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A STUDY ON THE SIGNIFICANCE OF DEMOGRAPHIC CHARACTERISTICS ON ONLINE PURCHASE BEHAVIOUR DURING COVID-19 PANDEMIC

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ABSTRACT

Online buying behavior during Covid-19 has seen drastic changes. Consumers due to various factors preferred Online purchasing rather than Offline shopping. In this study we have tried to understand the demographic characteristics and its association with the buying behavior of online consumers during Covid-19. We have also extended the study to understand if there is any relationship exists between demographic characteristics and Online purchase intention components and Covid-19 Pandemic factors. The data was collected from 583 Work from Home (WFH) IT Professionals using online Survey form. The study found that the demographic factors had a moderate association with the buying behavior. It is observed that, there was a positive relationship between the demographic characteristics and independent variables. Data analytic methods such as Correlation and Frequency distribution are used in this study. It is also observed from Frequency distribution that IT Professionals surveyed are more prone to still purchase in online through Amazon (49.4 percent) and Flipkart (28.6 percent) which have a combined share of 78 percent. It is also found that a high degree of correlation existed between the variables.

Key Words - Online, Purchase behavior, Covid-19, Pandemic, Correlation, Frequency distribution

1. INTRODUCTION

A Study has identified that 78.2% of the Work from home respondents are missing out on regular life like offline shopping, movies, eating out etc. due to pandemic (Shikha Gulia, 2021). Work-from-Home culture has changed the opinion of the people from being very excited to very hopeless during Covid-19 (Akash D Dubey, 2020). It has also changes the purchase pattern of the consumers from being offline to adopt online. E-Commerce has grown at an annual rate of 51% in India as per Competition Commission of India Study, 2020. Covid-19 has created a chaotic situation that challenges the E-Commerce industry. A pandemic refers to a new disease that most people are affected and do not have immunity and also it spreads worldwide (WHO, 2010). The Covid-19 virus has already infected 42.8 crore people worldwide, consequentially has led to 5.91 million deaths (December 12, 2020). It is essential to learn the pandemic fear (Covid-19) and its influences on online consumer spending and consumer purchase behavior (Khan and Huremovi´c, 2019). The literature reviews have indicated that the current situation and fear among the public would have negative consequences that could lead to changes in consumer attitude and behavior (Solomon, 2017). Covid-19 has changed online consumer purchasing behavior as consumers fear infectivity over offline (Laato et al., 2020; Prentice et al., 2020). World Health Organization (WHO) recommended that the only possible solution to be safe during Pandemic was to self-isolate and stay at home. Due to this, the world has brought to a standstill and the organizations have moved to online based working.

2. LITERATURE REVIEW

Nor Asiah Omar a & Co. 2021, have recently examined the panic buying behavior of consumers during the COVID-19 pandemic by applying behavioral inhibition system theory, expectancy theory, and reactance theory. This research investigated how psychological factors such as uncertainty, perceived severity, perceptions of scarcity, and anxiety affected the purchasing behavior of consumers. The results indicated that uncertainty, and perceptions of scarcity are positively associated with anxiety. Also, anxiety completely mediated the relationship among the variables and the panic purchasing behavior of consumers.

Rashed Alhaimer, 2021, investigated the various risk factors that alter online shopping behavior in Kuwait, during the COVID-19 pandemic. The findings showed that risk susceptibility, Perceived risk severity, and risk of formal penalties positively affect consumers' online buying attitude. Whereas, product risk, financial risk, and non-delivery risk show no significant effect.

They also found that convenience risk is the only factor that had negative effect on attitude. Further, they identified formal penalties imposed during the lockdown directly and positively affect consumer behavior toward online shopping during the pandemic. We show that factors that affect the attitude and behavior of users toward online shopping in normal condition vary from pandemic time.

Russell J. Zwanka & Cheryl Buff, 2021, reviewed the impact of the COVID-19 pandemic of 2020 on global consumer traits, buying patterns, global interconnectedness and psychographic behaviour etc… Their study has suggested the marketer's the longterm behavioral shifts during COVID-19 pandemic of 2020 and its resulting shifts in consumer behavior.

