active and sedentary routines.

Influences On Dietary Choices and Its Impact

Family influence emerged as a central determinant of dietary behavior. Children reported that they were more likely to eat fruits and vegetables when these were purchased and made available by parents or guardians. Caregivers actively discouraged the consumption of sweets, sugary drinks, and other junk foods, often warning about "chemicals" or health problems. Some children described completely stopping certain snacks because of parental advice. School and teacher influences were also evident. While a few children mentioned that fruits were sometimes sold at school, others reported that school food vendors mainly sold sweet snacks, which conflicted with parental guidance. Physical education teachers cautioned pupils against eating foods sold in unhygienic environments and highlighted the risk of disease from such practices. Personal experiences, such as stomach pain after consuming carbonated drinks or overconsumption of ice cream, reinforced parental restrictions and led some children to modify their eating behaviors.

Safety Concerns

Safety concerns featured prominently in children's narratives about food environments. Pupils reported that fruits were often unavailable in schools because vendors perceived them as too expensive or believed that students did not like them, limiting access to healthier options. Children also expressed worry about food hygiene, describing vendors who used excessive spices and oil and did not wash their hands properly after using the restroom before handling food. Beyond hygiene, children articulated a broader sense of responsibility and advocacy around healthy eating. They felt that family and friends should advise them on food choices, cook nutritious meals, and ensure regular exercise. Some children indicated they would personally encourage peers to avoid carbonated drinks and fattening foods. A few also recognized that unhealthy foods are sometimes produced and marketed primarily for financial gain, suggesting early awareness of economic drivers behind the availability of less healthy foods.

Table 2. Themes, Subthemes, and Illustrative Quotes from Focus Group Discussions with Schoolchildren on Dietary Behaviors and Obesity

Themes	Subthemes	Illustrative Quotes
Health and Dietary Knowledge	Understanding balanced diet	“A balanced diet is a food that you eat that help you grow well, gain weight and help you not to get sick easily.” (F3L3) “The stew gives us vitamins, the rice gives us carbohydrate, and the fish gives us protein.” (F2L7)
	Concerns about food healthiness	“Some snacks are not healthy because they contain too much sugar.” (F3L3) “Some snacks are good because they add fruits and low percent of sugar... The snacks that are not good are the ones that they add too much sugar and chemicals...” (F3L8) “Is it true that indomie is made up of rubber?” (F2L1) “If you add a lot of oil, it’s not that healthy...” (F1L1)
	Perceptions of obesity and risks	“Obesity is fatness.” (F1L1) “Overweight means you have so much weight than your normal weight... when we take in so much carbohydrate.” (F3L2) “When you eat junk food every day... the person can die.” (F3L3) “Kidney disease.” (F3L5) “Heart failures.” (F2L7) “People can tease you just because you are obese.” (F1L3)
Dietary Practices and Preferences	Fruit and vegetable preferences	“I like all the fruits except grapes, pawpaw and pineapple... the pineapple, it makes your tongue itch you.” (F1L9) “I like onion and carrot... But I don’t like green pepper because it taste awful.” (F3L8) “I eat them when my mother buy them or when there’s some in the house.” (F2L1)
	Physical activity and leisure	“I go out and play football or I run.” (F3L8) “I go out and do activities... jumping, running and playing.” (F3L7) “Sometimes I watch movie or sometimes I study.” (F3L5) “Madam I eat and watch YouTube.” (F2L9)
Influences on Dietary Choices and Its Impact	Family guidance and restrictions	“My mother tells me that the toffees, they will bring chemicals to you so I should stop, I’ve stopped totally.” (F1L5) “My mother and my father said I should stop eating sweets and all kinds of junk foods...” (F1L2) “My grandma said that a lot of everything is bad so whatever I eat, I should not eat it every time.” (F1L3)
School and teacher influence		“Some fruits are available in the school... sometimes orange.” School and teacher (F1L1) “They sell some sugary biscuit and things there.” (F2L1) “My PE teacher... said I shouldn’t take them because I may get diseases because of the environment they sell it in.” (F2L3)

Themes	Subthemes	Illustrative Quotes
Safety Concerns	Personal experiences and impact	“When I eat toffee and those kinds of drinks... my stomach will be starting to paining me.” (F1L9) “When she stopped [taking ice cream], she found out that it’s not good for her.” (F2L7)
	Availability and affordability of healthy foods	“No, there are no fruits, they think it will be expensive for us to buy it.” (F2L6) “Some of the students don’t like fruits.” (F2L9)
	Hygiene and food safety	“Some of the people, they put a lot of spices and oil inside and sometimes too, when they finish defecating, they don’t wash their hands well and they will be taking it for you.” (F1L9)
	Responsibility and commercial motives	“I will advise my friend to stop drinking carbonated drinks and stop eating foods that will make you become fat.” (F3L8) “Our parents should provide us with adequate information... should cook good meals for us... should make sure we exercise at least every day.” (F2L7-UP) “They make the foods and sell it because they want people to come and buy it so that their financial gains...” (F2L8)

