



Impact of Covid-19 on consumers' attitude towards food purchase with special reference to Chennai city

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Abstract

This study aims to identify the Consumer's food purchase behavior during the pandemic situation. COVID-19 has been a major challenge for the consumers to purchase food products. This study mainly focuses to understand the changes in buying behavior of the consumers in Chennai city. A well-structured questionnaire was framed using Google forms and it was distributed to the respondents in the north, south, and central part of Chennai city. Filled-in forms were collected from 130 respondents. Data obtained from the respondents were analyzed using percentage graph charts. The findings of this study revealed that the consumers have become more health-conscious and increased their purchases of certain food products such as natural foods like fruits & vegetables (80%), herbal foods like ginger & turmeric (73%) to boost their immunity. Certain foods like frozen desserts (74%), cold drinks (93%) junk foods(62%) have been avoided by the majority of the respondents. Therefore, it is evident that the impact of COVID-19 has fundamentally changed the consumers buying behavior.

Keywords: COVID-19, Consumers behavior, food purchase, Chennai city

Introduction

Coronavirus disease or COVID-19 is a severe acute respiratory syndrome caused by SARS coronavirus 2 (SARS-CoV-2). The virus, first identified in China in 2019, was responsible for the disease outbreak. Within a matter of months, the virus spread rapidly to the rest of the world causing havoc. The countries of the world are still grappling with the impact of the virus has had and continuing to have on human lives and economies. The common clinical symptoms observed in patients suffering from COVID-19 include fever, cough, shortness of breath, myalgia (muscle pain), tiredness, headache, production of sputum, hemoptysis, stomach pain, dizziness, nausea, diarrhea, and vomiting (K. Sree Kala Priyadharsini, *et al* 2020) ^[1]. The disease has been shown to spread from person to person through droplets/aerosols. The virus spreads rapidly when an infected person coughs, sneezes, or talks as the tiny droplets carry the virus into the air from their nose or mouth. It is this remarkable ease with which the virus could spread that resulted in the outbreak becoming a pandemic. In an attempt to control the spread of the virus and bring down the fatality rate, Governments around the world declared a lockdown. Schools, offices, factories, places of worship, commercial establishments, and food service outlets were all closed indefinitely. Transportation was hit and movement of only essential goods was permitted. Closure of industries and factories impacted the supply chain and resulted in a decline in production and access to resources (Mr. Amey Ramane, *et al* 2020) ^[2]. The Food supply chain demonstrated its resilience by quickly responding to the situation and bringing in changes to ensure that food reached the consumers. Online Apps joined hands to deliver essentials to consumers. The prevailing

conditions and restrictions have had a huge impact on the consumers' consumption and purchasing patterns. Food service institutions were affected by the lockdown as only essential services were allowed to function. The food supply system witnessed large-scale disruption (Sube Singh.*et al* 2020)^[3]. This pandemic has been a huge challenge for consumers with regard to purchasing goods for consumption. Panic buying and fear of the disease forced consumers to avoid direct purchases and opt for online retailers. The lockdown-imposed restrictions thus resulted in a huge rise in the segment of the population shopping online. This has had a significant impact on the consumer's dependence on the local Kirana and other retail stores. Some consumers still preferred the direct mode of purchasing groceries, considering as a much safer option. During the pandemic, the purchase of certain food categories increased. Foods like fruits, vegetables, nuts, herbal foods, etc were purchased frequently and in large quantities. Certain foods such as seafood, meat, poultry, etc, were avoided by the consumers. This behavior in part was due to the false information shared on social media about the safety of animal foods. Food products such as cold drinks, ice creams were deliberately avoided to minimize the risk of throat infection, cold, and fever.

Objectives of The Study

1. The main aim of this study was to identify the impact of COVID -19 on consumers' food purchase behavior in Chennai city.
2. To identify the consumers' awareness and difference between their choice of purchasing food prior to and during the pandemic.
3. To identify the specific food categories that were been

- purchased in higher amounts by the consumer’s during this pandemic and the reasons for the same.
- To determine the mode/place of purchase, and frequency of purchase during COVID-19 and the reasons for the same.
 - To identify the type of foods that have been specifically avoided by the consumers and the reasons for the same.

