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Study of Factors Affecting Online Grocery Shopping During COVID-19 Outbreak: An Empirical Approach

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ABSTRACT

COVID-19 has affected more than 211 countries and territories globally. Governments across the world are taking rigorous precautionary measures and issuing advisories to ensure people do not come out of their houses and the chain of corona virus is broken. The majority of people are following the guidelines stated by their respective government officials. Other that acquiring healthcare services; purchasing groceries and other food items is the only important task which forces people to leave their houses. This deliberately enhances the risk of people getting infected with corona virus. This pandemic situation has shifted the way of shopping grocery for many consumers. People across the whole world are escalating towards online grocery shopping platforms for even milk, eggs and bread. Several online grocery shopping websites with assistance of local authorities had managed to supply contactless and doorstep deliveries maintaining all necessary safety measures. However, with sudden increase in demand, these online grocery suppliers have faced many challenges including supply chain pressure and maintaining availability and training of employees under such conditions. This study identifies the factors affecting consumer buying behavior of online grocery shopping. Online data collected from 166 respondents through questionnaire is analyzed using IBM SPSS Statistics 23.

Keywords: Consumer Perception, COVID-19, Demographic Profile, Online Grocery, Retail Businesses

INTRODUCTION

Food and grocery are the basic daily needs for any household. Online grocery business is at emerging stage in India. This kind of model has gained popularity in tier one cities like Delhi and Mumbai, but still it has a long way to go. As of now people in India are not much familiar with this kind of model. People in the country prefer buying items like groceries, fruits and vegetables by physical comparison of price and quality. In this type of culture prevailing in the country, it is very difficult to make this kind of model popular in Indian markets. While other e-commerce businesses are gaining much popularity in the Indian markets, e-commerce grocery industry is in its introductory phase. So, this COVID-19 pandemic situation presented a great opportunity for any firm to enter the online grocery space.

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Issues of living alone and away from family are tough tasks for anyone to manage. Under the lockdown period, everyone is home quarantine and isolated from the society. Other than that, one has to take care of everyday domestic hassles. Tiring online office shifts leave feel anybody so exhausted that the prospect of cooking seems like torture. In this COVID-19 scenario, it is difficult for even young professionals to shop from traditional grocery. With the current flourishing online grocery portals on the digital medium in India, one might wonder about the shift of consumers from traditional shopping to these online ventures. Online grocery stores such as D-mart, ondoor, big basket, natures basket, grofers have operated at limited point of delivery providing convenience to consumers intend to shop grocery online during COVID-19 outbreak.

REVIEW OF LITERATURE

A descriptive study was done by Sinha and Kim (2012) with regard to identification of factors that influence consumers to go for online grocery shopping. With the help of this study it has been found that convenience, time and money savings are some of the major factors responsible for shifting of traditional shoppers towards online grocery stores. Online grocery shopping benefits both consumers and retailers. Consumers benefit through convenience of time, place and products whereas for retailers it is an advantage to get connected with customers 24x7. Online grocery shopping reduces the mental and physical effort of shopping (Morganosky and Cude 2000).

From the research of Fransi et al. (2007) it has been found that online grocery shopping saves time that consumers spend during multiple stores. Zaini et al. (2011) and Jiang et al. (2013) highlighted the advantages of online grocery shopping which benefit consumers. They enumerated that offers and discounts, variety of items, convenience, time and shopping not limited to business hours are the advantages of online grocery shopping. Online grocery shopping has made shopping easy as orders could be placed and customized at consumers' convenience.

Morganosky & Cude (2000) and Raijas (2002) suggested that online shopping is skewed more towards women. Research by Merz (2013), Richmond (1996) and Sorensen (2009) found that consumers shop online to effectively manage time and experience convenience.

OBJECTIVES

1. To study the demographic profile of consumers shopping online grocery during COVID-19 pandemic. (Frequency Test)

2. To find the factors influencing consumer perception towards online grocery shopping during COVID-19 pandemic. (Factor Analysis)

RESEARCH GAP AND RATIONALE

As the COVID-19 outbreak is novel to the whole world, there is lack of adequate research and rarity of literature on online grocery shopping and effect of the pandemic on it. With the lockdown pressure piling up, supermarkets and delivery giants like Big Bazaar, DMart, etc exhausted quickly. It provided an opportunity to online grocery retailers to expand their business. During COVID-19 related lockdowns, many shoppers tested this format for the first time. It gave researcher a click about studying the factors that shoppers find important for the acceptance of online grocery over traditional retail shops. Nearly half of respondents in a survey reported trying online grocery shopping for the first time or increasing their use of it because of the novel corona virus.

