

ANTICIPATED FOOD EXPENDITURE ACCORDING TO PERSONALITY TRAITS DURING THE COVID-19 PANDEMIC IN POLAND

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ABSTRACT

Aim: The practical aim of the study is to recognize the changes in consumers' purchasing patterns according to personality traits, which can be used for higher purposes (e.g., to consciously influence sustainable consumption by government agencies on a country level). **Methods:** The subject scope of the research was the systematic literature review of determinants of food expenditure and the assessment of consumer behavior. The research sample is representative (N = 1,000), and the study met the criterion of representativeness. The article presented only statistically significant dependencies between anticipated changes in food expenditure according to personality traits measured by Big Five analysis. **Results:** The study's applicative findings are that there are significant statistical dependencies between different types of personalities along with the gender of a consumer and anticipated food expenditure during the COVID-19 pandemic in Poland. The research shows how to restore sustainable consumption in Poland after the COVID-19 pandemic. **Conclusions:** Thoughtfully crafted food policy strategies, such as subsidizing specific priority food items, can impact the consumption patterns of selected foods. These strategies have the potential to either increase or decrease the intake of particular food items and can exert influence over both the quantity and quality of the food consumed by citizens. State institutions can make beneficial changes in citizens' diets by subsidizing low-processed and organic foods and/or imposing additional fees on stimulants and unhealthy food items. The research adds valuable insights to the existing knowledge on food expenditure and consumer behaviors. It also offers practical advice and guidance to effectively support the post-pandemic era in Poland and Europe.

Keywords: food expenditure, consumer behavior, personality traits, Big Five analysis, COVID-19 pandemic, Poland

JEL codes: D12, D91, E27, H72

INTRODUCTION

According to European Union law, the term “food” (or “foodstuff”) is defined as any substance or product, whether it is processed, partially processed, or unprocessed. This includes items intended for human con-

sumption or those that can be reasonably expected to be consumed by humans. Foodstuff includes beverages, chewing gum, and any substance – including water – knowingly added to food during its manufacture, preparation, or processing [EU 2002]. Food does not include feed, medicinal products, cosmetics, tobacco products,

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or narcotics [Dz.U. 2006 nr 171 poz. 1225 z późn. zm]. The purpose of food consumption is to supply the human body with essential nutrients, encompassing those needed for building and repairing tissues, providing energy, and supporting regulatory functions [Carpenter et al. 2023]. When taken orally, foodstuffs are digested in the digestive tract, and the nutrients are absorbed into the body, which is nutrition [Sensoy 2021].

Food has been mostly studied qualitatively [Horta et al. 2013, Lepkowska-White and Chang 2017]. Arbit, Ruby, and Rozin [2017] turned to presenting the importance of food in a quantitative way. Consumer behavior science is a young scientific discipline that, due to its interdisciplinary nature, provides a broad spectrum of analysis opportunities [Światowy 2006, Ozimek and Żakowska-Biemans 2011, Ozimek 2006]. Depending on the scope and purpose of the research, the concept of consumer behavior may take on different meanings [Woods 2010].

The pandemic induced by COVID-19 has put the global agrifood system under enormous pressure [Vargas-Lopez et al. 2020]. Producers, processors, wholesalers, and retailers were forced to throw away tons of fresh food due to the disruption of supply chains, the overnight closure of food services, and the lack of employees available for land work [Ipes-Food 2020, FAO 2020]. Unfortunately, the impossibility of selling goods as usual has increased food losses. Rodgers et al. [2021] asserted that the pandemic has impacted the four pillars of food security: availability, access, utilization (the assimilation of nutrients), and stability (ensuring permanent access to food). The majority of individuals had to stay at home, preparing and consuming meals indoors [Principato et al. 2022].

