CONSUMPTION OF COFFEE OF THE YOUNG PEOPLE FROM BRANICEVO AND SMEDEREVO COUNTY

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Abstract

Now days, production and distribution of coffee is a global industry that employs more than 20 million people and in meanings of generated revenues is the second in the world, just behind the oil industry.

Coffee is another thing besides food that is consumed on a daily basis. Now, the sophistication of coffee drinking is very strong. Consumers know what they want. Manufacturers produce more types of coffee and coffee beverages and now we have coffee for the morning, lunch and the night, and there are even divisions based on the amount of caffeine or based on taste.

This paper aims to present the results of the research on the impact of gender and age of examinees in a choice of coffee, frequency of drinking during the day, time consuming and a reasons of drinking coffee by young people. We conducted an anonymous survey in Branicevo and Smederevo County of 62 people aged 18 to 30 years. The most common were those aged 23 to 24 (43.55%). Among the respondents 72.58% were female and 27.42% male. The majority of surveyed women were between 23 and 26 years of age (75.00%), while the most numerous were men between 27 and 30 years of age (46.15%). In order to draw objective conclusions about the examined issues, analysis of the responses was performed by χ^2-test.

Spending time with friends while maintaining vigilance usually are the reasons for drinking coffee for women (37.50 %) and men (38.46 %). In analyzis of the answers, it was found that women were more likely to drink coffee (88.89%) than men (76.47%).

Key words: *Coffee, Young, Males, Females, Analysis, Drinking, Branicevo and Smederevo county, χ²–test.*

1. Introduction

Now days, production and distribution of coffee is a global industry that employs more than 20 million people and in meanings of generated revenues is the second in the world, just behind the oil industry.

Practice shows that coffee until the 60's of the last century has an upward trajectory and a very clear position in the market. In the USA, the results from in 1962 show us that 75% of the entire population drank coffee every day. However, in 1997 that level dropped to 49%. The reason for this is the negative publicity that argument about the harmful effects of caffeine on human health. Coffee was a commodity that did not change a lot and it was seen as old-fashioned drink. At the end of the 90's of the last century we have a new wave of growing desire for coffee and it became again a popular drink. Today, coffee is a luxury drink that is widely consumed by people all over the world (70% - 80%) [1]. Coffee has a relaxing effect and it alleviates stress [2].

Coffee is another thing besides food that is consumed on a daily basis. Now, the sophistication of coffee drinking is very strong. Consumers know what they want. Manufacturers produce more types of coffee and coffee beverages and now we have coffee for the morning, lunch and the night, and there are even divisions based on the amount of caffeine or based on taste.

Relation consumers - coffee is not enough studied. According to Garzaro *et al.* in 2011 [3], found the tested coffee-flavored iced dessert pleasant, on the basis of the Organoleptic-Sensorial Questionnaire (OSQ), in terms of taste, aspect, texture, and smell. No statistically significant differences were observed between the male and female subjects. However, gender differences in coffee consumption have not been adequately determined, although Yamazawa *et al.* [4] reported gender differences in coffee-flavored desserts and coffee consumption.

People drink coffee for different reasons, and these reasons may differ between males and females. Mirmiran *et al.* [5] reported gender as a factor influencing nutrient consumption. Du *et al.* [6] demonstrated that females have higher interest in the nutrients than males.

Thus, knowledge about coffee may also differ between males and females. Therefore, knowledge about coffee and habits of coffee drinking may differ between men and women.

This paper aims to present the results of the research on the impact of gender and age of examinees in a choice of coffee, frequency of drinking during the day, time consuming and a reasons of drinking coffee by young people. In order to draw objective conclusions about the examined issues, analysis of the responses was performed by χ^2-test.

1.1 Types of coffee

Coffee is a tropical plant that grows at 600-1800 m above the sea level. What we generally call a coffee is a drink that is prepared by boiling roasted, milled grains. A product that gives the coffee plant has the appearance of red cherries with two seeds. After separating them from the fruit pulp, we get grains that are commonly known as "green bean" coffee. The coffee berries, containing green coffee, are the products of evergreen plant of the genus *Coffea*. The two most prevalent types are *Caffee canephnora* (also known as a *Caffe robusta*) and *Caffee Arabic* [11].

Raw coffee (dried seeds/beans) is provided by the corresponding technological process from the coffee fruit, with the mesocarp removal, endocarp and preferably complete or partial removal of tegument (silver membrane) [8].

