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## SOCIOECONOMIC LEVEL OF UNIVERSITY STUDENTS AND ITS RELATIONSHIP WITH HEALTHY EATING

### NIVEL SOCIOECONÓMICO DE ESTUDIANTES UNIVERSITARIOS Y SU RELACIÓN CON LA ALIMENTACIÓN SALUDABLE

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#### ABSTRACT

Studying the consumption of healthy foods poses an important measurement challenge due to the influence of social, economic and cultural factors. The objective of the study was to analyze the incidence of socioeconomic level on the consumption of healthy foods in university students. Social strata were established according to what was suggested by the World Bank, the consumption of healthy foods was stratified using scales from the Ministry of Public Health and a correlation analysis was carried out with the weighted scores. It was verified that the educational level of the head of household is secondary, with an average income lower than the basic basket, the house is their own and they have a laptop with internet. Among vegetable foods, the consumption of legumes and vegetables stands out and the low consumption of fruits is striking; Therefore, they consume rice, a tuber and one to two meats per week. University households belong to the vulnerable and poor socioeconomic group in which the consumption of healthy foods qualifies as a high risk situation. There is a significant direct relationship between the socioeconomic level and the consumption of healthy foods, that is, the higher the socioeconomic level, the higher the consumption of healthy foods.

#### Keywords:

Social class, home, unified salary, healthy food.

#### RESUMEN

Estudiar el consumo de alimentos saludables plantea un importante reto de medición por la influencia de factores sociales, económicos y culturales. El objetivo del estudio fue analizar la incidencia del nivel socioeconómico sobre el consumo de alimentos saludables en estudiantes universitarios. Fueron establecidos estratos sociales acorde a lo sugerido por el Banco Mundial, se estratificó el consumo de alimentos saludables mediante escalas del Ministerio de Salud Pública y con los puntajes ponderados se realizó un análisis de correlación. Se verificó que el nivel educativo del jefe de hogar es el secundario, con ingresos promedios menores al de la canasta básica, la vivienda es propia y disponen de computador portátil con internet. Entre los alimentos vegetales destaca el consumo de legumbres y hortalizas y llama la atención el bajo consumo de frutas; igualmente, consumen arroz, un tubérculo y de una a dos carnes por semana. Los hogares de universitarios pertenecen al grupo socioeconómico de vulnerable y pobre en la que el consumo de alimentos saludables califica a una alta situación de riesgo. Existe una relación significativa directa entre el nivel socioeconómico y el consumo de alimentos saludables, es decir, a mayor nivel socioeconómico mayor consumo de alimentos saludables.

#### Palabras clave:

Clase social, hogar, salario unificado, alimentos saludables.

## INTRODUCTION

The lifestyle of university students from COVID 19 is not healthy; Therefore, it is urgent to carry out actions that allow improving health care behaviors and habits (Inga Ávila et al., 2022). Eating behavior is one of the aspects that most influence health (Vento Ruizcalderon & Ordaz Hernández, 2020) and is generally conditioned by cultural, social and economic variables.

According to Souza et al. (2018), when studying the behavior of the population in general, it is observed that university students constitute one of the groups most susceptible to certain health risk behaviors, for example, smoking, use of illicit drugs, excessive consumption of alcoholic beverages, sedentary lifestyle and adoption of inappropriate eating practices.

Pucha et al. (2020), found that the factors that affect student eating behavior are the weather and non-nutritious foods, the same ones that trigger health and academic performance problems. While Alarcón et al. (2019), managed to identify that friends, lack of time and advertising, as well as information obtained from social networks, are limiting to maintain healthy habits.

Regarding the measurement of the socioeconomic level, there is no consensus to find the best form of operationalization, so different forms of measurement are applied (Broer et al., 2019). However, in the literature Sirin (2005); Alves et al. (2014), point out that the three main components of a socioeconomic indicator are: family income, level of education and occupation of the parents. In Latin America there are periodic methodological adjustments, which is why there are studies such as those by Paredes & Guerrón (2020), that establish different denominations such as typical middle class, upper middle class, lower middle class, while Rodríguez et al. (2013), divide the population in 5 strata: High, High Medium, Medium, Low Medium and Low.

From this perspective, the present study aims to analyze the incidence of the family socioeconomic level of university students on the consumption of healthy foods, information that can be used for the implementation of measures that seek to improve the food security situation in households students.

