

Research

# The prevalence and determinants of unhealthy feeding practices among children 6-23 months of age in Burkina Faso

Hermann B. Lanou<sup>1,\*</sup> , Boubacar Savadogo<sup>1</sup> , Jeoffray Diendéré<sup>1</sup> , Augustin N. Zeba<sup>1</sup> <sup>1</sup> Département Biomédical et Santé Publique, Institut de Recherche en Sciences de la Santé (IRSS), Centre National de la Recherche Scientifique et Technologique (CNRST), Ouagadougou, Burkina Faso**Keywords:** Unhealthy infant feeding practices, sweet beverages, dietary diversity, young children, Burkina Faso, maternal dietary diversity, media exposure  
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## Background

Unhealthy food consumption in early childhood is an emerging concern in low- and middle-income countries, including Burkina Faso. Poor dietary quality during the complementary feeding period may increase the risk of both undernutrition and diet-related non-communicable diseases. However, evidence from nationally representative surveys on the specific drivers of this phenomenon in the Sahel region of West Africa remains limited.

## Objective

This study aimed to address this gap by investigating the prevalence and associated factors of unhealthy feeding practices among children aged 6 to 23 months in Burkina Faso using recent national data

## Methods

Data from the Burkina Faso Demographic and Health Survey (DHS) were analyzed. Survey-weighted logistic regression models were used to identify factors associated with unhealthy feeding practices.

## Results

Overall, 63.1% of children in this age group had at least one unhealthy feeding practice (UPF). Factors associated with higher odds of UPF included urban residence and frequent household media exposure. Also included were the following counterintuitive findings: younger child age, greater maternal dietary diversity, and multiple antenatal care visits.

## Conclusions

UPF among young children in Burkina Faso is not only widespread but also influenced by a complex interplay of maternal and household characteristics. This study provides novel insights indicating that interventions must go beyond basic awareness to promote context-specific infant and child feeding practices, even in more advantaged households.

## INTRODUCTION

Significant dietary shifts have brought a global nutrition transition, particularly in low- and middle-income countries (LMICs), where consumption patterns increasingly favor refined carbohydrates and dietary fats at the expense of adequate protein, fiber, and essential micronutrients (Baker et al. 2020; Baker & Friel, 2014; Popkin et al. 2012). These foods are often heavily processed and low in nutrients essential for maintaining good health. Numerous studies have highlighted their major role in the increasing global burden of obesity, cardiovascular disease, type-2 diabetes, and other chronic noncommunicable diseases (Afshin et al.

2019; Malik et al. 2010). Burkina Faso is one of the countries where this nutrition transition appears to be accelerating, with an increasing prevalence of overweight and obesity, particularly among urban women (Ziraba et al. 2009), and an increase in cardiometabolic risk factors (Zeba et al. 2012). Yet the country is still facing challenges with undernutrition that particularly affect young children and women of reproductive age. Approximately 13.2% of children under five are underweight, and 19.0% are stunted (Ministère de la Santé, 2025). Dietary diversity is notably low across the population, with most households consuming

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\*Corresponding author: [hlanou@yahoo.ca](mailto:hlanou@yahoo.ca)

too few food groups per day (4 for children <5y and 3 for women of reproductive age) (Ministère de la Santé, 2025).

Unhealthy diets —characterized by high levels of energy, fats, free sugars, and salt/sodium (WHO, n.d.) — are increasingly common across all socio-economic groups. In sub-Saharan Africa, this trend is primarily driven by economic growth, urbanization, improved accessibility (Popkin et al. 2020), and the aggressive marketing strategies of the food and beverage industries (Reardon et al. 2021). A pooled prevalence of unhealthy food consumption among young children was recorded at 62.4% in four countries in sub-Saharan Africa (Tekeba et al. 2025) and 81.6% in Indonesia (English et al. 2019). Unhealthy food consumption early in life can have deleterious consequences on health, indirectly through displacement of breast milk and of more nutritious foods (Kimmons et al. 2005), and directly by increasing the risk of inadequate nutrient intake and excessive energy intake, contributing to childhood obesity (Green et al. 2019). In addition, consumption of sugary snacks has been associated with oral diseases, particularly dental caries (Feldens et al. 2022; Large et al. 2023). These conditions can negatively impact nutritional status and lead to other health problems.