Coffee products are obtained by baking of green coffee with appropriate technological process to the extent that provides the characteristic color, smell, flavor and aroma of coffee. Light (mild) baking is used for coarser grinded beans and they are intended for so-called "Filter coffee" [10]. A medium baked coffee gives to grain milling distinctively brown color. This is used for "Turkish coffee". Dark baked coffee gives the grain very dark, almost black color with a glossy surface of secreted oil. Beverage prepared from this kind is known as "espresso". Very intensive heat treatment provides "espresso" coffee feature of significantly low caffeine value [8].

Grinding is a very important part in the production of coffee and this is a part that is given the most attention.

Grinded coffee coarseness depends on the type of beverage that is produced from it, so, for the different types of coffee beverages we use a finer or coarser grind:

- For the preparation of Turkish coffee, the extraction is carried out almost instantaneously giving highly aromatic tone for beverage and for this kind it is needed extra finely grinded coffee (about 0.1 mm particle size);

- Espresso mixtures were milled to accelerate the extraction process typical for this system of preparation that enables the water absorption, which gives

maximum flavor in a few seconds. For espresso coffee, which requires 20 to 30 seconds for extraction, it is necessary that we have grinded coffee of larger uniformed granulation;

- American coffee, prepared with filter coffee machine, requires coarser grind. This method requires the retention of water, in order to convey the taste to its features. Filter coffee, which is in the longer contact with water in the process of preparation, it is necessary to have moderately coarse grind (about 0.3 mm particle size) [11].

In the Republic of Serbia, including Branicevo and Smederevo county, daily consumed are four types of coffee: homemade coffee which is more commonly known as "Turkish coffee", filter coffee, instant and espresso. In addition to them, also used are many variations, which are formed by combining the coffee drinks with milk, cream, water, and other ingredients. These combinations usually work with espresso coffee, and a small number of filter and homemade coffee. Combinations of coffee drinks and supplements are numerous and best known are: Latte, Cappuccino, Macchiato, Affogato, Mocha, Ice coffee, Duch and Irish coffee [9].

2. Materials and Methods

2.1 A survey about gender and age impact on consumption of coffee

We conducted an anonymous survey in Branicevo and Smederevo County of 62 people aged 18 to 30 years. The most common were those aged 23 to 24 (43.55%). Among the respondents 72.58% were female and 27.42% male. Women's participation was very much higher than the share of men $\chi^2 = 12,645$; p < 0,001). The ratio of male and female respondents weren't similar in age groups ($\chi^2 = 7,399$; p = 0,025). The majority of surveyed women were between 23 and 26 years of age (75.00%), while the most numerous were men between 27 and 30 years of age (46.15%).

In addition to questions about sex and age, coffee consumers were asked the following questions with the offered answers:

1. What type of coffee do you drink most often?

a) Homemade ("Turkish"); b) Ness-coffee; c) Espresso; d) Cappuccino.

2. How often do you drink coffee?

a) One a day; b) Two a day; c) Three a day; d) More then three.

3. When do you usually drink coffee?

a) Morning; b) Afternoon; c) Evening.

4. What is your reason for drinking coffee?

a) Socializing with friends; b) Maintainens alertness during learning; c) For the delight of coffee aroma.

Statistical analysis of the responses was performed by χ^2-test.

3. Results and Discussion

The observed pattern (significantly higher) ($\chi^2 = 31,226$; $p < 0,001$) were represented by people who drink coffee, 85.48%. With regard to the gender structure of the sample it was logical that among coffee drinkers ($\chi^2 = 13,755$; $p < 0,001$) women dominated the examined sample (75.47%).

In analyzis of the answers, it was found that women were more likely to drink coffee (88.89%) than men (76.47%). However, this difference was not statistically significant ($\chi^2 = 0,696$; $p = 0,404$).

The four types of coffee, respondents don't drink equaly ($\chi^2 = 26,321$; $p < 0,001$). Almost half of the respondents usually drinking homemade coffee (Figure 1). Then, by the frequency of consumption comes instant coffee and espresso. Only 1.89% of respondents usually drink a cappuccino.

