

## Young Consumers' Concerns About Meeting Their Food Needs During the COVID-19 Pandemic

**Irena Ozimek**

prof. dr hab., Institute of Economics and Finance, Warsaw University of Life Sciences – SGGW, Poland  
<https://orcid.org/0000-0003-3430-8276>

**Joanna Rakowska**

dr hab., Institute of Economics and Finance, Warsaw University of Life Sciences – SGGW, Poland  
<https://orcid.org/0000-0001-5135-6996>

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### Abstract

**Purpose:** The aim of the study was to identify young consumers' concerns about the increase in food prices and its consequences for young consumers' eating habits and meeting food needs during the COVID-19 pandemic.

**Design/methodology/approach:** An online survey of 702 young consumers – students – was carried out in October and November 2020. The questionnaire was available to respondents as a Google form. The obtained data was processed using a standard qualitative analysis and selected quantitative methods, including descriptive statistics, Spearman's correlation coefficient and Pearson's chi-square test.

**Findings:** Nearly 63% of respondents agreed or rather agreed that the food needs of their household are fully met. Almost 44% of respondents stated that they are afraid of the lack of money to meet their food needs during the pandemic, and quite a similar share of respondents (47.3%) stated that they have no concerns in this regard. Although as many as 72% of the surveyed young consumers are concerned about rising food prices, only 22% are concerned that they will have to change their eating habits during the pandemic. The vast majority of respondents (92%) pay attention to the price when buying food and 83% agree that food is wasted in households.

**Research limitations/implications:** Due to the limited possibilities during COVID-19, the research was conducted among 702 respondents, who were mainly students of the Warsaw University of Life Sciences (SGGW). Such a number of respondents and the sample selection do not fully authorize the generalization of the results. Consequently, the conclusions should not be treated as representative for the whole population of Polish young consumers. Moreover, the questionnaire survey is related to the subjective

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*Correspondence address:* Institute of Economics and Finance, Warsaw University of Life Sciences – SGGW, Nowoursynowska 166, 02-787 Warsaw, Poland, e-mails: [irena\\_ozimek@sggw.edu.pl](mailto:irena_ozimek@sggw.edu.pl); [joanna\\_rakowska@sggw.edu.pl](mailto:joanna_rakowska@sggw.edu.pl)

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interpretation of questions and the declarativeness of respondents, which may influence the obtained results. However, despite these limitations, the findings allow for approximating the concerns of this consumer group during the COVID-19 pandemic.

**Originality/value:** As COVID-19 is a new social and economic challenge, young consumers' concerns in such conditions have not been investigated so far and this study is to fill this gap. Moreover, this research may be a basis for further research as the pandemic situation evolves and may change both young consumers' economic situation and their concerns about meeting their food needs.

**Keywords:** young consumers, food, food prices, pandemic, consumer concerns.

**JEL:** D12

## Obawy młodych konsumentów związane z zaspokojeniem potrzeb żywnościowych w czasie pandemii

### Streszczenie

**Cel:** określenie obaw młodych konsumentów związanych z zaspokojeniem potrzeb żywnościowych w czasie pandemii poprzez pryzmat postrzegania wzrostu i roli cen żywności.

**Metoda:** w badaniu ankietowym posłużono się kwestionariuszem ankiety, dane zebrano od 702 młodych konsumentów, będących studentami. Do przeprowadzenia badań ankietowych wykorzystano zamieszczony w Internecie formularz Google. Uzyskane dane przeanalizowano przy użyciu standardowych narzędzi analizy jakościowej i ilościowej, w tym test Pearsona chi kwadrat, statystyki opisowe oraz korelację rang Spearmana.