However, the biggest challenge of a pandemic is the lower wealth of households' wallets. This is due to job losses, fewer hours worked by household members, and lower disposable income of the population. Laborde, Martin, and Vos [2021], along with Laborde et al. [2020], suggest that households with lower incomes are likely to transition from consuming fresh fruits and vegetables, which are rich in nutrients and micronutrients, to relying more on staple foods. Bracale and Vaccaro [2020] have shown a shift toward consumption of more processed

foods. Furthermore, in North America, there is a resurgence in Community-Supported Agriculture [CSA], driven by an increasing concern among people about the reliability of supermarket purchases. This trend reflects a growing desire for more direct access to fresh fruits and vegetables, as well as meat and fish products [Worstell 2020]. According to Szustak et al. [2022], a loss of jobs and income and uncertainty about the future have contributed to a reduction in the growth rate of consumer spending in Poland. Additionally, in some countries, a growing interest in home and community gardening was observed, as people sought to grow their own food for food security and nutrition [Lal 2020]. These changes in the food environment have had a variable impact on food diversity and nutrition [Yue et al. 2021].

From a consumer point of view, the increase in food expenditure leads to difficulties in meeting life needs in the long run [Sajdakowska et al. 2018, Springmann et al. 2016]. Climate changes are of great importance to evaluating changes in food consumption and consumers' behavior, which have been influencing cost of food production [Nelson et al. 2018]. Higher food production costs can lead to increased food expenditure, potentially reducing the availability of food for consumers with lower incomes [Mbow et al. 2019, Springmann et al. 2016]. Most likely, a less healthy diet with less availability of key micronutrients will characterize the global population [Gustafson 2013], which can evolve into higher malnutrition among people in lower- and middle-income countries [FAO 2008, FAO et al. 2021].

According to Furst et al. [1996], Lindeman and Sirelius [2001], Rozin [2007], and Kokkoris and Stavrova [2021], factors influencing changes in the level of food consumption and personal traits towards food consumption include dietary restrictions, ethical food choices, perception of food vs food-related emotions, lifestyle, perceptions of food. Firstly, health-conscious eating behaviors, such as adhering to a healthy diet, eating fruits and vegetables frequently, buying seasonal and regional foods, and cooking by following medical recommendations for nutrition are driven by the social and moral significance of food [Cally 2020]. Secondly, indulgent eating behaviors, buying organic products, shopping at small stores or local markets, avoiding meat products,

and favoring quality over quantity are predicted by the moral significance of food [Samli 2013]. Thirdly, indulgent eating behaviors, eating salty and sugary snacks, prepared meals, eating on the go, and overeating are driven by the aesthetic importance of food and the reduced importance of the health importance of food [Chinea et al. 2020, Arbit et al. 2017]. Finally, functional eating behaviors, consuming functional foods such as dietary supplements, fortified foods or “light” products, paying attention to food labels, buying groceries with a shopping list, and buying groceries online are driven by the sacred meaning of food and reduced appreciation of the aesthetic meaning of food [NC Solutions 2020a]. To summarize, the significance of food can serve as a useful framework for understanding different food consumption patterns, generating new insights, and providing practical recommendations [Forbes 2017].

Personality can be presented as a construct designed to describe, explain, and predict how people function in various aspects of life [Kusnier et al. 2020]. In the literature [Awais et al. 2020, Otero-López et al. 2021, Khatri et al. 2022, Tarka et al. 2022], individuals’ personality traits may play a role in determining consumer behavior. DiCrosta [2021] showed that the “Big Five” personality traits can predict consumer behavior. This model proposes the following five factors that capture individual differences in how people think, feel and behave [Tovanich et al. 2021]:

- extraversion – the tendency to seek stimulation in the company of others, to be sociable and energetic;
- agreeableness – the tendency to be warm, compassionate and cooperative;
- conscientiousness – the tendency to show self-discipline, strive for achievement and be organized;
- neuroticism [emotional stability] – the tendency to experience unpleasant emotions easily;
- openness to experience – the tendency to be intellectually curious, creative and open to feelings.

