ROMANIAN CONSUMER BEHAVIOUR REGARDING PASTA CONSUMPTION DURING THE COVID 19 PANDEMIC

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Abstract

Since the onset of the COVID-19 pandemic and the associated lockdowns, many events occurred, such as supply chain disruption, shielding and working from home restrictions along with diminished incomes and people's extra time spent in their own homes; all these have led to broad changes in consumer attitudes and behaviour. Therefore, people spent more time at home in all countries, and there was a significant increase in the number of people who enjoyed experiencing cooking at home, having a regular schedule for their meals. Pasta represents one of the most consumed food products in the world, their consumption increasing from year to year, experiencing a boost demand during the pandemic, because it has many important advantages such as: low cost, easy to cook, high nutritional value and long shelf life. Properly cooked pasta has a low potential to increase blood sugar, it slows down digestion and give a feeling of satiety for a longer period. The purpose of this study was to obtain information on consumer perceptions towards pasta consumption in order to develop new products that are adapted to current consumer requirements and preferences.

Key words: pasta consumption, consumer behaviour, Covid 19 pandemic.

INTRODUCTION

The global crisis generated by the COVID-19 pandemic has devastated the global economy, the medical system, causing panic, anxiety and uncertainty among people.
More than a year after the global crisis caused by the COVID 19 pandemic began, humanity is facing a new wave of infections, despite all the restrictions imposed and the protection measures taken. According to data collected on March 29, 2021, from the World Health Organization (WHO) website regarding the evolution of the COVID 19 pandemic, 126,890,643 cases were confirmed and 2,778,619 confirmed deaths were recorded (WHO, 2021). The third wave of infections comes with new restrictions for the population, due to the appearance of new strains of SARS-COV 2 virus that have proven to be much more virulent. Presently, billions of people around the world are under lockdown.
In Romania, the new restrictions imposed by the government to limit the spread of infections are, among others, limiting the operating hours of economic operators, which implicitly affects the operating hours of grocery stores. We are witnessing a new form of panic expression that is quite increased and widespread among consumers, which has led to the overcrowding of these stores.
Panic buying has become a global phenomenon reflecting that loss of control among consumers in the era of Coronavirus lockdown (Islam et al., 2021). According to Oxford (2020), panic buying is "the action of buying large quantities of a particular product or commodity due to sudden fears of a forthcoming shortage or price increase". For instance, when consumers start panic buying dry pasta, eventually, the whole supply chain with raw and auxiliary materials, involving eggs, flour, wheat, is affected (Nikolopoulos, 2021).
The impacts of COVID-19 pandemic on food systems can be divided between direct impacts of the virus outbreak, and indirect impacts derived from containment measures (e.g. lockdown, mobility restrictions, shops closure) adopted at different levels, from local to global. While all food systems across the globe have been affected by the pandemic, it is argued that vulnerability is different for different types of

food systems. Long food supply chains have been particularly affected by COVID-19 crisis; however, it is important to avoid universalization of impacts and responses as agri-food systems are characterized by a huge diversity and heterogeneity (Rivera-Ferre et al., 2021).

Despite declining sales during lockdown, they remained above average for non-perishable food. For example, depending on the week, in March 2020 rice showed sales between +27% and +208% and flour between +105% and +139% as compared to the averages of the previous six months. Pasta and strained tomatoes showed a similar pattern of sales (Statistisches Bundesamt, 2020).

The filled fresh pasta market is expected to register a Compound annual growth rate (CAGR) of over 4% during 2020-2024 (Business Wire, 2020).

