

FAMILY BACKGROUND AND SOCIOECONOMIC FACTORS AS DETERMINANTS OF CHILDREN'S EATING HABITS: INSIGHTS FROM THE CHILD HEALTH 2024 STUDY

Dana Hübelová¹ , Beatrice-Elena Chromková Manea¹ , Jana Kratěnová² ,
Kristýna Žejglicová² 

¹ Mendel University in Brno, Faculty of Regional Development and International Studies, třída Generála Píky 7, 613 00 Brno, Czech Republic

² National Institute of Public Health, Šrobárova 49, 100 00 Praha, Czech Republic

Abstract

Family environment plays a crucial role in shaping children's eating habits, both through parental attitudes and the socioeconomic conditions of the household. A study conducted in Brno in 2024 surveyed parents (N = 228) during preventive paediatric check-ups using a structured questionnaire. The analysis revealed that more than half of the children consume sweet or salty snacks on a daily or near-daily basis, while only a minority of families effectively limit such behaviour. Nevertheless, most children regularly drink water, and more than two-thirds eat breakfast every day. Food selectivity proved to be a widespread phenomenon, with almost 80% of children showing some degree of picky eating. Shared family meals also emerged as an important factor: while the majority of families eat together on weekends, fewer than half manage to do so during weekdays. A composite Healthy Eating Index confirmed that higher parental education levels and an active interest in healthy nutrition are associated with more favourable dietary behaviours in children. The findings emphasize that effective prevention of unhealthy eating patterns requires a close interplay between family and school settings, combining parental guidance with educational strategies and improvements in school catering environments.

Keywords: Eating Habits, Socioeconomic Factors, Child Health 2024/25 Study

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Introduction

Childhood obesity ranks among the major public health challenges of today, both in terms of its increasing prevalence and its long-term consequences for individual health. Obesity in childhood commonly tracks into adulthood and is associated with increased risk of cardiometabolic diseases and premature mortality (Birbilis *et al.*, 2013; Mavrogianni *et al.*, 2021). The occurrence of childhood obesity is multifactorial, encompassing genetic predispositions, perinatal factors, lifestyle, and socioeconomic determinants.

The family environment is not only a key agent in shaping children's eating habits; it also functions as a cultural mechanism reflecting broader societal values and traditions. Promoting healthy family mealtimes and positive parenting approaches may foster healthier dietary behaviours among children and help prevent adverse health outcomes later in life. Alongside the family context, cultural values and the socioeconomic situation also influence both the foods children consume and the attitudes toward eating that they develop. Whereas cultural influences may be deeply rooted and difficult to modify, socioeconomic factors can be partly addressed - e.g., through parental nutrition education and initiatives that improve access to healthy foods.

Theoretical Background

The family environment plays a pivotal role in shaping children's eating habits, with its influence manifested through family dynamics, parental attitudes, and cultural patterns. From the perspective of cultural patterns, eating is not only a biological necessity but also a sociocultural phenomenon. Factors such as clearly defined rules for eating, versus the presence of distractions during meals (mobile phones, tablets, laptops, etc.), and the ways in which parents motivate children to eat, have a substantial impact on children's eating behaviour (Piloquet *et al.*, 2024). Children exposed to clearer mealtime rules and shared family meals tend to exhibit more varied and healthier eating habits. Children's prosocial behaviour can be shaped by

family activities such as cooking together or participating in cultural events, which may indirectly influence their approach to food (Berge *et al.*, 2023). This underscores the importance of family cohesion and eating-related 'rituals' that can reinforce health-promoting dietary habits. Parents' shared meals with children appear to be an important protective factor. More frequent family dinners and home cooking support healthier dietary patterns and weight regulation in children, though parents' time constraints related to employment substantially shape the feasibility of regular shared meals (Boutelle *et al.*, 2014).

