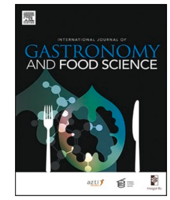
International Journal of Gastronomy and Food Science 28 (2022) 100538

Contents lists available at ScienceDirect

International Journal of Gastronomy and Food Science

journal homepage: www.elsevier.com/locate/ijgfs



Consumers' eating habits during the Covid-19 pandemic: Evidence of an experimental analysis in Italy

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A B S T R A C T

During the COVID-19 pandemic, the Italian food supply chain responded to the needs of consumers by giving continuity to the supply of food products even if the Italian food system in the first phase of lockdown had to deal with the anxiety of consumers who rushed to the food stores to "clear the shelves". The aim of this research is to provide a qualitative interpretation of Italian families' food consumption experiences during the lockdown due to Covid-19, which lasted from March 9, 2020 to May 4, 2020. This research has examined twenty Italian families and reveals that anxiety about the exhaustion of food stocks was detected in the first weeks of the lockdown, where there were consumers queuing at supermarkets and emptying the shelves (especially of products with high shelf life such as pasta, flour, tomato sauce). In the following weeks, the awareness that in Italy the food supply chain had been able to manage the logistics well, allowing a continuous return of food supply, led to a reprise of the normal situation. However, the results of the research show that Covid-19 in rural areas has led to a "return" to the consumption of local or near local agri-food products based on the greater time available deriving from taxes by the legislator. Furthermore, the research highlights a return to self-consumption through family-run gardens. Ultimately this article highlights some resilience strategies used by families during the lockdown resulting from the COVID-19 pandemic.

1. Introduction

The World Health Organization declared COVID-19 a global emergency on January 30, 2020 (Sohrabi et al., 2020). According to data from the Ministry of Health in Italy, up to March 25, 2022, Covid-19 infections amounted to 14,229,495 and almost 158,582 confirmed deaths. Worldwide, on the same date, COVID-19 recorded 6,120,000 deaths and 480,000,000 infections confirmed since the beginning of the pandemic. Since March 2020, in order to slow down the COVID-19 contagion, public authorities have adopted several closure measures that were very tight (lockdown) in the first phase of the spread of the infection (March–May 2020). After the first period, from October 2020 to May 2021 the public authorities did not implement total lockdowns, but intervened with systems that provided for greater or lesser closures depending on the spread of the epidemic and the ability of the territory to respond to the emergency. The aim of this research is to provide a qualitative interpretation of Italian families' food consumption experiences during the lockdown due to Covid-19, which lasted from March 9, 2020 to May 4, 2020. In this research, after examining the possible impact on consumers' demand, we interviewed 20 families in order to analyse how the Covid-19 pandemic has impacted food consumption, purchasing habits and styles as well as self-consumption. The study ~~is~~ analyses the important aspects related to the habits of rural families. In the literature we have not found studies that analyse these aspects. The novelty of the study is the behaviour of the rural consumer ~~in~~ during the pandemic period. This aspect is very important for gastronomy as it highlights the basket of goods and its composition. Another relevant aspect is the impact on the consumers' habits for the purchase of food products.

2. Consumer purchasing behaviour during the Covid-19 pandemic

The consequences of this extraordinary situation are visible both in the changing daily life of consumers and in business activities (Głąbska et al., 2021; Guzek et al., 2021; Mota et al., 2021; Skolmowska et al., 2021; Donthu and Gustafsson, 2020; Pantano et al., 2020). Thanks to some surveys by Accenture (2020) and McKinsey (2020) it has been shown that consumers all over the world, after the first wave, have looked at products and new brands differently. Concerns about getting sick has reduced the willingness to go to restaurants (Hakim et al., 2021). They showed an attitude of accumulation, different from the ordinary consumption. In fact, consumers have started buying certain products more often and stocking up on basic necessities (e.g. non-perishable food, household and cleaning items, frozen foods) (PWC, 2020). Although agreed on basic needs, consumers have made conscious