Tovanich et al. [2021] applied an abbreviated form of Goldberg’s questionnaire to measure the Big Five personality traits in their research. The questionnaire measures the five traits mentioned above and consists of 20 items. It is a shortened version of the 50-item Big Five Markers questionnaire from the International

Personality Item Pool resource – the Polish version of which was prepared by Strus et al. [2014]. The construction of the short version used the procedure of Donnellan and co-authors [Donnellan et al. 2006]. The findings from the abbreviated version of the Big Five Factors of Personality demonstrate that the Polish iteration of the IPIP-BFM-20 is at least as effective as its English-language equivalent in measuring the Big Five. Moreover, it serves as a valuable tool for a concise assessment of these personality factors. Notably, it has been highlighted that the 20-item mini-IPIP is nearly as reliable and valid as the more extensive 50-item parent instrument IPIP-FFM [Topolewska-Siedzik et al. 2014].

Few authors [Stein and Nemeroff 1995, Arbit et al. 2017, Palcu et al. 2019] point out that changes in food expenditure and, thus, in consumption go far beyond hunger or nutrition factors – which often include personal, cultural, and religious values and ideals.

The novelty of the manuscript is the presentation, analyses, and assessment of anticipated changes in food expenditure during the COVID-19 pandemic in Poland in 2022. The research includes a theoretical and practical parts using quantitative and qualitative measures. The quantitative methods are a CAWI questionnaire and Logit model analysis. The qualitative methods are Big Five analysis and case studies. The appeal of the article is heightened by the utilization of the Big Five method to investigate the influence of personality profiles on changes in food expenditure during the 2022 pandemic in Poland.

The article is structured as follows: the introduction indicates the problem, motivates its importance, and advances the main findings; the second section describes the research sample, materials, and methods; the third section presents the results and discussion; the final section summarizes the main contributions and outlines future research directions.

RESEARCH SAMPLE, MATERIALS, AND METHODS

The scientific aim of the study is to evaluate anticipated changes in food expenditure and consumer behavior measured by Big Five personality traits during

the COVID-19 pandemic in Poland. The practical aim is to recognize directions of consumers' purchasing patterns according to personality types and respondents' metrics, which can be used for higher purposes such as consciously influencing sustainable consumption at country level. The authors' empirical studies have led to the following hypothesis:

H_0 : There are statistically significant relationships between the anticipated changes in food spending and personality profiles during the COVID-19 pandemic in Poland in 2022.

H_1 : There are no statistically significant relationships between anticipated changes in food spending and personality profiles during the COVID-19 pandemic in Poland in 2022.

The necessity of the research can be included in three research questions:

1. Are there any statistically significant dependencies between anticipated changes in food expenditure and personality traits during the COVID-19 pandemic in Poland in 2022?
2. Are there any statistically significant dependencies between anticipated changes in food expenditure and respondents' metrics during the COVID-19 pandemic in Poland in 2022?
3. Are there any statistically significant dependencies between anticipated changes in food expenditure with personality traits and respondents' metrics during the COVID-19 pandemic in Poland in 2022?

The authors found a research gap in the form of methodology and understanding of detailed insight into food expenditure to support peoples' decisions on food in a wider and longer perspective [Borsellino et al. 2020, Khanam and Uppal 2020, Christelis et al. 2021, Xiong et al. 2021, Janssen et al. 2021, Ben Hassen et al. 2020]. We confirm that little is known about the different meanings people assign to food, which affects their food consumption behavior. There is a need to increase the knowledge and understanding of anticipated changes in food consumption in accordance with the personal traits of consumers.

By means of quantitative methods, the necessary data was collected, completed, and purified. By using

qualitative methods, the Big Five analysis was transformed into qualitative methods. Finally, only statistically significant relationships between the anticipated changes in food expenditure and personality traits were presented, and future recommendations were given.

The study was conducted on a population of $N = 1,000$ individuals (women and men) aged 16 to 83. The panel database was created to find and assess the relationships between consumers' personality traits and anticipated changes in food expenditure in Poland in 2022. The final panel database consisted of approx. 18,450 data received from 1,000 respondents in the period from 01/01/2022-31/03/2022 (from Poland). The data was processed with the statistical program Excel. The calculations for the records involved a comprehensive analysis of the overall distribution of gender, age, and the classification of township size across various voivodeships in the country. The study adhered to the criteria of representativeness. Notably, statistically significant anticipated changes in food expenditures for 2022 were identified with respect to gender, age, and traits related to conscientiousness vs stability.

