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**ASSESSING THE INFLUENCE OF KNOWLEDGE, SOCIO-
ECONOMIC STATUS AND SELF-CONSCIOUSNESS ON
NUTRITION MANAGEMENT**

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Abstract

The study investigates the influence that the level of education and socio-economic status have on both self-awareness and conscious or unconscious compromise made by young consumers with to food choices. The aim of the research is to identify the degree of influence of the three factors; knowledge, socio-economic status, and self-consciousness, in achieving nutrition management. Data was collected through a Market Research type questionnaire. A total of 1500 students participated in this study. Among well-informed youths, there is an increased interest in foods that meet the conditions of quality and origin for safe consumption, followed by those with high incomes, although this category of consumers are not more informed compared to those with lower incomes, which must often make trade-offs. There is also a category of uninformed consumers that unconsciously make trade-offs. The study identified some confusion regarding functional foods among young people in Romania due mainly to names of imported foods that are more or less exotic, which signals the need for information campaigns.

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Keywords: Nutrition management, knowledge, socio-economic status, self-consciousness.



1. Introduction

The Nutrition and Dietetics Academy (NDA), claims that “the food defined as integral food, along with fortified food, enriched or improved, have a potentially beneficial effect upon health, when they are consumed as part of a food diet that is regularly various at efficient levels” (Krowe & Francis, 2013).

The European Commission defines functional foods as “food which affects in a beneficial way one or more main function of the body, besides the nutritional effects, in a way that is relevant either for improving health and welfare and reducing the risk of illness, taking part of a normal diet. There is no pill or capsule or any other form of dietary supplement needed (Krowe & Francis, 2013).

In 2016, the U.S. Food & Drug Administration announced “the new Nutrition Facts label for packaged foods to reflect new scientific information, including the link between diet and chronic diseases such as obesity and heart disease”. (U.S. Food & Drug Administration, 2018)

The 2015-2020 Dietary Guidelines for Americans state that “there is room for limited amounts of Added Sugars in the diet, especially from nutrient dense food like naturally tart cranberries.” (Safeguards/Food, 2018, paragraph 4)

During the last few years, many studies about what we eat have been published. However, there still exist questions without an answer, and the recommendations are both varied and sometimes contradictory. In the content of this plethora of information, there is data in which researchers have found some common ground, considering certain foods as being important due to the way they impact our health (Marklund, 2017).

Certain changes of a lifestyle that has become not only more and more sedentary, but also implies consuming genetically altered foods or containing additives, have led, during the last few decades, to an increased number of cardiovascular diseases, hypertension and diabetes.

Culture and society play an integral role in the shaping of one’s diet. There is also a strong, reverse association between socio-economic factors, such as one’s habits, income and obesity. A study claimed that healthy foods, such as fruits and vegetables are more expensive than energy boosting, unhealthy food. (Edward, 2018)

There are several ways that society has influenced the way we eat. For example, many people do not have the time or desire to cook at home. A busy working life can also cause difficulties in consistently following a balanced diet. Unfortunately, in a society in which *cheap is good, quick is even better*, we have chosen oversized portions, low cost fast-food that have lead the way to an alarming increase in obesity rates. (Edward, 2018)

In one of his publications, the well-known nutritionist Mencinicopschi (2010) mentions that being healthy does not depend on a food diet, but also on behaviour affected by wealth, especially in the social-economic environment which is an essential component of the quality of life.

The consumption of ultra-processed foods is an important issue in young adult nutritional habits.

Bielemann et al. (2015) conducted a study that underscored the importance of monitoring the consumption of ultra-processed foods and the influence these products may have on consumers’ health and nutritional status. Mendonça et al. (2016) suggested that increased ultra-processed food consumption is associated with a greater risk of weight disorders. So, reducing the consumption of this kind of food and maintaining the traditional food culture of young people can prevent obesity.

