

Behavior of Food Habits in Students of an Educational Institution of Barranquilla

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Abstract

Behavioral factors associated with food habits directly affect the development of applicable knowledge processes exercised by junior high school students. Therefore, this study aimed to identify the behaviors affecting the eating habits of students from an educational institution in Barranquilla from February 2018 to 2019, conduct a sociodemographic characterization of the study population and determine their eating behaviors. A total of 708 junior high school students were included in the quantitative, descriptive, and cross-sectional study. The sample consisted of 426 ninth-grade junior high school students. Sociodemographic characteristics showed that the population of the District Educational Institution in Barranquilla predominantly consisted of females aged between 14 and 16 years. Moreover, the majority of these students reported that they always or sometimes had breakfast, and others indicated they never took a lunchbox to school. Most of the students reported eating salty and fatty foods at least once a day, whereas fruits are consumed only once a day, and vegetables are usually two or more times a day. We observed that students of the District Educational Institution in Barranquilla had poor food habits as evidenced by their high consumption of unhealthy foods.

Keywords: Nutrition, Malnutrition, Health, Healthy Habits, Teenagers

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INTRODUCTION

Eating habits are recurrent individual and collective manifestations of what, when, where, and how people eat, as well as the elements they use to eat, the reason why they eat, and who eats each food. These behaviors are directly and indirectly adopted as sociocultural practices and changed based on factors affecting the family dynamics and interaction, such as a family's economic situation, which shapes the consumption patterns of children, teenagers, and adults [1]. Unhealthy eating habits may develop during childhood and extend to adolescence with repercussions, such as obesity, which in many cases starts in childhood, evolves throughout adolescence, and prevails during adulthood and becomes a short- or long-term risk factor for the development of metabolic clinical alterations affecting the patient's life expectancy [2].

The consequences of food selectivity include slower weight gain rate, failure to reach an individual's maximum potential size, lack of vitamins and mineral salts, poor light and dark adaptation, and memory and learning alterations, resulting in reduced learning potential among children. Healthy feeding during childhood and adolescence is essential for optimal health and development. Furthermore, it helps prevent the occurrence of high-incidence diseases in subsequent ages [3]. The World Health Organization (WHO) indicated that having a healthy diet helps prevent malnutrition and different non-communicable diseases and disorders. Nowadays, people are eating more hypercaloric food, fats, free sugars, and salt/sodium, but lesser fruit, vegetables, and dietary fiber consumption levels [4]. The WHO stated that from 10 to 19 years, teenagers grow fast and gain 50% of their body weight as adults, 20% of their definitive size, and >50% of their bone mass. For this reason, adequate feeding is essential during this stage, so that they can achieve their growth goals based on their genetic potential and avoid any short- or long-term health deterioration effects secondary to insufficient or unbalanced feeding [5].

The Colombian population currently faces problems associated with being underweight and overweight in all age groups. For this reason, adequate nutrition during school age results in children achieving their full growth and health potential. At this stage, children tend to face several problems; therefore, they should be familiar with healthy feeding principles and reinforce their healthy habits. Overweight increased from 18.8% in 2010 to 24.4% in 2015 among school populations. In the Atlantic Coast area, every 100 children aged 5 to 12 years are overweight, and the same is observed in Barranquilla [6].

For this reason, this study identified the main behavioral factors associated with food habits among students and conducted a direct assessment of the development of applicable learning processes conducted by students in junior high school. Therefore, we aimed to identify the behaviors of eating habits of students from the District Educational Institution "La Hacienda" from February 2018 to January 2019.

MATERIALS AND METHODS

This quantitative, descriptive, and cross-sectional study was conducted on 708 junior high school students of a District Educational Institution in Barranquilla. Sampling was non-probabilistic and consisted of 426 ninth-grade students at junior high school. Inclusion criteria were as follows: students aged 14 to 16 years and ninth-grade junior high school of the selected District Educational Institution in Barranquilla.

Data were collected with a wide-ranging survey applied to children aged 14 to 16 years assisting the District Educational Institution in Barranquilla. The WHO STEPwise approach was applied to non-communicable disease risk factor surveillance [7]. The instrument used was called the "Food habits questionnaire applied in the District Educational Institution of Barranquilla during 2019." Data were collected as of April 30, 2019; the surveys were conducted by the research group, and data were verified by

Counsel Gloria Lastre Amell. Questions aimed at obtaining the necessary information for the study. As a result, 426 ninth-grade students at junior high school answered the survey, after their families had signed informed consent. The surveys lasted from 10 to 15 min and were answered by students during their lessons and collected by researchers after class to not interrupt the school schedule.