Key determinants of health-promoting eating habits include hydration, the frequency of daily meals and breakfasts, shared meals, snacking, and food fussiness. A regular daily schedule of meals is particularly important. Skipping breakfast – more common among children from lower socioeconomic backgrounds – represents a significant risk factor for the development of obesity. Conversely, regular breakfast consumption is associated with better weight regulation and healthier dietary composition (Shrewsbury, Wardle, 2008).

Children's eating behaviour is also influenced by the availability of beverages and foods within the home environment. Greater and 'unrestricted' availability of sugar-sweetened beverages and sweets is linked to more frequent snacking and higher obesity risk and is more prevalent in families with lower socioeconomic status. By contrast, households with more highly educated parents tend to offer healthier alternatives such as water, fruits, and vegetables (Boutelle *et al.*, 2014; Birbilis *et al.*, 2013). It follows that family socioeconomic status, particularly parental education, affects not only overall obesity risk but also specific components of dietary habits, such as drinking patterns and snacking frequency.

Another potential risk factor for children's eating habits is food fussiness. Food fussiness may be influenced by parenting style and by the range of foods offered at home. An authoritative parenting style combined with higher maternal education is typically associated with a more varied supply of healthy foods and lower selectivity among children, whereas permissive approaches and lower educational attainment are more often linked to greater fussiness and preferences for unhealthy foods (Vereecken *et al.*, 2004; Shrewsbury and Wardle, 2008).

The above-mentioned factors are closely connected to family socioeconomic characteristics, especially educational attainment, parental time availability, and attitudes toward a healthy lifestyle. Maternal education, attitudes to nutrition, cultural beliefs, and family support play important roles in the introduction of complementary feeding among infants and toddlers. Children from higher-SES families tend to consume more balanced diets, whereas those from lower-SES families may be more exposed to nutritional deficits due to financial constraints and reduced access to quality foods (Qoyimah *et al.*, 2024).

Methods

Input data were obtained as part of the Child Health 2024/25 Study (Prevenec nemoci a podpora zdraví dětí, 2024), conducted in paediatric primary care practices across the Czech Republic. For the pilot analyses, we deliberately selected questionnaires from practices in Brno, where a survey of parents (N = 228) was carried out in 2024 during preventive paediatric check-ups. Data were collected using a structured questionnaire. For the purposes of this paper, we analysed items related to children's eating habits and the family environment. Specifically, we considered: the regularity of meals and breakfasts; consumption of sweets/unhealthy snacks; hydration; the degree of food fussiness; and shared meals - subsequently used to construct a Healthy Eating Habits Index that integrates these domains into a single, comparable outcome measure.

To capture overall healthy eating habits, we constructed a composite index from five domains measured in the survey: a) regularity of breakfast and main meals; b) consumption of sweet/ "unhealthy" foods; c) hydration (drinking regime); d) pickiness/food fussiness; and e) frequency of shared/family meals. Higher scores indicate healthier habits.

Items were coded so that higher values consistently reflect healthier behaviour. To eliminate scale differences, each domain score was standardized using z-scores:

$$z_{ij} = \frac{x_{ij} - \bar{x}_j}{s_j},$$

where x_{ij} is respondent i 's domain score on domain j , \bar{x}_j is the sample mean, and s_j the sample standard deviation.

The composite index is the unweighted mean of the standardized domains:

$$C_i = \frac{1}{9} \sum_{j=1}^9 z_{ij}.$$

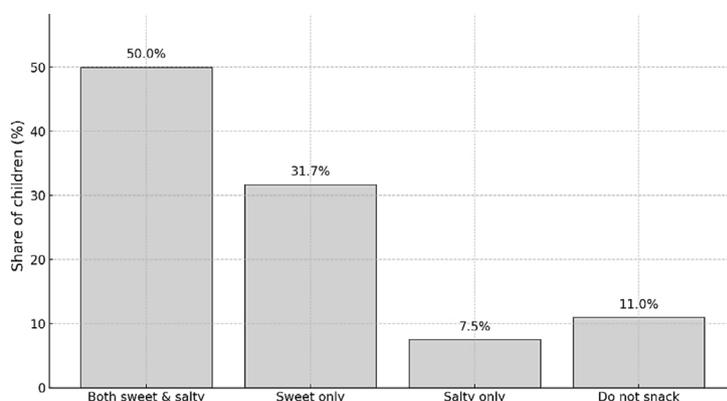
Equal weighting reflects the a priori view that each domain contributes comparably to healthy eating habits. Higher values always indicate healthier eating patterns.

