

INFLUENCE OF SOCIOECONOMIC FACTORS ON THE ADOPTION OF DIETARY PATTERNS AMONG WOMEN USING THE BRAZILIAN UNIFIED HEALTH SYSTEM (SUS)

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Highlights: (1) Adult women with lower levels of education are more likely to adhere to an unhealthy dietary pattern. (2) Pregnant women adhere to both the unhealthy and traditional dietary patterns. (3) Adherence to a healthy dietary pattern is more common among older women.

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ABSTRACT

This study aimed to identify the predominant dietary patterns among adult women using the Brazilian Unified Health System (SUS) in João Pessoa, Paraíba, Brazil, and to estimate the effects of different factors on adherence to these patterns. This cross-sectional study included 268 women aged 18–59 years recruited from 10 Family Health Units. Face-to-face interviews were conducted to characterize the study population, assess nutritional status, and evaluate dietary intake using 24-hour dietary recalls. Dietary patterns were identified through exploratory factor analysis using principal component extraction. Factors with eigenvalues greater than 1 were retained, followed by varimax rotation. Adherence to the dietary patterns was assessed using tests for comparison of means, including Student's *t*-test and analysis of variance (ANOVA). The effect of each independent variable was evaluated using multiple logistic regression models, with each dichotomized factor considered as the dependent variable. Four dietary patterns were identified, designated as “Unhealthy,” “Mixed 1,” “Mixed 2,” and “Traditional,” accounting for 36% of the total variance. Pregnancy was associated with greater adherence to both the “Unhealthy” pattern (OR: 7.62; 95% CI: 3.59–16.19) and the “Traditional” pattern (OR: 6.00; 95% CI: 2.82–12.78). Being older than 35 years was associated with the “Traditional” pattern (OR: 2.10; 95% CI: 1.06–4.18), whereas lower educational attainment was associated with the “Unhealthy” pattern (OR: 3.10; 95% CI: 1.18–8.12). Low income was also associated with this pattern but lost statistical significance in the multivariable model. Unhealthy food choices among women of lower socioeconomic status should be considered when developing health strategies aimed at promoting nutrition education and access to healthy foods. Older women showed greater adherence to the traditional dietary pattern, suggesting that the worsening in diet quality may be a relatively recent phenomenon.

Keywords: Dietary patterns; Women; Socioeconomic factors; Factor analysis.

1 INTRODUCTION

Dietary practices have changed over the years, leading to a process of nutrition transition, particularly in low- and middle-income countries.^{1,2} Unfavourable food choices

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from a nutritional perspective may result in serious adverse health outcomes.^{3,4} Understanding these changes in eating habits is important, and dietary pattern analysis is a valid method for characterizing the nutritional profile of a population.⁵

Dietary patterns capture the combined effects of multiple dietary components and thus reflect the population's actual eating habits^{6,7}, which, in turn, are associated with chronic diseases and general health status. Identifying dietary patterns and adherence to these patterns in specific populations is essential for implementing strategies to address potential nutritional inadequacies and identify priority groups, ultimately improving diet quality⁸.

Among the factors that influence food consumption, socioeconomic conditions are particularly relevant because they may limit access to healthy foods.³ Recommended diets are often costly and may therefore be replaced by less expensive and less healthy foods.⁹ Limited financial resources faced by low-income women may also limit access to a range of services and products, making them more vulnerable to unfavourable conditions for maintaining their health.⁸

Considering the social vulnerability experienced by many women, inequalities in access to adequate food become even more evident. According to the report by the Brazilian Research Network on Food and Nutrition Sovereignty and Security (Rede PENSAN), female-headed households face greater vulnerability due to social determinants such as skin colour, employment status, and low educational attainment. Inequalities in access to adequate food are more pronounced in households headed by Black women and by individuals with lower educational attainment, where hunger is more prevalent, exposing these families to greater health risks.¹⁰

In this context, women's dietary intake plays an important role, particularly during reproductive age and pregnancy, contributing to the prevention of chronic diseases and mortality and affecting both maternal and offspring health.¹¹⁻¹³ In addition, women play a central role in household food selection and preparation and may therefore influence the eating habits and health of other family members.¹⁴

Assessing dietary intake among women of reproductive age makes it possible to identify social determinants that influence eating habits and adherence to healthy or unhealthy dietary patterns. Factors such as income inequality, limited access to high-quality foods, and low educational attainment may affect food choices and, consequently, the health

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of women and their families. Despite the relevance of this topic, studies investigating dietary patterns and their relationship with socioeconomic factors among women using the Brazilian Unified Health System (SUS) remain limited. Therefore, understanding these factors may support nutritional interventions and strengthen public policies aimed at promoting equitable access to healthy diets within the SUS.