RESEARCH METHOD

Since the study requires analysis of data, descriptive analysis technique has been used to analyze and interpret data. The convenient sampling technique is best suited and has been used to collect data from the sample size of 166 respondents. Primary data through questionnaire is collected to analyze the consumer attitude towards online grocery shopping. Factor analysis is used to identify the various components that may influence the consumer perception. Frequency test has been done to identify the demographics of online grocery consumers. This statistical data analysis is done using IBM SPSS Statistics 23.

DATA ANALYSIS

5.1 Frequency Test

Gender

	Frequency	%	Valid %	Cumulative %
Male	77	46.4	46.4	46.4
Female	89	53.6	53.6	100.0
Total	166	100	100	

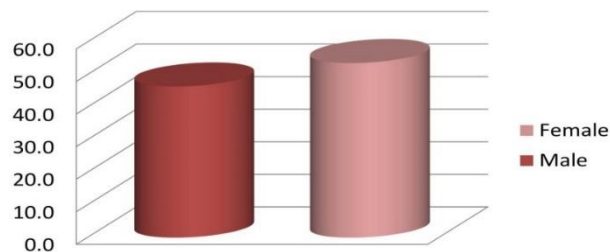*Table 1: Gender*

From the data collected, it is observed that there are more female online grocery shoppers (53.6%) than that of males (46.4).

Age

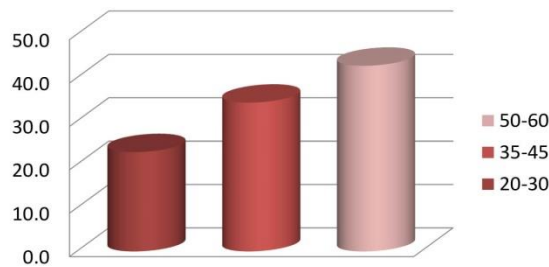|	Frequency	%	Valid %	Cumulative %
20-30 years	38	22.9	22.9	22.9
35-45 years	57	34.3	34.3	57.2
50-60 years	71	42.8	42.8	100.0
Total	166	100	100	

Table 2: Age

Out of the mentioned categories, there are less young shoppers of the age 20-30 years (22.9%) than those of 35-45 years (34.3%) and 50-60 years (42.8%). During the lockdown period, old age people were more concerned about their health, thus they prefer to buy groceries online rather than traditional shops.

Education

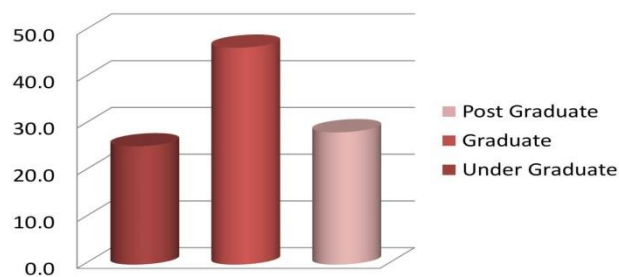|	Frequency	%	Valid %	Cumulative %
Under Graduate	42	25.3	25.3	25.3
Graduate	77	46.4	46.4	71.7
Post Graduate	47	28.3	28.3	100.0
Total	166	100	100	

Table 3: - Education

From the overall survey, it is found that graduate (46.4%) and post graduate (28.3%) respondents are more inclined towards online grocery shopping during COVID-19 situation.

Employment

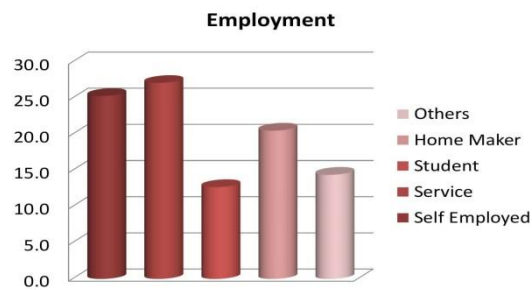|	Frequency	%	Valid %	Cumulative %
Self Employed	42	25.3	25.3	25.3
Service	45	27.1	27.1	52.4
Student	21	12.7	12.7	65.1
Home Maker	34	20.5	20.5	85.5
Others	24	14.5	14.5	100.0
Total	166	100	100	

Table 4: - Employment

The employment table shows mixed results for different respondents. Self employed (25.3%) and service sector employees (27.1%) capture about half of the respondent profile. Remaining includes home maker (20.5%), others (14.5%) and student (12.7%).