Following media campaigns, more and more people have realised that unaltered foods can prevent certain diseases, helping them with their health. A well-balanced diet is essential for optimal growth and development. (Pang et al., 2012)

The first crucial step is to make a connection not only between the preference for good food and good health, but also between unhealthy food and fragile health. (Slăvilă, 2013)

A healthy diet doesn't always mean a food diet; it stands for a method to improve health. By adopting a regular food diet that is balanced, healthy, low in dry fats and rich in muesli, fruits, vegetables and good fats (extra virgin olive oil) the risk of disease will be sufficiently reduced and the management of certain diseases sustained (Slăvilă, 2013).

We considered it important to evaluate the situation of young university students who, from our point of view, are in the new position to manage their nutritional decision making. Leaving home has a major psychological impact for those in the first year, for whom the new student life is completely different and involves rapid and effective adaptation. Usually, the first condition to deal with is the social status that allows them to choose where they will be able to live during the academic year - dorm, shared dwelling or renting a home. Even those years are not without financial challenges because although some may have scholarships, others have to get a job in order to support themselves. It is their socio-economic status that allows them to spend more for a healthy diet and for a better life.

Socio-economic status is important in the compromise of choosing a healthy life (Benzeval et al., 2014) in their report identified key theories explaining how money affects health:

- materialistic arguments: for example, money buy health-promoting goods and the ability to engage in a social life in ways that allow people to be healthy;
- psychosocial mechanisms: for example, the stress of not having enough money can affect health;
- behavioural factors: people living in deprived circumstances may be more likely to have unhealthy behaviours.

Poor health can affect education and employment opportunities in ways that affect health described recovery as a crucial part of any performance system. To be able to produce optimal performances, individuals have to respond to bio-psycho-social demands adequately as these demands affect a person's health status.

2. Problem Statement

University campuses are equipped with canteens where food is affordable, but students often fail to eat there because of their class schedule or because they are happy with a fast food snack. We believe that the freedom to choose how to spend money on food depends a lot on the education they had in the family until they left home and on the degree of conscience to apply this knowledge to their personal lives. We believe that parents with a higher level of education, who got through such a student experience, can prepare their students better to cope with these challenges. To deal with the school schedule, we consider it important for students to be healthy. The study is designed to see if these issues are real and if they depend on the socio-economic status, knowledge and consciousness of the students.

3. Research Questions

The study investigates the influence that the level of education and socio-economic status have on both self-awareness and conscious or unconscious compromise made by young consumers regarding food choices.

4. Purpose of the Study

The main purpose of the study, in our case, is to evaluate the social-economic status, degree of knowledge, and the impact of consciousness on young students' attitudes in relation to a kind of diet. As far as we know, few researches have evaluated students' interest and attitude with respect to daily food intake.

5. Research Methods

The information for this research was collected through a Market Research questionnaire. The study was conducted in the University of Bucharest, Romania, between September 2017 - February 2018. The study subjects were students from 18 faculties of the University of Bucharest, with ages ranging from 18 to 24, who had either attended or not attended Physical Education and Sport courses. 1500 subjects: 900 female (60%) and 600 male (40%) completed the questionnaire. The subjects received information about the purpose of the study and they gave their consent about the use of their personal data. In conformity with the Declaration of Helsinki, the Amsterdam Protocol and Directive 86/600 EEC, the agreement of the Ethics Commission of the University of Bucharest and the Department of Physical Education and Sport was approved for this study.

The characteristics of the sample who participated in the study are presented in Table 2.