The reasons for such selection can be seen as a tradition, the established habits of respondents and lack of desire for tasting new flavors. You may consider that these results have an impact itself of market and price.
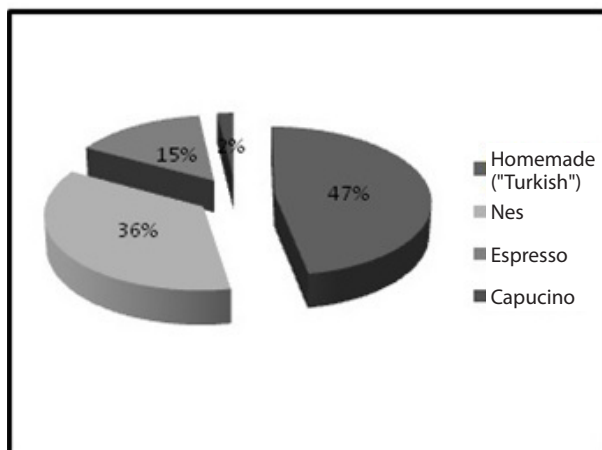

Figure 1. Schedule of respondents by type of coffee that usually drink

Men and women have significantly different habits according to the type of coffee they usually drink ($\chi^2 = 10,756$; $p = 0,013$). Unlike the women who usually drink homemade (57.50%) and Ness-coffee (32.50%), men usually drink Ness-coffee (46.15%) and espresso (38.46%). None of the male respondents did not state that they usually drink a cappuccino. Perhaps the reason of this answer structure lies in the fact that the

male population feels less coffee flavor with notes of sweetness and smoothness of cappuccino.

The structure according to the type of coffee drink usually don't depend on the age of the respondents ($\chi^2 = 2,392$; $p = 0,880$), although respondents under 22 years old usually drink Ness-coffee (57.14%), and other preferes homemade (48.57% of the the age group 23 to 26 years and 54.55% of the respondents in the age group of 27 to 30 years). Cappuccino is the most common type of drink for persons in the age group of 23 to 26 years (2.86% of them).

Respondents drank more than three coffee a day. In addition, most respondents drink two coffee a day, and the same number of respondents said that they drink one and three coffees a day (Figure 2). As the population that participated in this survey is aged 18 - 30 years, we conclude that the reason of frequent coffee drinking is a result of maintaining alertness during learning. The caffeine in coffee has a stimulating effect on the central nervous system [7] and many people who drink coffee expect from coffee to help them feel awake.
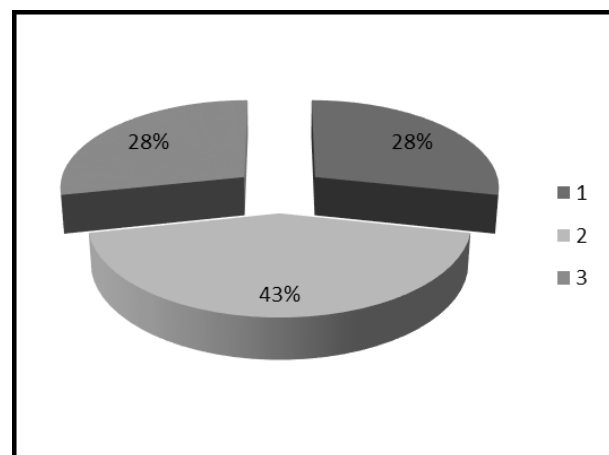

Figure 2. Structure of respondents by number of cups of coffee drinks a day

The frequency of coffee consumption does not depend on gender ($\chi^2 = 1,674$; $p = 0,433$). Women (42.50%) and men (46.15%) most commonly drink two coffees during the day. While the women stated that they drink more often three (32.50%) than the one (25.00%) coffee a day, the men pleaded that they frequently drink one (38.46%) than three (15.38%) coffees during days. This response was to be expected because women are naturally sociable and often in the company that drinks coffee.

Number of drinked coffees a day does not depend on the age of the respondents ($\chi^2 = 4,905$; $p = 0,297$). Respondents of 22 years (57.14%) and over 27 years (63.64%) usually drink two coffees per day, and the respondents in the age group of 23 - 26 years (37.14%) are more likely to drink one cup of coffee per day.