Appropriate feeding during early childhood is essential for healthy growth and development, and various pediatric guidelines discourage the inclusion of unhealthy foods in the young child's diet (Fidler Mis et al. 2017; Gupta et al. 2019). Furthermore, in the recent update to infant and young child feeding (IYCF) practices, WHO and UNICEF introduced new indicators to capture unhealthy feeding (WHO and UNICEF, 2021). These include the consumption of sweetened beverages, “sentinel” unhealthy foods, and the lack of fruits and vegetables in the diet—all grouped as unhealthy feeding practices. These indicators were assessed using a 24-hour dietary recall. While the problem of unhealthy feeding practices is recognized, nationally representative data are scarce on the specific factors driving these practices among young children in the West African context, particularly in Burkina Faso. Therefore, this study aimed to assess the prevalence and determinants of unhealthy feeding practices among children aged 6 to 23 months in Burkina Faso using the recent demographic and health survey (INSD and ICF, 2022).

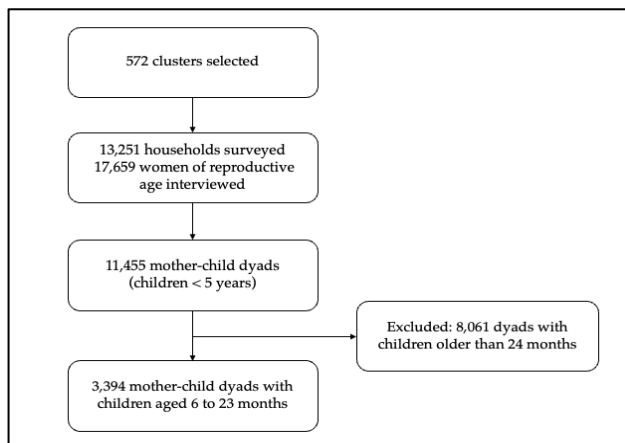
## METHODS

### STUDY DESIGN AND PERIOD

This study utilized data from the latest Burkina Faso Demographic and Health Survey Round-V (BFDHS-V) (INSD and ICF, 2022) to investigate the prevalence of unhealthy feeding practices and their associated factors among children aged 6–23 months. The BFDHS-V, a nationally representative cross-sectional survey conducted from 30 July to 30 November 2021, was implemented by the National Bureau of Statistics in collaboration with The DHS Program (ICF, Rockville, Maryland, USA).

The Burkina Faso DHS-V (2021) employed a two-stage stratified sampling design. As illustrated in Figure 1, a total of 572 clusters were selected from 26 strata defined by urban and rural areas of the 13 regions, followed by a random sample of households within each cluster (32 per cluster in the Sahel region, 26 in other regions). All women aged 15–

49 in selected households were interviewed. For this analysis, a weighted sample of 3,394 children aged 6–23 months and their mothers was included.



**Figure 1: Sampling profile of children aged 6–23 months and their mothers.**

## VARIABLES

### OUTCOME VARIABLE

During BFDHS-V, data on feeding practices were collected via a single 24-hour recall period, consistent with the WHO/UNICEF guidelines for estimating population-level IYCF indicators. It is well-established that a single day of intake data does not capture the day-to-day variability of an individual child's usual diet. However, this method is appropriate to assess the usual intake of a large population (FAO, 2018), which is the objective in this analysis.