**Wyniki:** blisko 63% respondentów zgodziło się ze stwierdzeniem, że potrzeby żywieniowe ich gospodarstwa domowego są w pełni zaspokojone. Prawie 44% ankietowanych stwierdziło, że obawia się w trakcie trwania pandemii wystąpienia sytuacji związanej z brakiem pieniędzy na zaspokojenie potrzeb żywnościowych. Zbliżona część ankietowanych stwierdziła, że nie ma obaw tym zakresie (47.3%). Chociaż aż 72% uczestników badania obawia się wzrostu cen żywności, to tylko 22% obawia się konieczności zmiany przyzwyczajeń żywieniowych z tego powodu. Przeważająca większość ankietowanych (92%) zwraca uwagę na cenę podczas zakupu żywności, jednocześnie aż 83% stwierdza, że żywność jest marnowana.

**Ograniczenia badań i wnioski:** z uwagi na ograniczone możliwości badanie przeprowadzono wśród 702 respondentów, będących głównie studentami SGGW. Ta liczba respondentów i dobór próby nie upoważniają do generalizowania wyników i traktowania przedstawionych wniosków jako reprezentatywnych dla całej populacji polskich młodych konsumentów. Ponadto badanie ankietowe wiąże się z subiektywną interpretacją pytań i deklaracyjnością respondentów, co może mieć wpływ na uzyskane wyniki. Jednakże uzyskane wyniki badań pozwalają wstępnie określić obawy tego segmentu konsumentów.

**Oryginalność/wartość:** niniejsze badania mogą stanowić podstawę do dalszych badań, ponieważ sytuacja COVID-19 ewoluuje i może zmienić położenie młodych konsumentów w odniesieniu do poziomu zaspokojenia potrzeb żywnościowych z powodu barier ekonomicznych.

**Słowa kluczowe:** młodzi konsumenci, żywność, ceny żywności, pandemia, obawy konsumentów.

## 1. Introduction

Consumers, as market participants, undertake activities aimed at satisfying their needs, including food needs. All their choices and decisions are made in certain natural, social, cultural and economic conditions that form the so-called consumer's environment. Participating in the process

of production, exchange and consumption, consumers experience changes in their close and distant environment to a different degree and extent. COVID-19, the pandemic announced by the World Health Organization on March 11, 2020 (WHO, 2020), is currently one of the most important economic, social and political challenges, changing consumers' environment (Aday & Aday, 2020; Benton, 2020; Laborde et al., 2020) and possibly affecting consumers' behavior on the food market (Barrett, 2020).

Although generally the pandemic undermines food security both by disrupting food systems and by decreasing household income (Devereux et al., 2020; Deaton & Deaton, 2020), some food systems have remained relatively unaffected (Swinnen & McDermott, 2020). The preliminary analyses of food price changes caused by COVID-19 in 31 European countries indicate that different food categories in different EU countries were affected by the epidemic in different ways – from rather insignificant changes in some cases to a surge in prices of e.g. meat and fish (Akter, 2020). These facts may be perceived by different groups of consumers in various ways, and thus raise different concerns.

When designing the study, it was taken into account that young people constitute an important and cognitively interesting category of consumers (Franc-Dąbrowska et al., 2021). Despite rapid ageing of the Polish population, 7.19 million young people between 20 and 34 years of age constitute over 18.8% of the population (GUS, 2021a). These young buyers are an important group for the development of the economy, because they have a large and promising economic potential (Gracz & Ostrowska, 2004). That is why it is important to investigate young consumers' concerns about the increase in food prices and its consequences for meeting food needs during the ongoing pandemic.

Hence, the aim of the study was to identify young consumers' concerns about changes in food prices and about meeting their food needs during the pandemic.

## **2. Factors Influencing Consumers' Food Choices and Conditioning the Satisfaction of Their Food Needs – Literature Review**

Consumer behavior towards food is implied, on the one hand, by the perceived sense of hunger, thirst (primary internal stimulus) and internalized consumption norms (secondary internal stimulus). On the other hand, it is impacted by individual elements of food marketing (food product, its price, availability, way of communicating about its attributes), as well as the conditions of the natural, socio-cultural and economic environment (Gutkowska & Ozimek, 2005). The level and structure of food consumption also depend on many variables, both exogenous (e.g. food supply, the degree

of diversification of food products, marketing strategies of food producers, cultural patterns of eating behavior) and endogenous, such as demographic characteristics of the members of the household; preferences towards food products; the level of consumer awareness of the principles of rational nutrition, etc. (Bywalec & Rudnicki, 1999; Kramer, 1997; Shepherd, 1990). Consumer behavior is directly related to the concept of consumption, which is generally understood as the process of satisfying needs, important for maintaining both the biological and social dimensions of human life.