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https://doi.org/10.1016/j.ijgfs.2022.100538
Received 6 October 2021; Received in revised form 26 April 2022; Accepted 1 May 2022
Available online 8 May 2022
1878-450X/

purchases, choosing local products and focusing on digital commerce (Accenture, 2020). Furthermore, during this emergency, health has caused great concern in individuals (Cranfield, 2020; Zwanka and Buff, 2021) not only because of the need to have safe food ingredients and possess a strong immune system (Muscogiuri et al., 2020), but also in the focus on entertainment and hobbies, such as reading news, cooking, having active social media, doing housework, shopping online, and playing sports (PWC, 2020). Particularly alarmed by the economic and health impact of Covid-19 (Accenture, 2020), many consumers have re-evaluated their shopping habits and considered new ones (Sheth, 2020). Given the restrictive measures, some consumers have discovered the safety and benefits of online shopping purchases, or have turned to home delivery and cashless payment, which is an aspect not previously assessed (D'Avoglio Zanettaa et al., 2021; Pantano et al., 2020; Zhao and Bacao, 2020). Due to lesser accessibility to physical stores, consumers have focused their attention on online options for dealing with the pandemic (McKinsey, 2020), thus some types of alternative distribution, in which there is no physical interaction, have gained popularity (Amazon, 2020; Kirk and Rifkin, 2020). For example, the population of Czechs shopping online this year has increased from 39% to 54% year-on-year and the large number of orders has increased this business by 10% (CZSO, 2020). In particular, online spending has experienced stable but limited growth over the past decade (Harris et al., 2017), significantly increasing during the Covid-19 pandemic crisis (Pantano et al., 2020).

3. Effects of the pandemic on food demand

As consumer behaviours are influenced by various variables, including socio-demographic and family preferences and behaviours, households are expected to reduce consumption to make precautionary savings (World Bank, 2020a). For example, according to a survey on consumption in Russia, 51% of Russians say the pandemic has had an impact on their consuming behaviour (Deloitte, 2020a; b). Consequently, retail managers and marketers should detect changes in consumers' behaviour and buying habits to understand what changes in strategies they need to adopt (Verma and Gustafsson, 2020). The Covid-19 epidemic has reached all the countries in the world (WHO, 2020) and the impacts on the food chain are becoming particularly tangible (FAO, 2020). Many studies have outlined that consumers' behaviours change during pandemics, creating fundamental modifications in consumption and nutrition (Cranfield, 2020; Zwanka and Buff, 2021). Indeed, the pandemic has led consumers to highly focus their attention on health and nutrition (Arshad et al., 2020), discouraging unhealthy eating habits and frequent "snacking" (Robinson et al., 2021). Russian consumers are an example of this. In fact, during the 2008–2009 economic crisis, there was a change in their attitudes and behaviours (World Bank, 2020b), which re-emerged in 2020. From the nutritional point of view, modern and Western diets were preferred, rich in saturated fat, sugar and processed foods, and low in fibre compared to traditional diets, based on foods rich in fibre, such as cereals and legumes (Maksimov et al., 2020; Wegren et al., 2016). However, traditional food products play a major role in household food security by providing nourishment (Grivetti and Ogle, 2007). They are safe because they have been eaten by previous generations (Li and Ganzle, 2020). In addition to this, they are considered healthy because their production involves traditional techniques with little or no use of artificial additives (Trichopoulou et al., 2006). Covid-19 has induced fear in people and some studies (Addo et al., 2020; Chinazzi et al., 2020; Kim, 2020; Wiranata and Hananto, 2020) have reported that impulsive buying behaviour has increased worldwide. Fear has developed as a protection against circumstances where life is in danger (Addo et al., 2020; Wegmann et al., 2017). As stated by Laato et al. (2020) the government has closed several activities such as restaurants, some shops and public services with the consequence of triggering fears of sudden interruptions and different responses in people's behaviour. Studies show that COVID-19 and its findings have sparked fears, stress and tensions and have turned into a focus that affects the well-being and prosperity of individuals across the planet (Reznik et al., 2020; Ahorsu et al., 2020). Stress sometimes increases hunger, causing negative health effects on consumers (Skolmowska et al., 2021). Furthermore, some research suggests that the onset of terror side effects in the population is age-related (Chen, 2020; Sljivo et al., 2020). The Covid-19 pandemic has triggered panic buying and storage behaviours that have made it difficult for many families to obtain the food they needed (Hobbs, 2020); in fact during crises or disasters there is an anticipated accumulation of food that often provides the only source of domestic nourishment (Chitwood et al., 1992). During disastrous events that cause loss of income, there is a decline in the purchasing power of families (Béné, 2020). In this situation, families tried to buy more food, hence stockpiling occurred, which led to the shortage of food on empty shelves in supermarkets. As stated by Power et al. (2020) stockpiling is: "an accumulation of goods motivated mainly by the desire to minimize the loss or the risk of losing access to certain products and could arise due to the belief that a product is in short supply, soon it will no longer be available ". Stockpiling is a behaviour aimed at minimizing the risk of loss of access due to the belief of lack of supply. This fear-driven attitude (Kantar, 2020), in the UK prior to the announcement of the blockade, resulted in 15 million visits to supermarkets.