## MATERIALS AND METHODS

The data to establish the incidence of the socioeconomic level in the consumption of healthy foods were obtained through surveys to the head of household of in person graduation students. In accordance with the student population indicators reported by the Universidad Técnica Estatal de Quevedo (2022), for a population of 1071

students enrolled in the first academic period 2022-2023 in the Faculty of Social, Economic and Financial Sciences, a sample of 88 students was obtained for a confidence level of 95% and a margin of error of 10%. The questionnaire to establish the socioeconomic conditions of the students was adapted to the stratification guidelines proposed by the (Ecuador. Instituto Nacional de Estadísticas y Censos, 2011) and qualified out of 100 points. This stratification was complemented with the World Bank scheme through Ferreira et al. (2013), and the population was divided into four social groups: Upper middle (81 to 100 points), Middle (61 to 80), Vulnerable (40 to 60) and poor (less than 40 points).

Regarding the consumption of healthy foods in the homes of university students, 5 foods of vegetable origin (legumes, vegetables, fruits, cereals, tubers) and 1 food of animal origin (meat) were selected from among those with the highest consumption on the Ecuadorian coast and suggested by the Ecuadorian Ministry of Public Health (Ministerio de Salud Pública del Ecuador, 2017). Consumption was classified as adequate when the average score was between 100 and 80 points; Risk when it was greater than 60 and less than 80; e Inadequate when it was between 40 and less than 60 points.

From there, using the "SPSS" software, a correlation analysis was carried out with the total score (value of the scores) of the two variables with a significance level of 95%, establishing the dependent variable "y" as consumption of healthy foods from an independent variable, "x" the socioeconomic level.

## RESULTS AND DISCUSSION

The predominant educational level of the head of household of economics students is secondary with 49%, followed by the higher level 29% and 12% have fourth level studies. 48% of the heads of household work on farms and private agricultural companies, while 32% work in the public sector and 20% work in businesses and self-employed enterprises. The majority income corresponds to the range of \$451 to \$850 US dollars, followed by income less than the unified basic salary of \$450.

The predominant type of housing is houses with 59%, followed by Villa 25%, this is self-built with a Zinc roof for more than half of the families, followed by fiber cement 35%; while 57% of student rooms have a private shower.

In the homes where the students reside, most of them have a laptop in which they access to surf the net. Less frequently, they state that they have paid internet service on their cell phones and a small group have a fixed

computer with paid services where they access the internet for consultations or attendance at virtual classes.

Regarding household appliances, 58% of those surveyed indicated that they have more than two televisions and, additionally, 51% have a motorcycle as the predominant form of mobilization at home.

In the homes of university students in the economics major, families consume one to two legumes per week, in a lesser proportion there is the consumption of three legumes and finally there are few families in the extremes that do not report the consumption of legumes and almost the same number of families report four legumes in their diet.

36% of household heads report consuming one vegetable between cucumber, tomato, cabbage/cauliflower and carrot per week, followed by 24% corresponding to three vegetables and to a lesser extent they consume between two to four vegetables per week. In relation to fruit consumption (bpineapple, apple, orange, watermelon), a considerable consumption of three fruits per week is reported by 32% followed by one fruit by 26% of families, but it is striking that 14% of families do not report having consumed fruit in the week of the survey.

The consumption of at least one cereal is reported by 53% of households followed by the consumption of two cereals (rice and corn) by 34% and three cereals by a small number of families. The consumption of a tuber such as cassava or plantain is common for 41% of families and the rest consume between two to three products. Regarding meat consumption, 69% report one to two meats per week, followed by 28% who consume up to three meats out of the four alternatives consulted: Chicken, Beef, Pork and Seafood.

Figure 1 shows four groups of families according to the score established in the basic data of the head of household and the availability of goods and vehicles of students of the University of Quevedo during the year 2022.

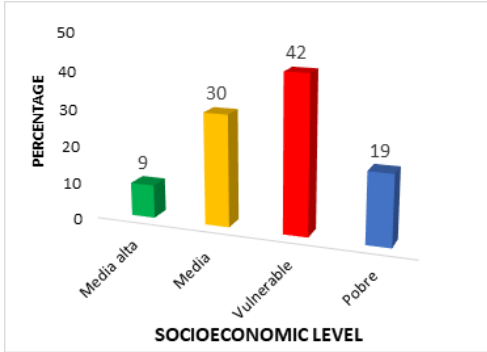


Figure 1. Socioeconomic level by stratum in households of university students.

It can be observed that 61% of the homes of university students belong to the vulnerable and poor socioeconomic group, a worrying situation because according to Villalobos et al. (2022), lower class students experience their university life with anguish, tensions and constant abdications, they experience their university experience as a stage that requires them not only to fully dedicate themselves to study, but also to give up youth activities and sociability.

The adequate consumption of healthy foods in the families of university students is around 42%, followed by a high risk situation with 33% and even for 25% of families the consumption of healthy foods is inadequate (Figure 2). Despite the fact that Giler et al. (2022), found that the prices of the products that make up the basic basket in the last two quarters of 2020 and the first two quarters of 2021 had a decreasing trend.