For the calculation of the minimum representative sample size, the formula for qualitative tests with large sample sizes was used ($n = u_{\alpha}^2 \times (0,5)^2/d^2$). The questionnaire was underdone with the CAWI technique by SW Research Sp. z o. o. Agency. The agency applies the standards outlined in the Program for Quality Control of the Work of Interviewers (in Polish: *Program Kontroli Jakości Pracy Ankieterów – PKJPA*) in the CAWI survey category, in accordance with the quality audit of the Professional Responsibility Commission and the Board of Directors of the Organization of Opinion and Market Research Firms. The SW Research Sp. z o. o. is entitled to use the PKJPA quality mark in the awarded category. All questions were presented to the respondents in exactly the same way regarding content and form. The questionnaire contained closed questions, so-called "simple questions" (answer: yes/no), questions with options for answers (a/b/c/d), questions requiring a scale of assessment of responses (1 – least, 5 – the most), deeply closed questions (deliberately reopening the question in other parts of the survey to check the accuracy of the respondent's answers), closed ques-

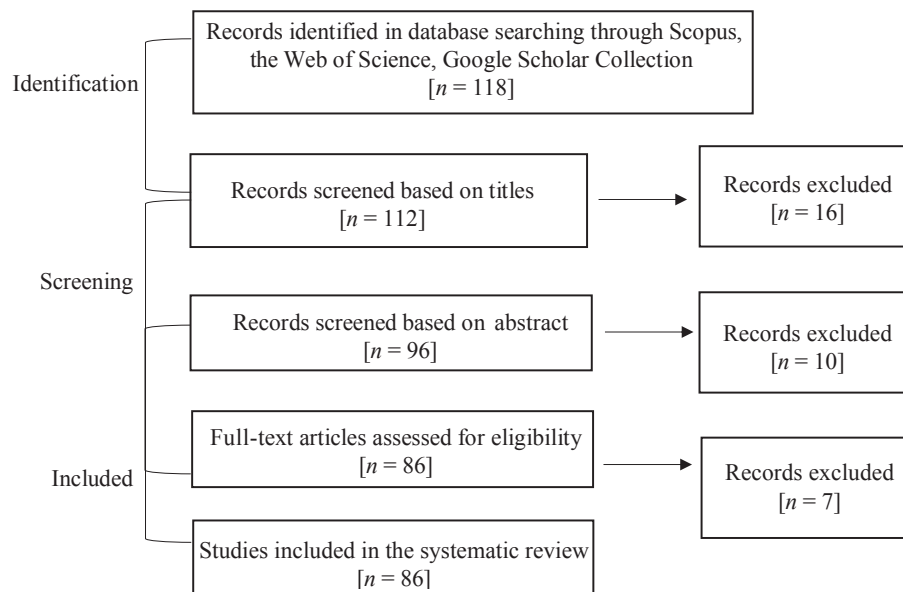


Fig. 1 presents the selection of secondary sources according to PRISMA guidelines.

Source: authors' own elaboration.

tions giving respondents the possibility of ticking and completing the answer “other – what?”, and questions to track changes over time. In the questionnaire, the options for answering were not exhaustive for reasons of clarity and for the sake of mapping the diversity and ordering the measured characteristics [Corder and Foreman 2009, Mann and Whitney 1947, Wilcoxon 1945]. The study's accuracy is verified by confirmatory factor analysis and correlation analysis of the questionnaire's scales with other measures of five personality traits [Thalmayer et al. 2011, Rammstedt 2007]. The study's reliability, measured by Cronbach's index, is satisfactory – which allows the research to be used for scientific purposes [Samson and Huber 2010, Saucier 1994, Saucier and Goldberg 2002].