4. Review of the economic literature

According to what is proposed by the Economic Theory, the generical individual demand function indicates the relationship that exists between the quantity of a given product demanded by ~~the~~ consumers and a series of variables capable of influencing their decisions. These variables are: the price of the goods demanded; the price of other consumables on the market; the average propensity to spend; consumers' income and other factors that are able to affect the size and composition of the final demand such as demographic, technological and economic ones. The announcement of closures determines an effect on the consumer that has repercussions in a shock on the demand. This aspect can manifest itself in an increase in the quantities demanded as a response to the consumers' panic and leads to the accumulation of food stocks. In fact, this situation occurred in the early stages of the Covid-19 pandemic whereby supermarket shelves of food and non-food products at the basis of daily life and for the fight against Covid-19 were emptied. These products include pasta, rice, canned goods, flour, frozen foods, bottled water, hand sanitizers, and soap (National Post., 2020). Despite the economic policy authorities announcing that the food industry and food distribution were ready to support the emergency (thus there would not have been a decrease in the quantities offered), "panic buying" behaviours have occurred. The pandemic, as highlighted above, has led to the adoption by the economic policy authorities of policies of social distancing all over the world. This situation has determined in many consumers an effect towards ~~a~~ food accumulation behaviour to safeguard against a possible interruption in the supply and distribution of food. It is worth underlining that in food distribution systems based on just-in-time production and delivery, the sudden and unexpected spike in demand in all key categories has created short-term stock-outs (Mussell et al., 2020). In fact the distribution systems, which did not foresee an increase in demand in the very short term, were not ready to provide greater quantities of supply. As we know, the food retail sector in Italy and many other Western economies is dominated by large concentrated supermarket chains with significant purchasing power and an emphasis on cost efficiency. These supermarket chains ~~enjoy~~ operate in economies of scale and scope according to the quantity of market volume (which they control) and the experience they have in the market where they operate. From the point of view of economic theory, we are witnessing in particular oligopolistic-type form of markets with all that this entails in terms of strategies that companies operating in these markets can adopt. The just-in-time approach to food retailing is an important source of greater efficiency in the food sector, with relatively low inventories and continuous food streams. In normal times, these are efficient and well responsive supply chains. Retail buyers plan expected increases in consumer demand (e.g. during main holidays, Christmas, Easter or other special occasions in the territories where supermarkets operate), with contracts in place with key suppliers to increase supplies at the appropriate time. From the point of view of business management, the system is not very effective in responding to a widespread sudden increase in demand in all regions and on many food products for the fight against the pandemic. If retailers respond with effective and efficient strategies it means that the system has a good response to these spikes in demand increases. According to the Economic Theory, where inefficiencies occur, one could react with short-term rationing, including the imposition of purchase limits on food products and specific time-slots dedicated to shopping for elderly or more vulnerable customers. Another response could be to use price as a rationing mechanism. In the case of Italy, and of many Western countries, supply chains have rapidly adapted to the signals of demand from consumer markets with an increase in product flows and the short-term problem of shortages and stocks has eased. A very important aspect in terms of the effects on the food system, and in particular on the retail sales of food products, has been the closure of restaurants, cafes, bars and hotels, with many citizens working from home. It is estimated that before the pandemic on average every Italian ate out 4 times a month ~~to~~ (Peta, 2020). The effect of the closure of these places of social consumption of food products (restaurants, bars, pizzerias) determines a shift in the food retail sector, creating further demand pressure on the food system. All this leads to a crisis in the supply chains aimed at supplying hotels, restaurants and catering. Providers of these services may not be suitable for supplying the food retail sector, for example, in terms of package size (usually much larger than retail distribution) and distribution infrastructure. This situation can result in batches of food products that cannot be reused for retail (such as mozzarella cheese, potato packages, etc.). If the increase in demand resulting from panic buying behaviours is a short-term problem, this is easily solved. However, pandemic phenomena can have long-term effects caused by a decline in consumer incomes (especially those who lose their jobs), which affects the supply of food products. This effect manifests itself in the behaviour of consumers shifting their demand from relatively higher priced brands to lower