Table 01. Sample characteristics

Type		Age	Hired	Subjects ' Birth region	How do you appreciate your health Scale from 1 to 7
Female	60%	18-24 years	Yes = 2% No = 93% Part - time = 5%	Muntenia 56% Oltenia 19% Moldova 17% Other areas 8%	S1 =0% S2=0,3% S3=0% S4=2% S5=21,7% S6=51% S7=25%
Male	40%	18-24 years			
Total %	100%				

5.1.Data collection instrument

This Market Research questionnaire was initiated by the research group of the Department of Physical Education and Sports (DPES) of the University of Bucharest and aimed to obtain information on the lifestyle of students, as well as the existence of relationships between food management and certain factors such as knowledge, socio-economic status and consciousness. The questionnaire was distributed between September, 2017, in 500 printed copies and 1130 copies online. All 500 printed questionnaires were recovered of which 486 were complete and 1014 online questionnaires were returned.

The questionnaire was divided into four categories of items:

- a. items of a general nature - 9
- b. items about eating habits - 18
- c. Lifestyle items – habits, activities - 12
- d. items about social relations – 5

The subjects were asked about the food they bought, if they read the labels of the food items, their interest towards the knowledge of the items that maintain their health and their attitude towards such information, what lifestyle they practise, if they have hobbies and about their social relations.

The answers were collected in a Microsoft Office Excel data base. Also, the data was manufactured and transposed in graphic format, using the same Microsoft Excel and SPSS.

6. Findings

The distribution of the responses of the sample is presented according to the three research variables: social condition, knowledge, consciousness.

6.1. The parameters of the socio-economic status

6.1.1. Parents' education level

Students' responses on parents' education level were found to be statistically significant at $P < 0.001 < 0.05$, for $\chi^2 = 85.420$ and $df = 2$ (Table 02). Parents' level of education is presented in Figure 01 which reveals that 52% of parents have a higher education.

Table 02. Statistical data for parents' education level

	χ^2	df	P (Sig.)
χ^2 - Goodness of fit	85.420	2	<0.001

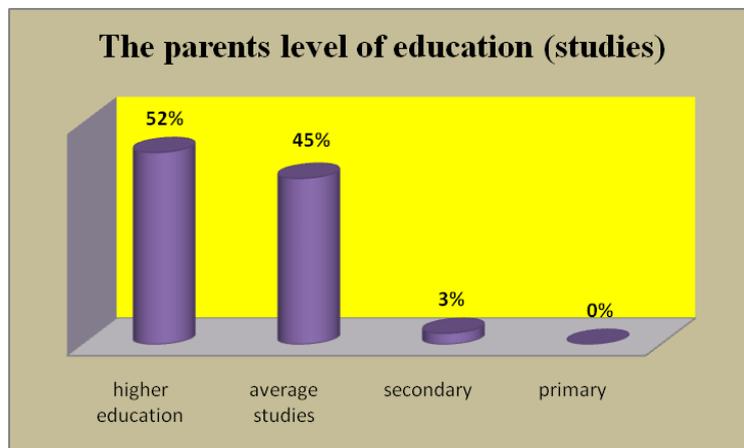


Figure 01. Parents' level of education

6.1.2. Financial support

Regarding the financial support of the parents, the students' responses were also statistically significant at $P < 0.001 \leq 0.05$, for $\chi^2 = 222.742$ and $df = 5$ (table 03). Parental financial support is presented in Figure 02 where 48% of students received financial support ranging from 1001 to 1500 lei.