Respondents said they usually drink coffee twice a day and before the afternoon, and three times a day: morning, afternoon and evening. Small amount of respondents said they drink coffee in the morning and in the evening (Figure 3).
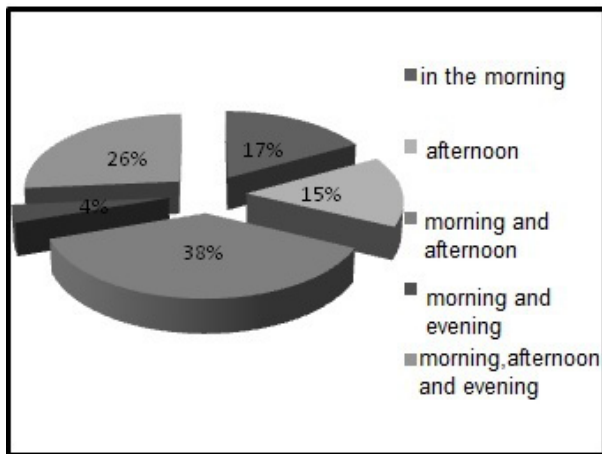

Figure 3. Schedule of respondents to the time of day when consume coffee

Time of coffee consuming does not depend on half of respondents (χ^2 = 4,276; p = 0,370). Women (37.50%) and men (38.46%) usually drink coffee in the morning and afternoon. Furthermore, women often drink coffee three times a day and in the morning, afternoon and evening (30.00%), and men in the afternoon (30.77%).

In all age groups, approximately we have the same percentage of people drinking three coffees during the day (27.27 to 28.57%).

However, while coffee consumption significantly depends on the age of the respondents (χ^2 = 19,521; p = 0,012). The morning coffee drinkers are persons aged 23 - 26 years, and in the morning and in the evening we have people aged up to 22 years. Respondents of all ages usually drink coffee in the morning and afternoon.

Results of the survey showed us that young people drink coffee primarily for socializing with friends, and rarely for maintaining of alertness during learning (Figure 4).

The structure of responses on occasion for coffee consumption does not differ significantly in female and male patients (χ^2 = 1,952; p = 0,745). Spending time with friends while maintaining vigilance usually are the reasons for drinking coffee for women (37.50%) and men (38.46%). Only women stated for a reason of drinking coffee spending time with friends and enjoying of the aroma (the least common reason - 5%).

The reason for drinking coffee is in a very strong connection with the age of respondents (χ^2 = 24,738; p = 0,002). Among younger than 27 years the reason for drinking coffee is usually spending time with friends (42.86% up to 22 years and 68.57% for the age group
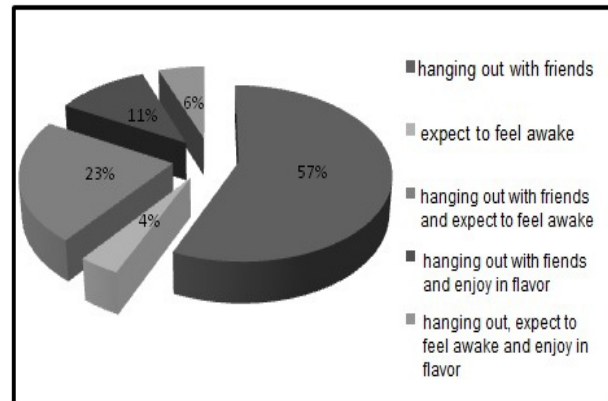

Figure 4. Schedule of respondents to the occasion for drinking coffee

of 23 to 26 years), and maintenance of alertness during learning (28.57% up to 22 years) and spending time with friends and maintaining alertness during learning (28.57% up to 22 years and 20.00% for the age group of 23 to 26 years). For people from 27 - 30 years the most common reason for drinking coffee is spending time with friends and enjoyment of the aroma (36.36%). Maintaining alertness during learning motivates younger than 22 years to drink coffee. This is understandable, given that this is a period of education.

4. Conclusions

- In the surveyed counties about 85% of young people consumes coffee. Almost half of them usually drink homemade coffee. Young consumers drink more than three coffee a day, with most daily intake of coffee twice and before the afternoon. The reason for drinking coffee young people usually states that is because of spending time with friends, and rarely because of maintainens of alertness during learning.

- Women have, but not statistically significantly, higher percentage of coffee drinkers. Men and women have significantly different habits according to the type of coffee they usually consume. Women usually drink homemade and men Ness-coffee. Only women drink cappuccino, so it can be concluded that cappuccino is female coffee type. The frequency, time consuming and a source of drinking coffee does not depend on gender.

- The age of the respondents do not depend on the type of coffee they usually drink, and the number of coffees drinked during the day. However, time of coffee consumption and the reason for drinking coffee significantly depends on the age of respondents.

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