

THE HYGIENIC QUALITY OF THE FOOD DELIVERY SERVICE IN THE CONTEXT OF THE SARS-COV-2 PANDEMIC

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Abstract

The research aims to determine the level of accordance in regards of the legally imposed measures for the operation of public catering units, the rate of customers who order food-delivery and customer satisfaction.

Food hygiene during the COVID-19 pandemic is an important factor of public health concerns, which must be known and implemented in all catering units and food-delivery companies. The study relies on a theoretical approach as well as on quantitative research which will confirm or deny specific theories.

At the end of the study, the results show the rate of compliance with the imposed measures in Oradea, Romania from a customer perspective though the systematization of the general quality determined by the specific factors of the food products delivered at home during the Sars-Cov-2 pandemic. The research generates a set of conclusions and recommendations for improving the food-delivery service in the food industry.

Key words: food-deliveary, Sars-Cov-2 pandemic, food hygiene, food industry.

INTRODUCTION

“The hygienic quality of the food delivery service in the context of the Sar-Cov-2 pandemic” research aims to determine the quality of the food delivery service and the customer satisfaction in the basis of complying with the hygienic and sanitary standards for the prevention of COVID-19 by implementing drastic public safety measures in the field of food industry.

The aim of the study is supported by a set of 5 objectives which are fulfilled during the course of the study as it follows: to determine the types of catering establishments used by consumers (respondents) for food delivery services both before and during the pandemic; to compare and contrast the reasons why consumers ordered food at home; to establish the level of consumer satisfaction with the hygiene of food delivery staff, to systematize the overall quality of food delivered at home during the pandemic (conditions of transport, packaging, appearance, smell, temperature, taste and delivery time) and last but no least to generate relevant conclusions and recommendations for the food industry.

The study is supported by the quantitative research in order to obtain relevant data in the field of food hygiene. It provides an overview of the

factors that determine a good hygienic quality of food delivery services, from a consumer perspective.

MATERIAL AND METHOD

The study follows an empirical type of research, which is based on observed and measured phenomena and derives knowledge from actual experience rather than from theory or belief (Bouchrika, 2021). The research strategy is quantitative. "A quantitative research method deals with the quantification of analysis variables to obtain results. It involves the use and analysis of numerical data using specific statistical techniques to answer questions such as who, what, how much, when, where and how."(Apuke, 2017).

According to Shannon McCrocklin (2018), the primary research addresses those subjects that have not been studied before and do not have a theory base yet, in other words the researchers are directly involved in the data collection process. By using the primary research method, the study shows the level of food sanitation and hygiene during the food-delivery process, as well as the extent of customer satisfaction.

The primary data is collected through an online questionnaire (13 questions) in order to acquire a large number of responses in a short period of time. The questionnaire represents the research instrument - a tool used to collect, measure, and analyze data related to the subject (EBSCOConnect, 2018).

The online questionnaire formulates different types of questions and answers: demographic, direct/indirect, open/closed, multiple answer, Likert scale, semantic differential scale etc. Google Forms is the software used for creating the questionnaire, which is distributed entirely in the online environment, targeting random respondents.

The study returned a number of 100 responses that are analyzed with the use of Google Forms program, Microsoft Excel and IBM SPSS Statistics. The statistical techniques applied are descriptive, crosstabulation, frequency graphs and so on.

RESULTS AND DISCUSSION

The questionnaire is divided in 3 parts: - The first section addresses the demographic questions, the frequency of using food delivery before and during the pandemic and the reason why customers make use of this kind of services.

- The second section pays attention to the level of respondent's satisfaction regarding the hygiene of the food-delivery personnel.

- The third section shows the factors of sanitation regarding transportation of food products, packaging, aspect, smell, temperature, taste and time of the food-delivery and whether or not the customers are satisfied with this type of service during the pandemic.

- Section I -

Out of 100 respondents 70% of them are females and 30% males, with ages between 18-22 years old (70%), between 33-49 (25%) and over 50 years old (5%). The participants to the study who come from urban areas are 87% and from rural areas 13%.

A study by Mihail Tănase showed that women go to the restaurant more often than men (65% compared to 59%) and pastry shops (58% compared to 43%), while men go out more often in bars (42% compared to 21%)”. In the present study, it was found that 92% of those who frequented restaurants before the pandemic were represented by 65 of the participating women compared to 27 of the men who completed the questionnaire (out of 100 respondents) (Table 1). Therefore, women tend to use the services offered by restaurants at a higher level than men.