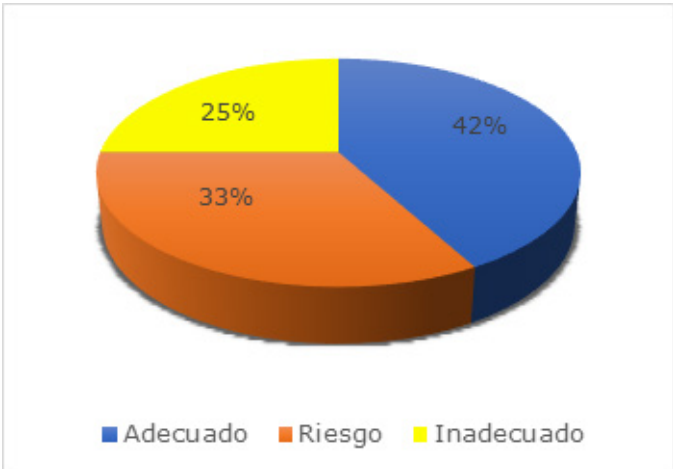


Figure 2. Consumption of healthy foods in homes of university students.

The results agree with Hernández-Gallardo et al. (2020), who found that the eating habits of university students from Manabí show the execution of three daily meals, with a nutritional pattern characterized by the use of refined cereals in the diet, a limited incorporation of fruits, vegetables, fish and shellfish, and a high consumption of red and processed meats, as well as soft drinks, a condition that determines that the quality of the diet is unhealthy and requires changes to support health.

Figure 3 shows the scatterplot of the correlation between socioeconomic level and food consumption that can be introduced into a multivariate model.

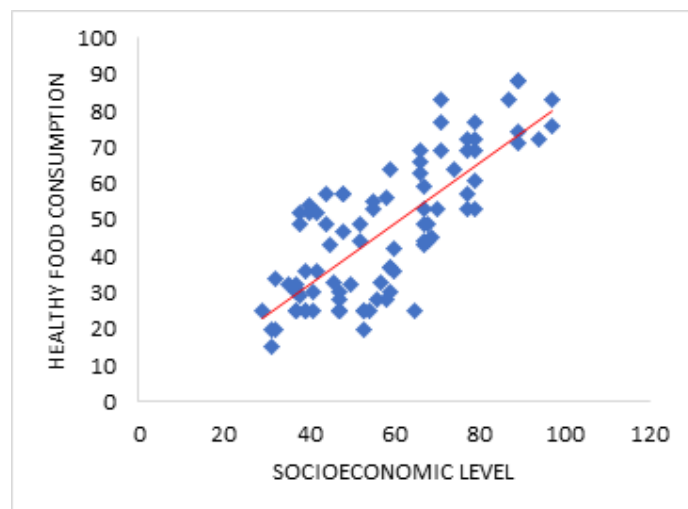


Figure 3. Degree of correlation between socioeconomic level and consumption of healthy foods.

The scatter diagram shows a positive correlation with a linear trend of the total scores obtained in the variables and therefore makes it possible to calculate the Pearson correlation coefficient.

Table 1. Pearson correlation of socioeconomic level and consumption of healthy foods in university households.

Variables	P	P	No.
Socioeconomic level – consumption of healthy foods	0.775**	,000	88

Table 1 shows that since  $p$  is equal to 0 and less than 0.05; Statistically, there is a significant relationship between socioeconomic level and the consumption of healthy foods. This relationship is direct, that is, the higher the socioeconomic level, the higher the consumption of healthy foods, and the relationship is high (0.775). This situation is consistent with Pérez et al. (2023), who found that, at a lower socioeconomic level, there is a lower consumption of dairy products, whole grains, fruits, and vegetables.

## CONCLUSIONS

The predominant educational level of the head of household of the economics student is secondary, he works in agricultural companies, public sector and own enterprises. The majority income corresponds to the range of \$451 to \$850 dollars. The house is mostly their property built with a zinc roof; they have a laptop in which they access to surf the net.

Among the foods of plant origin consumed in homes, the consumption of one to two legumes per week and one vegetable including cucumber, tomato, cabbage/cauliflower

or carrot stand out. In relation to fruit consumption, it is noteworthy that a group of families did not report having consumed fruit during the week of the survey.

Families normally consume rice along with a root vegetable such as cassava or plantain, and one to two meats per week, including chicken, beef, pork, or seafood.

The households of university students belong to the vulnerable and poor socioeconomic group with a high risk situation and even inadequate food consumption. There is a significant direct relationship between the socioeconomic level and the consumption of healthy foods, that is, the higher the socioeconomic level, the higher the consumption of healthy foods.

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