Covid-19 Pandemic: Effect of Socio-Demographic Factors on Human Behavior

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ABSTRACT: The effect of Socio-Demographic Factors (Gender, Marital status, Occupation and Income) as predictors of Human behavior during the COVID-19 pandemic is explored. Sample comprised 313 male and female Indian respondents. Standardized measures were used to assess the constructs. Results revealed that; Pandemic proved equally fatal for both Male and Female (p value for equality of means is 0.890). Being married or not, did not significantly affected the human behavior during pandemic. Survival was the major thrust and occupation didn't bother people much and professionals of all kinds have similar pressures to earn their livelihood in situations of fear, lockdown and resource constraint. It is being widely propagated that 'the world has to live with the novel coronavirus, and hence, an understanding of Socio-Demographic factors affecting Human Behavior would facilitate in the rehabilitation of people. The findings of this study revealed that there is more to affect human lives and behavior than just socio demographic factors which were presumed to be one of the significant factors.

KEYWORDS: Human behavior, COVID 19 pandemic, Socio-Demography

Pandemic is witnessed across globe with a popularly known Covid Virus affecting human behavior and lives across continents. The virus was identified on January 7'2020 and WHO declared it pandemic when it got identified as a cause of severe illness, over the time the virus has changed its nature of existence and now the multiple variants are the reasons of serious concern [China CDC (2019); WHO (2020)].

With increasing number of Covid cases (mutant variants), the virus has led to million deaths, thereby affecting the human lives in nutshell (Chen Wu and Chan 2020). World Health Organization (2020) quotes the impact of virus on people with low-income group, stating, "the international migrants, especially those involved in low-income jobs, are the most affected and vulnerable to death and infection of COVID 19".

A study conducted in New York City compared the statistical significance of Demographics and its effect on COVID 19 Virus outreach. The results stated difference in occupation patterns linking people with high-level social outreach and higher social interaction to be more vulnerable for getting infected by virus. Some other studies linked virus outbreak and human behavior and its effect with varying demographic variables like psychological interventions (Duan and Zhu 2020),an individual's emotions affected by neighbors behavior (Borjas 2020), population parameters (Kraemer et al 2020), age group (Dowd et al 2020) and parameters affecting socioeconomic setup (Mogi and Spijker 2020).Covid 19 crises has created economic deficit across globe along with affecting the mental health of people and quality of work life. Studies proved ill effects of pandemic on human behavior such as increasing cases of Depression and apprehension (Wang et al 2020), fear of losing loved one's (Ahorsu et al 2020) and xenophobia towards people speculated of being infected with the disease (Mamun and Griffiths 2020). Nevertheless, fear of getting covid struck has led to suicidal tendencies in people across globe.

People exist to be a part of social community and try to maintain the status quo in between their professional and personal life. Pandemic has bought Work from home culture to be prevalent in many societies affecting the work life balance, social contribution of individuals and also creating income deficit. As quoted in Economic Times (2020), most of the outcomes of covid 19 pandemic resulted in negatively affecting human behavior. Lee (2020) stated in his study about individuals who experience various symptoms of anxiety like loss of appetite, sleep disruption, immobility and dizziness as expressions of anxiety due to COVID-19.

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I. MATERIAL AND METHOD

The present research utilizes a quantitative research design using standardized measures to assess the Impact of various Socio-Demographic Factors such as; Gender, Age, Occupation and Income level on Human behavior during Covid 19 Pandemic. The data is collected form residents of Madhya Pradesh via self- designed questionnaire. Responses from 313 respondents (including entrepreneurs, students, business owners, professionals and service employees) is considered to be appropriate sample

The study was conducted in Madhya Pradesh. Data has been collected from 313 respondents including students, business owners, service class employees and other professionals. Secondary data has been used from journals, magazines, articles and websites.

Data has been analyzed using various statistical tools such as; Reliability analysis, KMO and Bartlett's Test, t-test statistic using Statistical Package for Social Sciences (SPSS version 17.0).

a. Reliability & Normality test statistic

The Cronbach's alpha value of 0.871 is good enough to proceed further for analysis. The KMO value of 0.862 indicates the sampling is adequate

Table 1 Reliability test statistics

Cronbach's Alpha	N of Items
.867	30

Table 2 KMO and Bartlett's test result

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.862
Bartlett's Test of Sphericity	Approx. Chi-Square	3.179E3
	df	435
	Sig.	.000

b. Objectives

The study aims to assess the Impact of various Socio-Demographic Factors such as; Gender, Age, Occupation and Income level on Human behavior during Covid 19 Pandemic. To achieve these objectives, the present study proposed the following hypotheses:

c. Hypothetical Framework

H_{01}: There is no significant effect of gender on Human behaviour during Covid 19 Pandemic.

H_{02}: There is no significant effect of marital status on Human behaviour during Covid 19 Pandemic.

H_{03}: There is no significant effect of occupation on Human behaviour during Covid 19 Pandemic.

H_{04}: There is no significant effect of income on Human behaviour during Covid 19 Pandemic.