DISCUSSION

This study explored children’s dietary knowledge, food practices, concerns about safety, and the key influences shaping their eating habits. The findings show that children are not passive consumers of food; they possess meaningful knowledge about nutrition, negotiate their food choices through personal experiences, and respond to the social and environmental conditions around them. These insights highlight the importance of listening directly to children, not only to understand what they eat, but why they make certain choices and how they interpret health information in their daily lives.

Children’s knowledge and perceptions of healthy eating

The participants demonstrated a strong awareness of what constitutes a balanced diet and the health implications of poor dietary habits. Many children correctly identified healthy foods like fruits, vegetables, protein-rich dishes and recognized that excessive intake of sugary or fatty foods can lead to overweight and obesity. They also linked obesity to negative outcomes like illness, difficulty in movement, and social teasing. Similar observations have been made in other contexts; for instance, adolescents in Malaysia defined healthy versus unhealthy eating largely by food types and preparation methods (Ishak *et al.*, 2020), and our participants likewise pointed out that cooking methods such as using too much oil, can make an otherwise healthy dish harmful. The children’s concern about specific items (whether instant noodles contain “rubber”) indicates that some misinformation or myths circulate among them, which is also common at this age. Altogether, the ability of these children to discuss nutrients like vitamins in stew or carbohydrates in rice, and to articulate the concept of a balanced diet is encouraging, which supports prior evidence that children, when given the opportunity, can reliably report their understanding of health and diet (Adler *et al.*, 2019). Their awareness of obesity and its causes (such as junk food and lack of exercise) also mirrors findings from studies in high-income

countries where children associate unhealthy eating and sedentary lifestyles with being overweight (Holsten *et al.*, 2012).

Dietary preferences and practices

Our results show that while children generally enjoy many fruits and some vegetables, their consumption is highly dependent on taste acceptability and availability. Some fruits were disliked due to taste or adverse reactions (for example, pineapple causing tongue itching, or mango causing nausea for certain children), and also, some vegetables like green pepper or ginger, were avoided because of bitterness or discomfort. Such taste-driven preferences are consistent with the literature that identifies sensory appeal as a key determinant of children's food choices (Krølner *et al.*, 2011). Children naturally gravitate towards foods they find palatable, and bitter flavors or negative experiences can create aversions. On the other hand, several children in our study expressed enjoyment of carrots, onions, and other vegetables when prepared in appealing ways. This reinforces the idea that improving the palatability and preparation of healthy foods could encourage higher intake among young ones. Importantly, availability emerged as a critical factor: many children noted they eat fruits and vegetables when these are readily available at home or school, which aligns with existing evidence that accessibility is strongly linked to higher fruit and vegetable intake in children (Krølner *et al.*, 2011; Scaglioni *et al.*, 2018). In our context, if parents purchase fruits or if the school provides them, children are more likely to consume them regularly. The children's descriptions of their physical activity also varied, with some engaging in active play (football, running, outdoor games) and others spending time on sedentary hobbies (television, video games). This mix of activities reflects global trends where opportunities for exercise are sometimes limited by competing sedentary entertainment (Popkin *et al.*, 2012). Although our study focus was not physical activity per se, the children's remarks underscore how diet and activity often coexist; those who were conscious of diet also mentioned exercise, indicating a substantial awareness of healthy lifestyle practices.

Influences on dietary choices

Family influence was a dominant theme in the children's discussions. Participants frequently mentioned parents and occasionally grandparents, as key figures who guide what they eat. Some children said they had stopped eating certain "junk" foods because their mother or father warned them about health effects. This finding is in line with numerous studies highlighting the pivotal role of parents in shaping children's eating habits through both modeling and setting rules (Scaglioni *et al.*, 2018; Yee *et al.*, 2017). Parents in our study not only provided healthy foods when possible but also actively restricted unhealthy items, confirming that parental oversight is a crucial factor in improving child diet quality. In addition to direct parental guidance, children's dietary behaviors were influenced by their broader environment. The school food environment presented mixed influences: while one child noted that oranges were sometimes sold at school, others pointed out that many available snacks at school were sugary or not very healthy. This kind of conflict between health education messages and the actual food options accessible to children was reported in Ishak *et al.*, 2020 study where school curriculum encourages fruit consumption but the canteen or vendors predominantly sold candy and fried snacks. Our participants felt this tension; they mentioned that fruits were often not sold at school because vendors assume either that students will not buy them or that fruits would be too expensive for the children. Indeed, studies in other low- and middle-income settings have noted that healthier foods are perceived as cost-prohibitive or less profitable to sell, resulting in limited availability in school settings (Reynolds *et al.*, 2025; Chinogona *et al.*, 2021). In our study, the children's reliance on parents to provide healthy foods suggests that, in the absence of a structured school feeding program, the home remains the primary source of nutritious options. Additionally, peer influence was mentioned indirectly where some children talked about advising their friends to avoid certain unhealthy foods. Prior research

