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## **COVID-19 Awareness of People and its Impact on Lifestyle and various Sectors of the Economy**

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**Abstract:** We all know a new respiratory disease called COVID-19 is spreading across the world and India is one of the most affected countries of COVID-19 pandemic. The government is trying to contain the spread of the disease, but till now the affected and death rate has been increasing day by day in India. This study employed descriptive research method to understand the awareness among people regarding COVID-19 pandemic and how the pandemic impacted their lifestyle and Indian economy. The primary data collection method was used through a semi-structured questionnaire using Google form. A sample of 200 people was selected for this study including people from different states, age and profession. Hypothesis tests were based on people awareness of COVID-19 spread and if there were any effects on lifestyle and Indian Economy due to COVID-19. The variables were mostly categorical variables. Most of the test results rejected null hypothesis and hence, we concluded that Indians were aware of COVID-19 spread and most of them agreed that this pandemic affected their lifestyles as well as Indian Economy. The paper would be informative to Government and Research Scholars who are further researching on impact of Covid-19 on people's lifestyle and economy.

**Keywords:** COVID-19, Lifestyle, Economy, Awareness, society

### **1. Introduction**

A new respiratory virus called the COVID-19 has been making headlines from 2019 end for causing an outbreak of respiratory illness throughout the world. The outbreak began in Wuhan, Hubei Province, China and quickly spread internationally. Millions of people have become sick and public health officials are keeping a close watch on how the virus is spreading. India is one of the most affected countries of COVID-19 pandemic. The government is trying to contain the spread of the disease but till now the infected and death rate has been increasing day by day in India. This pandemic has not only been taking human lives but also affecting Indian Economy poorly. Hence, we have conducted a research survey to understand the awareness of people about the pandemic and COVID-19 impact on their lifestyles and their views on how the economy and various sectors of the society will be affected by the pandemic in an Indian Context.

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## 2. Literature Review

Why did the spread of the coronavirus bring the global economy to its knees? The answer lies in two methods by which coronavirus stifled economic activities. First, the spread of the virus encouraged social distancing which led to the shutdown of financial markets, corporate offices, businesses and events. Second, the exponential rate at which the virus was spreading, and the heightened uncertainty about how bad the situation could get, led to flight to safety in consumption and investment among consumers, investors and international trade partners (Peterson and Thankom, 2020). The outbreak of coronavirus named COVID-19 has disrupted the Chinese economy and is spreading globally. The evolution of the disease and its economic impact is highly uncertain which makes it difficult for policymakers to formulate an appropriate macroeconomic policy response (McKibbin, 2020). At the date of this report, the duration of the lockdown, as well as how the recovery will take place is still unknown. That is why several scenarios are used. In a mild scenario, GDP growth would take a hit, ranging from 3-6% depending on the country (Fernandes, 2020). Containment measures are crucial to halt the spread of the 2019 COVID-19 pandemic but entail large short-term economic costs. This paper tries to quantify these effects using daily global data on real-time containment measures and indicators of economic activity such as Nitrogen Dioxide (NO<sub>2</sub>) emissions, flights, energy consumption, maritime trade, and mobility indices (Furceri, 2020). COVID-19's daily increasing cases and deaths have led to worldwide lockdown, quarantine and some restrictions. This study aims to analyse the effect of lockdown days on the spread of coronavirus in countries. COVID-19 cases and lockdown days data were collected for 49 countries that implemented the lockdown between certain dates (without interruption). The correlation tests were used for data analysis based on unconstrained (normal) and constrained (Tukey-lambda) (Atalan, 2020). The paper compares the impacts of COVID-19 to previous epidemic/pandemics and other types of global crises and explores how the pandemic may change society, the economy, and tourism. It discusses why COVID-19 is an analogue to the on-going climate crisis, and why there is a need to question the volume growth tourism model advocated by UNWTO, ICAO, CLIA, WTTC and other tourism organizations (Scott and Hall, 2020).