II. RESULT AND DISCUSSION

T-test statistic is applied to know the difference in means of male and female respondents in lieu of Human behavior during Covid 19 Pandemic. The data comprises of 155 male respondents and 158 female respondents.

The mean for male respondents is 120.89 and female respondents is 124.14. The t value for male staff is -2.057 and for female staff is -2.056. p value for equality of means is 0.890 which is greater than 0.05. Since $p > 0.05$ which is more than significance level $\alpha = 0.05$, so Null hypothesis gets accepted and it's inferred that

"H_{01}: There is no significant effect of gender on Human behavior during Covid 19 Pandemic". Probable reasons for same can be the equal pressures of work life balance on both the counterparts i.e., Male and Female. The respondents varied from students to working professionals and a situation like pandemic has proved equally fearful and disheartening for all human beings. Human faced lot of health issues, burnout and stress disorders. Thus, Pandemic proved equally fatal for both Male and Female and their behavioral patterns were almost similar during Covid 19 pandemic.

Table 3 Independent sample test

Group Statistics					
	Gender	N	Mean	Std. Devia-tion	Std. Error Mean
Human Behavior	Male	155	120.89	14.531	1.167
	Female	158	124.14	13.395	1.066

Table 4 Analysis of Variance test statistic

t-test for equality of Means								
		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Human Behavior	Equal variances assumed	0.019	0.89	-2.057	311	0.04	-3.249	1.579
	Equal variances not assumed			-2.056	307.894	0.041	-3.249	1.58

Marital Status					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	913.444	4	228.361	1.158	.329
Within Groups	60527.517	307	197.158		

Total	61440.962	311			

Occupation					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	74.861	3	24.954	.125	.945
Within Groups	61310.657	307	199.709		
Total	61385.518	310			

Income					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1549.955	6	258.326	1.322	.247
Within Groups	59581.350	305	195.349		
Total	61131.304	311			

ANOVA test statistic is applied to analyze the effect of marital status on Human behavior during Covid 19 Pandemic. F value is 1.158 and Mean square value in between the groups is 228.361 at degree of freedom 4.p value is 0.329 which is more than 0.05 level of significance, that denotes no significant effect of Marital status on Human behavior during Covid 19 Pandemic. Thus, Null Hypothesis "H_{o2}: There is no significant effect of Marital status on Human behavior during Covid 19 Pandemic" gets accepted. Initially during pandemic, it was assumed that women are struggling with meeting household's demands during Lockdown as the work from home culture became prominent and also the home makers' responsibilities were burdened on female counterpart in family. Whether being married or not, did not made much difference in handling the family responsibly during pandemic.

ANOVA test statistic is used to analyze the effect of Occupation on human behavior during Covid 19 Pandemic. F value is .125 and mean square value in between the groups is 24.954 at degree of freedom 3.p value is 0.945 which is greater than 0.05 level of significance which denotes no significant effect of Occupation on human behavior during Covid 19 Pandemic. Thus, Null hypothesis that is "H_{03}: There is no significant effect of occupation on Human behavior during Covid 19 Pandemic", is accepted. The most common disorder observed during Covid 19 pandemic had been stress disorder and Mental Fatigue. Work from Home for all occupations whether it be of; Consulting Doctor, Engineer, Technician, IT Software Personnel or Teacher has been equally challenging as each one of these professionals have to earn their livelihood in such situations of fear, lockdown and resource constraint. Thus, human behavior in all occupations under experimentation had been quite similar in nature.

ANOVA test statistic is used to analyze the effect of Income on Human behavior during Covid 19 Pandemic. F value is 1.322 and mean square value in between the groups is 258.326 at degree of freedom 6.p value is 0.247 which is more than 0.05 level of significance that denotes insignificant effect of Income on Human behavior during Covid 19 Pandemic. Thus, Null hypothesis that is "H_{04}: There is no significant effect of income on Human behavior during Covid 19 Pandemic", is accepted. The Pandemic situation created a terror of survival in human mind. Covid 19 virus spread is a disease of its kind wherein humans are afraid of another human beings.

Lockdown confined people in their spaces and thereby restricting their movement to and fro. Thus; survival on past earnings was a major thrust for mediocre family, government support of resources for poor and migrant workers and non-stop cash flow from investment for affluent class families didn't let people bother in initial phase of pandemic. Major giants and IT companies offered promotional hikes to their employees whereas various work units and Institutes bought their staff on 50% salary but still, the choice of survival as compared to Income has been witnessed as a priority for Professionals, during pandemic.

III. CONCLUSION

COVID-19 pandemic has led a non-significant influence of gender, marital status, occupation and income on Human behavior. The findings of this study revealed that there is more to affect human lives and behavior then just socio demographic factors which were presumed to be one of the significant factors. Individual factors such as fear of getting diseased, losing a family member, anxiety and confinement in limited space proved to be more significant. Human faced lot of health issues, burnout and stress disorders and Pandemic proved equally fatal for both Male and Female. Whether being married or not, did not made much difference in handling the family responsibly during pandemic.

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Covid 19 virus outbreak bought significant changes in individual's life affecting their behavior in several patterns and functions but their behavioral patterns were almost similar when identified on sociodemographic attributes.

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