The dependent variable for this analysis was 'unhealthy feeding practices' (UFP). This measure was constructed based on the three novel indicators conceptualized by WHO/UNICEF (WHO and UNICEF, 2021) to assess unhealthy feeding: 1) the consumption of sweet beverage (juice/fruit flavored drinks; tea or coffee/herbal drinks; tinned, powdered or fresh milk; chocolate flavored drinks; sodas, malt, sports, energy drinks); 2) the consumption of selected sentinel foods (sausages, hot dogs, frankfurters, ham, bacon, salami, or canned food; chocolates, sweets, candies, pastries; and chips, crisps, French fries, fried dough, instant noodles), and 3) zero consumption fruit and vegetables during the previous day. If any amount of food from any of the sentinel categories had been given to the child, or he hadn't consumed any fruit and vegetable based on a 24-hour dietary recall, he is counted as “consumed unhealthy food;” otherwise, he is counted as “not consumed unhealthy food.”

### INDEPENDENT VARIABLES

The selection of independent variables was informed by examining the existing literature (Endawkie et al. 2024; Semagn & Abubakari, 2023; Tekeba et al. 2025) and their availability in the BFDHS-V dataset. The individual and community-level variables and the ways we categorized them were as follows:

- for mothers: age (<20y; 20–29 y, 30–39 y, ≥40 y), education (no education, primary, secondary and higher), current marital status of the mother (single, married/union), occupation (no job, worked in the past

year, currently working), frequency of media exposure (not at all, once a week, more than once a week), antenatal care (ANC) visits (<4 visits; ≥4 visits), type of contraception used (no, traditional, modern), age at first birth (<18 y, 18–24y, ≥25 y), minimum dietary diversity (met, unmet), place of delivery (home, health facility).

- for children: age (6–11 months, 12–17 months, 18–23 months), sex (male, female), place of delivery (home, health facility), size at birth as perceived by the mother (smaller than average, average, larger than average), cesarian-section (yes, no), breastfeeding history (never breastfed, ever /still breastfed).
- community and household-level variables: place of residence (urban, rural), household size (≤4; 5–6 and >6 members) wealth index quintile (poorest, poorer, middle, richer, richest), source of drinking water (protected, unprotected), toilet facility (improved, non-improved), sex of household head (male, female).

For all variables, reference categories were selected to ensure the clinical relevance, temporal causality, and interpretability of the model coefficients.

#### STATISTICAL ANALYSIS

To account for the hierarchical structure of the BFDHS-V data structure, a multilevel modeling strategy – recommended for analyzing DHS data—was applied for this analysis (Elkasabi et al. 2020). Descriptive and summary statistics were presented through text and tables. Weighted frequency distributions were used to summarize categorical variables, while means with standard deviations (SD) were reported for continuous variables.

The association between UFP and explanatory variables was assessed using multivariable logistic regression for complex survey data. Survey-weighted regression models were fitted using the ‘svyglm’ function (Lumley, 2004) from the survey package in R (version 4.4.2; R. Core Team, 2024). Variable selection for the multivariable model included all factors significant at  $p < 0.05$  in bivariate analysis, along with those marginally significant at  $p < 0.20$ . Before model fitting, multicollinearity was assessed using the Variance Inflation Factor (VIF), with VIF <3 indicating acceptable levels of correlation. We first fitted a null model (intercept-only) to estimate the overall weighted prevalence of UFP. Subsequently, we fitted a full model containing all selected covariates to obtain adjusted estimates. Model performance was assessed by comparing changes in coefficient estimates and model fit between the null and full specifications. For visualization, the overall weighted prevalence alongside subgroup-specific adjusted prevalence was displayed, and the distribution of predicted probabilities from the full model was examined; this suggested that the outcome varied substantially across subgroups, highlighting the influence of sociodemographic and household factors. The results are presented as adjusted odds ratios (aOR) with 95% confidence intervals (CI). Statistical significance was defined as a  $p$ -value < 0.05.