According to the best known classification of needs, Maslow's Needs Hierarchy (Maslow, 1943), food needs are classified as basic, physiological needs. Starting with the needs of the lowest order, the hierarchy comprises the following categories of needs:

- physiological needs (e.g. food, water, warmth, rest, sex, shelter),
- safety needs (e.g. certainty, care, order, stability of interpersonal relationships),
- love and social belonging needs (e.g. love, tenderness, belonging to a group),
- esteem needs (e.g. prestige, feeling of accomplishments),
- the need for self-actualization.

After satisfying the basic needs, people strive to meet the needs of a higher order. That is why there are many modifications of food needs reflected in the structure and level of consumption of individual consumer groups. They result, among others, from increasingly differentiated consumer expectations towards food (Gutkowska & Ozimek, 2005), but also from interactions between individual factors contributing directly and/or indirectly to final food choices (Chen & Antonelli, 2020). However, during the pandemic, it is worth rethinking the importance of meeting the basic needs, as emphasized in the IceMobile COVID-19 report (IceMobile, 2021).

Individual food choices are conditioned by various determinants related to the food itself, individual differences and social influences. Numerous studies (e.g. Ozimek & Tomaszewska-Pielacha, 2011; Dąbrowska et al., 2015) show that taste, use-by date and price are the factors that consumers usually pay most attention to when purchasing food, regardless of their age (Zalega, 2020).

### 3. Design of the Survey

The survey was carried out online in October and November 2020. That was the time of peaking morbidity and deaths rates in Poland (Medonet, 2021) and lockdown. The online questionnaire consisted of main research questions and additional questions about the demographic and socio-economic characteristics of respondents. In the case of questions:

- Q1. Are you concerned about the lack of money to meet food needs during the pandemic?

Q2. Are you concerned about rising food prices?

Q3. Are you concerned about the necessity to change your food habits due to the lack of money during the pandemic?

respondents had 3 answers to choose from: (1) 'Yes, I am', (2) 'No, I am not', and (3) 'I do not have an opinion'.

To answer such questions as:

Q4. Do you agree with the statement that 'food needs are fully met in your household'?

Q5. Do you agree with the statement that 'I pay attention to the price of food when I buy it'?

Q6. Do you agree that food prices increased over the last six months?

Q7. Do you agree that a lot of food is wasted in your household?

respondents used a 5-point scale, where the score 1 meant that the respondent does not agree with the statement at all, 2 – 'rather disagrees', 3 – 'neither agrees nor disagrees', 4 – 'rather agrees', 5 – 'completely agrees'.

The questionnaire also included five questions about the characteristics of the respondents, such as: gender, situation on the labor market (working or non-working), number of people in the household, type of place of residence, population of the place of residence and financial situation of the household.

Scores assigned to each answer were used to calculate the average results for the entire group of respondents and for various subgroups of respondents defined by their demographic and socio-economic characteristics (Table 1). Using the chi-square test, we investigated whether young consumers' perceptions of the level of meeting food needs and the perception of food prices during the pandemic depend on their social and economic characteristics. The score results also served to rank the responses and perform Spearman's rank correlation to investigate the relationship between perceptions of food prices and the level of food satisfaction during the pandemic and selected demographic and socioeconomic characteristics. The analysis was carried out using descriptive statistics, Spearman's correlation coefficient and Pearson's chi-square test.