As the number of people infected with SARS-COV 2 continues to rise, consumers are being advised to ensure that they have enough food to last for two weeks in case they experience symptoms or have come into contact with people who have been diagnosed positively and need to self-isolate. This has led to a rising demand for non-perishable goods like dried pasta. The closure of many restaurants to prevent the spread of the virus has also led to more consumers cooking at home. In March 2020, UK sales of dried pasta increased by 55%. Another factor that has caused increased sales of dried pasta is the impact the global crisis has had on consumer's finances, with many looking for economical ways to feed their families such as pasta dishes, casseroles and stews. The spike in demand for dried pasta and noodles has also boosted demand for wheat, leading to rising wheat prices across the US and Europe (Globe Newswire, 2020).

The significant increase in the average energy density of solid foods consumed by participants was not reflected in changes in fruit and vegetable intake, expected to decrease, or snack food intake, expected to increase. However, intakes from other food categories that we did not analyse might have changed, including bread, pasta, meat, and prepared salads (Poskute et al., 2021).

It may be possible that non-perishable food was not more consumed than usual as, for instance, typical meals which were previously eaten in restaurants or canteens (e.g., pasta) were now cooked at home (Lehberger et al., 2021).

Traditional pasta dishes have always been a part of the human diet, and they are comprised from different types of cereals. One of the most important and used crops in the world is represented by cereals, and *Triticum vulgare* and *Triticum durum* are the most important species of wheat used to produce pasta (Biernacka et al., 2021).

Refined flour or semolina are the main ingredients from which pasta is made because they have a low quantity of vitamins, fibre, and bioactive compounds. Therefore, these products are usually fortified with products that increase the technological and nutritional quality (Nilusha et al., 2019)

Fresh pasta dishes are widely consumed all over the world, being a good substituent for the traditional dry pasta products. Fresh pasta is used as a carrier of functional ingredients such as β-glucans, because of their ability to limit blood cholesterol levels and in the same time, not affect the organoleptic proprieties of the fresh pasta products (De Santis et al., 2020). There are several kinds of new raw materials used in order to make pasta products. Zarzycki et al. (2021) studied the use of Moldavian dragonhead defatted flour in order to produce new pasta products, and the study revealed that the Moldavian dragonhead defatted flour pasta had a better nutritional content and sensory acceptance than the traditional pasta.

In this context, the aim of the present study was to obtain information on consumer perceptions towards pasta consumption in order to develop new products that are adapted to current consumer requirements and preferences.

MATERIALS AND METHODS

In order to obtain information on consumer preferences and perceptions towards pasta consumption during the COVID-19 pandemic a survey in form of an online questionnaire was designed and uploaded on "Google Forms" platform, this being distributed in the online environment on different social networks. The target population were persons over the age of 18, who are responsible for the shopping activities within their household (i.e. food

shoppers), from both the urban and rural regions of Romania. The questionnaire-based interview method is one of the most widely used information collection techniques. The questionnaire has a short completion time of several minutes and consists of a small number of logical questions that aim to provide information about buying habits, preferences, behaviour and even the profile of consumers (Colibaba, 2001).

In order to conduct the study on pasta consumption, a questionnaire was developed containing 20 questions, 13 of which refer to consumption habits and consumer preferences, and the other 7 questions are aimed at obtaining socio-demographic information about consumers such as: age, gender, income, environment from which they come, etc. The questions are closed, simple, clear, some with a single answer and others with multiple answers.

In the first part, the respondents were asked if they consume pasta, what types of pasta do they consume, how often do they buy pasta products, their method of preparation and questions regarding the price/manufacturer of the pasta products. The second part of the questionnaire included questions about the age, professional status, education and monthly earnings.

This study was conducted in 2020 and following the completion of the questionnaire a total sample of 178 answers was gathered 78.6% women and 21.4% men. The data were collected, processed and interpreted, thus drawing the final conclusions of the study.

RESULTS AND DISCUSSIONS

In the first part of questionnaire, the participants were asked if they consume pasta products (Figure 1).
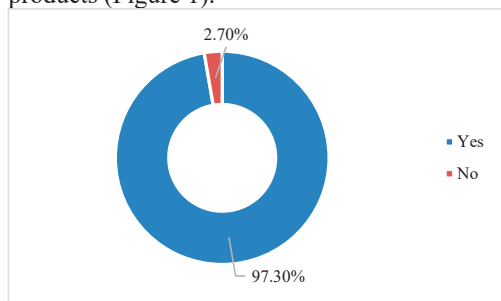

Figure 1. Q1 - Are you a pasta consumer?

