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ORIGINAL ARTICLE

CONSUMER BEHAVIOUR DURING COVID-19 PANDEMIC

Paulina Helisz[1], Weronika Gwioździk[1], Natalia Kaczmarczyk[1], Beata Całyniuk[2]

[1]Student Scientific Team, Department of Human Nutrition, Faculty of Health Sciences in Bytom, Medical University of Silesia in Katowice, Poland
[2]Department of Human Nutrition, Faculty of Health Sciences in Bytom, Medical University of Silesia in Katowice, Poland

ABSTRACT

Background. COVID-19 pandemic poses a significant threat in area of public health. In the light of dynamic increase of infections European countries decided to implement special safety measures in order to stop spread of SARS-CoV-2 virus. Reduction of the activity of shopping galleries, grocery stores and gastronomy directly impacted the change of consumer behaviours.

Objective. The aim of this research was the analysis of consumer behaviour during COVID-19 pandemic regarding the use of gastronomical services, grocery shopping and undertaken safety measures.

Material and methods. The main instrument was original survey conducted on-line in November 2020. The form consisted of metrics and close-ended questions about consumer behaviour during COVID-19 pandemic. 1080 respondents took part in the study (females - 850; men - 230). Results were mapped out in Statistics 13.1 program and graphical representation was prepared in Microsoft Excel.

Results. More than half of respondents were working people (n=629; 58%). Vast majority of working respondents during the study were working stationary (n=304; 48%), while remotely only 33% (n=208). Among young respondents almost half of the group was unemployed (n=158; 45%), while the rest of the group was employed (n=195; 55%). Professional activities in the group of respondents that were still learning was mostly stationary/ physic (n=57; 29%). During the pandemic the stationary form of working switched into remote in every third of respondent (n=307; 28%).

Conclusions. Global pandemic of COVID-19 forced people to change their current behaviours - both consumer and social. Consumers are aware of risks borne by SARS-CoV-2 infection, which may be concluded from undertaken safety measures.

Keywords: *COVID-19, SARS-CoV-2, consumer behavior, pandemic, gastronomy*

STRESZCZENIE

Wprowadzenie. Pandemia COVID-19 stanowi duże zagrożenie w obszarze zdrowia publicznego. W związku z dynamicznym wzrostem zakażeń, kraje Europy postanowiły wdrożyć specjalne środki ostrożności w celu zahamowania rozprzestrzeniania się wirusa SARS-CoV-2. Ograniczenie działalności m.in. galerii handlowych, sklepów spożywczych oraz gastronomii bezpośrednio przyczyniło się do zmiany zachowań konsumenckich.

Cel. Celem badań była analiza zachowań konsumentów w dobie pandemii COVID-19 dotyczących korzystania z usług gastronomii, zakupów spożywczych oraz podejmowanych przy tym środków ostrożności.

Materiał i metody. Badanie zostało przeprowadzone za pomocą ankiety on-line w listopadzie 2020 roku. Formularz składał się z metryczki i zamkniętych pytań dotyczących zachowań konsumentów podczas pandemii COVID-19. W badaniu wzięło udział 1080 respondentów (kobiet - 850; mężczyzn 230). Wyniki zostały zmapowane w programie Statistica 13.1, a reprezentację graficzną sporządzono w programie Microsoft Excel.

Wyniki. Ponad połowa respondentów uczestniczących w badaniach stanowiły osoby pracujące (n = 629; 58%), z czego większość pracowała w trybie stacjonarnym (n = 304; 48%), natomiast zdalnie tylko 33% (n = 208). Wśród młodych respondentów prawie połowa grupy była bezrobotna (n = 158; 45%), a pozostała część grupy była zatrudniona (n = 195; 55%). Aktywność zawodowa w grupie badanych nadal się uczących miała głównie charakter stacjonarny lub fizyczny (n = 57; 29%). W czasie pandemii stacjonarna forma pracy zmieniła się na zdalną u co trzeciego badanego (n = 307; 28%).

Wnioski. Globalna pandemia COVID-19 zmusiła ludzi do zmiany dotychczasowych zachowań - zarówno konsumenckich, jak i społecznych. Konsumenci są świadomi zagrożeń, jakie niesie ze sobą zakażenie SARS-CoV-2, o czym świadczą podjęte środki bezpieczeństwa.

Słowa kluczowe: *COVID-19, pandemia SARS-CoV-2, zachowania konsumenckie, gastronomia*

Corresponding author: Paulina Helisz, Student Scientific Team, Department of Human Nutrition, Faculty of Health Sciences in Bytom, Medical University of Silesia in Katowice, Poland, tel. +48 883 975 935, e-mail: paulinahelisz@gmail.com

INTRODUCTION

COVID-19 worldwide

Current COVID-19 pandemic poses a significant threat in area of public health. In the first quarter of 2020 over 180 thousand SARS-CoV-2 cases were reported. According to date from March 16th 2020 mortality connected to the infection of COVID-19 amounted over 7 thousand people [2]. Situation rapidly changed - according to data from World Health Organization, number of active cases as for the November 10th 2020 reached over 50 million. Mortality resulting from infection reached 1 257 523 cases that day [10].