#### 4. Social and Economic Characteristics of Respondents

702 students took part in the study, of whom 63.4% of women and 36.6% of men. Ranking in decreasing order, the biggest share of respondents represented households of 4 or 3 people (respectively: 31.5% and 21.5%), 18.1% represented households consisting of 5 people. The smallest shares of respondents declared that they lived either in a single-person household or in a household of 6 or more people (7.7% and 8.4%, respectively). Describing their situation in the labor market, nearly 43% of students stated that they worked, and 57.1% that they did not work. At the same time, almost half of the respondents (48.1%) described the financial situation of their household as good, and nearly 35% as average. Most respondents came

from the Mazowieckie Voivodship (66.7%). The respondents represented different places of residence in terms of population. Most of them declared that they lived in a city with more than 100 000 inhabitants (36.9%) or in rural areas (35.5%), followed by cities with 20 000 up to 100 000 inhabitants (16.7%) and fewer than 20 000 inhabitants (11.0%). Detailed characteristics of the respondents are presented in Table 1.

<b>Demographic characteristics</b>	<b>N<sup>a</sup></b>	<b>%</b>
<i>Gender (N = 702)</i>		
Females	445	63.4
Males	257	36.6
<i>Economic activity (N = 702)</i>		
Working	401	57.1
Non-working	301	42.9
<i>Number of persons in the household (N = 702)</i>		
1	54	7.7
2	90	12.6
3	151	21.5
4	221	31.5
5	127	18.1
6 and more	59	8.4
<i>Place of residence (N = 702)</i>		
Rural areas	249	35.5
Town with less than 20 thous. inhabitants	77	11.0
Town with from 20 to 100 thous. inhabitants	117	16.7
City with more than 100 thous. inhabitants	259	36.9
<i>Financial situation of the household (N = 702)</i>		
Very bad	4	0.6
Bad	26	3.7
Average	245	34.9
Good	338	48.1
Very good	89	12.7

<sup>a</sup> Number of respondents

*Tab. 1. Socio-demographic and economic characteristics of respondents. Source: The authors' research.*

## 5. Findings

The survey revealed that 62.6% of respondents agreed or rather agreed with the statement that their household's food needs are fully met (the average score on a 5-point scale was 3.8). The professional status of the respondents significantly differentiated their opinions. The working respondents were slightly more likely to agree with this statement than the non-working ones (67.3% and 56.1%, respectively). On the other hand, the working ones more often neither agreed nor disagreed with this statement (Table 2).

Scores and opinions	% of all answers [N = 702]	Economic activity	
		% of the working [N = 401]	% of the non-working [N = 301]
1 – I do not agree at all	1.3	1.2	1.3
2 – I rather disagree	3.0	3.0	3.0
3 – I neither agree nor disagree	33.2	28.4	39.5
4 – I rather agree	36.8	36.4	37.2
5 – I agree totally	25.8	30.9	18.9
<b>Average score/ ±st. dev.*</b>	<b>3.83±0.89</b>	<b>3.79±0.89</b>	<b>3.89±0.88</b>

\* Scores in 1 to 5 scale.

*Tab. 2. Respondents' opinions on the statement 'food needs are fully met in my household', by economic activity (%). Source: The authors' research.*

The respondents were also asked if they were concerned about the lack of money to meet their food needs during the pandemic (Table 3). Almost 44% of the respondents stated that they were afraid of such a situation, and a similar share of them stated that they had no concerns in this regard (47.3%). Gender significantly differentiated the opinions of the respondents in this regard. Women (48.1%) more often than men (36.2%) said that they were concerned about the lack of money to meet their food needs during the pandemic.

Opinions	% of all answers [N = 702]	Gender	
		% of females [N = 445]	% of males [N = 257]
Yes, I am concerned	43.7	48.1	36.2
No, I am not concerned	47.3	41.1	58.0
I do not have an opinion	9.0	10.8	5.8

Tab. 3. Respondents' concerns about the lack of money to meet food needs during the pandemic, by gender (%). Source: The authors' research.