Results

The results are presented according to the questionnaire items selected from the Child Health 2024/25 survey for parents. Following the descriptive statistics, we report findings for the composite Healthy Eating Habits Index.

Questions on the Consumption of Unhealthy Foods and Their Frequency

The findings indicate that consumption of sweets and salty snacks, i.e., snacking between main meals, is very widespread among children. Only 11.0% of parents reported that their children do not snack at all, meaning that the vast majority consume unhealthy snacks at least occasionally. The most common response was a combination of sweet and salty snacks (50%), indicating that half of the children regularly consume both types of unhealthy foods according to parental reports. Another 31.7% preferred sweet snacks and 7.5% preferred salty snacks (Fig. 1). The frequency of consumption is also high. More than half of parents (52.2%) stated that their children snack daily or almost daily, whereas only 2.0% reported that their children consume sweets and snacks only rarely. The most frequent response was ‘only occasionally’ (45.8%), suggesting that some children have at least partial control over snacking. Overall, however, excessive and frequent consumption of sweets constitutes a risk factor in the paediatric population.

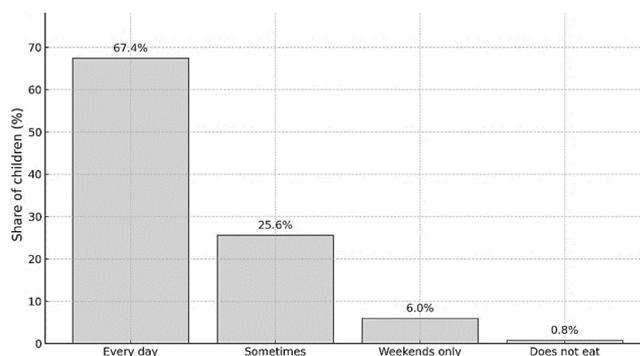


1: Consumption of sweet and salty snacks

Source: Child Health 2024/25 questionnaire (2024)

Questions on the Frequency of Regular Eating Throughout the Day and Breakfast Frequency

Regularity and an adequate number of meals during the day play a crucial role in preventing overweight and obesity. Most parents (73.9%) reported that their children consume 4–5 meals per day, which is considered optimal. More than a quarter of children (26.1%) have a suboptimal meal pattern according to parents, either too few (1–3 meals per day) or too many (6 or more meals). This dispersion indicates irregularity that may lead to fluctuations or an excessively high energy intake from foods. According to parents, 67.4% of children eat breakfast regularly, 25.6% eat breakfast only sometimes, and 6.2% only at weekends. A total of 1.0% do not eat breakfast at all (Fig. 2), which may negatively affect concentration, school performance, and metabolic health.



2: Breakfast frequency

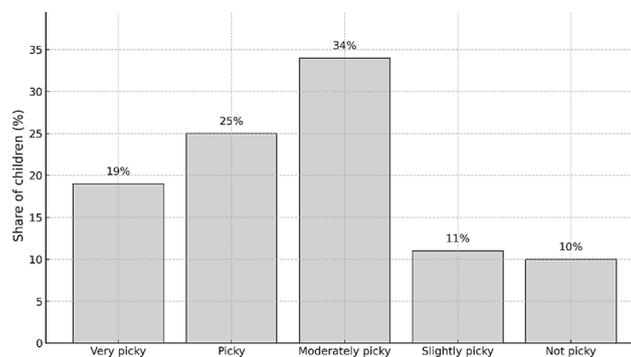
Source: Child Health 2024/25 questionnaire (2024)