As a result of dynamic increase of infections European countries decided to implement special safety measures in order to stop the spread of SARS-CoV-2 virus. Authorities of various countries decided to implement major restrictions in the social life, which were directly connected with switching to remote teaching by educational entities, calling off mass events or limiting economic activity [5].

Consumer during pandemic

Many factors influenced behaviour of consumers - psychological, social or physiological [11]. Sanitary-epidemiological situation caused by the global spread of SARS-CoV-2 directly influenced the change of current behaviours. Panic regarding risk of getting infected with COVID-19 played a significant role and to large extent forced clients to change the typical way of doing shopping [9].

Constant increase of online stores' popularity may be observed. Prices in e-shops are usually lower than in comparison with stationary facilities of the same producer, which has a crucial impact on choice of this form of doing shopping, especially by younger group of consumers [1].

According to data from PBI (Polish Internet Research) in September 2020, 27,7 million of users used the Internet [7], which stands for vast majority of Polish society, that accounts for 38 million (GUS, June 30th 2020). According to the above, over 73% of Polish citizens have access to the Internet.

The aim of this study was the analysis of consumer behavior during COVID-19 pandemic regarding use of gastronomical services, grocery shopping and undertaken safety measures.

MATERIAL AND METHODS

The main instrument was original survey conducted on-line in November 2020. The form consisted of metrics including respondent's gender, age, place of residence, professional status, and potential mode of working (remote/ stationary) and twelve close-ended questions about consumer behaviour during COVID-19 pandemic. The survey was validated in terms of validity, reliability and accuracy of measurement scales.

Subjects were asked to provide answers to the questions concerning ordering meals „to-go", concert related to this activity, used safety measures during stationary shopping and its frequency.

Results were mapped out in Statistics 13.1 program and graphical representation was prepared in Microsoft Excel.

RESULTS

The 1080 respondents took part in the study (females - 850; men - 230). More than half of the respondents were people between 18-25 years old (n=576). Another age groups were 26-35 years old (n=314); 36-45 (n=142); 46-55 (n=30), 56-65 (n=14); 65+ (n=4) (Figure 1).

Grouping based on place of residence was based on data indicated in questionnaire (countryside, city over 100 thousand citizens, city between 100 - 200

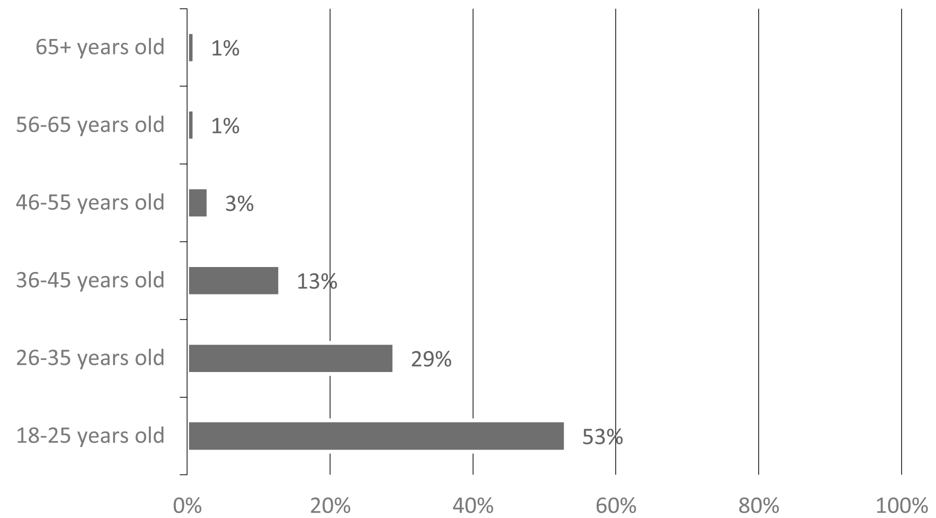

Figure 1. Age of responders

thousand citizens and city over 200 000 citizens). The biggest group were persons living in urban areas with over 200 000 citizens (n=382), while the smallest group lived in cities between 100 - 2000 thousand citizens (n=175) (Figure 2).

The remaining respondents' (n=33; 3%) employment status was different than proposed by authors. People in this group mostly didn't take up any professional activity (n=22; 66%).