Methodology of The Study

COVID-19 restrictions had impacted every sphere of man’s life. This study was carried out to identify the impact of COVID-19 on consumer’s attitudes towards food purchases. Several factors such as types of foods purchased/avoided, frequency & mode of purchase, and place of purchase have been analyzed in order to identify the effect of COVID- 19 on these parameters. A self-administered questionnaire was employed for the study. The questionnaire was generated using Google forms and was sent electronically throughout Chennai.

Data Collection Method

The research includes data collection from primary as well as secondary data sources.

Primary data collection: A questionnaire method was used to collect information from the respondents. The information has been collected by circulating the questionnaire to the respondents using online Google forms.

Secondary data collection: secondary data was collected in the form of various supporting research articles on the food purchasing behavior of consumers from different states/countries.

Target Population

The target group was the general population of Chennai city. For the purpose of the study, respondents have been categorized according to their geographical location namely North Chennai, Central Chennai, and South Chennai.

Sampling Method Used For The Study

For the purpose of this study, **Convenience sampling** method was employed to collect the data. It is a type of non-probability sampling method where the sample is taken from each part of Chennai city such as North, South and central in a convenient manner. This type of sampling is also known as grab sampling or availability sampling.

Sample Size

Questionnaire was distributed online and enough time was given to the respondents to fill the questionnaire to reduce sampling error. The Questionnaire was constructed in simple language in order to reduce the risk of ambiguity. Completed questionnaire was obtained from 130 respondents.

Analytical Method

The data obtained from the respondents were analyzed using Percentage graph charts.

Results and Discussion

The findings of this study were analyzed through Excel graphs. The graphs depict the percentage value or number of responses obtained for a particular question and also aids in

understanding the relationship between the variables.

Section 1- Demographic analysis of the respondents

Table 1: Gender wise distribution

Gender	No. of Respondents
Male	20
Female	110

Interpretation

From the figure, it is evident that among the 130 respondents, majority were females (85%), and the remaining respondents were males (15%).

Table 2: Age wise distribution

Age Group	No. of Respondents
18-25	109
25-40	9
Above 40	8
Below 18	4

Interpretation

From the above figure, it is evident that a majority of the respondents (84%) were in the age group of 18-25 years. About 7% of the respondents were between 25- 40 years. The remaining respondents were either below 18 years and above 40 years.

Table 3: Educational qualification of the respondents

Educational Qualification	No. of Responses
Postgraduate	33
undergraduate	89
Uneducated	1
Other	7

Interpretation

The above graph clearly indicates that nearly all of the respondents (99%) had basic education and were still pursuing some form of higher studies.

Table 4: Occupational classification of respondents

Occupation	No. of Respondents
Student	80
Employed	29
Unemployed	11
Home maker	8
Other	2

Interpretation

The above graph represents the classification of occupation of the respondents. From the chart, it is clear that a majority of the respondents (62%) were students. About 22% of the respondents were employed and about 8% of the respondents unemployed. Only 6% of the respondents were homemakers.

Table 5: Place of residence of the respondents

Place of Residence	No. of Responses
North Chennai	55
Central Chennai	30
South Chennai	45

From the above graph, it is evident that among 130 respondents, most of the respondents (42%) were from the northern part of Chennai. About 35% of the respondents were from the southern part of Chennai. Only 23% of the respondents are from the central part of Chennai. From the graph, it is evident that the majority of the consumers preferred direct mode of grocery purchase during the pandemic.