has shown that peer behaviors and norms can affect children's eating choices, especially as they grow older (Ragelienè & Grønhøj, 2020).

Safety and environmental concerns

A uniquely striking aspect of our findings is the emphasis children placed on food safety and hygiene. Participants expressed concern that some street food vendors or school snack sellers do not practice proper hygiene or that they use excessive additives (spices, oil) that could make food less healthy. Food safety is not always a focus in studies of children's dietary habits, but in our context, it emerged organically, which may reflect the children's lived experiences with their local food environment. In a recent photovoice study, food hygiene and safety were in fact the most frequently mentioned factors influencing adolescents' food decisions at school (Reynolds *et al.*, 2025). The lack of healthy options like fruits in the school environment, as noted by our participants, also highlights a gap that has policy implications. Children recognized that fruits were absent because of cost or assumption of low preference, and they found this problematic. Affordability of healthy food is a common barrier in many settings (Krølner *et al.*, 2011; Monterrosa *et al.*, 2020), and the children's perspective provides confirmation that economic factors visibly shape their choices: when only cheap, energy-dense snacks are available, those become the default choices. Another insightful observation from some children was the notion that manufacturers and sellers make unhealthy foods "to get financial gains." This demonstrates a rudimentary awareness of the food industry's profit motive and how it might conflict with public health essentially, children perceive that tasty high-sugar or high-fat products are marketed to entice them despite health consequences. Such critical understanding is seldom reported in this age group, and it aligns with broader discussions in nutrition literature about the role of food marketing and the proliferation of ultra-processed foods in the nutrition transition (Baker *et al.*, 2020). Recognizing this perspective in our participants suggests that interventions could build on children's inherent skepticism about junk food marketing, perhaps by strengthening their media literacy and understanding of advertising tactics.

Our study's themes – knowledge, practices, social influences, and environmental factors – reinforce the utility of a socioecological framework for interpreting child nutrition behaviors. The children's viewpoints illustrate how factors at multiple levels (individual, home, school, community) interact. This is consistent with conceptual models proposed in prior research (Scaglioni *et al.*, 2018) and accentuates that effective solutions to improve children's diets must be multi-faceted. Notably, our research adds to the limited qualitative literature from sub-Saharan Africa capturing children's own voices. Previous studies on Ghanaian children's diet have been largely quantitative or based on parent reports, making it difficult to understand the personal experiences and reasoning of the children themselves. By conducting focus groups directly with children, we were able to uncover not only what they do or know, but *why* they make certain choices and how they feel about the challenges of healthy eating. This methodological strength gives our findings a high degree of validity regarding children's real perspectives and can inform culturally relevant interventions. However, it is important to acknowledge the study's limitations. The sample was drawn from one city and involved children who had consent to participate, which may mean they come from families more interested in nutrition or health; thus, their knowledge levels might not be generalizable to all children in Ghana. Additionally, focus group discussions can be influenced by peer presence, potentially leading some participants to withhold dissenting opinions or exaggerate healthy behaviors due to social desirability. Despite these limitations, the insights gained are valuable for hypothesis generation and for tailoring future nutrition programs to children's reported needs. Future research could build on this work by exploring the perspectives of children in different regions (urban vs rural) and by quantitatively assessing how widespread some of these perceptions are.

CONCLUSION

This study shows that Ghanaian school-aged children have meaningful knowledge about healthy eating and can clearly describe the personal, family, school, and environmental factors that shape their dietary choices. Their awareness of issues such as food availability, cost, hygiene, and parental influence informs the need for multi-level interventions that extend beyond classroom nutrition education. To build on these findings, future research should include studies that track how children's nutrition knowledge, preferences, and behaviors develop over time, especially in response to policy changes or targeted programs. Also, intervention trials are needed to evaluate the effectiveness of school-based strategies such as increasing fruit availability, regulating snack vendors, improving food-safety practices, and child-led initiatives like peer-support clubs and media-literacy activities. These efforts will provide stronger evidence for designing sustainable and culturally relevant solutions to improve children's dietary behaviors and prevent obesity.

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