This study aimed to identify the predominant dietary patterns, based on dietary intake, among adult women using the Brazilian Unified Health System (SUS) in João Pessoa, Paraíba, Brazil, and to evaluate the effect of socioeconomic factors on adherence to the identified dietary patterns.

2 METHODOLOGY

2.1 Study Design and Ethical Considerations

This cross-sectional study included adult women divided into two groups: pregnant and non-pregnant women. All data analysed in the present study were obtained from a prospective cohort conducted in João Pessoa, Paraíba, Brazil, between 2018 and 2020, as described by Viana et al.¹⁵

All ethical guidelines for research involving human participants were followed, and the study protocol was approved by the Research Ethics Committee through Plataforma Brasil in the state of Paraíba (CAAE: 78557717.60000.5188). All participants provided written informed consent before participating in the study.

2.2 Sampling and Data Collection

All women included in this study were recruited from 10 Family Health Units (FHUs) at the beginning of the cohort. The inclusion criterion was age between 18 and 59 years. Women with neurological, psychiatric, or metabolic disorders, communication difficulties, or severe conditions or diseases requiring specialized care were excluded.

Recruitment into the cohort was non-random. All women who met the inclusion criteria and attended the selected FHUs for routine health care, including prenatal care, were considered eligible for the study. Recruitment was conducted daily until the sample size

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established for the original cohort was reached. Participants were interviewed at recruitment and subsequently received two home visits, approximately three months apart, during which two 24-hour dietary recalls (24HRs) were administered to assess dietary intake. All women with complete socioeconomic data and complete 24-hour dietary recall data were included in the present study, resulting in a final sample of 268 women. This sample size was considered adequate for factor analysis to identify dietary patterns based on a list of up to 53 food items (Hair et al., 2008).

The sample size of this study allows for the detection of odds ratios of 2.5 or greater for factors associated with adherence to any dietary pattern, with a 95% confidence level and 80% statistical power, assuming an approximately 20% difference in adherence to a dietary pattern between the comparison groups (pregnant and non-pregnant women).

Data were collected through face-to-face interviews conducted by previously trained interviewers, who used the KoboCollect® application on their mobile phones to administer the questionnaire and record participants' responses. KoboCollect® is free, open-source software developed by the Harvard Humanitarian Initiative for field data collection.¹⁶

2.3 Socioeconomic Characteristics

The following variables were assessed: age (years); self-reported race/skin colour (White, Black, Brown, Asian/Indigenous); median per capita income (up to half a minimum wage; more than half a minimum wage), with the median value corresponding to half the minimum wage in effect during the data collection period; educational attainment (illiterate, primary education, secondary education, higher education); presence of self-reported morbidity, with dichotomous responses (yes/no); and self-reported physical activity (active/inactive), classified according to the World Health Organization recommendation of ≥ 150 minutes/week.¹⁷

2.4 Dietary Intake Assessment

Dietary intake was assessed using 24-hour dietary recalls (24HRs) administered at two time points. To facilitate portion-size estimation, a photographic atlas containing household measures and food portions from the manual for dietary intake assessment in

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population-based studies was used.¹⁸ The second 24HR was administered to more than 50% of the total sample to reduce within-person variability in dietary intake and improve the accuracy of food intake estimates while accounting for seasonal variation.¹⁹

Nutriquant® nutrition software was used to enter the collected data and calculate energy and nutrient intake. The software includes updated Brazilian food composition tables and allows the addition of new foods, preparations, and household measures.²⁰ Usual intake was estimated using the Multiple Source Method (MSM), a statistical method that estimates day-to-day variability in nutrient intake and usual intake based on two or more dietary measurements.²¹

2.5 Dietary Patterns

Foods were classified into 18 groups according to correlations observed in the correlation matrix and/or similarities in nutritional composition: staple foods (rice, roots and tubers, couscous, corn), pasta, legumes, fruits and vegetables, natural juices, meat and eggs, processed meats, snacks, breads and savoury biscuits, milk and yogurt, sugar-sweetened beverages, cheese, sweets (desserts, confectionery, and sweet biscuits), soups and broths, coffee and tea, seasonings and sauces, added sugar, and butter, margarine, oils, and olive oil. Foods consumed with a frequency less than 5% were excluded from the analysis.