Valaskova, K. et al, 2021, conducted a study on Changes in Consumers' Purchase Patterns as a Consequence of the COVID-19 Pandemic. The results revealed that consumers' demographic characteristics like income, age, and occupation play vital role in the context of new shopping patterns. Their findings are in agreement with other global studies, confirming both the worldwide impact of the pandemic on consumer behavior and the importance of national studies on consumer shopping behaviour are similar using which the state authorities, traders, marketers, and entrepreneurs will be able to take necessary measures.

Di Crosta A, Ceccato I, Marchetti D, La Malva P, Maiella R, Cannito L, et al. (2021), administered an online survey during the first wave of the contagion in Italy and found that consumer behavior was predicted by anxiety and COVID-related pandemic fear, whereas consumer behavior toward non-necessities was predicted by depression. Personality traits, perceived economic stability, and self-justifications for purchasing also had an impact on consumer behavior.

3. OBJECTIVE OF THE STUDY

- To study the demographic characteristics of the Online Purchasing IT professionals.

- To find the association between the demographic characteristics and online purchase intention and Covid-19 components.

- To find the relationship among the Pandemic components (Pandemic Fear, Panic

Buying, Situational Influences, Government Guidelines, Information Overload, Cyberchondria and Perceived Severity) and Online Purchase intention factors (Attitude, Subjective Norms, Ease of Use and Perceived Usefulness).

3.1 METHODOLOGY

The study was conducted with the IT Professionals working from home during Covid-19 pandemic. The geography selected for the study was Bangalore known as IT hub of India. The total population of IT professionals for this study was 4,150 and the database was obtained and the Google survey form link was sent and data was collected. Based on the Krejice and Morgan (1970) sample size table, 384 respondents were considered to be adequate. Probability multi-stage random sampling technique was used for this study and the data were collected from 583 respondents.

3.2 DATA ANALYSIS

Table-1: Frequency Distribution for Demographic Characteristics of the Respondents (n=583)

Variable	Category	Frequency	Percent
Gender	Female	237	40.7
	Male	346	59.3
Age	20-29 Yrs	479	82.2
	30-39 Yrs	87	14.9
	40-49 Yrs	17	2.9
	>50 Yrs	0	0.0
Marital Status	Married	139	23.8
	Unmarried	444	76.2
Educational Qualification	Post Graduate	156	26.8
	Under Graduate	427	73.2
	Others	0	0.0
Experience	>16 yrs	17	2.9
	11 -15 yrs	24	4.1
	5-10 yrs	542	93.0

Sources: Authors Compilation

The table-1 shows the frequency distribution of the respondent's demography. Gender frequency has shown that the 59.3% (346) were males and 40.7% (237) females. 93% of the online consumers have experience of a range between 5-10 years. 76.2% of the online buyers are

unmarried. Regarding educational qualification level, about 73.2% of the consumers have completed their undergraduate Programme and remaining was Post graduates. Age distribution shows that 82.2% of them come under the 20–29 years age range.

Table-2: Frequency Distribution for Website Usage of the Respondents (n=583)

Websites	Frequency	Percent
AJIO	16	2.7
Amazon	288	49.4
Big Baske	3	.5
EBay	4	.7
First cry	5	.9
Flipkart	167	28.6
Meesho	21	3.6
Myntra	24	4.1
Netmeds	1	.2
Paytm	13	2.2
ShopClues	2	.3
Snapdeal	1	.2
Swiggy	22	3.8
Zomato	16	2.7
Total	583	100.0

Sources: Authors Compilation

The table-2 demonstrates the website usage of the online consumers. It is evident that 49.4 % of the respondents have frequently used Amazon website for their purchase. In second, 28.6% have chosen Flipkart as their most frequently used website. Subsequently, Myntra (4.1%), Meesho (3.6%) and Ajio (2.7%) websites have been used for purchasing. Swiggy (3.8%) has been used more frequently for ordering of food compared to that of Zomato (2.7%). Paytm (2.2%) website is also been used for payment and purchasing.