Table 03. Statistical data for parental financial support

χ^2 - Goodness of fit	χ^2	df	P (Sig.)
	222.742	5	<0.001

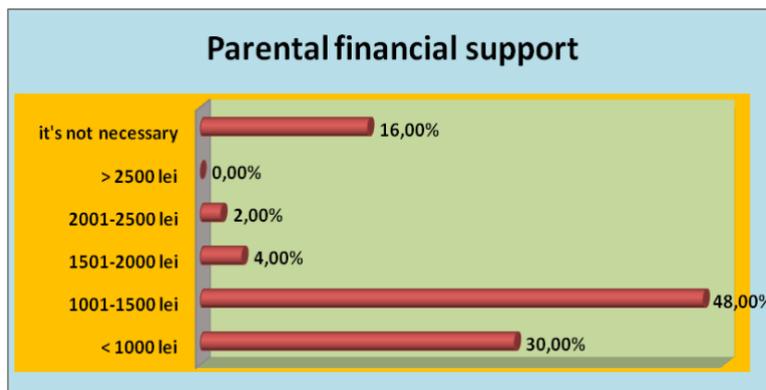


Figure 02. Parental financial support

The margins for students' monthly costs for food are statistically significant at $P < 0.001 < 0.05$, for $\chi^2 = 142.879$ and $df = 4$ (table 04). 39% of students spend between 251-500 lei per month on preserved products, semi-prepared products, but not frozen, products with fewer ingredients and dietary. The cost for food ratios is shown figure 03.

Table 04. Statistical data for students monthly expenses on food

χ^2 - Goodness of fit	χ^2	df	P (Sig.)
	142.879	4	<0.001

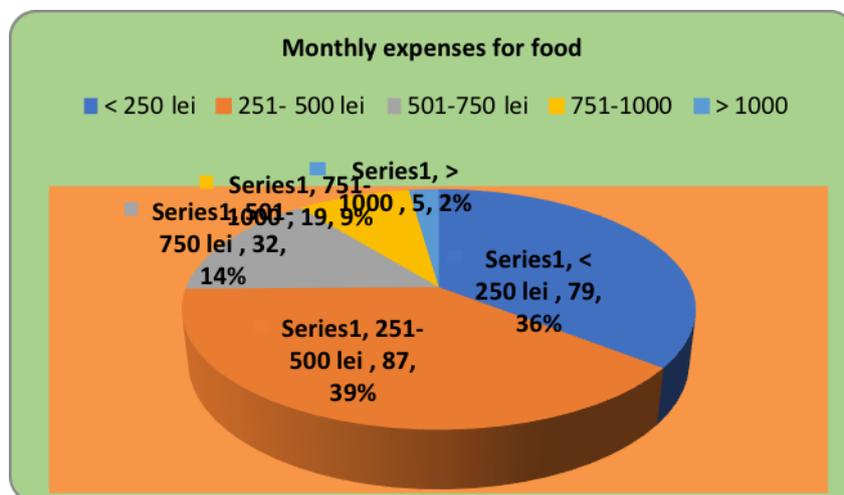


Figure 03. Monthly expenses for food

6.2. Knowledge Parameters

Of the 18 items about eating, we considered it necessary to highlight 2 items' responses for this parameter.

6.2.1. Do you know the significance of the food additives on the labels of the food that you purchase?

The responses about the knowledge of the significance of the food additives on their labels are statistically significant at, $P < 0.001 < 0.05$, for $\chi^2 = 113.382$ and $df = 3$ (table 05). 46% of the students are not aware of the significance of the food additives (figure 04).

Table 05. Statistical data of the knowledge of the significance of the food additives