The results indicated that 97.3% of the respondents stated that they consume pasta, while 2.7% mentioned that were not among the pasta consumers.

Pasta dishes seem to be the favourite products of Romanian household consumption registering an important increase in recent years. This increasing trend in the pasta consumption could be observed in the first half of 2020, amid the crisis and the new rules imposed during the state of emergency caused by the Covid 19 pandemic, consumers being concerned about food products purchasing with increased validity in order to limit the supply frequency used to reduce the risk of contamination with the new coronavirus.

The next question (Figure 2), a multiple answer question, asked the respondents what types of pasta products they consume regularly. According to the obtained results, the most consumed types of pasta are spaghetti (70.7%) and vermicelli (42.4%), followed by macaroni and penne, both with a percentage of 38%, then noodles (29.3%), tagliatelle (18.5%), lasagne (13.6%), tortellini (12.5%), and the last places in the top of consumer preferences were ravioli (9.2%) and couscous (3.8%).
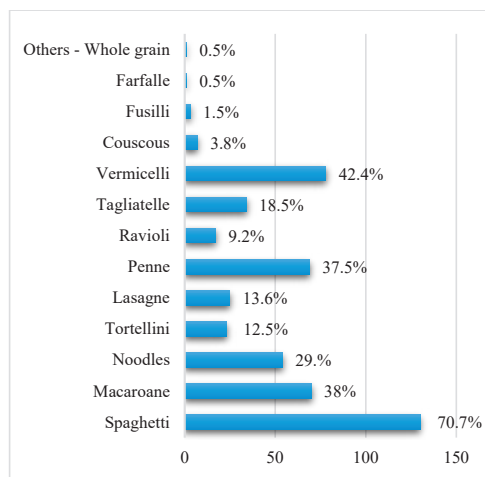

Figure 2. Q2 - What types of pasta do you consume regular?

In the next question (Figure 3), also a multiple answer question, respondents were asked how they consume the pasta. Of those who participated in the study, 62.2% consumed pasta as a stand-alone dish, followed

immediately by their consumption in soups or broths by 56.2% of respondents, while 49.2% of respondents prefer to eat pasta as a dessert. Only 5.9% of respondents choose to eat pasta as an addition to various salads, and 7% in other forms.
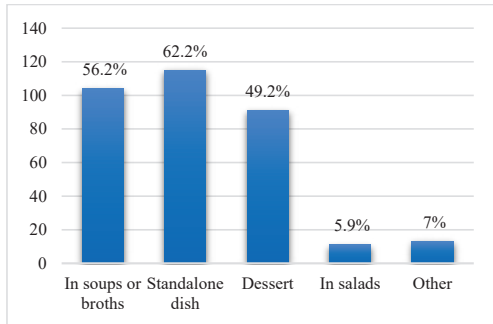

Figure 3. Q3 - In what form do you consume the pasta products?

Analysing the answers of the question "How often do you eat pasta" it can be seen that 38.9% of respondents eat pasta once a week, 18.9% consuming them even 2-3 times a week. There are a small number of people who eat pasta daily (1.6%), but there are also people who say that they only rarely eat pasta (8.6%). 22.7% of the respondents eat pasta once every two weeks, and 9.2% eat only once a month (Figure 4).
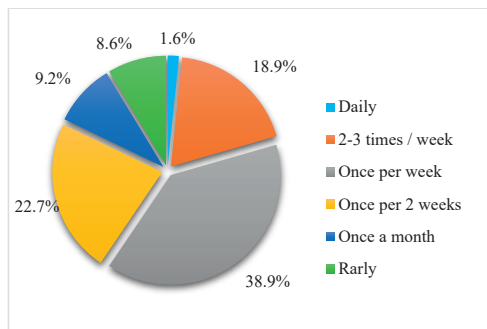

Figure 4. Q4 - How often do you consume pasta?