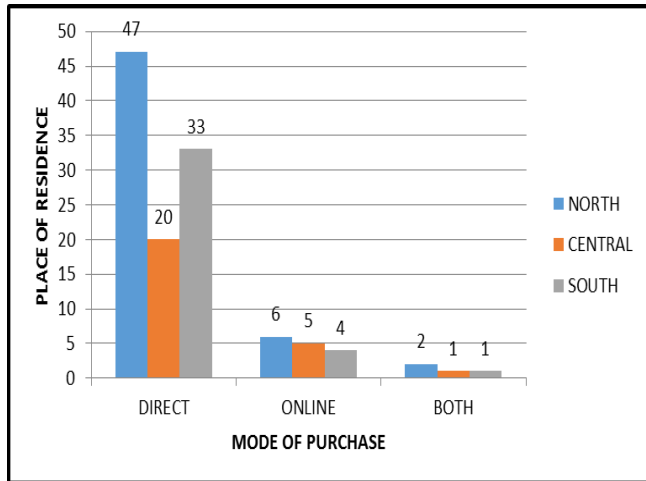


Fig 1: Impact of Consumers place of residence on the mode of their purchase during COVID-19

From the graph, it is evident that nearly 47 respondents from the northern part of Chennai prefer direct mode of purchase whereas 6 respondents prefer purchasing online and the remaining respondents were found purchasing through both direct and online mode. About 33 respondents from the southern part of Chennai were found purchasing groceries only through direct mode, 4 respondents were found purchasing online and the remaining 1 respondent prefers both modes for purchasing essential goods. Among 30 respondents from central Chennai, most of the respondents (n=20) preferred direct mode of shopping.



Fig 2: Preference towards place of shopping

The place of purchase of foods has been considered as one of the important factors during the pandemic period. The above graph explains the availability of food products during the pandemic in four different places such as supermarkets, local shops, wholesale markets, and online shopping. About 31% of the respondents were found purchasing essential goods in local shops and the remaining respondents purchased in wholesale markets (10%) and online (10%). It is observed that majority of the respondents 48% purchased from supermarkets during the COVID period.

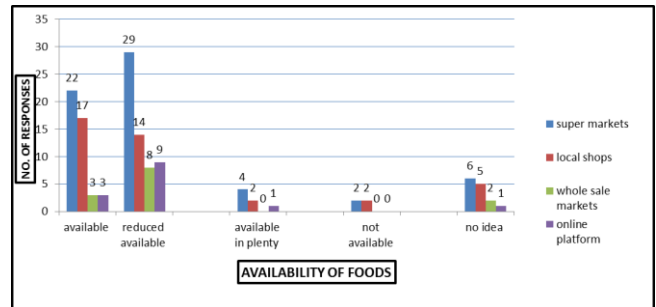


Fig 3: Impact of Consumers place of preference for shopping on the availability of food products

Respondents purchasing in supermarkets (n=29) claimed that the availability of food products was less during this period, whereas 22 respondents felt the availability was normal. About 4 respondents felt that the availability of foods in the market was plenty. Other respondents who purchased in supermarkets had no idea about the availability of goods. About 17 respondents who purchased groceries in local shops felt that the availability was the same as compared to pre-COVID. 14 respondents found reduced availability of goods in the local shops. It has been observed that only few respondents have purchased groceries in wholesale markets and online. Moriom et al, (2020) [4] conducted a similar study in Bangladesh which aimed to identify the consumer's perception of food purchase during COVID 19. This study focused on three important factors such as price, availability of food products, and the role of government in this COVID situation. The results of the study indicated that most of the consumers felt that the food products had been highly priced and the availability of food products was low at the local markets