priced brands. For example, we can expect consumers to become more price sensitive and demand for income-elastic products to decline more rapidly as consumers replace more expensive items. This can be expected to affect the reseller's buyer behaviour with respect to product category management and contractual relationships with suppliers. In the event of a severe economic downturn and falling demand, retailers can act on supply chains for cost efficiency. As these are typically low-margin businesses, this will create competitive challenges for many food businesses and wholesalers. In the case of previous economic recessions, some authors (Matopoulos et al., 2019) have observed that many buyer-supplier relationships in highly competitive and dynamic markets, such as food retail, fail to develop beyond the level of transactional exchanges, given the asymmetry of market power. In particular, the recession has negative effects, given the market asymmetry, on all operators in the food chain in consideration of the fact that there is no collaborative relationship in the supply chain. In contrast, collaborative supply chain relationships are long-term partnerships with suppliers that help reduce transaction costs, share risks, provide access to complementary resources and skills, and improve productivity (Cao and Zhang, 2011). Analyzing buyer-supplier relationships in food retailing during the Greek financial crisis, Matopoulos et al. (2019) found that such relationships are strained during an economic downturn. However, the development of stronger relationships and engagement within buyer-supplier relationships has been rewarded through mutual risk sharing and further efforts to maintain strong supply networks in ~~a~~ times of crisis. The importance of building strong collaborative relationships between buyers and suppliers, even in the face of clear market power asymmetries, can prove to be an effective strategy for food supply chains. Strong relationships help build supply chain resilience. Suppliers are more likely to "do what they can" (eg, priority supplies) in times of crisis for ~~a~~ retail buyers who have developed a collaborative and supportive relationship with their suppliers. In addition to the effects of demand-side shocks and potential supply-side disruptions, it is worth considering whether the COVID-19 pandemic will have more lasting effects on the nature and structure of food supply chains. Indeed, attention must be paid to two aspects: the online food delivery sector and local food supply chains as well as to what extent consumers will respond to these two aspects. An aspect that should not be underestimated concerns the online sale of food products and the related home delivery which is also used in normal periods. However, this is a widely used channel in response to social distancing, especially by the elderly population due to the high risk of contagion. Another method of purchase always concerns online sales but with customers collecting directly from the retailer. This mode also reduces the time spent shopping and therefore the likelihood of getting infected. In areas where online food delivery services are common, these systems have facilitated the continuity of food shopping by consumers, based on the delivery networks already existing in the urban centres where they operate. This could also represent an opportunity for food distribution as they could build more customer loyalty, creating a reputation to be maintained even after the pandemic. Regarding online food (meals) delivery services, already offered in many metropolitan areas, they could increase during the pandemic. For both, the online delivery of food may lead to a short-term problem: the increase in demand causes an increase in the infrastructure and human capital involved in these services. The sudden closure of many non-essential businesses results in an increase in unemployed or underemployed people who may be temporarily redeployed to tasks within the food supply chain, including staff in grocery stores, warehouses and food deliveries. This presupposes the existence of flexible and effective labour legislation to respond to changes in the labour market. In this respect, we must also ask ourselves some questions. If the demand for home delivery (of groceries and food) increases during the COVID-19 pandemic, what will happen once the pandemic ends? To answer this question, it is necessary to distinguish the urban and non-urban context where the consumer lives and other variables such as age, the consumer's income and how they interpret their lifestyle in relation to food consumption. As evidenced by Güsken et al. (2019) prior to COVID-19, an obstacle to the wider adoption of online spending (where available) was consumer reticence, trust and unfamiliarity with using the service. Before COVID-19 only users who were inclined to resort to this innovative channel used it. During the pandemic, many consumers used online grocery delivery for the first time. As this segment of new users becomes more familiar with online grocery delivery services, the adoption curve escalates much faster than without the pandemic. For these distribution companies, the pandemic represents an opportunity. In fact, while this custom will partially decline after COVID-19, consequently to making the switch many consumers will continue to use online grocery delivery services. In any case, the real impact can be seen once the pandemic is over due to the increase in demand for online services, not so much with the pandemic period but with the pre-pandemic period.