Almost 72% of the respondents said they were afraid of rising food prices, and only 16.7% said they had no concerns about it. Among the characteristics of the respondents, only the declared professional status differentiated their opinions in this respect in a statistically significant way (Table 4). The non-working respondents were slightly more likely to fear an increase in food prices (75.4%) than the working (69.3%).

Opinions	% of all answers [N = 702]	Economic activity	
		% of the working [N = 401]	% of the non-working [N = 301]
Yes, I am concerned.	71.9	69.3	75.4
No, I am not concerned.	16.7	15.7	17.9
I do not have an opinion.	11.4	15.0	6.6

Tab. 4. Respondents' concerns about rising food prices, by economic activity (%). Source: The authors' research.

However, despite concerns related to the increase in prices, only one in five respondents (22.4%) said that they were afraid of the need to change their eating habits due to lack of money (Table 5). No socio-demographic characteristics significantly differentiated opinions of the respondents in this respect.

Opinions	% of all answers [N = 702]	Gender	
		% of females [N = 445]	% of males [N = 257]
Yes, I am concerned	22.4	22.7	21.8
No, I am not concerned	65.8	64.0	68.9
I do not have an opinion	11.8	13.3	9.3

Tab. 5. Respondents' concerns about the necessity to change their food habits due to the lack of money during the pandemic, by gender (%). Source: The authors' research.



The vast majority of respondents (91.9%) indicated that they paid attention to the price when buying food (Table 6), which is confirmed by both the high share of ratings 4 and 5 from the upper level of the 5-point scale (91.9%) and the average rating of 4.43. Consequently, no socio-demographic features significantly differentiated opinions of the respondents in this respect.

Scores and opinions	% of all answers [N = 702]	Gender	
		% of females [N = 445]	% of males [N = 257]
1 – I do not pay any attention at all	1.0	1.1	0.8
2 – I rather do not pay attention	2.3	1.8	3.1
3 – I do not care	4.8	4.0	6.2
4 – I rather pay attention	36.2	35.7	37.0
5 – I pay a lot of attention	55.7	57.3	52.9
<b>Average score/ ±st. dev.*</b>	<b>4.43±0.77</b>	<b>4.46±0.75</b>	<b>4.38±0.80</b>

\* Scores in 1 to 5 scale.

Tab. 6. Respondents' opinions on whether they pay attention to the price of food they buy, by gender (%). Source: The authors' research.

The findings show that the vast majority of respondents (83.8%) expressed the opinion that food prices had increased over the last six months. However, none of the socio-demographic features significantly differentiated the opinions of the respondents in this respect (Table 7).

Scores and opinions	% of all answers [N = 702]	Gender	
		% of females [N = 445]	% of males [N = 257]
1 – I do not agree at all	2.1	2.5	1.6
2 - I rather disagree	2.3	2.9	1.2
3 – I neither agree nor disagree	11.8	11.9	11.7
4 – I rather agree	29.1	26.3	33.9
5 – I agree totally	54.7	56.4	51.8
<b>Average score/ ±st. dev.*</b>	<b>4.32±0.92</b>	<b>4.31±0.96</b>	<b>4.33±0.84</b>

Tab. 7. Respondents' opinions on the statement that food prices have increased over the last six months, by gender (%). Source: The authors' research.

Most respondents (83.2%) agree with the opinion that a lot of food is wasted in households. Gender is the only one among the analyzed social

and economic characteristics that affects this opinion (Table 8), which is confirmed by chi square of  $p < 0.05$ . A larger share of women (54.4%) than men (46.3%) agree that food is wasted.

Scores and opinions	% of all answers [N = 702]	Gender	
		% of females [N = 445]	% of males [N = 257]
1 – I do not agree at all	3.1	3.6	2.3
2 - I rather disagree	3.6	4.0	2.7
3 – I neither agree nor disagree	10.1	8.1	13.6
4 – I rather agree	31.8	29.9	35.0
5 – I agree totally	51.4	54.4	46.3
<b>Average score/ ±st. dev.*</b>	<b>4.25±0.99</b>	<b>4.27±1.01</b>	<b>4.20±0.93</b>

Tab. 8. Respondents' opinions on the statement that a lot of food is wasted in their households, by gender (%). Source: The authors' research.