Table-3: Frequency Distribution for Buying Behavior of the Respondents (n=583)

Variable	Category	Frequency	Percent
Buying Behavior	Daily	18	3.1
	Monthly once	183	31.4
	Rarely	149	25.6
	Two Weeks once	108	18.5
	Weekly once	125	21.4
	Total	583	100.0

Sources: Authors Compilation

The table-3 illustrates the buying behavior of the online consumers. Majority (31.4 percent) have used the online Apps and websites at least once in a month. While 25.6 percent has rarely used the online websites and applications for their purchase. About 21.4% of consumers have weekly once purchased from online platform at the same time 18.5% of consumers have purchased two weeks once. Consumers purchasing daily on online was just 3.1%.

Table-4: Association between Demographic Characteristics and Buying Behavior

Variables	Pearson Chi-Square		Strength of Association	
	Value	P	Cramer's V	Strength
Gender * Buying Behavior	6.889	.142	.109	Small
Age * Buying Behavior	15.724	**.003**	**.164**	Moderate
Marital status * Buying Behavior	15.450	**.004**	**.163**	Moderate
Education Qualification * Buying Behavior	4.220	.377	.085	Small
Experience * Buying Behavior	26.679	**.001**	**.214**	Moderate

Sources: Authors Compilation

The table-4 shows that, there is no association exists between the gender and buying behavior, Education Qualification and the buying behavior of respondents. There is a significant moderate (V=.164) association exists between age and the buying behavior of online purchasers. There is a significant moderate (V=.163) association exists between marital status and the buying behavior of online purchasers. There is a significant moderate (V=.214) association exists between Experience and the buying behavior of online purchasers.

Table-5: Correlation Coefficient between Online Purchase behavior and Covid-19 Pandemic Scales among male (n=346) and female (n=247) Consumers

Gender	Variables	PF	PB	SI	GG	IO	CC	PS	AT	SN	EU	PU
Female	Pandemic Fear	1										
	Panic Buying	.639**	1									
	Situational Influences	.598**	.642**	1								
	Government Guidelines	.516**	.554**	.757**	1							
	Information Overload	.508**	.486**	.770**	.789**	1						
	Cyberchondria	.587**	.564**	.676**	.727**	.723**	1					
	Perceived Severity	.578**	.561**	.682**	.740**	.676**	.708**	1				
	Attitude	.491**	.483**	.570**	.551**	.543**	.473**	.460**	1			
	Subjective Norms	.431**	.399**	.508**	.515**	.544**	.464**	.346**	.758**	1		
	Ease of Use	.475**	.457**	.529**	.545**	.525**	.500**	.483**	.756**	.679**	1	
	Perceived Usefulness	.376**	.483**	.527**	.525**	.496**	.519**	.494**	.610**	.578**	.780**	1
Male	Pandemic Fear	1										
	Panic Buying	.646**	1									
	Situational Influences	.530**	.666**	1								
	Government Guidelines	.508**	.670**	.742**	1							
	Information Overload	.475**	.617**	.676**	.718**	1						
	Cyberchondria	.453**	.623**	.580**	.691**	.734**	1					
	Perceived Severity	.422**	.600**	.634**	.622**	.660**	.661**	1				
	Attitude	.229**	.364**	.433**	.428**	.391**	.436**	.413**	1			
	Subjective Norms	.234**	.359**	.326**	.368**	.343**	.394**	.328**	.589**	1		
	Ease of Use	.269**	.365**	.371**	.367**	.383**	.424**	.364**	.597**	.653**	1	
	Perceived Usefulness	.157**	.328**	.362**	.385**	.364**	.413**	.367**	.582**	.521**	.712**	1