χ^2 - Goodness of fit	χ^2	df	P (Sig.)
	113.382	3	<0.001

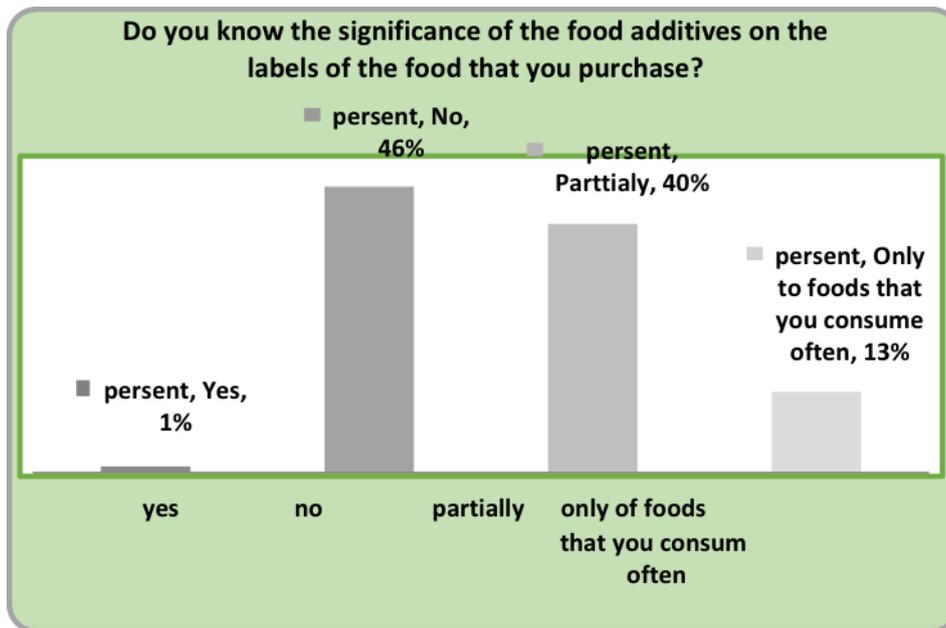


Figure 04. Knowledge of food additives

6.2.2. When you do your shopping, what type of food do you prefer?

The students' preferences for the types of food are statistically significant at, $P < 0.001 < 0.05$, for $\chi^2 = 69.282$ and $df = 7$ (table 07). Figure 05 shows that preserved products are preferred in 20% of cases, while 17% prefer semi-prepared products, but not frozen, 15% prefer with fewer ingredients and another 15% prefer dietary ones.

Table 06. Statistical data with food preferences

χ^2 - Goodness of fit	χ^2	df	P (Sig.)
	69.282	7	<0.001



Figure 05. Food preferences

6.3. Consciousness Parameters

6.3.1. Do you think the way you eat is important to your life?

The students' answers for this item are statistically significant at, $P < 0.001 < 0.05$, for $\chi^2 = 251.681$ and $df = 2$ (table 08). Figure 06 shows that 85% of the students answered "Yes" to this item.

Table 07. Statistic data on the importance of food for life

χ^2 - Goodness of fit	χ^2	df	P (Sig.)
	251.681	2	<0.001

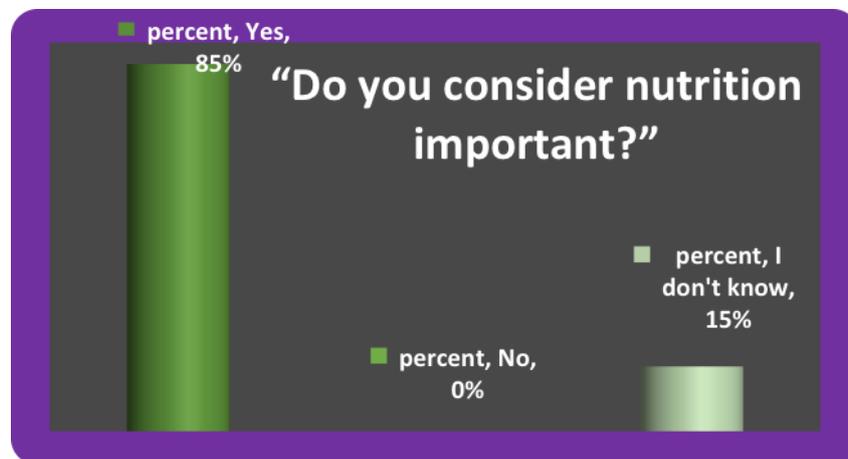


Figure 06. Importance of food for life

6.3.2. Do you consider that monthly income influences the approach to quality food?

The answers about the influence of the monthly incomes on the quality of food are statistically significant at, $P < 0.001 < 0.05$, for $\chi^2 = 272.449$ and $df = 5$ (table 09). Figure 07 shows that 57% of students think that the monthly income influences the approach to quality food.