## RESULTS

### SOCIODEMOGRAPHIC CHARACTERISTICS

A total of 3,394 mother-child pairs with children aged 6–23 months were included in the study. The mean age of the mothers was 28.3 (SD=6.8) years. The majority of them resided in a rural area (75.0%) and had no formal education (67.8%). Approximately one-third of sample children belonged to each of the three 6-month ranges included, while 82.3% lived in households with five or more members. Table 1 summarizes the individual, household, and community characteristics of the study subjects.

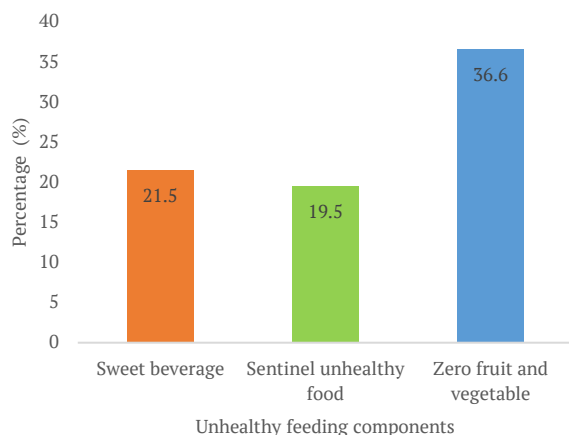
**Table 1: Socio-demographic and community-level characteristics of study participants**

Characteristics	N	%
<b>Place of residence</b>		
Urban	991	25.0
Rural	2,403	75.0
<b>Family size</b>		
≤4	599	17.7
5 or 6	756	22.5
≥7	2,040	59.8
<b>Number of children &lt; 5</b>		
1	987	28.3
2 or 3	1,883	55.8
4 or 5	524	15.9
<b>Wealth quintile</b>		
Poorest	634	20.3
Poorer	675	21.4
Middle	751	21.0
Richer	731	19.4
Richest	603	17.9
<b>Mother's age</b>		
<25 years	303	8.9
25–29 years	1,676	49.6
30–34 years	1,184	34.8
≥35 years	231	6.7
<b>Marital status</b>		
Married/in union	3,248	96.3
Single	146	3.7
<b>Type of contraception</b>		
None	1,846	56.2
Traditional	117	3.7
Modern	1,431	40.1
<b>Mother's education</b>		
No education	2,250	67.8
Primary education	462	13.4
Secondary education	640	17.5
Higher education	42	1.3
<b>Mother's working status</b>		
Not working	1,179	35.8
Worked in the past	136	3.9
Currently working	2,079	60.3
<b>Sex household head</b>		
Female	289	8.5
Male	3,105	91.5
<b>Child's age</b>		
6–11 mo	1,104	32.5
12–17 mo	1,211	36.0
18–23 mo	1,079	31.5
<b>Breastfeeding history</b>		
Never breastfed	133	4.0
Ever or still breastfed	3,261	96.0
<b>Antenatal care visits</b>		
< 4	889	27.0
4 and more	2,470	73.0

### PREVALENCE OF UNHEALTHY FEEDING PRACTICES

Regarding the components of unhealthy feeding practices, the prevalence of sweet beverage intake was 21.5% (95% CI: 20.0%–23.0%), that of sentinel unhealthy foods

consumption was 19.5% (95% CI: 18.0%–21.0%), and the prevalence of zero fruit and vegetable consumption was 36.6% (95% CI: 34.7%–38.7%) (Figure 2). Overall, 63.1% of participating children were included in the unhealthy food consumption category (95% CI: 60.9%–65.2%).



**Figure 2: Prevalence of unhealthy feeding practices among children 6-23 months of age in Burkina Faso**

**FACTORS ASSOCIATED WITH UFP**

Bivariate analysis showed that a child’s UFP was significantly associated with the following individual factors: child’s age, maternal age at first birth, education level, working status, contraceptive method, underweight status, dietary diversity, and antenatal care (ANC) visits; and the following household factors: place of residence, household size, drinking water source, and toilet facilities; and the household frequency of media exposure (Table 2).