Data were presented and analyzed using the Excel database, 2016 version, and represented as pie charts, which quantitatively show the project outcomes.

This study was conducted based on Resolution no. 008430 of 1993 outlined in Title II, Chapter 1, sections 5 and 8, on human research ethical aspects. Section 5 states that “any research conducted with human beings shall respect their dignity and protect their rights and well-being,” whereas Section 8 states that the “research conducted with human beings shall protect the privacy of individuals studied and reveal their identity only if required by the results and with individuals’ previous consent” [8].

Moreover, Title II, Chapter 11, portrays a classification of the types of research, according to which this research is riskless given those biological, physiological, psychological, and social variables of the study population were not modified. Moreover, data were collected after obtaining participants’ informed consent, defined in Section 14 as follows: “Informed consent is defined as the written statement by which research participants or their legal representatives authorize their participation in the study, fully understanding the procedures, benefits, and risks that this entails, and acknowledging that they are free to choose and have not been forced to participate” [8].

RESULTS

Regarding the participants’ sociodemographic characteristics, 55% and 45% of the students from the District Educational Institution of Barranquilla were females and males, respectively. Conversely, 49% of the population aged 15 years; the stratum of most students is stratum 2, 3, and 1 with 33%, 28%, and 24%, respectively, showing that food habits may be related to the economical stratum. About 76% of participants were affiliated with the contributive regime and 24% with the subsidized regime (Table 1).

Table 1: Sociodemographic variables of the food habits in schools of the District Educational Institution in Barranquilla

SEX		
Criteria	Frequency	Percentage
Female	45	55%
Male	87	45%
Total	82	100%
AGE		
Criteria	Frequency	Percentage
14	35	43%
15	40	49%
16	7	8%
Total	82	100%
SOCIOECONOMIC STRATUM		
Criteria	Frequency	Percentage
1	20	24%
2	27	49%
3	23	28%
4	10	12%
5	2	3%

Total	82	100%
HEALTH AFFILIATION REGIME		
Criteria	Frequency	Percentage
Contributive system	62	76%
Subsidized system	20	24%
Total	82	100%

Source: Food habits questionnaire.

Regarding their food habits, 37% of students reported eating breakfast on some occasions over the last 30 days, 20% said they did not have breakfast because they had no time, 75% because it was too early in the morning, and 1% because of no food in their home. Moreover, students reported acting in ways affecting their weight: 3% took weight loss products, 22% ate less to lose weight, and 17% ate more to gain weight (Table 2).

Table 2: Food habits of students of the District Educational Institution in Barranquilla in 2019.

OVER THE LAST 30 DAYS HOW OFTEN DID YOU HAVE BREAKFAST?		
Criteria	Frequency	Percentage
Never	11	13%
Rarely	29	35%
Sometimes	30	37%
Always	12	15%
Total	82	100%
HOW OFTEN DID YOU HAVE BREAKFAST?		
Criteria	Frequency	Percentage
Always	59	72%
I did not have time	16	20%
It was too early in the morning	6	7%
There was no food at home	1	1%
Total	82	100%
DID YOU USE ANY WEIGHT LOSS PRODUCTS?		
Criteria	Frequency	Percentage
Yes	2	3%
No	80	97%
Total	82	100%
DID YOU EAT LESS TO LOSE WEIGHT?		
Criteria	Frequency	Percentage
Yes	18	22%
No	64	78%
Total	82	100%
DID YOU EAT MORE TO GAIN WEIGHT?		
Criteria	Frequency	Percentage
Yes	14	17%
No	68	83%
Total	82	100%

Source: Food habits questionnaire.

Regarding food consumption, each student was asked about the frequency in which they consumed different types of food. When asked about their daily intake of dairy products, 39% of students reported that they consumed them less than once a day and 34% once a day. As for fruit consumption, 45% and 21% reported eating fruits less than once a day

and twice a day or more, respectively. Most students (45%) reported eating vegetables less than once a day.

When asked about unhealthy food, 33% of students reported they ate salty foods once a day, whereas 51% and 21% of students reported eating fatty food less than once a day and once a day, respectively. Moreover, 35% and 29% reported drinking soft drinks less than once a day and once a day, respectively. Finally, 32% of students reported eating fast food twice a week (Table 3).

Table 3: Food consumption frequency among students of the District Educational Institution of Barranquilla in 2019.