Table 08. Statistical data on income influence in addressing quality food products

χ^2 - Goodness of fit	χ^2	df	P (Sig.)
	272.449	5	<0.001

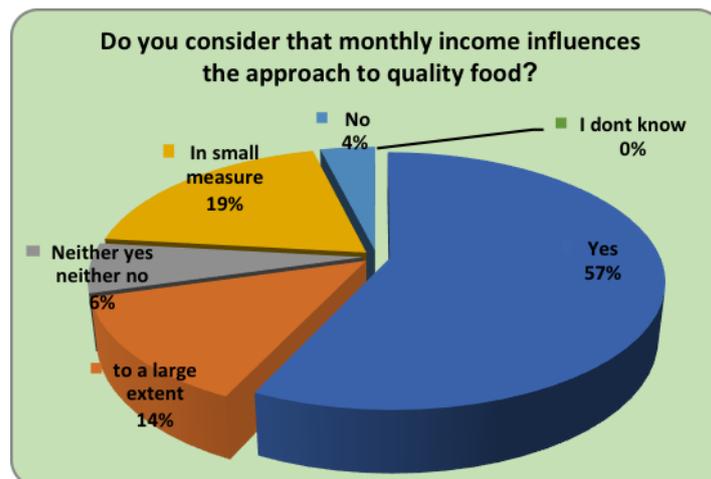


Figure 07. Revenue influences the approach to purchasing quality food

7. Conclusion

7.1 Socio-economic status: is represented by the level of parental education, the financial support of the subjects and the monthly expenses on the food. In our opinion, parents with higher education (97% with upper and secondary education) can influence the approach of the study subjects regarding proper nutrition. Of the entire sample of 1500 students, 84% are financially supported by parents with less than 1000 lei (30%), with amounts between 1001-1500 lei accounting for 48%, with sums between 1501-2000 lei representing 4% and between 2001-2500 lei representing 2%. It is worth noticing 16% are financially independent, meaning that they either work part-time or are scholarship recipients. Of the total of 84% of those who are financially supported, 75% spend between 250-500 lei on food. We assume that the parameters of the socio-economic status greatly influences the monthly expenses on food, the sums being able to go up to almost half of the total, as the subjects responded.

7.2 Knowledge Parameters: An insignificant percentage of 1% of subjects knows the meaning of food additives on the labels of the products. It is alarming that a significant percentage of respondents (46%) do not know about the significance of additives on the food label, whereas 40% only know about this partially.

We can assume that the interest in knowledge about food is very low. These results were ascertained from the responses to preferred diet, where we find close percentages to types of products that contain a high amount of preservatives. Hence, it is understandable that these students would not know or want to know about the food additives in their purchases.

7.3 Consciousness Parameters: Given the above finding on lack of knowledge about food additives, it is very surprising that 85% of the subjects consider that nutrition is an important aspect of life, whereas 15% did not consider it that important. This may due more to media campaigns or socially fuelled 'trends' rather than an internal consciousness on the importance of good nutrition.

Although a large number of subjects consider the nutrition an important aspect, only 1% of them had knowledge about this. 57%, the subjects considered that monthly income is important for quality nutrition approach. From the responses of the subjects, we conclude that socio-economic status is an important parameter for consumption of healthy food .

It can be seen that parents have not educated their children to understand the importance of good food even if they have adequate intellectual support. Socio-economic status is important for healthy eating, but even subjects, who seem to come from families with highly educated parents, appear to lack the necessary knowledge to engage in and sustain such a diet. Other than 13% of the subjects, it has been found that they do not know the significance of food additives of the food they consume.

8. Implications

This study is important for young students from the University of Bucharest because it has been found that they have health problems, obesity tendencies, hormonal disorders occurring over the past 10 years and one of the major causes is the unhealthy food. From the results obtained in this study, we believe that an alarm needs to be sounded to instil awareness in them regarding their diet in view of the fact that these young people will be entering the labour market healthier and capable of more productive work.

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