

# WILL COVID-19 CONTRIBUTE TO AN INCREASE IN COCOONING IN THE NUTRITIONAL BEHAVIOUR OF POLES?

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## ABSTRACT

The social, economic and technological changes that have occurred in the last decade have substantially altered consumers' eating behaviour. The objective of this study was to identify and describe cocooning as a new phenomenon in the food choices of Polish consumers and the factors that shape it, with particular stress on the possible impact of the COVID-19 pandemic on this trend. For this purpose, primary and secondary tests were carried out. The primary studies examine the level of cocooning in consumer' food choices, while secondary data analysis focuses on finding a relation between this phenomenon and the COVID-19 pandemic. The direct research was conducted by means of the survey method on a sample of 660 Poles in 2018. The survey carried out among Poles has shown that cocooning is rather poorly noticeable in the eating behaviour of consumers. This trend is observable predominantly in the behaviour of young people who are rather highly educated city residents; however, this depends on the type of activity related to cocooning. On the basis of secondary research, it has been shown that anxiety and a disturbed sense of public and social security are one of the most important factors that may affect the development of cocooning in consumer behaviour. The COVID-19 pandemic that hit the world in 2020 has evoked this kind of feeling in many consumers, which has been aggravated by the restrictions imposed by the state. Owing to the restrictions, social isolation increased and Poles have transferred many activities home, thus forming new habits, which may have a strong impact on their consumption behaviour in the longer term, even after the pandemic comes to an end. It is worth noting that the increase in the level of cocooning directly contributes to the growth of the e-commerce market, which poses new challenges especially for the logistics industry.

**Keywords:** *cocooning, new trends, consumer nutritional behaviour, COVID-19*

## INTRODUCTION

The social, economic and technological changes that have occurred in the last decade have substantially altered consumers' eating behaviour (Sheth, 2021), and influence on developing new trends in their behaviour, such as servitization [17], rationalization [5], ethnocentrism [4], as well as cocooning. Sweeping changes in consumer behaviour mobilise economists to methodically monitor new

phenomena occurring on the Polish food market, because this allows them to track the trajectory of the development of food and catering industry companies, as well as societies themselves.

Cocooning is studied by both Polish and foreign researchers within various frameworks, such as cocooning in behaviour of consumers or factors influencing on faster development cocooning [10]. Based on the results of the literature review the general manifestation of cocooning in consumers' nutritional behaviour using direct surveys have not been the subject of a scientific study in the last decade. There is also a lack of work discussing the likely impact of the COVID-19 pandemic.

Therefore, in order to get a holistic view of the problem author decided to find the answer for the question does the phenomenon of cocooning in consumers' nutritional behavior is clearly visible in Poland? Which socio-demographic characteristics have the greatest influence on the presence of this phenomenon in consumer behavior? Could a coronavirus pandemic affect its development in Poland?

The main objective of this research was to identify and characterise cocooning as a new phenomenon in the nutritional behaviour of Polish consumers and to study the factors shaping it, with special emphasis on the possible impact of the COVID-19 pandemic on its development. To look into the problem, we drew information from the latest scientific articles, reports, summaries and Internet sources on the subject of consumer behaviour, nutrition, new trends and the pandemic. The knowledge was broadened through direct research conducted as a survey on a sample of 660 Polish people in 2018.

The paper is divided into the following sections. The first part presents the phenomenon of cocooning in theory. The second is dedicated to methodology and data collection, while the third presents the empirical results and discussion. The conclusion provides a summary, and indicates applications of the work, limitations and further research directions.

## **LITERATURE REVIEW**

Today's consumers spend more time at home than they did a few years ago, they spend more money on take-out than on eating out, watch movies on online platforms instead of going to the cinema, and make a larger share of their purchases online. These consumers have turned into "cocooners," who have supplanted going outside with staying at home and limit their visits to market spaces. Therefore, a new trend in consumer behaviour is being observed: cocooning. This term was proposed in the 1980s by Faith Popcorn, who predicted the emergence of a fad for a retreat from the world by insulating oneself in one's own locality [8]. Cz. Bywalec (2007) defines cocooning as the process of consumption shifting from outside the home, i.e. from public institutions to one's

home. The home mentioned in the definition is not only understood as a building, but, first of all, as a focal point of family and social life, where you can relax and satisfy the needs that were once satisfied outside its territory. In the literature on the subject, cocooning is often allied with the privatisation of consumption, defined as the process of commercialisation, i.e. the transformation of public consumption into private consumption. These phenomena can be regarded as interrelated, because the key characteristic of cocooning is a retreat of consumers into privacy, which is associated with a preference for private consumption [1]. The cocoonisation of society generates hidden consumption, which takes place at home, outside norms and regulations, in an atmosphere of individual privacy and in the group of one's loved ones.