There were also statistically significant correlations, especially between the perception that food prices increased in the last six months and the statement that a lot of food is wasted in households and the fact that respondents pay attention to the price when buying food (Spearman's rho correlation coefficient was 0.308 and 0.170, respectively – both correlations were significant at the level of 0.01). A weak correlation was also found with regard to the relation between paying attention to the price of food and compliance with the statement that a lot of food is wasted in households (Spearman's rho = 0.177,  $p = 0.01$ ). A statistically significant correlation (at the level of 0.01) was also noted between the financial situation of respondents' households and the statement that a lot of food is wasted in households, as well as paying attention to the price of purchased food (Spearman's rho amounted to: 0.109 and 0.98, respectively).

## 6. Discussion and Conclusions

Summing up, it should be emphasized that nearly 63% of respondents agreed or rather agreed that the food needs of their household are fully met.

The vast majority of the survey participants noticed the fact that food prices increased in 2020 during the pandemic and therefore the price of a food product is an important factor for them when buying food. Other studies also confirmed that Polish consumers experienced an increase in food prices and a decrease in their purchasing possibilities (GUS, 2021b). This is an important finding as the increase in food prices may signal potential food insecurity (Dowler et al., 2020). Almost half of respondents of the

IPSOS survey conducted on March 31, 2021 answered that the situation of their households had deteriorated. Similarly, findings of the study by KPMG (KPMG, 2020) showed that the COVID-19 pandemic had worsened the financial situation of 44% of respondents. The price had become more important than before. Over 40% respondents declared that they limited their consumption, and they bought fewer products (IPSOS, 2021). Before the epidemic, between 2016 and 2019, the increase in the share of expenditure on food and non-alcoholic beverages in the structure of total expenditure of Polish households was moderate. Due to COVID-19, this share increased strongly in 2020, reaching 27.7% of total expenditures of all households. Taking into consideration different types of households, the share of expenditure on food and non-alcoholic beverages ranged from 24.0% in the case of households of the self-employed in non-agri sector to 35.2% in households of farmers (GUS, 2021b).

The ever-increasing share of food expenditure in the household budgets of young consumers may not allow for the proper satisfaction of basic needs in the future. So almost 44% of respondents stated that they were afraid of the lack of money to meet their food needs during the pandemic.

Interestingly enough, only 22% of the surveyed young consumers are concerned that they will have to change their eating habits during the pandemic. According to the study 'Eating habits of Poles during social isolation during the 2020 coronavirus epidemic', carried out by MRW on behalf of Upfield at the end of June 2020 on a sample of 2,000 adult Poles (MEiN, 2021), respondents declared that they were more likely to eat vegetables then, while some resigned from meat in favor of plant-based products. Moreover, they were more willing to cook and have meals with their relatives.

The fact that 83% of young consumers agree that food is wasted in their households is in line with results of other studies showing that although in developed countries food waste occurs at all stages of the food chain, households account for the largest share of food waste (Łaba et al., 2020). Many authors (e.g. Visschers et al., 2016; Quested et al., 2013; Secondi et al., 2015) indicate that meal planning and preparation in households play a key role in the production of food waste. This finding partly confirms the food waste paradox (Porpino et al., 2015), as also the respondents with a bad financial situation of the households agreed with this statement. The process of wasting food is influenced by consumer behavior and attitudes – by how they cope with planning and doing shopping, preparing and consuming food. According to a study by Kołozyn-Krajewska and co-authors (Kołozyn-Krajewska et al., 2020), only 41.9% of Polish adult consumers check their food stock before shopping and 39% prepare food shopping lists, nearly 19% regularly buy food that they did not plan to buy and 16.7% buy food for stock. Careful planning of food purchases is an effective tool to prevent food waste, and thus protect the environment, prevent the destruction of resources and reduce food expenses, which are already significant in the budgets of Polish households.

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