**Table 2: Multivariable logistic regression of factors associated with unhealthy feeding practices among children 6-23 months of age in Burkina Faso**

Variable	OR	95% CI	p value	aOR	95% CI	p value
<b>Place of residence</b>						
Urban	Ref			Ref		
Rural	0.40	0.32; 0.49	p<0.001	0.43	0.31; 0.59	p<0.001
<b>Household members</b>						
≤4	Ref			Ref		
5-6	1.02	0.78; 1.32	0.899	1.01	0.70; 1.45	0.980
>6	0.87	0.70; 1.07	0.184	0.96	0.71; 1.29	0.767
<b>Source of drinking water</b>						
Protected	Ref			Ref		
Non-protected	0.80	0.65; 0.98	0.034	0.94	0.70; 1.28	0.708
<b>Toilet</b>						
Improved	Ref			Ref		
Non-improved	0.50	0.42; 0.60	p<0.001	0.85	0.65; 1.11	0.242
<b>Frequency of exposure to media</b>						
Not a all				Ref		
≤ Once a week	1.69	1.35; 2.11	p<0.001	1.31	0.93; 1.83	0.119
> once a week	1.69	1.38; 2.06	p<0.001	1.53	1.13; 2.08	0.007
<b>Mother's age</b>						
<20 y	Ref					
20-29 y	1.04	0.72; 1.52	0.830			
30-39 y	1.28	0.86; 1.89	0.227			
≥40 y	1.38	0.77; 2.46	0.274			
<b>Marital status</b>						
Single	Ref					
Married/ in union	1.03	0.68; 1.56	0.907			
<b>Age at first birth</b>						
<18 y	Ref			Ref		
18-24 y	1.20	1.02; 1.41	0.032	1.02	0.79; 1.33	0.865
≥25 y	1.38	0.99; 1.93	0.061	1.17	0.72; 1.90	0.520
<b>Mother's education</b>						
No education	Ref			Ref		
Primary	1.15	0.81; 1.61	0.437	0.81	0.56; 1.16	0.247
Secondary	1.51	1.04; 2.19	0.030	1.04	0.72; 1.51	0.819
higher	2.52	1.36; 4.66	0.003	1.02	0.25; 4.08	0.981
<b>Mother's working status</b>						
Not working	Ref			Ref		
Worked in the past year	1.03	0.67; 1.57	0.905	0.53	0.29; 1.01	0.053
Currently working	0.86	0.71; 1.04	0.119	0.91	0.70; 1.19	0.51
<b>Type of contraception</b>						
No	Ref			Ref		
Traditional	1.701	1.06; 2.74	0.0294	1.39	0.72; 2.68	0.328
Modern	1.085	0.91; 1.29	0.3597	1.01	0.78; 1.30	0.951
<b>Antenatal care (ANC) visits</b>						
< 4 visits	Ref			Ref		
≥ 4 visits	1.18	0.97; 1.42	0.096	1.33	1.03; 1.72	0.028
<b>Delivery</b>						