5. Demand for local food and food distribution

Another important aspect to highlight concerns the origin of food products. Indeed, many food supply chains may find it difficult to adapt to the unprecedented short-term demand shock resulting from changes in consumer purchasing behaviour, and, to adapt to a radically changed business environment, food supply from "local" territories could represent a viable alternative. Widely reported out of stock in supermarkets in the early stages of the pandemic, and long lines of customers outside some stores, has undeniably resulted in many consumers turning to smaller stores and local suppliers. In fact, in the short term, these companies may be more agile in responding to supply fruit and vegetables (for example, depending on warehouse management policies with the tendency to hold more inventory in proportion to sales), so that an increase in demand in the short chain can be determined. Interest in 'local' products and food is a consumer trend and previous research has shown that there are various reasons for this interest, including perceptions of economic, social, environmental and health benefits (Cranfield et al., 2012). Indeed, in some regions of the world the COVID-19 pandemic may have shaken consumer confidence in the safety and reliability of the food system. Here one has to ask: If consumers remember empty store shelves and images of long lines outside grocery stores during the early stages of the pandemic, how will this affect their attitude towards how and where they will buy food in the future? Interest in local food is likely to grow, at least in the short and medium term post-COVID-19. However, it must be emphasized that although the pandemic may give, in the short term, a boost to the increase in demand for local food products (both in farms and in small local supermarkets), it has to be pointed out that after one year and between the start of the pandemic there has been little change in the fundamental economy of the food sector. Why is this? The reasons are to be found in the economic reasons underlying food spending. In fact, localized and small-scale food supply chains are less cost-effective than the traditional food system of large-scale retail trade and offer less variety of products at higher prices. Price and value for money remain determinants of consumer purchasing behaviour, thus food and major food supply chains have a clear competitive advantage in this regard. However, as highlighted by Hobbs (2020), it must also be said that consumers are inherently heterogeneous in their preferences and food purchasing behaviours. For some consumers, the COVID-19 pandemic will solidify an existing interest in locally sourced foods, while others will revert to their pre-pandemic habits. To what extent consumer habits will change is a trend that can be measured in the medium to long term. However, it should be emphasized ~~here~~ that the speed with which major food supply chains have been able to adapt to the initial demand shock and build greater supply chain resilience against potential supply-side shocks will help shape the long-term consumer confidence in these supply chains. Therefore, the change in consumer behaviour will also be determined by the strategies implemented by the distribution companies during the pandemic. Lastly, it should be noted that the greater availability of time due to agile work (from home) determines an increase in the consumer's free time (due to the decrease in downtime to reach the workplace, especially for public employees). This free time can be used in various ways. From the point of view of the food system, the increase in free time could be used in urban gardens, in nearby gardens (these are gardens for self-consumption in the context of land permanently invested in other crops such as olive groves, vineyards, citrus groves and orchards in general), or leisure time can be used for purchasing in a short supply chain (farmers' markets or directly on the farm). Also in this case a distinction must be made between "urban" and "non-urban" population. In the first case, it could lead to a greater demand for plots of land to be used for production for self-consumption in the cities, which may not necessarily be paid according to local policies and the actual availability of land to be used as an urban vegetable garden. In the second case, the increase in the demand for garden land is immediately reflected in the offer as this population lives in rural areas and owns the land or can rent it from third parties where the rent acts as a regulator between supply and demand of land for use as a vegetable garden. In both cases (urban and non-urban) an essential factor is the availability of knowledge on the methods of agricultural products production. This aspect should not be underestimated as work in agriculture is not improvised but requires a series of skills, which in the case of family gardens is acquired through working in the field.