HOW MANY TIMES A DAY DID YOU DRINK MILK OR OTHER DAIRY PRODUCT?		
Criteria	Frequency	Percentage
None	0	0%
Less than once a day	32	39%
Once a day	28	34%
Twice a day or more	22	27%
Total	82	100%
HOW MANY TIMES A DAY DID YOU EAT SALTY FOOD?		
Criteria	Frequency	Percentage
None	20	24%
Less than once a day	26	32%
Once a day	27	33%
Twice a day or more	9	11%
Total	82	100%
HOW MANY TIMES A DAY DID YOU EAT FATTY FOOD?		
Criteria	Frequency	Percentage
None	15	18%
Less than once a day	42	51%
Once a day	17	21%
Twice a day or more	8	10%
Total	82	100%
HOW MANY TIMES A DAY DID YOU EAT FRUITS?		
Criteria	Frequency	Percentage
None	13	16%
Less than once a day	37	45%
Once a day	15	18%
Twice a day or more	17	21%
Total	82	100%
HOW MANY TIMES A DAY DID YOU EAT VEGETABLES?		
Criteria	Frequency	Percentage
None	7	9%
Less than once a day	19	23%
Once a day	33	40%
Twice a day or more	23	28%
Total	82	100%
HOW MANY TIMES A DAY DID YOU DRINK SOFT DRINKS?		
Criteria	Frequency	Percentage
None	7	9%
Less than once a day	29	35%
Once a day	24	29%
Twice a day or more	22	27%
Total	82	100%
HOW MANY DAYS DID YOU EAT AT FAST FOOD RESTAURANTS?		
Criteria	Frequency	Percentage
0 days	17	21%
1 day	19	23%
2 days	26	32%

3 days	20	24%
Total	82	100%

Source: Food habit questionnaire.

DISCUSSION

When determining the behaviors of eating habits of students from the District Educational Institution in Barranquilla in 2019 and analyzing their demographic characteristics, we observed that female students prevailed, most being between 15 and 16 years. These results are consistent with those reported by Campo L. et al. [6], who included children and teenagers aged 7 to 17 years from 16 public schools in Barranquilla [6]. Regarding students' socioeconomic stratum, 33% and 28% were in stratum 2 and 3, respectively, a finding similar to that of the study conducted by Pastrana Y. and Montes, C. [9], who reported that 47.6% and 28.3% of their population were in stratum 2 and 3, respectively [9].

Regarding food habits, 37% and 35% reported that they sometimes and rarely had breakfast, respectively, a finding inconsistent with that of Morales R. et al. [10], who reported that 19% of the student population reported having breakfast every day, confirming its paramount importance as the first meal of the day; these students also showed good eating behaviors [10].

Moreover, 20% and 7% of students reported they did not have breakfast because of time constraints and it was too early in the morning; these findings are consistent with those of Tuero C. et al. [11], who investigated the food habits of a teenage population and found that 4.1% only had 1 to 2 meals per day. This may also be associated with their socioeconomic stratum, given that only 21.6% of cases had a working father, showing that poor feeding is also related to a lack of resources at home [11].

Conversely, regarding healthy food consumption, 45%, 39%, and 45% of the students ate fruits, consumed dairy products, and ate vegetables less than once a day, respectively, which is consistent with that of the study conducted by Ávila H et al. [12], who reported that 40% of participants ate this food once a day [12].

As for unhealthy food consumption, 33% and 32% of students reported eating salty foods once a day and less than once a day, respectively. Moreover, 51% reported eating fatty food at least once a day and only a smaller percentage reported eating fatty food twice a day or more. These findings are similar to those reported by Morales R et al. [13], who identified that 25% and 31% of participants ate salty food once a day and fatty food less than once a day, respectively [13].

CONCLUSION

When identifying the behaviors of students from the District Educational Institution "La Hacienda," we found that most students belonged to socioeconomic strata 1, 2, and 3. Most of them were affiliated with the contributive system as opposed to the subsidized system.

Therefore, to specify the type of eating behaviors of students from Institución Educativa Distrital La Hacienda, based on how they had breakfast, it is concluded that they rarely or sometimes ate breakfast, because they did not have time, because it was too early in the morning, or because they were not used to taking lunchboxes to school. Moreover, students said they consume milk or some dairy products less than once a day.

Regarding unhealthy food consumption, most students reported eating salty, fatty, and fast foods and drinking soft drinks, whereas they did not report eating fruits every day.

Another significant finding is that they did not show habits or behaviors associated with physical activity. Some students maintained their weight and did not take any products or laxatives to lose weight.

In conclusion, students of the District Educational Institution “La Hacienda” showed poor food habits, given the high levels of unhealthy food consumption observed among them. Therefore, students should be explained that food has nutrients with specific functions that help our bodies to grow, develop, and work adequately.

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