

# A cross sectional study on Impact of food purchasing and Consumption patterns during covid-19 outbreak in the rural area of South Karnataka

Ms. Namitha M.Y (Corresponding Author)  
Guest Faculty at Department of Food Science and Technology

Dr.Gulappa Devagappanavar  
Guest Faculty at Department of Public Health  
Affiliation: School of environmental Sciences, Public health and Sanitation Management  
Karnataka State Rural Development and Panchayat Raj University, Gadag

## ABSTRACT

**Background:** Corona pandemic caused psychological, economic and social problems in this world and people are threatened worldwide. Because of this outbreak health, business, routine life, nutrition, food habits, economy, education system, social and cultural practices are affected.

**Objectives:** Assessing the impact of Covid-19 pandemic on food purchasing and consumption patterns in the rural area of south Karnataka.

**Methods:** Cross sectional study was conducted in the Hassan district village area from 28<sup>th</sup> March 2020 to 28<sup>th</sup> April 2020 using semi-structured interview schedule. Convenient sampling technique method was adopted to obtain the data and data was analysed using SPSS v20, expressed in frequency and percentage.

**Results:** Out of 127 most of them are purchasing Fruits (74.80%), Vegetables (77.17%), Meat, Poultry & egg (68.50%) and Fish (85.03%) from locally available resources and only groceries (67.72%) were purchased by market. After this pandemic consumption of turmeric (41.73%), garlic (14.96%) and ginger (14.17%) were increased.

**Conclusion:** Study concludes that due to corona virus disease pandemic, people changed their food purchasing and consumption practices to break the spread of infection through by avoiding risk and increasing immunity by consuming immunity boosters.

**Key words:** Corona pandemic; Food purchasing pattern; Immune Boosters; Impact of Covid-19; Locally available resources.

## INTRODUCTION

Safe and nutritious food in adequate amounts is required for the sustenance of life and the promotion of good health(1). The coronavirus might become a global pandemic. Yes it might affect global economies badly if it is already not doing so. But as an individual, the key thing is to have a health and good immune system and also to main certain hygiene rules and

precautions(2).

Corona virus pandemic affected whole world and almost all the countries were shut downed. Virus could be spreads through vegetable venders in the market. To avoid this people are depending on locally available resources and growing possible vegetables in their kitchen garden. The resulting changes to working patterns (e.g. extended working hours, loss of jobs) and living circumstances have had a large impact on the supply, purchase, preparation and consumption of food. The measures to prevent and control the spread of COVID-19 and their outcomes had a profound effect on the food supply, dietary patterns and nutrition of billions of people.

Corona virus pandemic is threatening whole world because of its spreading nature. To reduce the risk people are changing their food purchasing sources, consumption practices and moving towards healthy eating foods. To avoid the probability of risk occurrence they are purchasing food from locally available sources, preparing foods in their home and consuming. People are moving towards the consumption of all types of food to balance their nutrition and health.

## **METHODS**

### ***Study settings***

A community based study was conducted in the Hassan district Villages. Data was obtained during the 28 /03 /2020 to 28/04/2020 by conducting the house hold survey.

### ***Study design***

A cross sectional study was conducted, data was obtained by convenient sampling technique. A semi structured interview schedule was used to obtain the data.

### ***Participants***

In the study, women were included to assess the current nutrition and food preparation practices before and after the corona virus disease outbreak. Those who are involving in the food preparation at house were included in the study.

### ***Variables***

*Independent variables* variables such as age, religion, marital status, education and occupation.

*Dependent variables* food purchasing and consumption patterns before and after the corona virus disease outbreaks.

### ***Sample Size***

A totally of 127 women's were agreed to participate in the study.

*Data Sources*

Primary data was collected by visiting the houses and semi-structured interview schedule was administered to obtain the data.

*Statistical analysis*

Data was entered into excel sheet and analysed using SPSS v 20, results were expressed in frequency and percentages.