6. Materials and methods

In order to achieve the research objectives, a qualitative survey was carried out (Denzin and Lincoln, 2008). The research is an exploratory analysis aimed at investigating consumer habits regarding food consumption. In particular, the experiences towards food consumption of the interviewees and how these experiences and knowledge were constructed were analysed. This paradigm has made it possible to explore consumers' purchasing behaviour during the COVID-19 pandemic (Creswell, 2014). This aspect is very important in the analysis of consumption, as what we consume depends on our history, culture, geographical place and the time in which we live. These points of view are the result of the experience and interactions between members of a community and members of other communities (Creswell, 2014) and are also the result of experiences that are handed down from generation to generation. Food consumption is linked to the territory also according to the lifestyles led. Semi-structured interviews were used as a starting point, a data collection method to investigate eating habits, purchases, consumer behaviours and food preparation during the COVID-19 blockade in Italy. Data collection was carried out between March 19, 2020 and August 14, 2020. The subjects interviewed were families and/or cohabitants who were chosen as potential informants for this research because they are the actors of food spending, food consumption and meal preparation (Burton et al., 2017). For the purposes of the research, a reasoned sample of families and/or cohabitations was constructed. The subjects interviewed were chosen on the basis of characteristics that they had to have a priori. These characteristics were: 1) being part of a family or cohabitation of at least two members; 2) have plots of land either in the external part of the house or in the vicinity of the house (a few km from the house). The choice of the survey units took place through Facebook and a first interaction via messenger. Subsequently, the questionnaire (Table 1) was sent requesting that it should be filled either through the same channel or by email. The national lockdown adopted by the economic policy authorities, as a measure to mitigate the spread of COVID-19, in Italy lasted about two months (from 9 March to May 4, 2020). All intercepted subjects responded in a relatively short period. At the start of each interview, respondents were informed that all information would be treated as confidential (King, 2004a; b). They were further informed that their participation was voluntary and were free to withdraw from the study at any time prior to the data analysis. Twenty subjects were contacted, according to the objectives of the research, which represents an expansive analysis. Furthermore, the number was determined by the budget, the time and the personnel available for the research. The interviewees come from rural areas and not from large cities and all reside in Sicily. Subsequently, after the questionnaire was returned, an interview was carried out through Skype. Respondents did not receive any incentives for their

Table 1
Open questions submitted to the interviewees.

Q1. Could you tell me which meals are the most important for you and your family between lunch and dinner? Are they prepared by you?
Q2. What were the factors that influenced your choices on purchased foods?
Q3. Could you tell me about the source of food purchase before, during and after the lockdown?
Q4. Could you tell me about your eating out habits before and after the lockdown?
Q5. Could you tell me about your food planning behaviour before, during and after the lockdown?
Q6. Could you tell me about your cooking experience before, during and after the lockdown?
Q7. Where did you look for information or get inspiration on what to cook/prepare meals before, during and after the lockdown?
Q8. Could you please tell me if you encountered food availability/accessibility problems during the lockdown?
Q9. Could you tell me about your intentions to cook after the lockdown?
Q10. Could you tell me if you grew vegetables before, during and after the lockdown?
Q.11. Do you plan to continue growing vegetables even after the pandemic?
Q.12. Do you think that the cultivation of vegetables for self-consumption is convenient from an economic, environmental and social point of view?
Q.13. Does your family, or the one you come from, have any connection to the land?
Q14. Is there anything else you would like to add?

participation. The online interview sessions lasted between 15 and 45 min. Based on the research objective, and based on the literature on consumer shopping and culinary behaviour, a series of open questions were developed to form the questionnaire and interview guide (Table 1). Each participant was asked these questions as well as some in-depth questions that emerged from each interview and some basic socio-demographic issues (e.g. age, occupation status, type of occupation, etc.). Data analyses were performed concurrently with online interviews to maintain a balance between the two processes (Sandelowski, 2000). All interviews have been transcribed. Transcripts were returned to respondents for their feedback and/or further information. All respondents confirmed the transcripts. The transcribed data were subjected to thematic analysis using the Template Analysis technique (Brooks et al., 2015). This technique involves the development of a template coding which is a representation of the themes defined by the researchers. At the beginning, a sample was designed, and then the model was designed on the basis of a subset of data, which was then further revised, refined and applied to the entire data set. The rest of the transcripts were then encoded. In order to ensure the reliability of the data encoding, the questionnaire was reviewed with the interview conducted. In the event of divergent opinions, changes were made to the model until a consensus was reached (Creswell, 2014). Finally, the results of the model applied were codified.

7. Results and discussions

As mentioned in methodology, 20 subjects participated in the research; the questionnaire was first sent to these sample units who were subsequently interviewed. Within the units surveyed, 15 were men and 13 held a degree (Table 2).