In the manuscript, well-thought-out and well-organized primary and secondary research sources were used. The primary research sources come from questionnaires of residents in households within the Republic of Poland. The database covered 58.047 units of raw research material. Only purified research material was taken for analyses according to the selection criteria: a) include economic and social dimension; b) have a large

decision-making and information capacity; c) take into account the interests of the market actors; d) are characterized by a simple formula design. The evaluation of changes in food expenditure and traits of their personality is possible through interpretation of the results.

The secondary research sources come from scientific records such as published articles, books, bulletins, orders, identified through Scopus, the Web of Science, and Google Scholar. The search of database collection is 78. The secondary research sources were identified, screened, and finally included in the process of creating the article.

RESULTS AND DISCUSSION

In order to examine whether the personality trait of a consumer shows statistically significant dependency on anticipated changes in food expenditure in Poland in 2022, the characteristics of the values distribution of the explanatory variables of the study sample ($N = 1,000$) was carried out. In Table 1, there are characteristics of only correctly returned results from the respondents. According to the Big Five method, the explanatory

Table 1. Characteristics of the values distribution of the explanatory variables of the study sample [N = 1,000] – only correctly returned results

Explanatory variables	Average	Median	Standard deviation	Obliquity	Kurtosis	Min.	Max.
Extraversion	12,337	12,0	3,234	0,025	0,225	4	20
Conscientiousness	14,429	14,0	2,794	0,113	-0,451	5	20
Diligence	13,841	13,5	2,956	-0,027	-0,016	4	20
Stability	11,832	12,0	3,020	-0,028	0,267	4	20
Intellect	14,170	14,0	2,754	0,218	-0,613	6	20

Source: authors' own research.

variable is five personality traits such as Extraversion, Conscientiousness, Diligence, Stability, and Intellect.

The study revealed statistically significant dependencies only between the variable Conscientiousness vs Stability and both gender and varying age groups among consumers. To maintain statistical accuracy, the authors exclusively presented and discussed the statistically significant outcomes related to the Conscientiousness vs Stability variable. Furthermore, the variable Conscientiousness vs Stability was stratified into three size groups (low, medium, and high) to provide a more nuanced description of the differences between them.

Table 2. Characteristics of the values distribution of the explanatory variables of the study sample [N = 1,000] – only correctly returned results

Explanatory variables	Low	Medium	High
Extraversion	(4; 11 >	(11; 13 >	more than 13
Conscientiousness	(5; 13 >	(13 ;16 >	more than 16
Diligence	(4; 12 >	(12; 15 >	more than 15
Stability	(4; 11 >	(11; 13 >	more than 13
Intellect	(4; 12 >	(12; 15 >	more than 15

Source: authors' own research.

Table 3 provides the results of panel data modeling with a Logit Model estimation for 1,000 observations, time series length (minimum 4, maximum 20), and robust standard errors (robust HAC). The decision criterion is p ($p < 0,050$), which checks whether there is a significant difference in the level of Conscientiousness vs Stability with gender and range of age.

Studies by Janssen et al. [2021] and Bodirsky et al. [2020] prove that dietary choices change over the course of one's life. Food expenditure is stable and usually follow consumer habits. Shifts in consumers' food purchasing patterns often stem from pivotal life events, such as starting a family, the arrival of a newborn child, the inclusion of an elderly person in the family, or illness. These events can necessitate permanent changes in household eating habits. Numerous studies [Janssen et al. 2021, Kartari et al. 2021, Eftimov et al. 2021, Skalkos and Kalyva 2023, Dolati et al. 2022] prove that the pandemic and the associated restrictions have affected changes in the population's food choice patterns.