The next question was about the amount of pasta consumed per month by the respondents. The results showed that 65.9% of them consume 500 grams, 20% consume 1000 grams, and 14.1% of them consume more than 1500 grams per month, according to the data presented in Figure 5.
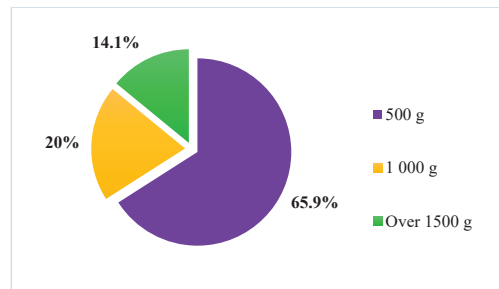

Figure 5. Q5 - What amount of pasta do you consume on a monthly basis?

A question regarding the criteria that determines the respondents to buy pasta was asked (Figure 6).

The main criteria that are taken into account when purchasing pasta are quality (64.9%) and taste (42.7%). The following important attributes are price and brand / manufacturing company, registering the same number of answers, respectively 27.6%. Of those surveyed, 13% take into account the ingredients contained in pasta, and for 10.8% of respondents the type of flour from which pasta was made is important. The least important criteria for choosing pasta was packaging, only 8.1% of respondents taking it into account.
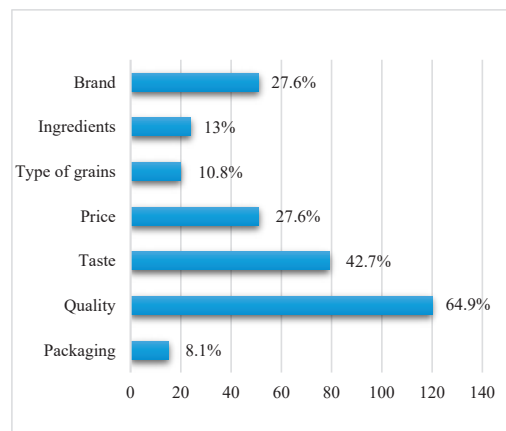

Figure 6. Q6 - What are the criteria that determine you to buy pasta?

In terms of price, more than half of the participants in the questionnaire (60.3%) stated that they are always looking for the best value for money. About 16.3% of consumers buy pasta depending on the brand, regardless of price, while 7.1% choose the most expensive

pasta, which are better in terms of quality according to them. 4.9% of consumers choose pasta that has the lowest price, and 11.4% do not take into account either price or brand, which is a good thing when it comes to launching new products (Figure 7).
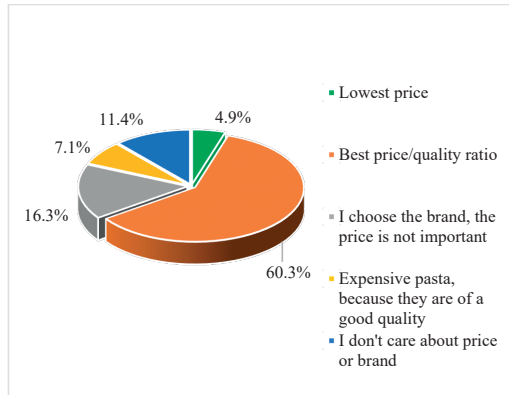

Figure 7. Q7 - In terms of price, how do you choose your pasta?

Regarding the availability of respondents to consume different pasta types depending on the used flour, they indicated the most common pasta known, namely those with white wheat flour gluten (77.2%) and gluten-free pasta made from whole wheat semolina (17.4%). A certain importance was also given to gluten-free pasta made from corn flour, 16.3% of the respondents being willing to consume it, respectively to gluten-free pasta made from rice flour (10.9%) and gluten-free pasta made from 100% brown rice (9.2%).