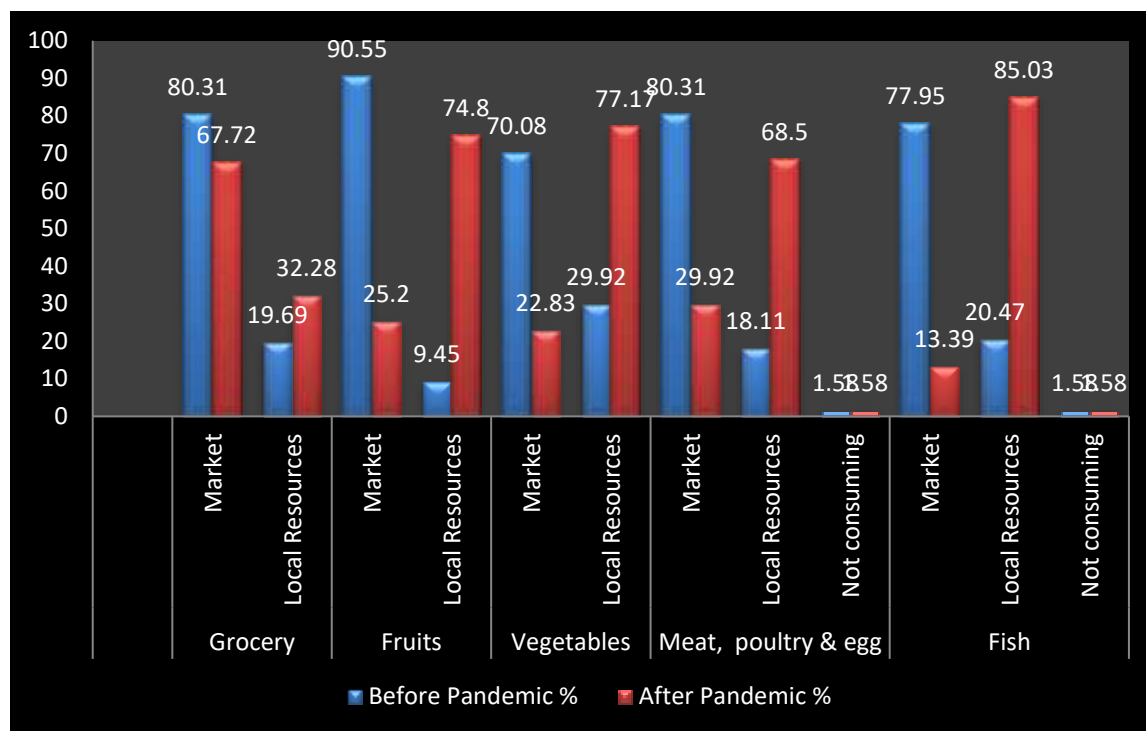
**RESULTS**

Table 1: Socio-demographic details of the participants (n=127)

Category	Characteristics	Frequency (%)
Age group	20-30	29 (22.83)
	31-40	19 (14.96)
	41-50	25 (19.69)
	51-60	36 (28.35)
	61 & Above	18 (14.17)
Religion	Hindu	127 (100)
	Muslim	00 (00)
	Christian	00 (00)
Marital Status	Unmarried	11 (08.66)
	Married	116 (91.38)
Type of family	Nuclear	106 (83.46)
	Joint	21 (16.53)
Education	Professional	18 (14.17)
	Graduate	20 (15.75)
	Diploma	05 (03.94)
	High school	64 (50.39)
	Middle school	11 (08.66)
	Primary school	04 (03.15)
	Illiterate	05 (03.94)
Occupation	Professional	09 (07.07)
	Semi-profession	20 (15.75)
	Clerical / shop/ farm	53 (41.73)
	Skilled worker	04 (03.15)
	Semiskilled worker	08 (06.30)
	Unskilled worker	07 (05.51)
	Unemployed	26 (20.47)