Nowadays, cocooning can be broken down into three different types. The first one is celebrating home life that is, transferring all everyday activities to the home, which becomes the centre of human life open only to the family members, who are participating in the escape from the chaos and everyday life. This type is associated with cocooning in consumers' nutritional behaviour [7]. Cocooning is manifested by buying food online very often, ordering meals delivered to the door or choosing to cook at home rather than visiting restaurants. It is proofed that Polish consumers do not allocate as much money as western countries on foodservices in their total annual expenditures [11]. However, the demand for home-delivery food provided by catering and facilities and restaurants is more and more popular [16]. Also, it should be noted, that the coronavirus pandemic has a significant impact on the development this kind of food services in Poland [3].

The second type is "wandering cocooning" most often observed among young people who isolate themselves from the outside world with the use of iPods, tablets, smartphones or mobile phones. Another salient feature of wandering cocooning is also shopping with headphones on and the use of luxury cars with Internet access, GPS, in which you can feel comfortable and avoid confrontation with the surroundings. The third type is called armoured cocooning, which manifests itself in cautious use of the Internet, installing alarm systems and monitoring cameras, or searching for flats in guarded neighbourhoods [7],[8].

Cocooning is often discussed in the literature. Very often researchers look for factors which impact on developing this trend. Some scholars have investigated the motives of consumers to shop without entering public spaces. It has been observed that consumers stay at home and limit their visits to the shops because of a recession or other situation that may have affected their finances and prompted them to save money. Other issues pertinent to this matter include growing social anxiety or a shattered sense of public and social safety. These situations force consumers to look for simple pleasures that they can enjoy at home, and although they may voice frustration about it, they notice that they derive pleasure from these new activities and gradually get used to the new way of spending their free time (Manning, 2005).

Moreover, it was found that cocooning may be an example of a reaction to the need for territorialism and delineation of boundaries, distinctive of the *Homo sapiens* species, as well as an effect of the ideology of individualism [8]. Consumers are looking for ways to stand out from others, e.g. with their possessions. Increasingly, they are turning their own apartments into entertainment centres; equip them with modern audio-visual equipment with access to VOD platforms, computer networks or even gyms, saunas and swimming pools. What's more, they participate in culture by listening to Internet radio or visiting virtual museums. Houses and flats are beginning to replace institutions such as the philharmonic hall, the theatre, the cinema, and even places of collective leisure. Products that have so far been popular in restaurants or cinemas are starting to appear at home (e.g. sushi sets or beer in KEG barrels).

It has been shown that what contributes to the development of cocooning is late marriages, a smaller number of large families, as well as faster maturation and children and adolescents entering adulthood earlier. As a consequence, material goods that used to be family property and were used conjointly become personal goods.

Also, shorter working and different methods of work, and thus more free time, are chief factors in the emergence of cocooning. Remote access to the Internet enables teleworking, as well as shopping or taking care of private matters in the virtual space, without the need to leave your own home [10].

## **RESEARCH METHODOLOGY**

The survey using quantitative methods covered consumers who decided autonomously about their own diet (over 18 years of age). The research was conducted in 2018 throughout Poland.

The choice of the research method, the selection of the sample, as well as the method of analysis of the collected information was determined based on the goals and scope of the survey. Two research techniques were used: an Internet survey and a drop-and-collect survey.

As the questionnaire-based study is non-exhaustive research, the selection of subjects for the sample was of great importance. The study used a purposeful-quota sample selection, with the quotas set in relation to the age and gender criteria.

The measuring tool in the primary research was a questionnaire, which consisted of an introduction, instructions for respondents, ten main questions and five background-data questions. Before the primary researches were realized, the pilot study was conducted on 50 respondents. The questions were dichotomous and closed-ended accompanied by tables and scales. The main objective of the study was to identify new trends in the nutritional behaviours of Poles and the

factors that affect these trends. Among the trends distinguished are greening, globalisation, servicisation, ethnocentrism, rationalisation and cocooning, on which this article focuses. In order to investigate the degree of occurrence of selected new trends in the nutritional behaviour of Poles, the variables were operationalised. Table 1 shows how the phenomenon of cocooning was measured.