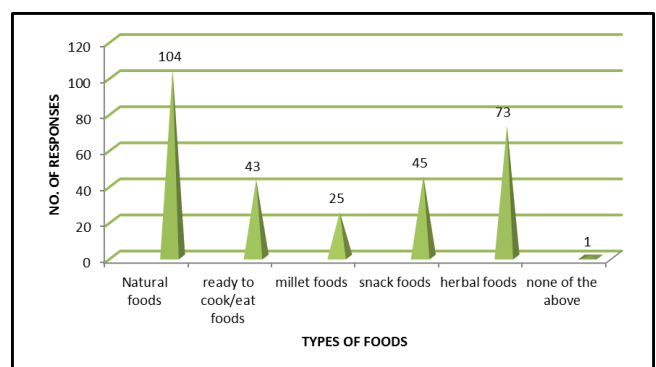


Fig 4: Increase in purchase of food products

This graph gives clear information on the types of food products that have been purchased frequently during the COVID period. From the figure, it is evident that the majority of the respondents (80%) increased their purchase of natural foods like fruits and vegetables. The second major purchase of food products is herbal foods. About 56% of the respondents spent money on purchasing of herbal foods like ginger, garlic, and turmeric. About 33% of the respondents were found purchasing ready to cook/eat foods and snack foods (35%) during COVID. About (19%) of the respondents increased their purchase of millet foods. The reasons for purchasing these food products were also identified. It is found that majority of the respondents (71%) purchased these foods to prevent themselves from getting infected with diseases. A similar study conducted by Dr. C. Vijai, et al (June 2020) [5] in India has revealed that nearly

half of the respondents (40.6%) had purchased natural foods like fruits and vegetables during the pandemic period.

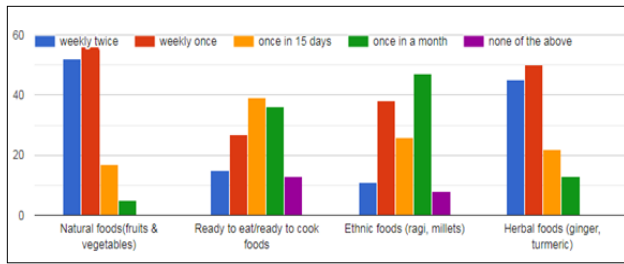


Fig 5: Frequency of purchase of food products by the consumers

This graph represents the consumer’s frequent purchase of food products during the pandemic compared to the pre-COVID period. From the graph, it is evident that the majority of the respondents (55%) have purchased natural foods like fruits and vegetables once a week. The second major food products like herbal foods (ginger, turmeric, etc) have also been purchased by consumers once in a week. Ethnic foods like (Ragi, millets) and ready to cook/eat foods have been purchased once a week by a few of the respondents. Some of the respondents were found purchasing natural fruits and vegetables twice a week during the pandemic. It is observed that ready to cook/eat foods have been purchased once in 15days by the majority of the respondents (40%). Ethnic foods like ragi, millets, etc have been purchased only once a month by some of the respondents compared to other foods like natural fruits and vegetables, ethnic foods, or ready to cook/eat foods. Therefore, it is found that the majority of the consumers have purchased natural and herbal food products frequently during the COVID period compared to pre-COVID.

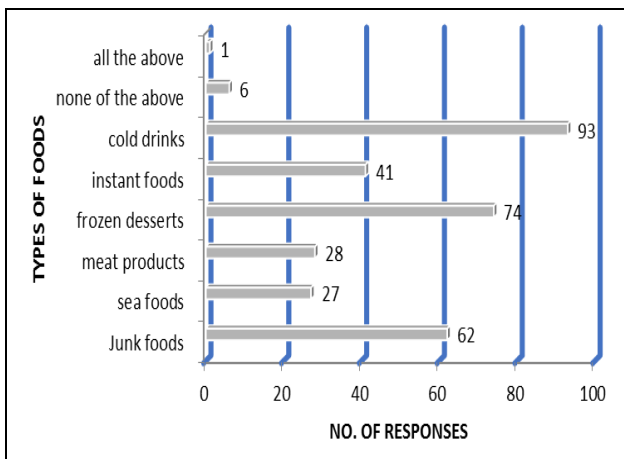


Fig 6: Types of food products avoided by consumers during COVID-19

From the figure, it is evident that the majority of the respondents (72%) avoided purchasing cold drinks, particularly during the pandemic. Foods like frozen desserts (60%) and junk foods (62%) are the second major foods that have been avoided by the respondents. About 32% of the respondents have reduced/avoided purchasing instant food products like noodles. Reasons for avoidance were also observed. It is found that nearly 70% of the respondents avoided purchasing these food products due to less

availability of these foods in the market and about 53% of the respondents felt that these foods were unhealthy to consume and chose to avoid purchasing them during COVID 19.