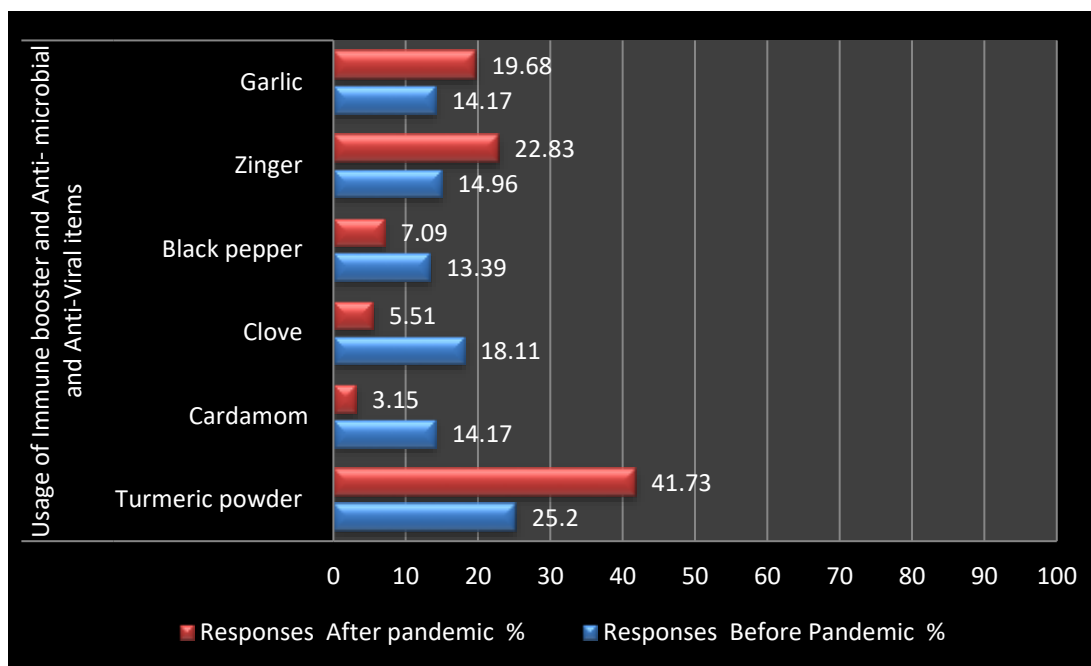
In the current study majority were in the age group of 51-60, belonged to nuclear and Hindu families. More than half were married and completed their high school education. Nearly half of them were working as clerical / shop / farm. (table 1 )

Figure 1: Responses about food Purchasing patterns (n-127)



In the above study purchasing of food from locally available market was increased drastically and people are more dependent on market for only groceries. People are purchasing fruits from locally available resources (74.80%) and more dependent of seasonally available fruits. Most of the vegetables were purchased in village only (77.17%) along with that they were growing possible vegetables in their kitchen garden. Green leafy vegetable which were grown in farming land before flowing was also used. Meat, poultry and egg which was grown and sold in the villages were only consumed by 68.50% of people during this period. Fish which were caught in village pond was mostly used (85.03%) for consumption in this period. To purchase only groceries (67.72%) people are more dependent on market (fig 1).

Figure 2 : Response regarding consumption of immune booster (n=127)



After this pandemic consumption of turmeric (41.73%), garlic (14.96%) and ginger (14.17%) were increased. People who are using Turmeric powder, Zinger and Garlic content is increased because due to their immune boosting properties. Curcumin present in turmeric, gingerol present in ginger and allicin present in garlic is responsible for the therapeutic properties. Usage of Cardamom, Black pepper and Clove content is decreased during this pandemic (fig 2).

## DISCUSSION

Findings revealed that more than one third of the people started eating green leafy vegetable, the UNICEF organization also suggested to use the green leafy vegetable during this Covid-19 outbreak(3–5).

Due to covid-19 outbreak majority of them started eating immunity booster food items by adding them to food preparation. The similar suggestions found in study conducted at Thailand during respiratory disease outbreak (2).

In the current the majority were dependent on local resources for food items , the similar findings revealed that Supermarket shelves remain stocked for now and the study was done by the Economic and social department of FAO (6).

## CONCLUSION:

Incidence of diseases will affect the people habits. This study shows that people's food purchasing practices are changed due to corona virus outbreak and started consuming more immune boosters to increase immunity. These changes had done by the population to avoid the spread of disease and to break the chain of spreading.

**REFERENCES**

1. Chaudhuri D. Food safety: A public health priority. *Indian J Public Health*. 2015;59(2):83.
2. Thailand medical news. Foods That Can Boost Your Immune System During Respiratory Viral Outbreaks ( Based On Clinical Studies ). <https://www.thailandmedical.news/articles/coronavirus>. 2020;1–38.
3. UNICEF. Easy , affordable and healthy eating tips during the coronavirus disease ( COVID-19 ) outbreak. 2020.
4. K. M. Heraman, A.J.Hall LHG. Outbreaks attributed to fresh leafy vegetables, United States,1973-2012. *HHS Public Access , Epidemiol Infect*. 2016;176(1):139–48.
5. Naja F, Hamadeh R. Nutrition amid the COVID-19 pandemic: a multi-level framework for action. *Eur J Clin Nutr* [Internet]. 2020;1–5. Available from: <http://www.nature.com/articles/s41430-020-0634-3>
6. Cullen MT. COVID-19 and the risk to food supply chains: how to respond. *COVID-19 risk to food supply Chain how to respond*. 2020;(March):1–7.