**Table 1. Operationalisation and measurement of variables**

The studied phenomenon	Scale position (questions)*	Cronbach's alpha for the scale
Cocooning	Buying food online	Alpha = 0.163 ***
	Ordering meals delivered to the door, such as those offered by pizzerias and other catering companies	
	Choosing to cook a sophisticated dish at home rather than going to a restaurant	

\* The questions used intensity scales from 1 to 5, and the ends of these scales were described differently, depending on the question asked

\*\*\* The result is not very reliable; analysis of answers to individual questions

Source: Author's study

When creating measurement scales describing consumer behaviour, factor analysis (principal components method) and the Cronbach's alpha coefficient were employed as a measure of the reliability of the scales. When verifying the hypotheses on the relationship between the behaviour of consumers and their characteristics, linear regression models (when dependent variables were measured on summary scales) or ordered logit models were used (when responses to individual questions were scrutinised). Descriptive statistics and structure indicators for individual questions and summary scales were also calculated. Moreover, the standard Student's t-test using heteroscedasticity consistent standard errors of the estimated coefficients was used to test the significance of the regression model parameters. It should be noted that the results of testing the significance of the regression model parameters should be treated with some caution because it is not possible to guarantee the independence of the responses given by the respondents in the online survey.

However, the used method made it possible to find the answer for the question does the phenomenon of cocooning in consumers' nutritional behavior is clearly visible in Poland and which socio-demographic characteristics have the greatest influence on the presence of this phenomenon in consumer behavior. It should be noted that the answer for the research question associated with the impact of COVID-19 was sought based on secondary research, because of the lack of data on this topic, and these considerations should be treated with great caution.

A total of 660 people participated in the study, including 393 women (59.5%) and 267 men (40.5%). People aged 18-34 accounted for approximately 42% of the respondents, people aged 35-54 – for 28%, and over 55 – for 31%. The structure of the sample in terms of age and sex resulted from the selection of the quota, which reflected the population structure in Poland as of 31 December 2016. Among the other characteristics of the research sample, the following were distinguished: education, income situation and place of residence. Almost half of the respondents had secondary education (49.5%), more than one-third had vocational education (35.3%), and every seventh person had higher education. Only 2.3% of the respondents declared having primary or lower secondary education.

**Table 2.** *Characteristics of consumers participating in the research (n = 660)*

Characteristics of the respondents	Respondents	
	number	%
<b>Sex</b>		
Woman	393	59.50%
Man	267	40.50%
<b>Age</b>		
18-24	103	15.6%
25-34	166	25.2%
35-44	102	15.5%
45-54	84	12.7%
55-59	50	7.6%
60-64	50	7.6%
65 and over	105	15.9%
<b>Education</b>		
Primary	6	0.9%
Junior high school	9	1.4%
Vocational	233	35.3%
High school	327	49.5%
Higher	85	12.9%
<b>Income situation</b>		
Very poor	13	2.0%
Poor	8	1.2%
Average	104	15.8%
Good	235	35.6%
Very good	300	45.5%
<b>Place of residence</b>		
City	407	61.7%
Countryside	253	38.3%

*Source: Author's data based on primary research*

It should be admitted that the presented characteristics of the sample do not guarantee its full representativeness. Hence, taking into account the use of non-random sample selection, the generalisation of results using standard statistical inference tools should be approached with great caution. Nevertheless, even on such an imperfect sample, attempts can be made to formulate conclusions about the phenomena under study.

Research conducted in 2018 showed that cocooning is rather negligible among Poles: the average was 1.94 and the median was 1.67 (tab. 3).