Dietary patterns were identified using factor analysis with principal component extraction, which allows food groups to be grouped according to the degree of correlation among them.²² The suitability of the data for factor analysis was assessed using the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity.²² The number of dietary patterns to be retained was determined based on eigenvalues greater than 1.0, visual inspection of the scree plot, and interpretability of the resulting patterns.²² After orthogonal varimax rotation, food groups with factor loadings greater than 0.30 were considered when naming the dietary patterns.

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2.6 Nutritional Status Assessment

Anthropometric nutritional status was assessed using Body Mass Index (BMI), calculated as body weight in kilograms divided by height squared (in metres). Information on pre-pregnancy weight and height among pregnant women was obtained from their prenatal care records, whereas weight and height among non-pregnant women were self-reported.^{23, 24}

The BMI cutoff points adopted were $<18.5 \text{ kg/m}^2$ for underweight, $18.5\text{--}24.9 \text{ kg/m}^2$ for normal weight, and $\geq 25 \text{ kg/m}^2$ for excess weight.²⁵ For the analyses, nutritional status was dichotomized as no excess weight (participants with normal weight) and excess weight (participants with overweight or obesity, $\text{BMI} \geq 25 \text{ kg/m}^2$).

2.7 Data Analysis

Data were entered into an electronic spreadsheet and subsequently exported to Stata statistical software, version 14 SE, in which all analyses were performed. Continuous variables were described using means and standard deviations.

To assess differences in adherence to dietary patterns according to women's socioeconomic and health characteristics, mean comparisons were performed using Student's t-test and analysis of variance (ANOVA), comparing dietary pattern factor loadings across the categories of each variable.

To identify factors associated with each dietary pattern, multiple logistic regression models were fitted, and odds ratios (ORs) and their respective 95% confidence intervals (95% CIs) were estimated. For model construction, the scores derived for each dietary pattern were dichotomized according to the mean when normally distributed or according to the median when asymmetrically distributed. Distributional assumptions were assessed using the Shapiro-Wilk test.

All statistical tests adopted a significance level of 5% for rejection of the null hypotheses.

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3 RESULTS

A total of 268 women participated in the study, with a mean age of 35 years. Most participants had a per capita income of up to BRL 499.00 at the time of data collection, corresponding to half the Brazilian minimum wage in 2019.

The distributions of age, income, race/skin colour, educational attainment, physical activity, marital status, number of household members, nutritional status, and morbidity among the women included in the study are presented in Table 1.

Table 1. Absolute and relative frequencies of adult women. João Pessoa, Paraíba, Brazil, 2018–2020 (n = 268).

Characteristic	n	%
Age		
≤ 35 years	179	66.8
> 35 years	89	33.2
Pregnancy status		
No	92	34.3
Yes	176	65.7
Per capita income		
Up to ½ minimum wage	126	51.2
More than ½ minimum wage	120	48.8
Race/skin color		
White	58	21.6
Black/Brown	210	78.4
Educational attainment		
Primary education	46	17.2
Secondary education	150	55.9
Higher education	72	26.9
Physical activity		
Active	92	34.3
Inactive	176	65.7
Marital status		
Living with a partner	179	68.3
Not living with a partner	83	31.7
Household members		
Up to 3 household members	143	54.6
More than 3 household members	119	45.4
Nutritional status		
No excess weight	109	41.3
Excess weight	155	58.7
Presence of morbidity		
Yes	157	58.6
No	111	41.4

Source: Research data.

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The analyses identified four main dietary patterns. The proportion of variance explained and the factor loadings for each pattern are presented in Table 2.

The first dietary pattern was labelled “Unhealthy” because it showed positive factor loadings for processed meats, snacks, sugar-sweetened beverages, sweets, and seasonings and sauces, as well as a negative factor loading for soups and broths. The second pattern was characterized by positive factor loadings for natural juices, breads and biscuits, cheese, and coffee and tea, and was labelled “Mixed 1.” The third pattern labelled “Mixed 2,” comprised positive factor loadings for pasta, natural juices, milk and yogurt, added sugar, and margarine, butter, oils, and olive oil. These two patterns were labelled “Mixed” because their food composition was not sufficiently clear to characterize them as either positive or negative. The fourth dietary pattern was labelled “Traditional” because it showed high positive factor loadings for staple foods, including rice, roots and tubers, couscous, legumes, meat, and eggs, as well as a negative factor loading for snacks. Fruits and vegetables did not load onto any of the identified dietary patterns. Together, the four patterns explained 36% of the variance in dietary intake among the study population.