Table 1

Gender of respondents compared to restaurant attendance before the pandemic

		Restaurant		Total
		Yes	No	
Respondent's	Female	65	5	70
gender	Male	27	3	30
Total		92	8	100

The frequency of attending restaurants during the Sars-Cov-2 pandemic decreases to 76% and for the female gender it drops to 53%, while the ratio of the male decreases only with 2 levels, becoming 23% (Table 2). According to a study conducted by Ipsos in 28 countries, 63% of consumers ate more rarely out in restaurants during these times and the frequency registered was higher regarding women compared to men (66% versus 59%). It results that the undertaken study in the catering field is in accordance with other researches from Europe.

Table 2

Gender of respondents compared to restaurant attendance during the pandemic

		Restaurant		Total
		Yes	No	
Respondent's	Female	53	17	70
gender	Male	23	7	30
Total		76	24	100

The participants to the questionnaire were asked if they used food delivery services (Figure 1) before the pandemic, resulting in 88% affirmative answers and 12% negative answers.

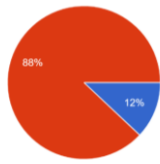


Fig. 1. Resorting to food delivery before the pandemic

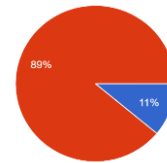


Fig. 2. Resorting to food delivery during the pandemic

Furthermore, participants were asked comparatively whether they used food delivery services during the COVID-19 pandemic, and their answers are shown in Figure 2 (89% did, 11% did not).

Although compared to Figure 1, Figure 2 shows an increase in the use of food delivery services by only one percent during the pandemic, the weekly frequency of orders placed has presented an considerable increase. An article written by Pascal Violeta-Loredana explains how “the effects of the coronavirus pandemic were also felt in terms of consumption trends. Statistics show that, starting with April 2020, an increasing number of Romanians have opted for food-delivery services.”

The study participants were asked to argue the reasons for using food delivery services or avoiding them. A total of 97 valid arguments were returned, of which 90 were in favor of the food delivery service and 7 were against it. On one hand, some of the reasons the respondents ordered food delivery are the fact that it saves time, it complies with the restrictions imposed by the authorities, it respects food hygiene factors and protects against spreading the coronavirus. On the other hand, other consumers may prefer to eat inside restaurants or to cook at home.

An article wrote by Marin Cristiana (2020) suggests that during the pandemic, Romanians started to cook more at home and that the rate of food delivery orders decreased by 20%, which is not in accordance with the results of the undertaken study.

The companies most often used by consumers to make food delivery orders are shown in Figure 3. To a large extent (52%) respondents choose Foodpanda to order food at home and Glovo (22%), followed by Tazz by eMAG (7%), Takeaway (6%), Bringgo (6%) and Bolt Food (6%).

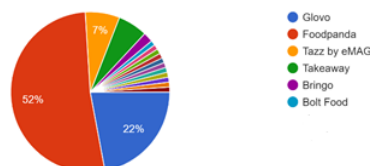


Fig. 3. Food delivery companies

There are various reasons why respondents trust these food delivery companies. The consumers consider accessibility and speed of delivery (the faster food arrives at home, the better the hygienic quality is maintained)

when choosing a company; others are encouraged by the lower offers and prices (due to the economic impact felt during the pandemic with the Sars-CoV-2 virus). "We encourage customers to confidently opt for online payment, but also for the contactless delivery option as an added security measure for both themselves and their loved ones and the staff that delivers the food", said Andreea Petrișor, Managing Director of foodpanda Romania (2020).

-Section II-

The hygiene of the delivery staff is the quality label of these food delivery companies and, in some cases, even the image of the catering units. "Among the measures taken by the company to prevent contamination and the spread of the virus are hygiene measures for all orders handling, from couriers to partner restaurants, and the provision of protective equipment (disinfectant, mask, gloves) and information on sanitizing transport bags, handling and sealing the order, personal protection and interaction with partners and customers." (Imbrea Andreea, 2020).

The participants to the questionnaire were asked about the degree of satisfaction related to the hygiene of the staff who made the food delivery orders, and the results are presented in Figure 4.

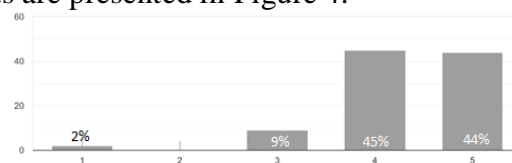


Fig. 4. Level of satisfaction regarding the hygiene of the food-delivery staff

Participants had to select on a scale from 1 to 5 (where 1=very dissatisfied, 2=dissatisfied, 3=satisfactory, 4=satisfied, 5=very satisfied) the degree of satisfaction with the hygiene of the staff who make deliveries. It can be interpreted that the respondents were largely satisfied with the hygiene of the staff because 45% selected option 4 "satisfied" and 44% option 5 "very satisfied". Only 9% of participants answered "satisfactory" to this question and 2% "very dissatisfied". The customers have a high degree of general satisfaction and they believe that the staff comply with all safety and hygiene standards imposed by using the appropriate protective equipment (masks, gloves, disinfectant and proper packaging).