**Table 3.** *Descriptive statistics for new trends in Poles' nutritional behaviour\**

<b>Phenomenon</b>	<b>Mean</b>	<b>Median</b>	<b>Standard deviation</b>
Cocooning	1.94	1.67	0.92

*\* The questions used intensity scales from 1 to 5, and the ends of these scales were described differently depending on the question asked*

*Source: Author's data based on primary research*

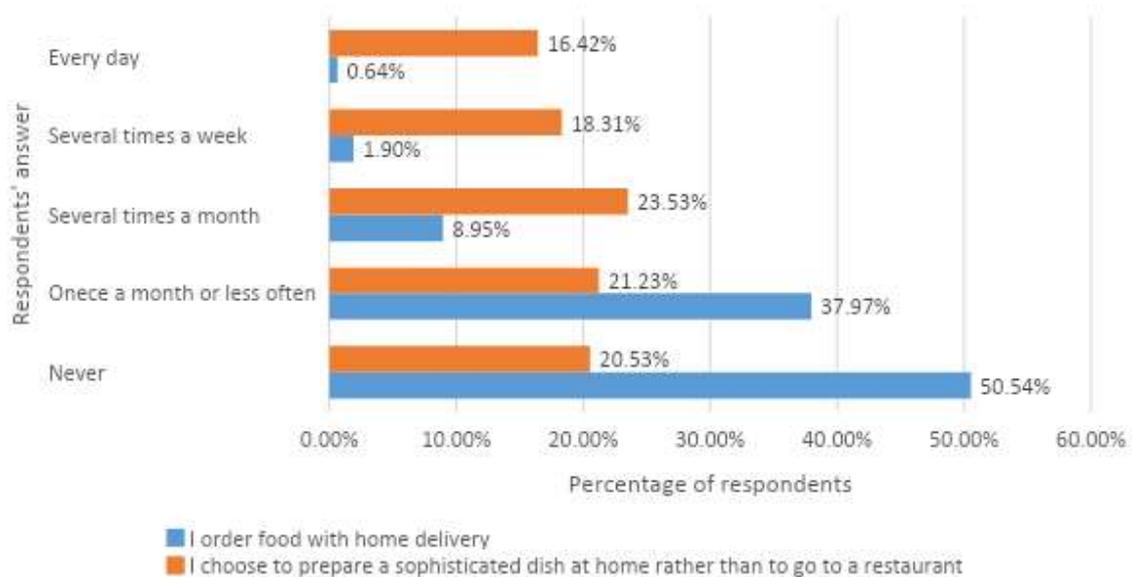
Three questions in the questionnaire were used principally to examine the degree of cocooning in Poland. The first one was concerned the frequency of food purchases over the Internet by the respondents, the second - ordering takeout meals with home delivery, and the third - choosing cooked dishes at home rather than visiting a restaurant.

Analysing the incidence of buying food online, studies have revealed that people who follow the principle "you are what you eat" and claim that they have healthy eating habits do it more often. It has also been shown that price is not the most essential factor for them when choosing food. The research also proved that people over 60 years of age buy food online much less often than people aged 18-24. Also, people with primary education show a lower level of cocooning in this respect than people with vocational education. Moreover, these are people who live in the city more often than in the countryside and assess their financial situation as poor (Tab. 4).

The research findings have demonstrated that home delivery dishes are ordered much less frequently by people aged over 35 than by people aged 18-24. It has also been shown that people with secondary and higher education evidently order takeaway dishes more often than consumers with vocational education. Another correlation that was noticed was that people who assess their diet as healthy order meals delivered to their homes much less frequently. However, no statistical significance was found regarding the impact of gender, income situation and place of residence on the frequency of ordering take-out food.

Preparing a complex dish at home rather than visiting a restaurant is an answer less often chosen by people over 65, and more selected by people aged 18-24. Statistical analysis has also revealed that people with primary education do

this much less frequently than consumers with vocational education. It is worth noting that on average the respondents who declared that they care about the quality of their meals and that they expand their nutritional knowledge gave higher answers to the question if they would choose to prepare a sophisticated dish at home rather than visit a restaurant (Table 4, Fig. 1).



**Fig. 1.** The frequency of ordering meals with home delivery and the frequency of preparing sophisticated meals at home by Poles

*Source: Author's data based on primary research*

On the basis of detailed analyses, it can be concluded that cocooning occurs mainly among young, better educated people who prefer healthy eating, and in terms of purchasing food, more often among city dwellers and people who assess their income situation as poor.