**. Correlation is significant at the 0.01 level (2-tailed).

The above table represents the correlation among the four online intention factors and six Covid-19 pandemic factors. A Pearson correlation was run to investigate the bivariate relationship among these variables. The results disclosed that, there exists a high degree of positive correlation between the scales 'Situational Influences' and 'Government Guidelines' (r=.757) and also between 'Situational Influences' and 'Information Overload' (r=.770) for female consumers. It is also observed that a high degree of correlation exists between 'Information overload' and Government Guidelines' (r=.789) and also there exists a strong significant correlation between the scales 'Attitude' and 'Subjective Norms' (r=.758), 'Ease of Use' (r=.756) for female online consumers. A high degree of correlation was observed between 'Perceived Usefulness' and 'Ease of Use' (r=.780) for Female consumers. In the case of Male Consumers, we have not observed high degree of correlation between the variables but moderate

positive correlation was found between 'Pandemic Fear' and 'Panic buying'(r= .646), 'Situational Influences' (r= .530), 'Government Guidelines' (r= .508). Result have indicated a moderate positive correlation between 'Panic buying' and 'Situational Influences' (r= .666), 'Government Guidelines' (r= .670), 'Information overload' (r= .617), 'Cyberchondria' (r= .623), 'Perceived Severity' (r= .600). Result have also indicated a moderate positive correlation between 'Panic buying' and 'Situational Influences' (r= .666), 'Government Guidelines' (r= .670), 'Information overload' (r= .617), 'Cyberchondria' (r= .623), 'Perceived Severity' (r= .600).

Table-6: Correlation Coefficient between Online Purchase behavior and Covid-19 Pandemic Scales among married (n=139) and unmarried (n=444) Consumers

Marital Status	Variables	PF	PB	SI	GG	IO	CC	PS	AT	SN	EU	
Married	Pandemic Fear	1										
	Panic Buying	.691**	1									
	Situational Influences	.601**	.664**	1								
	Government Guidelines	.454**	.542**	.667**	1							
	Information Overload	.469**	.486**	.678**	.674**	1						
	Cyberchondria	.548**	.630**	.636**	.672**	.750**	1					
	Perceived Severity	.526**	.615**	.638**	.566**	.653**	.687**	1				
	Attitude	.328**	.344**	.426**	.415**	.431**	.479**	.360**	1			
	Subjective Norms	.253**	.226**	.270**	.401**	.369**	.409**	.289**	.555**	1		
	Ease of Use	.170*	.205*	.323**	.291**	.361**	.413**	.225**	.618**	.695**	1	
	Perceived Usefulness	.142	.275**	.199*	.267**	.241**	.364**	.272**	.482**	.662**	.799**	
Unmarried	Pandemic Fear	1										
	Panic Buying	.630**	1									
	Situational Influences	.547**	.656**	1								
	Government Guidelines	.531**	.648**	.774**	1							
	Information Overload	.498**	.592**	.731**	.776**	1						
	Cyberchondria	.498**	.594**	.617**	.718**	.725**	1					
	Perceived Severity	.472**	.577**	.661**	.706**	.671**	.678**	1				
	Attitude	.343**	.442**	.514**	.506**	.469**	.443**	.454**	1			
	Subjective Norms	.335**	.427**	.449**	.445**	.455**	.429**	.353**	.705**	1		
	Ease of Use	.407**	.471**	.477**	.494**	.475**	.469**	.476**	.689**	.656**	1	
	Perceived Usefulness	.278**	.437**	.506**	.504**	.482**	.485**	.470**	.628**	.510**	.726**	
**. Correlation is significant at the 0.01 level (2-tailed).												
*. Correlation is significant at the 0.05 level (2-tailed).												

The above table represents the correlation among the four online purchase intention factors and six Covid-19 pandemic factors. A Pearson correlation was run to investigate the bivariate relationship among these variables. The results disclosed that, there exists a high degree of positive correlation between the scales 'Cyberchondria' and 'Information Overload' (r=.750)

and also between the scales 'Perceived usefulness' and 'Ease of Use' (r=.799) for married Online consumers. Among unmarried online consumers, it is also observed that a high degree of correlation exists between 'Government Guidelines' and 'Situational Influences' (r= .774) and between the scales 'Information overload' and 'Government Guidelines' (r=.776). Also, many scales have shown a moderate positive correlation for married and unmarried online consumers.