Variable	OR	95% CI	p value	aOR	95% CI	p value
Home delivery	Ref					
Health facility delivery	1.23	0.79; 1.91	0.360			
<b>Maternal overweight</b>						
No	Ref					
Yes	1.16	0.89; 1.51	0.281			
<b>Maternal underweight</b>						
No	Ref			Ref		
Yes	0.64	0.42; 0.98	0.040	0.77	0.50; 1.19	0.237
<b>Sex of household head</b>						
Male	Ref					
female	1.07	0.79; 1.44	0.666			
<b>Mother's dietary diversity</b>						
Met	Ref			Ref		
Not met	1.54	1.21; 1.95	p<0.001	1.50	1.08; 2.08	0.015
<b>Sex of the child</b>						
Male	Ref					
Female	1.07	0.92; 1.24	0.399			
<b>Child's age category</b>						
6–11 mo	Ref			Ref		
12–17 mo	0.55	0.45; 0.67	p<0.001	0.41	0.31; 0.55	p<0.001
18–23 mo	0.51	0.41; 0.62	p<0.001	0.42	0.30; 0.59	p<0.001
<b>breastfeeding history</b>						
Never breastfed	Ref					
Ever /still breastfed	0.98	0.67; 1.45	0.922			
<b>Perceived size at birth</b>						
Average	Ref					
Smaller than average	0.98	0.72; 1.32	0.882			
Larger than average	1.09	0.90; 1.31	0.372			
<b>C-section</b>						
No	Ref					
Yes	0.86	0.62; 1.20	0.378			

In the final multivariable multilevel logistic regression model, frequent household media exposure, satisfactory maternal dietary diversity, older child age, and multiple antenatal care visits were all associated with higher odds of UFP. Conversely, residing in a rural area was associated with lower odds of UFP.

As shown in Table 2, mothers residing in rural areas were 57% less likely to provide unhealthy food to their children [aOR = 0.43, 95% CI: 0.31–0.60]. In contrast, mothers exposed to media more than once a week were 53% more likely to feed their children unhealthy food than those with no media exposure [aOR = 1.53 (95% CI: 1.13–2.08)]. Similarly, mothers who attended four or more ANC visits during their last pregnancy were 33% more likely to feed their children unhealthy foods compared to those who attended fewer than four visits [aOR = 1.33, 95% CI: 1.03–1.72]. Mothers with adequate dietary diversity had 50% higher odds of feeding their children unhealthy foods than those without. In addition, children aged 12–17 months and 18–23 months were significantly less likely to consume unhealthy food compared to those aged 6–11 months, with an aOR of 0.41 (95% CI: 0.31–0.55) and 0.42 (95% CI: 0.30–0.59), respectively.

## DISCUSSION

In this study, we assessed the prevalence and associated factors of UFP among children aged 6–23 months in Burkina Faso. The UFP indicator was defined as any of the three WHO/UNICEF unhealthy food/beverage categories for infant

and young child feeding (sweet beverage consumption, selected sentinel unhealthy foods consumption, and zero vegetable or fruit consumption). We found that 63.1% of children aged 6–23 months consumed at least one type of unhealthy food within the previous 24 hours. Factors significantly associated with UFP included urban residence, frequent household exposure to media, fewer than 4 ANC visits, higher maternal dietary diversity, and younger child age.

Our prevalence estimate aligns with the general finding of a pooled prevalence of UFP—62.4%—reported in a recent multi-country analysis of five Sub-Saharan African nations, which included Burkina Faso (Tekeba et al. 2025). However, their analysis using the same dataset reported a lower prevalence for Burkina Faso (56.2%). This variation likely reflects methodological differences, probably in the application of sampling weights to capture variation across clusters or in the handling of response categories.

Comparable UFP prevalence among young children was reported in Ghana (65.99%) and in 3 East African countries: Kenya (58.96%), Tanzania (66.55%), and Mozambique (58.50%) (Tekeba et al. 2025). Conversely, another study (Mekonen et al. 2024) found lower prevalences in some of the latter countries – Kenya (13.8%), Tanzania (6.80%) – and in other countries in the same geographical area – Malawi (14.25%), Uganda (12.96%), and South Africa (35.13%). However, their definition of UFP was restricted to the consumption of selected sentinel foods such as chocolates, sweets, candies, pastries, etc.). A much higher prevalence was reported in Senegal among older children (aged 12 to 35

months), at 90% (Vanderkooy et al. 2023). They also used a more comprehensive nutrient-profiling model in that study – the UK-FSA model, based on energy, sugar, saturated fat, sodium, fiber, protein, and fruit/vegetable/nut content per 100g portion. Beyond methodological and regional differences, the overall high prevalence (62.4%) we reported likely reflects factors specific to Burkina Faso. These include a growing informal street food sector providing affordable, energy-dense foods, combined with aggressive marketing of sugary drinks and packaged snacks in urban areas, making such foods a convenient alternative for families (Weil et al. 2023; Zoma & Ki-Zerbo, 2024). This expansion is further facilitated by limited regulations on food composition, labelling, and child-targeted advertising (Tapsoba et al. 2024).