**Table 4.** Estimation results of ordered logit models for questions about cocooning

	Buying food online		Ordering dishes with home delivery		Choosing to cook a sophisticated dish at home rather than going to a restaurant	
	b	std(b)	b	std(b)	b	std(b)
According to the “you are what you eat” principle, do you pay attention to what food products you choose? Yes	1.762	0.673***	0.392 <sup>-</sup>	0.295	0.432	0.258*
What does packaging mean for you when choosing a food product?	0.001	0.124	0.068 <sup>-</sup>	0.092	0.030	0.074
What does price mean for you when choosing a food product?	-0.312	0.138**	0.025	0.147	0.026	0.103
What is the significance of the company when choosing a food product?	-0.129	0.134	0.041	0.099	0.071 <sup>-</sup>	0.085
What is the importance of quality for you when choosing a food product?	-0.111	0.228	0.245 <sup>-</sup>	0.176	0.554	0.137***
What is the importance of caloric content for you when choosing a food product?	0.153	0.141	0.030	0.116	0.142	0.088
What is the significance of composition when choosing a food product?	0.376	0.234	0.038	0.131	0.008	0.113
Do you think you are eating healthy? Yes	0.728	0.329**	0.543 <sup>-</sup>	0.218**	0.063 <sup>-</sup>	0.199
Do you use any diet (e.g. vegetable and fruit)?	0.288	0.309	0.096	0.244	0.056 <sup>-</sup>	0.187
Do you expand your knowledge of proper nutrition?	-0.331	0.339	0.293 <sup>-</sup>	0.269	0.355	0.206*

Do you use dietary supplements advertised in the media?	0.102	0.304	0.358	0.269	- 0.298	0.203
sex_female	-0.311	0.270	- 0.297	0.214	- 0.106	0.168
age_25_34	0.580	0.451	- 0.253	0.261	- 0.161	0.221
age_35_44	0.025	0.501	- 0.797	0.291***	- 0.324	0.244
age_45_54	0.071	0.502	- 0.834	0.346**	- 0.216	0.269
age_55_59	-0.917	0.683	- 1.921	0.432***	- 0.196	0.356
age_60_64	-1.541	0.803*	- 1.829	0.403***	- 0.501	0.355
age_65_and_above	-3.737	1.143***	- 4.258	0.596***	- 0.729	0.314**
primary education	- 12.370	1.324***	- 0.713	1.955	- 1.564	0.920*
junior high school education	2.564	2.106	0.318	0.900	0.382	0.706
secondary education	-0.255	0.614	0.876	0.339***	- 0.262	0.297
higher education	-0.105	0.648	0.673	0.364*	- 0.197	0.295
very poor income situation	1.195	0.872	0.333	1.646	- 0.277	0.736
bad income situation	2.228	0.955**	1.527	2.299	0.874	1.247
good income situation	-0.500	0.311	0.155	0.204	0.150	0.197
very good income situation	-0.549	0.406	0.155	0.374	0.268	0.260
place of residence city	0.539	0.317*	0.237	0.209	0.184	0.173
R <sup>2</sup>	0.157		0.180		0.051	
N	637		637		637	

The estimates of the regression coefficients are summarised in columns b; column std(b) contains the mean errors of parameter estimation calculated using a formula resistant to heteroscedasticity of the random term; statistically significant estimates are marked with asterisks:

\* p<0.1; \*\* p<0.05; \*\*\* p<0.01

*Source: Author's data based on primary research*

## DISCUSSION

The conducted survey showed that cocooning is very faintly visible in the nutritional behaviour of Polish consumers. It occurs in the majority of Poles preferring to prepare a sophisticated dish at home rather than to visit a restaurant,

in Poles occasional ordering meals with home delivery and making food purchases via the Internet, which in Poland is still rather uncommon, but is increasing every year (Neska et al. 2015; Gheribi, 2016; Włodarczyk, 2016; [11], Straczuk 2016; Kolanowski et al., 2020). This trend is noticeable mainly in the behaviour of young people, rather highly educated, city residents, however, this depends on the type of activity related to cocooning.

Research by other authors has shown that the development of cocooning among consumers may be influenced by many factors, however unquestionably, in 2020 the most vital factor affecting almost every area of human life has been the COVID-19 coronavirus pandemic. Scientists agree that the pandemic could have long-term consequences for consumers. COVID-19 has not only disrupted people's daily routine, but it also has already had psychological effects. Social isolation, growing anxiety and insecurity can lead to severe psychological and psychiatric disorders [2]. UNICEF (2020a; 2020b) and WHO (2020) has issued warnings against spending too much time in front of TV, computers and social media due to limited physical activity, rising obesity rates among children, and easy access to unscientific news and information on COVID-19, which spreads fear and paranoia [14], [15]. The pandemic has also forced a change in consumer behaviour. Due to the introduced restrictions, all activities of people were concentrated in their immediate surroundings, such as a house or apartment. Consumers were more actively looking for single-family houses with a garden or allotment gardens. Many new work and learning systems have been created, such as remote learning and work, online conference meetings, trade fairs and training workshops. Moreover, it has been shown that as early as two weeks after the introduction of restrictions on leaving the house, consumers admitted to changing their buying habits [6].