Of the units examined, 18 were aged between 31 and 40, of which 15 had a peasant origin. All sample units reported being occupied in the pre-pandemic period and none reported losing their jobs due to the pandemic. Three of the units surveyed reported having children (1 or 2). Three main issues were identified through the analysis of 20 interviews associated with food preparation behaviours, meal planning and food purchasing behaviours, eating behaviour and socially sustainable eating. In particular, these three aspects can be summarized as follows: 1) transformation in the culinary behaviour of consumers; 2) changes in the source of purchase of food products; 3) changes in leisure time planning and a new relationship with the land where agricultural products come from. In all cases it was recorded that home meal preparation (cooking at home) increased significantly during the pandemic restrictions compared to pre-pandemic times. In 15 cases it was recorded that the most important meal is lunch and is prepared directly by the woman (wife or partner). The increase in home-cooked meals was mainly attributed to the increased availability of time as most of the interviewees and their family members were confined to their homes during the lockdown. Eighteen subjects stated that the most important factors influencing the choice of food products are the price and origin. This aspect denotes the importance of the price variable in the composition of the shopping basket and also the origin, which undoubtedly represents a factor of social and environmental sustainability of food. With regards to the place of purchase of food products, a distinction must be made between before, during and after the lockdown. Previously, in almost all cases (19 out of 20), food products were purchased from the large-scale retail trade. During the confinement, 15 cases had turned from the large-scale retail trade to local shops. After confinement, habits returned to before confinement. An aspect to highlight concerns fruit and vegetables: in two out of 20 cases before the pandemic, fruit and vegetables were self produced (or at least, in times of shortage in their own vegetable garden, purchased in a short supply chain) (Table 3).

During the pandemic, all the other eighteen cases turned to their garden for self-consumption. In particular, since it was already the end of the autumn-winter cycle, only leafy vegetables were produced (lettuce, endives, parsley, beets) which, planted by March 20, 2020, were harvested in May and June of the same year. An important aspect of the analysis of the cases examined concerns the spring-summer production cycle. In all cases, the planting of tomatoes, watermelons, cucumbers, corn, courgettes, aubergines, peppers, celery, basil, parsley, lettuce, green beans (etc.), which are typical vegetables of the area, occurred in the area of production (Palermo). Therefore, during the lockdown, those who had previously not devoted themselves to the family garden reported having had the time available to do it then. After the lockdown they continued to cultivate (in fact the lockdown ended on May 4 in the full spring-summer production cycle) and in all cases they declared that they would continue to take care of the garden for self-consumption in the future as also evidenced by Li et al. (2020) and Romeo- Arroyo et al. (2020). In this case, when the interviewees were asked why, their answers were varied but the fundamental factor that emerged is that the return to dedication to the land (which they previously had but had abandoned or had seen their parents do) had a healthy function on the them, a feeling of well-being, of relaxation and involvement of the entire family unit (social aspect). Furthermore, we have discovered that the production of vegetables for self-consumption is considered a practice that determines the production of healthy foods that can be consumed, as also evidenced by Bialkova et al. (2020). Regarding the consumption of meals outside the home, 15 cases were recorded that before confinement they went out to eat at least once a week, in the remaining 5 cases at least twice a week (Table 4).

After confinement they returned to the restaurant more sporadically (once every two weeks in all the cases examined). This result highlights, on the one hand, that confinement has changed lifestyles, but also that these families interviewed had, at least in the past, a link with agricultural and therefore peasant production (Sgroi, 2022). Indeed, the interviewees stated that they prefer to stay at home and consume the products grown by them in the field and then prepared in the kitchen, as also evidenced by Kirk and Rifkin (2020). Regarding the planning of time before confinement, 16 cases replied that they planned between work and free time to devote to sports, aperitifs, walks. In the remaining 4 cases, the time was planned between work and dedication to the family. During and after confinement, in all cases, a surprising result was witnessed in some ways. In fact, all the interviewees stated that in their free time, also in accordance with the rules, they looked after their vegetable garden, prepared meals and took care of the house. After the pandemic, time devoted to drinking aperitifs has completely disappeared (at least in the cases interviewed). Regarding the increased time spent in the kitchen, everyone stated that they had a good

Table 3
Origin of fruit and vegetables consumed in the household.

	Before Lockdown		After lockdown	
	Purchase in large-scale retail trade	Backyard gardens/short supply chain	Purchase in large-scale retail trade	Backyard gardens/short supply chain
N°	18	2	0	20

Table 2
General information on the interviewees.

	Gender		*Education*		*Age*		*Children*		*Rural origins*	
	Female	Male	Degree	High School	<40	>40	up to 2	>2	Yes	No
N°	15	5	13	7	18	2	12	8	15	5

Table 4
Consumption of meals outside the home.