We found that children aged 12–17 months and 18–23 months were 60% less likely to consume unhealthy food compared to children aged 6–11 months. A study in Ethiopia supports this (Jemere et al. 2023) and a pooled analysis of data from Ghana, Kenya, Mozambique and Tanzania (Tekeba et al. 2025), and in Turkey (Kocagozoglul S et al. 2024). However, this finding is in contradiction with other studies in sub-Saharan African (Mekonen et al. 2024) and Asian contexts (Pries et al. 2017, 2019). One possible explanation is that many parents begin introducing complementary foods between 6 and 11 months of age, often relying on prepackaged baby foods, fruit juices, and sweetened purees, which they assume to be appropriate for young children. Then, by 12–23 months, children are more likely to transition to a family diet, which may contribute to reduced intake of unhealthy foods, especially in a largely rural population like that in Burkina Faso, where the penetration of ultra-processed foods is not yet as extensive. In other contexts, it may be argued that as children grow older, broader social and environmental influences come into play, potentially heightening their risk of unhealthy food choices. UFP is a composite indicator with three components that may have diverging directions and strengths regarding their association with children's age, as demonstrated in a study where increasing age of children was associated with a higher risk of sweet beverage consumption and a lower risk of unhealthy sentinel food consumption, and with zero fruit and vegetable consumption (Jubayer et al. 2023).

Mothers who were exposed to media more than once a week had 53% higher odds of providing unhealthy foods to their children compared to mothers with no media exposure. Several studies across diverse settings suggest an association between maternal media exposure and UFP in children aged 6–23 months. Our results are consistent with that of a pooled analysis of data from 5 sub-Saharan African countries (Mekonen et al. 2024), but contradictory to a study in North-West Ethiopia (Jemere et al. 2023) where children of mothers with minimal media exposure (less than once a week) had a four times higher risk of UFP compared to their peers with more frequent exposure. It is speculated that whenever the media are saturated with advertisements for sugary snacks or processed foods, exposure may increase the likelihood of unhealthy eating. An exception could be in an area where public health messaging counteracts advertising messages. Another possible explanation is that media-exposed mothers are often more urban, wealthier, or employed, which may

increase their use of convenience foods, but this was not fully controlled by the variables included in our model.

Consistent with earlier findings (Jemere et al. 2023; Pries et al. 2019; Tekeba et al. 2025), mothers living in rural communities were less likely to practice unhealthy feeding. Mothers in urban settings may have easier access to a wide range of unhealthy foods for their children, available through street vendors, small shops, and supermarkets. Urban women may also face food insecurity, leading them to purchase lower-cost, less nutritious foods from local markets (Hawkes et al. 2017). In contrast, children in rural areas often consume more fiber as their diets typically consist of roots, grains, and cereals grown on local farms.

Unexpectedly, we found that mothers who met the minimum dietary diversity had higher odds of feeding their children unhealthy foods. This finding may reflect persistent exposure to commercialized food environments, where increased availability of diverse foods coexists with access to energy-dense, ultra-processed foods that are often marketed as child-friendly. Findings from earlier studies indicate that maternal diet diversity alone does not guarantee healthy feeding practices when food marketing exposure, and unaffordability or lack of access to nutritious and healthy foods are not concurrently addressed (Nguyen et al. 2023; Turner et al. 2020). Moreover, a recent multi-country study showed that, although mothers tended to consume a broader range of nutritious food groups, children disproportionately consumed certain unhealthy items—particularly sweet drinks (Hanley-Cook et al. 2025). To confirm this hypothesis, longitudinal and qualitative research is needed to assess the impact of nutrition counselling on dietary diversity and unhealthy food consumption in such settings.