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Table 2. Factor loadings of dietary patterns among adult women. João Pessoa, Paraíba, Brazil, 2018–2020 (n = 268).

Food groups	Food Pattern			
	Unhealthy	Mixed 1	Mixed 2	Traditional
Explained variance**	9.3%	9.2%	9.1%	8.4%
Processed meats	0.65	-0.03	-0.06	0.02
Snacks	0.43	-0.05	-0.01	-0.48
Sugar-sweetened beverages	0.41	-0.23	0.19	0.31
Sweets	0.40	0.31	0.03	0.06
Seasonings and sauces	0.65	-0.01	0.01	-0.14
Soups and broths	-0.32	-0.10	0.27	-0.26
Breads and savory biscuits	0.04	0.47	0.35	0.22
Cheese	0.09	0.66	0.07	-0.14
Coffee and tea	-0.23	0.62	-0.06	-0.01
Natural juices	0.07	0.34	0.34	-0.12
Pasta	0.19	-0.15	0.53	0.16
Milk and yogurt	0.01	-0.16	0.44	0.10
Added sugar	-0.08	0.12	0.55	0.04
Butter and margarine; oils and olive oil	-0.09	0.17	0.62	-0.11
Staple foods (rice, roots, tubers, and couscous)	0.04	-0.04	-0.11	0.66
Legumes	-0.05	-0.11	0.24	0.58
Meat and eggs	-0.14	0.35	0.01	0.39

*KMO = 0.50

**Total variance explained: 36%

Source: Research data.

Table 3 presents the relationship between the study independent variables and adherence to each dietary pattern. Greater adherence to both the “Unhealthy” and “Traditional” patterns was observed among pregnant women and among those who reported the presence of morbidity. Regarding educational attainment, these two patterns showed opposite trends: the higher the educational attainment, the greater the adherence to the “Traditional” pattern, whereas lower educational attainment was associated with greater adherence to the “Unhealthy” pattern. Regarding the latter pattern, younger women, those with a per capita income of up to ½ minimum wage, and those classified as having no excess weight also showed greater adherence.

The two “Mixed” patterns showed different variations across groups of women, as presented in Table 3.

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Table 3. Profile of social determinants and adherence to dietary patterns among adult women. João Pessoa, Paraíba, Brazil, 2018–2020 (n = 268).

	Unhealthy		Mixed 1		Mixed 2		Traditional	
	Mean (SD)	p	Mean (SD)	p	Mean (SD)	p	Mean (SD)	p
Age*								
≤ 35 years	0.124 (1.04)	0.005	0.117 (1.03)	0.006	-0.204 (0.95)	<0.001	0.021 (0.91)	0.674
> 35 years	-0.236 (0.86)		-0.240 (0.89)		0.412 (0.96)		-0.034 (1.17)	
Pregnancy status*								
No	-0.530 (0.90)	<0.001	-0.283 (0.83)	<0.001	0.674 (0.95)	<0.001	-0.424 (0.83)	<0.001
Yes	0.284 (0.95)		0.147 (1.05)		-0.351 (0.83)		0.226 (1.01)	
Race/skin colour*								
White	0.003 (0.98)	0.987	-0.019 (0.71)	0.873	-0.162 (1.03)	0.163	0.134 (1.07)	0.260
Black/Brown	0.005 (1.01)		0.004 (1.07)		0.045 (0.99)		-0.033 (0.98)	
Per capita income*								
Up to ½ minimum wage	0.150 (1.02)	0.036	-0.052 (1.20)	0.336	-0.033 (0.97)	0.470	-0.016 (1.07)	0.596
More than ½ minimum wage	-0.120 (0.98)		0.071 (0.76)		0.060 (1.06)		0.052 (0.92)	
Educational attainment#								
Primary education	0.171 (0.95)	0.004	-0.473 (0.57)	0.002	-0.068 (1.01)	0.183	-0.263 (0.79)	0.007
Secondary education	0.113 (0.99)		0.010 (1.05)		-0.067 (0.95)		-0.054 (0.97)	
Higher education	-0.327 (0.97)		0.092 (1.04)		0.187 (1.08)		0.292 (1.12)	
Presence of morbidity*								
No	-0.312 (1.05)	<0.001	-0.169 (1.14)	0.020	0.411 (1.04)	<0.001	-0.301 (0.75)	<0.001
Yes	0.228 (0.89)		0.118 (0.87)		-0.289 (0.87)		0.221 (1.09)	
Nutritional status*								
No excess weight	0.234 (0.96)	0.002	0.094 (0.85)	0.185	-0.135 (0.98)	0.040	0.104 (1.17)	0.163
Excess weight	-0.141 (0.98)		-0.072 (1.10)		0.121 (1.00)		-0.071 (0.86)	
Physical activity*								
Active	-0.110 (1.04)	0.175	-0.020 (0.91)	0.824	0.002 (1.08)	0.988	0.081 (1.05)	0.359
Inactive	0.064 (0.97)		0.009 (1.05)		0.001 (0.96)		-0.038 (0.97)	