The next places in the top of consumer preferences are pasta with golden flax flour (7.1%), gluten-free pasta with pea flour (6%) and gluten-free pasta made from rice flour and corn flour (5.4 %). The pasta type with smallest percentage of responses are gluten-free pasta made from buckwheat flour (4.3%), gluten-free pasta made from chickpea flour (3.8%), gluten-free pasta from black bean flour (3.8%), gluten-free pasta made from lentil flour (2.2%) and red lentil flour (2.2%), which means that the consumers showed a lower interest for these products.

The respondent's socio-demographic profile is presented in Table 1. 48.6% of the participants in this study are between 18-25 years old, while 17.3% of the interviewees are between 35-45

years old. Respondents aged 45-60 years represent 17.8% of the total participants, while respondents aged 25-35 represent 16.2%. The vast majority of the respondents were employed (54.9%), and another important part of them were students (38%). Regarding the monthly net income, 41% have low incomes below 1500 RON, 39.3% have average incomes in the range of 1500-3000 RON, while 19.7% of consumers earn more than 3000 RON per month. Regarding the question "What is the last form of education you completed?" it was observed that 58.7% of the participants graduated high school, 29.3% have higher education (graduated from college), 10.9% graduated from vocational schools, while only 1.1% of respondents graduated from primary school. At the end of the questionnaire, consumers were asked to specify their environment, so 58.9% of them mentioned urban areas, and 41.1% represent the number of those from rural areas.

Table 1. The socio-demographic profile of the respondents

Age group	48.6% - 18-25 years
	16.2% - 25-35 years
	17.3% - 35-45 years
	17.8% - 45-60 years
Gender	21.4% - male
	78.6 - female
Highest level of education completed	58.7% - High school
	29.3% - University
	10.9% - Professional School
	1.1% - School
Household size	54.6% - four or more members
	27.6% - three members
	16.2% - two members
	1.6% - one member
Professional status	54.9% - employed
	38% - student
	4.9% - unemployed
	1.6% - pensioner
	0.5% - entrepreneur
Household's monthly net to income	41% - under 1500 RON
	39.3% - 1500-3000 RON
	19.7% - over 3000 RON
Where do you live?	58.9% - urban area
	41.1% - rural area

CONCLUSIONS

Following this study, the profile of Romanian pasta consumers was identified, as well as their

habits, preferences, purchase and consumption criteria, in order to ensure to consumers, the availability of their favourite products in the grocery/store, as well as to successfully launch new products on the market.

The study showed that almost all participants are consumers of pasta, there are people who consume them even daily, which leads us to believe that pasta is an important category of human food products. Most of the interviewees consume pasta as an independent dish, being exceeded their consumption in soups or broths hence resulting in increased consumption of pasta.

The results obtained revealed that the most consumed types of pasta are spaghetti, and the least consumed are farfalle. The majority of respondents were female, aged between 18-25 years, coming from urban areas. The main criteria taken into account when purchasing pasta are quality and taste, so producers must adopt specific procedures to improve these two features. A very small number of respondents choose the pasta with the lowest price, which is an advantage in terms of launching new products, as they can start from a higher price.

Studies have shown that due to the COVID-19 pandemic, most food companies have experienced a significant drop in orders. The difficulties they faced consisted in finding suppliers of raw and auxiliary materials, as a result of the cancellation of events, respectively fairs, in which partners could meet and sign contracts. Thus, the whole agro-food chain was negatively affected. In particular, the transport of foodstuffs has been difficult to carry out in some countries that have temporarily closed their borders, subsequently establishing much stricter rules and fixed transit routes. This has led to an increase in consumer panic buying, which has been reflected in increasing demand for non-perishable goods, such as dried pasta.

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