Mothers with optimal ANC visits (more than four) during their last pregnancy had a 33% higher likelihood of having unhealthy child-feeding practices. This is in contrast to studies in Ethiopia (Semagn & Abubakari, 2023) and in sub-Saharan African settings (Tekeba et al. 2025). It is reported that frequent ANC visits are associated with improved maternal dietary diversity (Jubayer et al. 2023; Nguyen et al. 2023). Evidence also suggests that maternal consumption of obesogenic foods is a strong predictor of early introduction of these same foods to infants (Kay et al. 2018). Several hypotheses may explain the positive association observed in our study context: first, women who attend ANC visits more frequently may still face economic constraints that limit their ability to purchase or access fruits and vegetables, despite having good nutritional knowledge or awareness of the nutritional value of recommended foods. Second, increased dietary diversity resulting from nutrition messages received during ANC attendance may include not only healthy options but also greater consumption of affordable, energy-dense, unhealthy foods, leading to poorer dietary behaviors overall, especially when the effective coverage (defined as "the fraction of maximum possible health gain an individual with a healthcare need can expect to receive from the health system") is low (Nguyen et al. 2021). Third, the potential limitation of health facility-based nutrition counseling; studies in Burkina (Becquey et al. 2022; Kim et al. 2022) and elsewhere (Nguyen et al. 2023) have shown that information-only nutrition interventions, including education delivered in health facilities, may not be sufficient

to improve diets and complementary feeding practices. This is likely to be particularly the case in the context of high exposure to marketing of unhealthy foods and drinks. This underscores the need for continued efforts to strengthen the delivery and use of maternal and child nutrition services. Antenatal care sessions should consistently promote healthy, nutrient-rich diets while discouraging energy-dense yet nutritionally poor foods.

The main strength of this study was the use of a large, nationally representative sample to determine the prevalence of UFP and identify its associated factors among children aged 6 to 23 months. Another strength is the application of statistical models that account for both individual- and community-level factors. However, the study also has certain limitations that should be acknowledged. Firstly, the cross-sectional nature of the data prevents the establishment of causal relationships and does not account for seasonal variability in food availability, prices, and consumption patterns. This limitation may influence both the prevalence of unhealthy feeding practices and the observed associations. Secondly, the dietary data were collected using the 24-hour recall method, which may not reflect the usual diet and, like all recall data, is subject to memory bias. Moreover, relying on a standardized list of sentinel foods may reduce sensitivity to local dietary contexts, potentially failing to capture important Burkinabe-specific foods, ingredients, or preparations. Thirdly, this study was limited to the variables available in the BFDHS-V, which were not collected for the purpose of this analysis. As a result, there may be overestimation or underestimation of the complex interplay of social, community, and individual factors.

## CONCLUSION

Unhealthy feeding practices were observed among over half of young children (6 to 23 months) in Burkina Faso, with

significant links to maternal dietary diversity, media exposure, place of residence, adequate antenatal care visits, and the child's age. Public health efforts must prioritize strengthening mothers' education on age-appropriate, healthy feeding practices while simultaneously building healthier food environments that provide equitable access to affordable, nutritious options.

## AUTHOR CONTRIBUTIONS

HBL conceptualized, supervised, and designed the methodology for the study. HBL was responsible for data curation and wrote the original draft. HBL and BS conducted the formal analysis. BS, JD, and ANZ contributed to writing through review and editing. All authors read and approved the final manuscript and consented to its publication.

## CONFLICT OF INTEREST

No potential conflict of interest was reported by the authors.

## DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN SCIENTIFIC WRITING

Nothing to disclose.

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