*Variables included in Student's t-test;

variables included in ANOVA.

Source: Research data.

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The inclusion of social variables in the logistic regression model allowed the estimation of the odds of adherence to the “Unhealthy” and “Traditional” dietary patterns (Table 4).

Pregnant women had higher odds of adhering to the “Unhealthy” dietary pattern (OR: 7.62; 95% CI: 3.59–16.19) compared with non-pregnant women. Women with primary education also had higher odds of adhering to this pattern (OR: 3.10; 95% CI: 1.18–8.12) compared with those with higher education. Pregnant women also had higher odds of adhering to the “Traditional” pattern (OR: 6.00; 95% CI: 2.82–12.78). Women older than 35 years were more likely to adhere to this pattern (OR: 2.10; 95% CI: 1.06–4.18) compared with women aged 35 years or younger. Women with primary education had lower odds of adhering to the “Traditional” pattern (OR: 0.26; 95% CI: 0.11–0.63) compared with women with higher education.

Table 4. Odds of adherence to each dietary pattern estimated using logistic regression models. João Pessoa, Paraíba, Brazil, 2018–2020 (n = 268).

Variables	Unhealthy** OR	95% CI	Traditional# OR	95% CI
Pregnancy status				
No	1.00		1.00	
Yes	6.14	2.69–14.03	6.00	2.82–12.78
Age				
≤ 35 years	1.00		1.00	
> 35 years	0.65	0.30–1.37	2.10	1.06–4.18
Educational attainment				
Higher education	1.00		1.00	
Secondary education	1.90	0.86–4.24	0.78	0.35–1.78
Primary education	3.19	1.21–8.42	0.26	0.11–0.63
Income				
More than ½ minimum wage	1.00		*	*
Up to ½ minimum wage	1.35	0.73–2.51		

**Unhealthy pattern: model adjusted for pregnancy status, age, educational attainment, and income.

#Traditional pattern: model adjusted for pregnancy status, age, and educational attainment.

*Variable not included in the adjusted model.

Source: Research data.

4 DISCUSSIONS

This study analysed dietary intake among adult women using the Brazilian Unified Health System (SUS) in the municipality of João Pessoa and applied factor analysis to

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identify dietary patterns. This approach is useful because it allows the analysis of groups of foods and the interactions among them, rather than focusing merely on individual nutrients.

Of the four dietary patterns identified, two showed clear characteristics and could be labelled “Unhealthy” and “Traditional.” The “Unhealthy” pattern was characterized by positive factor loadings for ultra-processed foods, whereas the “Traditional” pattern included foods commonly recognized as part of the traditional Brazilian diet, such as rice, beans, meat, and eggs, with positive factor loadings. The other two factors labelled “Mixed,” did not show a sufficiently distinct food composition to support either a positive or negative designation.

The unhealthy dietary pattern was common among the women, particularly among those who were pregnant, thereby increasing their vulnerability. The predominance of this pattern reflects the ongoing nutrition transition toward diets rich in fast foods, which may be associated with the development of cardiometabolic diseases.²⁶ The adverse effects of ultra-processed food consumption may be even more pronounced during pregnancy, as this dietary behaviour has been associated with a higher risk of gestational diabetes, greater gestational weight gain, a higher risk of infections and other complications,²⁷ impaired fetal development, and adverse infant health outcomes such as low birth weight and childhood obesity.^{28,31}

The unhealthy dietary pattern was characterized by the consumption of processed meats, fried snacks, soft drinks, sweets, and breads, indicating a high intake of ultra-processed foods. Processed meat products are often consumed as a source of protein because of their lower cost, which may have negative implications on public health.³² These findings highlight the need for a more context-sensitive approach.