Questions on the Child's Hydration (Drinking Regime)

Hydration represents another important indicator of a healthy lifestyle. More than half of parents (61.2%) reported that their child prefers unsweetened beverages, whereas 38.8% indicated a preference for sugar-sweetened drinks. A positive finding is that 93.8% of children tolerate drinking plain water. Nevertheless, 6.2% do not drink water at all, suggesting possible dependence on sugar-sweetened soft drinks and juices. Although water forms part of most children's hydration, a preference for sweetened drinks may substantially contribute to excessive sugar intake.

Question on the Degree of Food Fussiness

Food fussiness was rated by parents on a five-point scale. Only 21.5% of parents reported that their children were not at all or only slightly fussy. The largest group comprised children with moderate fussiness (34.1%). According to parents, 19.3% of children are very fussy, which may imply a limited range of foods and risk of an unbalanced diet. Another 34.1% exhibit moderate fussiness (Fig. 3). This means that nearly 80% of children show some degree of selectivity, a factor to consider when planning school menus and designing healthy-eating interventions.



3: Degree of food fussiness

Source: Child Health 2024/25 questionnaire (2024)

Questions on Shared Family Meals

Structured family eating is an important factor of a healthy lifestyle. On weekdays, only 43.4% of families eat together regularly. Most commonly (53.1%), families dine together only occasionally, and 3.5% do not eat together at all. At weekends the situation differs: 81.1% of families eat together regularly—nearly three times the weekday proportion. These findings indicate an individualisation of eating during the working week, which may adversely affect not only diet quality but also family communication and children's relationship to food.

Healthy Eating Habits Index

For overall assessment, we constructed a composite Healthy Eating Habits Index. The mean value of the index was 57.9, indicating a moderate level of healthy eating habits. The median (59.4) exceeded the mean, indicating a slightly negatively skewed distribution. The standard deviation (18.2) suggests considerable variability across children.

Parental Socioeconomic Status and its Influence on Eating Habits

Parental education emerged as an important factor. Children of mothers with primary education or secondary education without a diploma achieved the lowest index (51.8), those of mothers with secondary education with a diploma scored 58.2, and the highest values were observed among children of mothers with higher education (61.3). The differences were statistically significant ($F = 4.28$, $p = 0.015$), with maternal education explaining roughly 4% of the variability ($\eta^2 = 0.038$). A similar trend was observed for fathers: the best results were found among children of fathers with higher education (63.4), whereas the lowest values were among children of fathers with primary education or secondary education without a diploma (53.2). However, these differences were not statistically significant ($p = 0.002$).

Subjective Evaluation of the Financial Situation

Most families rated their financial situation as satisfactory or very satisfactory (78.9%). Only 1.8% of families reported that their financial situation was rather or completely unsatisfactory. The Pearson correlation coefficient $r (-0.114)$ indicates a small to moderate association between the family's financial situation and the child's eating-habits index. The worse the family's financial situation (completely unsatisfactory), the

poorer the child's eating habits (lower index values). Although the correlation is weak (-0.114), the trend is clear, and economic insecurity may adversely affect the quality of children's eating habits.

Parental Attitudes to Nutrition and Time Available for meal Preparation

One-third of parents (32%) declared that they pay great attention to healthy eating. Only 3.1% of parents do not address this aspect at all. More than two-thirds of parents (64.9%) try to do so, but it is not of paramount importance to them. The results confirmed that parental attitudes have a significant influence on children. Children of parents who pay attention to healthy eating achieve an average index of 64.6, whereas children of parents who do not address healthy eating score only 54.9. The Eta coefficient (0.254) suggests a small-to-moderate association, with parental attitude explaining approximately 6.4% of variability.