During the pandemic the stationary form of working

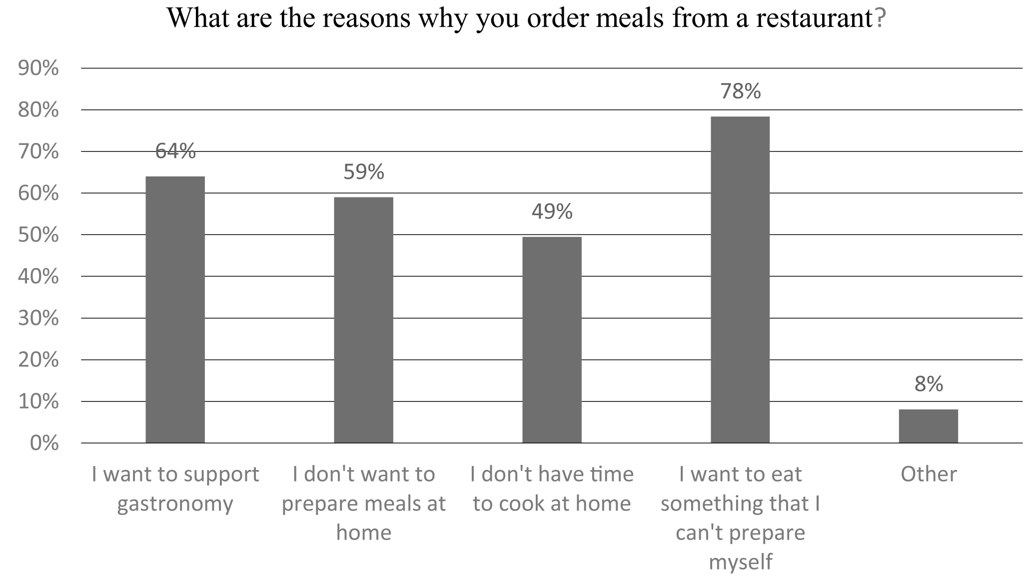

Figure 2. Reasons why consumers order take-away meals

Table 1. Responders' form of work

Did your work mode change during the pandemic?	Student	Working person	Unemployed person	Retired person	Other
	number of results	number of results	number of results	number of results	number of results
Yes, I manly work from home	128	176	0	1	2
No, I worked from home before	9	32	0	0	2
No, I still work from home	38	304	0	0	5
No, I work phisically	19	100	0	1	2
I don't work	158	17	52	11	22
No answer	0	0	1	0	0
Total	352	629	53	13	33

Over half of respondents were working people (n=629; 58%). The vast majority of them were performing their jobs in stationary form (n=304; 48%), while in remote form 33% of respondents (n=208).

Professional activity of students and school kids (n=352; 33%) was split. Among young people almost half was unemployed (n=158; 45%) while the rest was employed (n=194; 55%). Fulfilling professional duties in still-at-school respondents was mostly remote (n=137' 71%). Other subjects were working stationary/ physically (n=57; 29%).

Unemployed people accounted for less than 5% (n=53) of all respondents, while people retired / on pension - only 1%. Among retirees and pensioners only two subjects declared themselves as employed - one of them worked stationary (physically), the second one remotely.

switched into remote in every third of respondent (n=307; 28%). The vast majority of respondents (n=772; 71%) performed their professional duties without changes (Table 1).

More than half of subjects of age 18-25 used the possibility of food delivery from time to time (n=323; 56%). Similar results arise in remaining age groups (respectively: n=179, 57%; n=142, 61%; n=30, 63%) except from the 55-65 and 65+ years old, which are unwilling to order food „to-go" (respectively: n=9, 64%; n=2, 50%).

Basically each age group under examination (except the oldest ones) willingly benefits from food delivery under given address. People age 26-35 show the biggest will to order meals „to-go" except limited activity of gastronomy industry (Table 2).

Table 2. Ordering meals to take-away by consumers

Despite the limitation of gastronomy activities, do you use the option of ordering meals to take away?	18-25 yrs old	26-35 yrs old	36-45 yrs old	46-55 yrs old	56-65 yrs old	65+ yrs old	Total
	number of results	number of results	number of results	number of results	number of results	number of results	number of results
Yes	200	103	34	1	1	1	340
No	53	32	21	10	9	2	127
Sometimes	323	179	87	19	4	1	613
Total	576	314	142	30	14	4	1080

Table 3. Consumers' fears connected with ordering food to take-away

Do you have any fears connected with ordering food to take-away?	n	%
No, I'm not afraid to order take-away meals	90	70.9
Sometimes I feel anxious – about how are the meals prepared, are all precautions followed etc.	13	10.2
I am afraid of ordering meals to take-away – I'm scared of getting infected by the virus	9	7.1
I do not eat outside my house	6	4.7
I would order if I could afford it. Eating at home is much cheaper	4	3.1
Costumers not wearing face masks	1	0.8
The waiting time is too long	1	0.8
I prepare my meals by myself	1	0.8
I used to work in the gastronomy – so I know how it works, that's why I do not	1	0.8
I am afraid that they won't deliver	1	0.8
Total	127	100

n - number of results

Respondents were asked to indicate the concerns about delivering food. The group that is less willing to order food (n=127; 12%) are usually unafraid of personal delivery (n=90; 71%). Part of consumers declare that during COVID-19 pandemic they have concerns about how meal are prepared and whether all safety means are met during this process (n=13; 10%).