Income, age, and educational attainment are key factors associated with adherence to dietary patterns because they directly influence access to, availability of, and choices regarding the foods consumed. A study of 758 women in Rio de Janeiro found that healthy eating was more prevalent among women with higher educational attainment in a low-income population, and that a higher level of education was associated with the prevention of excess weight and obesity and with healthier food choices.³³ This relationship may be explained by the fact that low educational attainment is a vulnerability factor for excess weight, limited access to information, lack of body-weight control strategies, and reduced

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access to health services.³⁴ Higher educational attainment tends to influence food choices by favouring the selection of healthier foods.³⁵

The findings of the present study indicate that older women showed greater adherence to the “Traditional” dietary pattern, similarly to studies describing the nutrition transition as an ongoing and potentially reversible process.^{36,37} This finding may be related to the greater preservation of traditional dietary habits among older generations. In addition, digital media have increasingly influenced eating behaviour, particularly among younger women, who may be more exposed to media, behavioural, and sociocultural influences related to food and body image.³⁸ These influences may contribute to changes in dietary habits and to increasing rates of obesity and other health problems.³⁹

A study conducted in the Zona da Mata region of Northeastern Brazil with 322 women found that those older than 40 years maintained healthier dietary habits than younger women.¹¹ Another study conducted in the state of Ceará with approximately 648 adult and older women found that older women showed greater adherence to a traditional Brazilian dietary pattern, as well as higher consumption of fruits, vegetables, tubers, and dairy products.⁴⁰

A study conducted in Maceió with women using the SUS also observed a reduction in the consumption of foods traditional to the Brazilian diet, such as rice and beans, alongside a significant increase in the consumption of high-calorie foods.⁴¹ This finding may indicate another issue related to the decline in cooking skills in favour of ready-to-eat foods.⁴²

During the process of selecting foods for the 18 food groups included in the factor analysis, reported consumption of fruits and vegetables was so low that these foods were excluded from the analysis. The low consumption of fruits and vegetables identified in this study is a concern because it further increases the risk of chronic diseases.⁴³ In 2017, approximately 3.9 million deaths worldwide were attributed to inadequate fruit and vegetable intake.⁴⁴ In Brazil, slightly less than half of the population (45.5%) consumes vegetables at least five times per week.⁴⁵ However, this finding is not restricted to João Pessoa or to Brazil, as international studies have also shown that the consumption of fresh or minimally processed foods among adults remains below recommended levels.^{46,47}

Pregnant women showed greater adherence to both the “Traditional” and the “Unhealthy” dietary patterns, which may be related to increased food intake during

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pregnancy. A study conducted in São Paulo with 785 pregnant women using the SUS found greater adherence to a dietary pattern with higher energy density.⁴ In addition, emotional and behavioural changes characteristic of pregnancy may also influence dietary intake.⁴⁸ This behaviour may contribute to greater gestational weight gain and subsequently increase the risk of overweight and obesity among women.

The findings of this study are consistent with the current literature. Among its limitations, the use of non-probability sampling should be highlighted, as the sample may not be representative of other populations of women in Brazil. In addition, because this was a cross-sectional study, causal relationships could not be established, particularly regarding the group of pregnant women. Another limitation was the use of the 24-hour dietary recall, a method that is subject to day-to-day variability in dietary intake.

Nevertheless, the procedures for reducing food items into patterns were very careful and started from the classification of responses from dietary recalls into 18 food groups. A minimum of 90 women would be needed to carry out the factor analysis; however, the study evaluated 268 women, a sample size much larger than the minimum necessary, which offers robustness to the results found.²²

5 CONCLUSION

The present study showed that adherence to dietary patterns was associated with socioeconomic factors. Pregnancy and lower educational attainment were characteristics associated with greater adherence to the unhealthy dietary pattern, which was characterized by ultra-processed foods. In contrast, the traditional dietary pattern was more common among pregnant women, older women, and those with higher educational attainment. These findings should be considered when developing health strategies aimed at promoting nutrition education and improving access to healthy foods.

Therefore, it is necessary to be ready to adopt measures that promote healthy eating and access to fresh foods, as well as respect the culture and eating habits of the population of João Pessoa, in the case of this study and the Brazilian population, considering that this is not an isolated problem.

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