Table-7: Correlation Coefficient between Online Purchase behavior and Covid-19 Pandemic Scales among undergraduate (n=427) and post graduate (n=156) participants

Education Qualification	Variables	PF	PB	SI	GG	IO	CC	PS	AT	SN	EU	PU
Post Graduate	Pandemic Fear	1										
	Panic Buying	.683**	1									
	Situational Influences	.545**	**.762****	1								
	Government Guidelines	.608**	.668**	**.771****	1							
	Information Overload	.559**	.656**	.742**	.735**	1						
	Cyberchondria	.607**	.653**	.641**	.700**	**.796****	1					
	Perceived Severity	.551**	.583**	.617**	.609**	.651**	**.770****	1				
	Attitude	.404**	.490**	.562**	.555**	.529**	.506**	.473**	1			
	Subjective Norms	.417**	.517**	.489**	.536**	.522**	.465**	.369**	.709**	1		
	Ease of Use	.413**	.549**	.634**	.579**	.606**	.603**	.526**	**.757****	.602**	1	
	Perceived Usefulness	.267**	.438**	.470**	.404**	.462**	.497**	.447**	.566**	.499**	.769**	1
Under Graduate	Pandemic Fear	1										
	Panic Buying	.627**	1									
	Situational Influences	.567**	.614**	1								
	Government Guidelines	.474**	.604**	.742**	1							
	Information Overload	.461**	.523**	.706**	**.757****	1						
	Cyberchondria	.461**	.577**	.616**	.713**	.701**	1					
	Perceived Severity	.452**	.586**	.673**	.701**	.676**	.635**	1				
	Attitude	.316**	.389**	.467**	.458**	.430**	.433**	.419**	1			
	Subjective Norms	.275**	.317**	.371**	.393**	.392**	.409**	.323**	.651**	1		
	Ease of Use	.329**	.344**	.361**	.392**	.375**	.389**	.367**	.638**	.692**	1	
	Perceived Usefulness	.237**	.378**	.420**	.466**	.405**	.439**	.410**	.608**	.569**	.732**	1
**. Correlation is significant at the 0.01 level (2-tailed).												

The above table represents the correlation among the four online purchase intention factors and six Covid-19 pandemic factors for Educational Qualification. A Pearson correlation was run to investigate the bivariate relationship among these variables. The results disclosed that,

there exists a high degree of positive correlation between the scales 'Situational Influence' and 'Panic Buying' (r=.750), Government Guidelines (r= .771) and also between the scales 'Cyberchondria' and 'Perceived Severity' (r=.776), 'Information Overload'(r=.770) for post graduate Online consumers. Among under graduate online consumers, it is observed that a high degree of correlation exists between 'Information Overload' and 'Government Guidelines' (r= .757). Also, many scales have shown a moderate positive correlation for married and unmarried online consumers.

Table-8: Correlation Coefficient between Online Purchase behavior and Covid-19 Pandemic Scales among 5-10 yrs (n=542), 11-16=5 yrs (n=24) and >16 yrs (n=17) experienced consumers

Experience	Variables	PF	PB	SI	GG	IO	CC	PS	AT	SN	EU	PU
>16 yrs	PF	1										
	PB	.696**	1									
	SI	.541*	**.795****	1								
	GG	.626**	**.819****	**.882****	1							
	IO	.537*	**.763****	**.884****	**.965****	1						
	CC	.687**	**.826****	**.843****	**.961****	**.935****	1					
	PS	.537*	**.874****	**.846****	**.776****	**.777****	**.821****	1				
	AT	.618**	.505*	.417	.678**	.652**	.649**	.309	1			
	SN	.480	.504*	.458	.515*	.559*	.486*	.350	**.833****	1		
	EU	.450	.317	.265	.532*	.551*	.527*	.141	**.937****	**.801****	1	
	PU	.402	.456	.381	.540*	.559*	.498*	.261	**.831****	**.876****	**.879****	1
11 -15 yrs	PF	1										
	PB	.651**	1									
	SI	.704**	**.813****	1								
	GG	.547**	.734**	.740**	1							
	IO	.334	.555**	.694**	.500*	1						
	CC	.300	.645**	.660**	.509*	**.794****	1					
	PS	.492*	.740**	.723**	.547**	.719**	**.763****	1				
	AT	.405*	.576**	.612**	.440*	.589**	.560**	.469*	1			
	SN	.032	.164	.155	.240	.082	.096	-.100	.414*	1		
	EU	.215	.457*	.561**	.273	.559**	.583**	.507*	**.770****	.403	1	
	PU	-.016	.309	.369	.093	.397	.471*	.409*	.418*	.377	**.808****	1
5-10 yrs	PF	1										
	PB	.640**	1									
	SI	.553**	.643**	1								
	GG	.504**	.602**	.745**	1							
	IO	.496**	.553**	.710**	**.752****	1						
	CC	.508**	.584**	.607**	.701**	.716**	1					
	PS	.480**	.559**	.640**	.674**	.658**	.667**	1				
	AT	.331**	.415**	.496**	.488**	.452**	.446**	.441**	1			
	SN	.322**	.382**	.419**	.443**	.446**	.438**	.359**	.675**	1		