Analysis of respondents' answers showed that they do not order take away due to risk of getting infected with COVID-19 (n=6; 7%). Another issue for not ordering food from restaurants appears to be financial problem (n=4; 3%).

The reason why most of consumers (n=846; 78%) order take away is because they want to eat something that is above their culinary abilities. Implementation of severe restrictions in gastronomy encouraged many respondents to support it through delivering food under given address (n=691; 64%). Consumers declare that one of the reasons they decide to order food from the restaurant is lack of time for its preparation at home (n=534; 94%) and lack of will to prepare it (n=637; 59%).

Respondents were asked to answer the question about the way of ordering food. The options were - by phone, by food ordering sites, stationary or do not order. Most of them ordered food by mobile device - by phone. However, the popular way appears to be site dedicated do ordering food. This is the mean most preferably chosen by 18-25 (n=245; 43%) and 26-35 years old group (n=126; 40%). The least popular way is ordering food stationary - this mean was chosen by less than 8% of respondents (n=83).

Respondents were asked to answer the question about frequency of doing shopping, undertaken safety measures during visits in stores and methods of payment.

Obtained results showed that consumers visit stores nearly as often as before increase of COVID-19 cases (n=639; 59%). It turned out that every third respondent does shopping with decreased frequency (n=364, 34%). Less than 2% (n=23) declared increased frequency of doing shopping, while the rest (n=54, 5%) was unable to tell. Half of the respondents (during the study) stated that they visit stores few times a week (n=544; 50%). However, 34% of subjects (n=367) indicated that they do shopping once a week.

Respondents were asked to answer the question about used payment methods. Around 45% (n=477) of respondents used cashless payment methods (credit card, BLIK code etc.) more often than before pandemic. Among respondents appeared people (n=98; 9%) that were unable to assess whether the frequency of payments e.g. with credit card was increasing

Figure 3. Precautions taken by respondents

with increase of COVID-19 cases. Other respondents (n=505; 47%) did not see such a dependence.

The most popular safety measures during visiting the stores turned out to be: face masks (n=1046; 97%) and hand sanitizers (n=893; 83%). Respondents also often declared that they keep the safe distance between other customers (n=868; 80%) (Figure 3).

DISCUSSION

A report issued by the National Bank of Poland [6] shows that an increase in cashless payments was observed in the first half of 2020. Study presented in this report showed that 40% of respondents (n=412) performed payments with e.g. credit cards or other forms of electronic means [6]. Similar results were obtained by POLASIK Research [8] conducted for the Cashless Poland Foundation. Phone interviews performed in middle of May 2020 showed, that 39% (n=172) of respondents declared more frequent payments with e.g. credit card than in comparison with pre-pandemic times [6]. Own study shows similar results - among all of the respondents 45% (n=477) forms of cashless payments, such as credit cards, BLIK were used more frequently.

According to the E-commerce in times of 2020 crisis prepared by the Chamber of Electronic Economy in March 2020 [4], 17% of respondents used disposable gloves and 18% - face masks. In our study, conducted in November 2020, already 97% of respondents used face masks and 15% uses disposable gloves. It is a result of, among others, legally imposed obligation of wearing masks in public spaces.

Analysis conducted by takeaway.com (in Polish pyszne.pl) [3] showed that services of food delivery is the most popular among students (22%) and employed people (69%). The study showed that people in 25-34 age group account for more than 50% of purchases. Analysis of own examination creates similar view. The most willing to order deliveries are people in 18-35 age group (n=805; 75%).

CONCLUSIONS

Global pandemic of COVID-19 forced people to change their current behaviours - both consumer and social. Change of working conditions from contact to remote causes in society creating home conditions similar to those from before the outburst of pandemic. It may be indicated by the fact customer's loyalty towards closed gastronomy facilities - people are willing to order "take-away" to support the industry. It is also inseparable element of providing workplaces for the employees of the places.

Consumers are aware of risks borne by SARS-CoV-2 infection, which may be concluded from undertaken safety measures - not only those mandatory, such as face masks. Keeping safe distance and hands disinfection are one of main respondent's declarations.

Conflict of interests

The authors declare no conflict of interest.

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