5.2 Instrument Reliability

Internal reliability of the instrument can been measured using Cronbach's Alpha Coefficient. Alpha value for the collected data came as 0.806. This indicates that the collected data is reliable.

Reliability Statistics	
Cronbach's Alpha	No. of Items
0.806	16

Table 5: - Cronbach's Alpha Coefficient

Above table shows reliability check for overall and individual dimensions. This also denotes that the statements in the questionnaire are a reliable instrument for relevant data collection.

5.3 KMO and Bartlett's Test

KMO (Kaiser-Meyer-Olkin) test is a sample adequacy test that measures how suited/ adequate the data is for factor analysis. While Bartlett's test of Sphericity compares

the correlation matrix with identity matrix. It also checks for redundancy/duplicacy between variables that can be summarized with factors. (*Significance at 1% level, $p<0.01$).

KMO and Bartlett's Test		
KMO Measure of Sampling Adequacy		0.801
Bartlett's Test of Sphericity	Approx. Chi-Square	1012.361
	df	166
	Sig.	0
Source: Primary Data		

Table 6: - KMO and Bartlett's Test

Table 6 shows SPSS result of KMO and Bartlett's test indicating 0.801 and Sig 0.000 ($p<0.01$). It means the sample under survey is accurate.

5.4 Factor Analysis

Under factor analysis method, the rotated component matrix identifies and groups the different variables under identified components on the basis of their respective calculated communalities. A communality is a measure to which an item correlates with all other items. Higher communalities are always better.

Sr. No.	Variables	Components					
		1	2	3	4	5	6
1	During lockdown it is convenient to purchase online grocery than going outside.	0.767					
2	More variety of products are available at online grocery shops.	0.624					
3	It reduces the human contact and maintains social distancing and isolation.	0.531					
4	Attractive website increases your buying interest from a particular retailer.		0.798				
5	Website easily provides information about product you want to buy.		0.731				
6	It is easy to search products on online grocery websites.		0.678				
7	The shopping ambience is important to you.		0.563				
8	Online grocery shopping saves travelling time.			0.645			
9	Online grocery retailer operates as per customers' schedule.			0.528			
10	Online payment transactions must be secure.				0.746		
11	Misuse of personal information should not be there.				0.639		
12	Different modes of payments are available during online grocery purchase.				0.547		
13	Online grocery retailer willingly handles returns and exchanges.					0.719	
14	It is tedious process to return the damaged/defective/expired product.					0.644	
15	Sales executives provide prompt service to you as and when required.						0.636
16	Trained employees/executives can properly answer the questions.						0.572
Source: Primary Data							
Extraction Method: Principal Component Analysis							
Rotation Method: Varimax Rotation							

Rotation Sum of Squared Loadings			
Component	Total	% of Var.	Cumm %
Factor 1	2.958	13.419	13.419
Factor 2	2.67	12.532	25.951
Factor 3	2.475	11.635	37.586
Factor 4	2.222	9.977	47.563
Factor 5	1.856	8.548	56.111
Factor 6	1.552	7.936	64.047
Extraction Method: Principal Component Analysis			

Table 7: *Rotated Component Matrix and Total Variance Explained*

The above table shows RSS loadings under principal component analysis method. The principal component analysis, rotated component matrix and total variance table indicate that total six components were extracted from all the sixteen statements based on their factor loadings. These factors are named as Convenience Factor, Website Design, Time Savings, Security of Transactions, Return Policy and Customer Care.

CONCLUSION

The study primarily focused on the factors affecting consumers' attitude and their preference towards online grocery shopping during COVID-19 pandemic situation. Factor analysis provided us the components which are more associated towards our study topic. As per the current COVID-19 pandemic conditions, study revealed convenience, interactive website design, time saving factor, security of transactions, return policy and customer support are the major reasons for purchase from online grocery retailers. Under current situation, gender-wise females prefer more online grocery purchase than males. Due to age perspective, government restrictions and higher chances of getting infected with COVID-19 virus, old people preferred online grocery purchase than younger ones. Graduate and post graduate people are much aware about online grocery retailers. Education is also an important factor in selecting the type of grocery retailers. Occupation does not affect the purchase decision for online grocery. It averagely remains equal for respondents with service, self-employed persons or business and home makers.

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