To clarify Result 1, it is worth pointing out that conscientiousness and stability can influence food purchasing and financial management patterns, and those with lower conscientiousness and stability may be more likely to increase their food spending. Consumers with lower conscientiousness and stability spend more on food. They are more likely to make impulsive purchasing decisions or ill-considered food purchases that don't fit their budget plan. People with lower conscientiousness and stability may face difficulties managing their finances and controlling spending. They may be more susceptible to advertising and impulsive purchases, leading to excessive food consumption and potentially affecting their health and finances. Additionally, consumers with lower conscientiousness and stability may be more likely to invest in temporary pleasures, such as food, at the expense of long-term financial stability [Li et al. 2021]. This may mean they are more likely to choose to spend more on food. People with lower conscientiousness and financial stability

Table 3. Panel data estimation results for the variable Conscientiousness vs Stability – Logit Model estimation

Models 1–2–3: Logit model estimation for 1,000 observations				
Time series length: minimum 4, maximum 20				
Robust standard errors [robust HAC]				
<i>Variables</i>	<i>Coefficient</i>	<i>Standard error</i>	<i>Z</i>	<i>Critical significance level</i>
<i>Const¹</i>				
Q 1 Option 1: a sharp decrease in food spending	-2,005	0,3356	-1,348	< 0
Q 1 Option 2: a slight decrease in food spending	-1,048	0,3284	-0,404	< 0,001
Q 1 Option 3: unchanged food spending	1,728	0,3331	2,381	< 0
Q 1 Option 4: a slight increase in food spending	3,009	0,3494	3,694	< 0
Interpretation of the model	Gender (male/female) and/or age of a respondent and his/her level of conscientiousness (low, medium, high) vs stability (low, medium, high) has/have an influence on his/her likelihood to change the level of spending (small, medium, high) on food items.			
Hypothesis H ₁	There are statistically significant relationships between the personality profiles of a consumer [male/female] and his/her age in anticipated changes in food expenditure.			
Result 1	Respondents (male/female) with the lowest conscientiousness and lowest stability are more likely to increase the level of spending on food items than those with the highest conscientiousness and highest stability.			
Conscientiousness vs Stability	0,993	0,5353	2,042	< 0
Test Wald chi-kwadrat (2) = 3,439, critical significance level = 0,064				
Result 2	Respondents (male/female) aged 50–59 with the medium conscientiousness and medium stability are more likely to increase the level of spending on food items than those aged 16–19 with medium stability and medium conscientiousness.			
Conscientiousness vs Stability contra age of respondents	3,651	1,653	6,891	< 0
Test Wald chi-kwadrat (2) = 3,439, critical significance level = 0,027				
Result 3	Women aged 20–29 with small stability are less likely to increase the level of spending on food items than women aged 60+ with small stability.			
Stability contra gender and age of respondents	2,759	1,503	5,711	< 0
Test Wald chi-kwadrat (2) = 3,439, critical significance level = 0,067				
Conclusions	There are statistically significant differences in anticipated changes in food expenditure in Poland in 2022 according to: – personality traits (Conscientiousness vs Stability); – age of a respondent (20–29; 50–59; 60+); – gender of a respondent (male/female) .			
Decision on H ₁	Accept			
Summary	The level conscientiousness vs stability plays a crucial role in anticipated changes in the respondents' food expenditure in Poland in 2022. Moreover, the gender and age of the respondents are statistically dependent variables. The results of the Logit Model estimations explain H ₁ .			
Q 1 Option 5 is the base				
^{a)} is tested for consistency with the normal distribution;				
^{b)} was calculated from the data;				
^{c)} Lilliefors significance correction;				
^{d)} is the lower limit of true significance.				

Source: authors' own research.

ty may be less disciplined in managing their finances. They may make impulsive purchasing decisions that lead to increased food spending [Chen et al. 2021].

In Result 2, the groups of respondents are characterized by average stability and conscientiousness, which are not key factors influencing differences in food spending between age groups. The results suggest that respondents' levels of conscientiousness and stability are similar between age groups, so these personality traits do not drive differences in food spending. Respondents over the age of 50 are more likely to increase their food spending compared to the 16–19 age group with similar levels of conscientiousness and stability. Elderly people tend to invest more money in food, which can be explained by the fact that older respondents may be more conscientious in their food purchasing decisions due to longer life experience and accumulation of knowledge on healthy eating. Respondents over the age of 50 tend to lead different lifestyles in comparison to respondents in the age of 16–19, which have an impact on their dietary needs and food preferences.