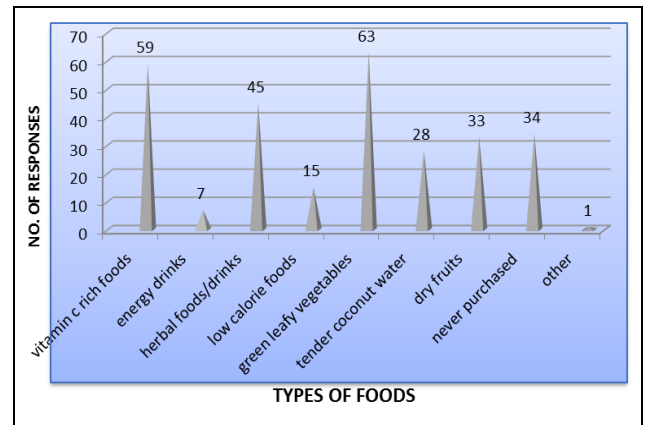


Fig 7: special purchase of foods for kids/elders

The above graph represents the types of food products that are particularly purchased for elders/kids in the family. Elders and kids, being the vulnerable group, could benefit from additional nutrient- rich foods to build their immunity. From the chart, it is observed that the majority of the respondents have purchased green leafy vegetables for their kids/elders in the family. About 45% of the respondents purchased vitamin c rich foods like citrus fruits. Herbal foods/drinks have been purchased by 34% of the respondents. About 26% of the respondents stated “never purchased” foods especially for elders/kids in their family. Other respondents were found purchasing dry fruits and tender coconut water for their family members. The remaining 5% of the respondents stated purchasing energy drinks for their kids/elders.

Summary and Conclusion

The widespread outbreak of the disease affected many countries in terms of economy, agricultural production, healthcare infrastructure, and the normal day-to-day life of a person. To develop a deeper understanding of consumers' shift in food purchase behavior during the COVID-19 pandemic, an online survey was conducted in February 2021. The survey was conducted using an online Google form in Chennai city. The findings of this study revealed that the impact of COVID-19 has resulted in changes in consumers' buying patterns. The majority of the study respondents (42%) were from North Chennai and in the age group of 18-25 years. Most of the respondents were aware of the current situation. The results indicated that the majority of the consumers preferred a direct mode of purchase in supermarkets during this pandemic (49%) than an online mode of shopping (11%). The preferences of the consumers clearly indicate their priority for cleanliness/freshness of food products followed by quality and availability. Consumers had become more health-conscious and preferred to purchase natural food products like fruits, vegetables, herbal foods, and other millet food products during COVID-19. Food products such as frozen desserts (56%), cold drinks (71%), and junk foods(48%) have been avoided by the majority of consumers. There has also been a significant change in the frequency of purchase

of certain food products by the consumers during COVID. The results indicated that there had been no changes in the purchase of seafood during the pandemic situation when compared with pre-COVID days. In these trying times, the factor that consumers valued most was the availability of essential goods. Nearly half of the respondents (46%) felt that the availability of foods was quite low during the period of COVID. Purchase through online mode had reduced during this pandemic due to the service restrictions that had been imposed on certain places. The consumers at large have taken cognizance of the current situation and adapted to this new 'normal' by making suitable modifications in their purchasing patterns and eating habits.

References

1. K. Sree Kala Priyadharsini, *et al* "Does Non Vegetarian Food Increases the Risk of COVID-19? - A Review" International Journal of Current Research and Review, 2020.
2. Mr. Amey Ramane et al. A Study On "The Indian Consumer Purchase Behavior During Lock – Down 1.0 Due To Covid-19" International Journal of Commerce and Management Studies (IJCAMS), 2020.
3. Sube Singh et al. "Impact of COVID-19 on logistics systems and disruptions in food supply chain" International Journal of Production Research, 2020.
4. Moriom Khatun et al. "Analysis of Consumer Perceptions on Food Purchasing During COVID-19 Pandemic in Bangladesh" International Journal of Agricultural Economics", 2020.
5. Dr. C. Vijai, *et al* "A study on coronavirus (COVID-19) impact of consume buying behaviour with special reference to Chennai city" International conference on COVID-19 studies, 2020.