Discussion

In our sample, snacking is highly prevalent (according to parents, only 11.0% of children do not snack at all). Half of the children combine sweet and salty snacks, and more than one-third prefer sweet snacks. More than half (52.2%) snack daily or almost daily. These patterns are consistent with mechanisms described in relation to screen-media exposure, whereby media use promotes 'off-schedule' eating and increases children's exposure to advertising for high-calorie, ultra-processed foods (Robinson *et al.*, 2017; Piloquet *et al.*, 2023).

Parents reported that most children consume 4–5 meals per day, and 67.4% eat breakfast regularly. Children who eat breakfast regularly tend to have better weight regulation and healthier dietary composition (Shrewsbury and Wardle, 2008). Breakfast and its regularity may reflect family routines and rules. A stable sleep schedule is likewise a lever to support positive morning eating habits and appropriate daily energy intake. Moreover, multicomponent interventions combining school-based and family components appear more likely to improve health-promoting eating habits (Hillier-Brown *et al.*, 2014). Although 93.8% of children in our study tolerate drinking plain water, 38.8% prefer sweetened beverages. Marketing and media exposure substantially shape children's preferences for these drinks (Robinson *et al.*, 2017).

Parental responses indicate that nearly 80% of children exhibit some degree of food fussiness. Fussiness per se need not imply poorer nutritional quality; however, in environments with high availability of sweet and salty snacks and weaker family influence, it may limit dietary diversity. Studies indicate that respectful communication and the setting of realistic family rules are essential, though often a sensitive topic for children with obesity and their families (Jones *et al.*, 2014). On weekdays, 43.4% of families eat together; at weekends, this rises to 81.1%. Shared meals are an indicator of structure and a supportive environment (Boutelle *et al.*, 2014). Limiting eating in front of screens alongside regular family mealtimes may be effective steps toward deeper communication and sharing within the family (Garasky *et al.*, 2009; Berge *et al.*, 2023). Approaches to nutrition and dietary practices are also frequently transmitted intergenerationally and shape attitudes toward contemporary changes in eating (Fisberg *et al.*, 2024).

The mean Healthy Eating Habits Index was 57.9 (median 59.4; SD 18.2). Children of mothers with higher education achieved better values, and the differences were statistically significant. This pattern is consistent with published research confirming that lower education and low socioeconomic status are associated with a higher risk of childhood obesity (Jones, 2016; Qoyimah *et al.*, 2024). Perinatal factors (e.g., higher birth weight, gestational diabetes, smoking during pregnancy) further contribute to the risk of obesity in adolescence (Manios *et al.*, 2013).

Conclusion

Our data confirm that children's eating habits emerge at the 'intersection' of individual preferences, the family environment, and socioeconomic conditions. It is encouraging that a relatively high share of children eat breakfast regularly and readily drink water. At the same time, risk-prone behaviours persist, including snacking on salty and sweet foods and consuming sweetened beverages. The importance of parental (especially maternal) education is reflected in the overall Healthy Eating Habits Index. Multicomponent preventive strategies engaging the family, school, and community appear particularly effective. Mitigating socioeconomic disparities appears crucial (Hillier-Brown *et al.*, 2014). Working with parents is an essential component of paediatric care. Findings from family-based weight-management programmes indicate that outcomes depend primarily on parental adherence to recommendations and on the family environment (Reinert *et al.*, 2013). Sensitive, collaborative communication between the family and the primary-care physician is likewise necessary (Jones *et al.*, 2014).

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Contact information

Dana Hübelová: dana.hubelova@mendelu.cz,  <https://orcid.org/0000-0002-2551-8792>

Beatrice-Elena Chromková Manea: beatrice-elena.manea@mendelu.cz,  <https://orcid.org/0000-0002-3849-5067>

Jana Kratěnová: jana.kratenova@szu.gov.cz,  <https://orcid.org/0009-0008-9544-5614>

Kristýna Žejglicová: kristyna.zejglicova@szu.gov.cz,  <https://orcid.org/0009-0002-4635-056X>