In the view of this article, data on online food purchases and online food ordering are of particular interest. The latest edition of the report *Global State of the Consumer Tracker (2020)* shows that almost 40% of Poles are ready to do grocery shopping online and pick it up in the store. Moreover, more than a quarter of Poles choose to order a home meal online. It has been shown that 40 percent of Poles order food with delivery at least once a week. Meals with home delivery are ordered mainly by people up to 34 years old: nearly half of them order food at least once a week. Every fourth person over 50 orders dishes from a restaurant at least once a week [9]. According to Tpay (2020) data, the average value of the e-cart in the grocery shopping category increased from PLN 105 in the first quarter of this year to PLN 226 during the lockdown. The upward trend of the e-cart continued, reaching PLN 239 during the holiday season. The food industry during the pandemic saw a significant rise in the number of online transactions, by as much as 128%. Trading value also went up by 276% [13]. This trend continues after the lockdown, with a 125% surge in the number of transactions and a 284% rise in the value of transactions compared to the beginning of the year [12]. It can therefore be assumed that changes in consumer behaviour, initiated by

maintaining a safe social distance, have transformed into convenient, everyday shopping performed without leaving home.

However, one may wonder if, after the COVID-19 pandemic is over, consumers will gradually return to their old habits or maintain their new ones? The increased volume of online purchases during the pandemic has not been the result of a natural market transformation, but rather of a forced change. This may be indicated by the fact that less than a third of consumers who have switched from traditional online purchasing channels are satisfied with them. Despite this moderate satisfaction, one can expect an increase in the dynamics of online sales growth, as the vast majority of consumers who positively evaluate digital shopping channels declare that even after the end of the COVID-19 pandemic, they will not stop using them (KPMG, 2020).

## CONCLUSION

The main objective of this research was to identify and characterise cocooning as a new phenomenon in the nutritional behaviour of Polish consumers and the factors shaping it, with particular emphasis on the possible impact of the COVID-19 pandemic on its development.

A survey conducted in 2018 among Poles has shown that cocooning is poorly visible in the nutritional behaviour of consumers. This trend is perceptible mainly in the behaviour of young people, rather highly educated, city residents, however, this depends on the type of activity related to cocooning.

On the basis of secondary research, it was shown that anxiety and a disturbed sense of public and social security are one of the most important factors that may affect the development of cocooning in consumer behaviour. The COVID-19 pandemic that hit the world in 2020 has evoked this kind of feeling in many consumers, which has been aggravated by the restrictions imposed by the state. The introduced restrictions have led to Poles suffering from social isolation and transferring all activities home, as well as shaping new habits, which may have a significant impact on their consumption behaviour in a longer run, even after the pandemic comes to an end. Therefore, in further research, attention should be paid to the current level of cocooning in the behaviour of Poles after returning to the normal functioning of society. It is also worth bearing in mind that the home-centre also leads to the education of the consumer-entrepreneur (the so-called prosumer), for whom consumption and work are no longer hermetically separated from each other, and leisure sometimes becomes prosumption instead of consumption, which may also be the subject of further analysis.

The study also has a practical angle and outcomes. It has been shown that in times of a pandemic, consumers more often buy online platforms with movies or games, order take-out food, buy household appliances and fitness equipment, using primarily e-commerce. For many consumers, these behaviours may not

change after the epidemic, which will continue to affect the rapid growth of the e-commerce sector, driving the emergence of innovative solutions used by the logistics industry.

There are some limitations of the results of this study. Firstly, the results cannot be generalized to the entire population, because research was non-exhaustive. Secondly, the questionnaire method has some drawbacks, e.g. there is a limited possibility of deepening the subject. Thirdly, the survey was conducted in 2018, and due to the coronavirus pandemic from 2020, consumers' food choices related to cocooning may have changed. Although, this research can be treated as a baseline for future studies conducted after the pandemic times.

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