	Before Lockdown		After Lockdown	
	Once a week	Twice a week	Once a week	Once in two weeks
N°	15	5	0	20

background but that very often, due to lack of time, they prepared routine foods. Now, they have rediscovered old recipes such as how to make homemade bread "caponata", homemade pasta, homemade tomato puree, jams. Through rediscovering old recipes, in all cases, it was to have gained greater confidence in their cooking skills. All respondents said they had not encountered any difficulties in purchasing food products. The results of the study carried out allow us to interpret the evolution of consumer habits and the impact of the pandemic. One aspect that should not be underestimated is the impact it has had on shopping habits. Consumers who have returned to buy local foods or grow them said there are several reasons. The security in the sourcing, the desire for fresh and local food and the recovery of the relationship with the earth as demonstrated by other studies (Sgroi and Marino, 2022; Sgroi, 2020). The study shows that in consumers who have origins from peasant families, the pandemic represented an opportunity for the return to consume food grown on their own or nearby (short supply chain). This aspect should not be underestimated, as it highlights that food lifestyles are always linked to their origins and what one eats and tries to buy is the result of the food and gastronomic tradition of the place where the consumer resides. This aspect reflects the history, climate, religion and customs of the place. And the results of the study highlight this. Indeed, the pandemic was a means of highlighting this aspect.

8. Conclusions

This qualitative study has explored the food consumption habits of some families, their perception and their culinary behaviors during the first phase of the COVID-19 pandemic. The results have indicated that the pandemic, and related blockages had a significant and transformative impact on the food and diet of families, on their behaviors and on the source of origin of the products to be used in the kitchen. Most of the cases examined indicated, during the lockdown, an increase in home cooking and the rediscovery of ancient culinary traditions, self-confidence and increased family meals. The fact that most of our participants indicated that they have increased the number of home-cooked meals and time to cook is positive in terms of a better quality of their diet as in recent times the habit of take-away and routine foods often rich in energy, in particular from saturated fats and refined sugars and low in dietary fibers and micronutrients (eg vegetables), which compromises diets. A positive outcome of returning to a healthy diet was the greater availability of time, which had previously been the main barrier that led to the reduction of food preparation at home. During the COVID-19 pandemic most Italians switched to working at home or had flexible working hours which most likely reduced commuting time (downtime) and therefore had more time for home cooking, turning to old recipes. However, the important thing highlighted in this research is the return to local or family gardens for self-consumption. These gardens, which have always existed in the peasant tradition, represent a union between man and land that has existed since ancient times. The abandoning of these traditions was had been determined by the daily life routine and urban lifestyles. The return to the cultivation of vegetables for self-consumption, in addition to having a social purpose, also represents a way to have "healthy" and zero-kilometre food products. Thus, the COVID-19 block has represented, at least for our interviewees, a return to peasant traditions, the possibility that these cultivations will continue to persist even after the pandemic due to the fact that the interviewees were fully satisfied with this practice. Surely the pandemic has changed consumers' lifestyles, as demonstrated in this research. Here, we have asked ourselves to what extent the behaviours carried out during the pandemic will remain in the habits of consumers. To answer this question, we need to reflect on some aspects. The first thing that must be highlighted is that food consumption is geographically decisive. The food consumption of a Sicilian consumer is different from that of an English or Australian one, due to different aspects (climate, work habits, etc.). From this point of view, therefore, consumption always remains linked to the territory. What had changed before the pandemic is the place of consumption as a function of the increase in disposable income, which involves, in technologically advanced societies, seeking the service associated with the food product. To this we must add the social phenomenon of being together, the increase in women's employment, etc. With confinement, we almost returned to that "domestic hotbed" of the families of the past where life patterns were much slower. Another aspect that should not be underestimated is the phenomenon of agricultural and rural exodus that led to man deserting the countryside. In this case too, the pandemic has led to a rapprochement of man with the land at least for the production of agricultural products for self-consumption. In conclusion, it can be stated that not everything achieved during the acute periods of the pandemic will remain, as many consumers will return to their pre-pandemic habits. However, one thing that will endure will be a greater environmental and social awareness of the preparation of meals and the cultivation of products for self-consumption. Moreover, the pandemic has had a significant impact on society in terms of deaths and above all of physiological changes in consumers' attitudes. Certainly, as mentioned, an advantage is having highlighted that the globalization of the economy has its limits. The study carried out has stressed that consumers are linked to proximity consumption or better to proximity purchases. The study was carried out in a rural area and perhaps this could represent a limit. In the future it would be desirable to repeat this study in urban areas.

Declaration of competing interest

I declare not to be in conflict of interest International Journal of Gastronomy and Food Science.

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