To explain Results 3, it should be noted that younger women aged 20–29 are focused on other financial priorities, such as paying rent, repaying student loans, or investing in education – which all affect their ability to increase spending on food. By definition, younger people may have less experience managing budgets and finances than older ones. Younger respondents were more inclined to save money on food items. Women of different ages may have different dietary needs. Elderly people are more likely to invest in healthy foods or specialty nutrition products, while younger people are more driven by price and availability. Result 3 demonstrates differences in sociodemographic situations between the two analyzed age groups: education level, family, place of residence, etc.

CONCLUSIONS

Based on the obtained results, it can be concluded that the pandemic period had different effects on peoples' lifestyles and food consumption patterns. Respondents, both male and female, exhibiting the lowest

levels of conscientiousness and stability were found to have the highest probability of increasing their spending on food items. This could potentially be attributed to elevated levels of perceived anxiety among this particular group. Respondents (male/female) aged 50–59 with medium conscientiousness and medium stability are more likely to increase spending on food items than those aged 16–19 with medium stability and medium conscientiousness. Experiencing negative feelings (i.e., fear and anxiety) increases spending on necessities, which includes food. To reduce negative feelings, people buy more because, in this way, they feel more secure and regain a substitute of control and agency. In the pandemic, age and gender affected food spending.

Pandemic restrictions have led to changes in purchasing behavior through increased food spending and increased food stocks. Women aged 20–29 with small stability are less likely to increase spending on food items than women aged 60+ with small stability. Elderly people were less likely to increase their food expenditure, which was linked to their diminished appetite.

It is necessary to point out possible limitations of the study. Firstly, the accurate identification, meticulous selection, and thorough evaluation of both quantitative and qualitative measures are crucial steps towards achieving success in obtaining accurate results and drawing valid conclusions. The results command the attention that, under certain conditions, there are differences in attitudes toward food expenditure between the two analyzed age groups. Further research will help to better understand these differences and their causes.

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PRZEWIDYWANE WYDATKI NA ŻYWNOSĆ WEDŁUG CECH OSOBOWOŚCI KONSUMENTÓW PODCZAS PANDEMII COVID-19 W POLSCE

STRESZCZENIE

Cel: Głównym celem artykułu jest poznanie przewidywanych wydatkach na żywność według cech osobowości konsumentów mierzonych metodą wielkiej piątki w pandemii COVID-19 w Polsce w 2022 roku. **Metody:** W artykule wykorzystano pierwotne i wtórne źródła danych przy użyciu jakościowych i ilościowych metod badawczych. Przeprowadzono staranny przegląd krajowej i zagranicznej literatury o wydatkach na żywność według zachowań konsumentów. Próba badawcza w badaniu ilościowym jest reprezentatywna ($n = 1000$). W artykule przedstawiono tylko statystycznie istotne zależności między przewidywanymi zmianami wydatków na żywność według cech osobowości konsumentów. **Wyniki:** Zaobserwowano statystycznie istotne zależności względem płci i/oraz wieku a typem osobowości. Wyniki badań mogą być wykorzystane do prowadzenia celowej, świadomej i długofalowej polityki zrównoważonej konsumpcji w kraju po pandemii COVID-19. **Wnioski:** Odpowiednio dobrana polityka żywnościowa państwa, np. subsydiowanie priorytetowych artykułów żywnościowych, subsydiowanie żywności nisko przetworzonej, nakładanie dodatkowych opłat na niezdrowe produkty, mogą przyczynić się do zwiększenia bądź zmniejszenia spożycia tych artykułów przez konsumentów. Wyniki badań wypełniają lukę badawczą na temat wydatków na żywność i zachowań konsumentów oraz są cennym źródłem wiedzy na temat efektywnej realizacji polityki żywnościowej państwa w Polsce i w Europie.

Słowa kluczowe: wydatki na żywność, zachowania konsumentów, cechy osobowości Wielkiej Piątki, pandemia COVID-19, Polska