EU	.359**	.413**	.444**	.458**	.440**	.451**	.425**	.661**	.673**	1	
PU	.259**	.407**	.443**	.472**	.424**	.464**	.434**	.595**	.547**	.737**	1

**. Correlation is significant at the 0.01 level (2-tailed).

The above table represents the correlation among the four online purchase intention factors and six Covid-19 pandemic factors for Experience of the respondents. A Pearson correlation was run to investigate the bivariate relationship among these variables. The results disclosed that, there exists a high degree of positive correlation between the scales 'Information Overload' and Government Guidelines (r= .752) for the people experienced between 5-10 years. A strong positive correlation was observed between the scales 'Situational Influences' and 'Panic buying' (r= .813), 'Cyberchondria' and 'Information Overload'(r= .794), 'Cyberchondria' and 'Perceived Severity' (r=.763), 'Ease of Use' and 'Attitude' (r=.770) and 'Ease of Use' and 'Perceived Usefulness' (r= .808) for the people experienced between 11-15 years. Also, many scales among people experienced more than 16 years have shown a high degree of positive correlation.

4. FINDINGS

- The first objective was to study the demographic characteristics of the consumers. Gender has shown that the males are 346 (59.3%), while females were 237 (40.7%). Age distribution shows that 82.2% of them come under the 20–29 years age. Majority (76.2%) of the online buyers are unmarried. About 73.2% of the consumers have completed their undergraduate Programme. Majority (93%) of the online consumers have experience of range between 5-10 years.

- The second objective was to find the association existing between the demographic characteristics and the buying behavior. It has been found that there is no association between gender, Education Qualification and the buying behavior of respondents. There is a significant moderate association between age, marital status, Experience of the online purchasers and their buying behavior.

- The third objective was to understand the relationship existing between consumers demographic (age, gender, marital status, education qualification and experience) and components of online purchase behavior (Attitude, Subjective Norms, Ease of Use and Perceived Usefulness) and pandemic components (Pandemic Fear, Panic Buying, Situational Influences, Government Guidelines, Information Overload, Cyberchondria and Perceived Severity). It is observed that a moderate and high degree of correlation existed between most of the demographic characteristics

(Attitude, Subjective Norms, Ease of Use and Perceived Usefulness) and Pandemic components (Panic Buying, Situational Influences, Government Guidelines, Cyberchondria) and Online Purchase intention factors (Attitude, Subjective Norms and Ease of Use).

5. SUGGESTIONS

- Various demographic factors such as marital status, age and experience of the online buyers are to be considered during tactical conclusions.

- Innovative ideas, proposals and plans can increase the frequency and buying behavior as most have opted for monthly once purchase over online.

- Creating a positive attitude in consumers through customized websites, products and services can improve the online purchase behavior.

- Subjective norms and Ease of use of technology are important factors that are to be a part of any decision taken by the firms.

6. CONCLUSION

E-commerce industry is expected to grow in upcoming years and with the pandemic is expected to be a future threat; marketers should rethink on their approach towards consumers. During Covid-19 pandemic, we have found a moderate to high degree of correlation between Covid-19 Pandemic factors (Panic Buying, Situational Influences, Government Guidelines, Cyberchondria), consumers demographic (age, gender, marital status, education qualification and experience) and components of online purchase behavior (Attitude, Subjective Norms, Ease of Use and Perceived Usefulness), that are expected to be part of future decisions taken by the marketers.

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