-Section III-

The last part of the questionnaire analyzes the degree of consumer satisfaction in terms of hygienic quality of food transport conditions, packaging, appearance, smell, temperature, taste and delivery time. The participants to the questionnaire selected on a scale from 1 to 5 the level of satisfaction, where 1=very dissatisfied, 2=dissatisfied, 3=satisfactory, 4=satisfied, 5=very satisfied.

Figure 5 shows the level of satisfaction of consumers with the transport conditions of the food delivery process.

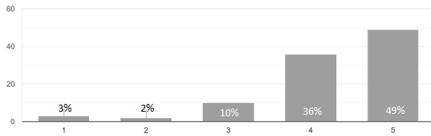


Fig. 5. Transport condition

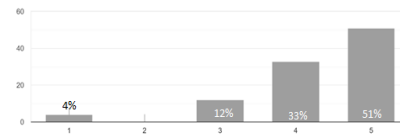


Fig. 6. Packaging

An important food hygiene factor during the covid-19 pandemic is the packaging of food (figure 6), in order to preserve both the superior quality of the food and to avoid its contamination with the Sars-CoV-2 virus. According to Sanew Christopher (2020), there are no studies on food contamination with Sars-CoV-2 virus after consumption, but the emphasis is on disinfecting packaging and hands after placing or picking up orders (implicitly after paying by card or cash) in order to reduce the risk of infection.

The appearance of food delivered can be associated with the label or image of the restaurant that prepares it, so the way the food is presented can even determine the degree of food hygiene imposed or followed in public catering establishments. Figure 7 determines how pleased are the customers with the aspect of the food delivered at home.

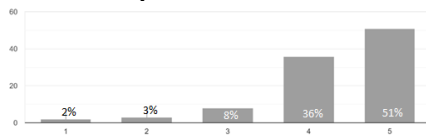


Fig. 7. Appearance

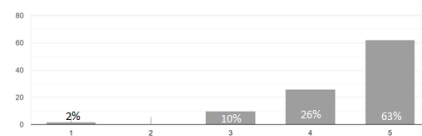


Fig. 8. Smell

The smell of food has the role of determining the freshness and hygienic quality of food. Keeping a pleasant smell during delivery also determines that the order was taken shortly after preparation and that it is in optimal conditions for consumption. The answers of the participants in the questionnaire are shown in the graph in Figure 8.

In the case of the food hygiene factor of the delivered products temperature, a high satisfaction can be interpreted among the consumers in Figure 9.

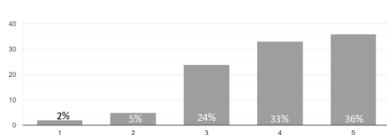


Fig. 9. Temperature

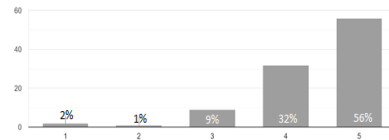


Fig. 10. Taste

"It is said that the taste of food is a factor closely linked to consumers' expectations before purchase and an experience of the quality characteristic after consumption." (Ganapathi et.al., 2020). Figure 10 shows that customers are highly satisfied with the taste of food delivered.

Time of delivery can determine the level of food and service quality. During the food delivery process the customers did not have to wait a long time for the products as it can be seen in Figure 11 and the consumers are overall satisfied.

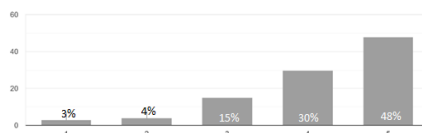


Fig. 11. Time of delivery

It can be deduced that the food establishments and delivery companies are very efficient and respect the food hygiene norms from the point of view of factors that determine a good quality product delivered to the consumers. In all cases the customers are satisfied with the food they received, over 40% in all cases, while only a small percent show dissatisfaction when questioned about the quality factors (under 10% of cases).

Therefore, useful and relevant results and data were collected for the study of the hygienic quality of the food delivery service in the context of the Sars-CoV-2 pandemic, which demonstrated the degree of compliance with the rules imposed for public safety and public health.

CONCLUSIONS

The purpose of the research to determine the factors supporting the hygienic quality of the food delivery service in the context of the Sars-CoV-2 pandemic and the 5 objectives set at the beginning of the study is emphasized.

In almost all cases the food delivery process undertaken in Oradea, Romania is in compliance with the safety measures imposed and respects a high level of product quality. The customers are satisfied and will further use this kind of service.

It is recommended that food hygiene standards be maintained and implemented in order to provide satisfactory and safe services to the general public, as well as rigorous monitoring of their compliance in catering establishments and during the food delivery processes.

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