The study demonstrates whether the people of India are aware of Covid19 spread and government precaution, whether people are taking any self-precaution (wearing mask, hand wash, avoiding crowded place and taking vitamins, *among others*) or not. It also assesses if Covid-19 has any impact on lifestyle (Purchase decision, going out for movies, restaurant, pub, travelling) and if Covid-19 has any impact on various sectors of Economy (Large and small organization, unemployment, Train and Airways, among others).

Based on our research questions, the research objective is developed to study the awareness of people regarding Covid19 spread and Government precaution, to understand

what type of self-precaution people are taking and to study the impact of Covid19 on people lifestyle and various sectors of Economy.

### **3. Methodology**

#### **3.1. Approach**

Quantitative and Descriptive research method was considered the most suitable for the purpose of investigation, which could provide the necessary insights into a new area of research. Quantitative research was concerned with the responses of participants. The primary data collection method was used through a semi-structured questionnaire using Google form.

#### **3.2. Participants**

A sample of 200 people which was the total population of participants was selected for this study including people from different states, age and profession. Probability sampling method was applied using systematic sampling method. An analysis of the demographic profile of respondents revealed that 57.7% of the respondents were male and 42.3% of the respondents were female. After analysing the respondent's age, it emerged that the largest group of respondents (59.7%) were aged between 18 to 25 years. The second highest group of respondents (22.4%) were aged between 26 to 35 years. Additionally, approximately 52.2% of respondents were from metropolitan cities and lowest 2.5% of respondents were from rural areas. It was also seen that 55.3% of total respondents were students and 20.1% were private sector employees by profession.

#### **3.3. Data Analysis**

R-studio 4.0.2 is used for hypothesis testing and data interpretation. Initially, demographic data of the subjects, factors as well as central tendency were established. Following this, a series of multivariate statistical procedures included hypothesis testing, correlation analysis and linear regression were performed on all the variables.

### **4. Analysis and Discussion**

The questionnaire consists of twelve questions. Hypothesis were tested first. Tools like correlation and regression were used to understand how much one variable can effect another.

#### **4.1. Hypothesis Testing**

Null hypothesis: location does not have any significant effect on washing hand regularly.

Alternative hypothesis: location has effect on washing hand regularly.

Chi-square test between location and washing hand was used, as both were two categorical variables.  $p$  - value =  $6.877e-08$  as  $p$ -value less than 0.05, we reject null hypothesis. Hence, location has impact on people habit of washing hand regularly in Covid time.

Null hypothesis: Gender does not have any significant effect on buying food from outside.  
Alternative hypothesis: Gender has effect on buying food from outside.

Chi-square test between gender and online food order was used as both were two categorical variables.  $p$ -value=  $0.3174$  as  $p$ -value greater than 0.05, we accept null hypothesis. Hence, Gender does not have significant effect on buying food from outside.

Null hypothesis: location does not have any significant effect on spreading concerned.  
Alternative hypothesis: location has effect on spreading concerned.

Chi-square test between location and spreading concerned was used, as both were two categorical variables.  $p$  - Value =  $2.982e-11$  as  $p$ -value less than 0.05, we reject null hypothesis. Hence, location has impact on people spreading concerned.

Null hypothesis: people are not avoiding social gathering.  
Alternative hypothesis: people are avoiding social gathering.

Chi-square test between location and avoiding social gathering was used, as both were two categorical variables.  $p$ - Value =  $6.833e-09$  as  $p$ -value less than 0.05, we reject null hypothesis. Hence, people of India are avoiding crowded place.

Null Hypothesis Testing: location does not have any significance difference in taking Safety concerns in buying products from stores/shops.  
Alternative Hypothesis Testing: location does have any significance difference in taking Safety concerns in buying products from stores/shops.

Chi-square test between location and buying products from store data was used as both were two categorical variables.  $p$  - Value =  $7.339e-05$  as  $p$ -value less than 0.05, we reject null hypothesis. Hence, location has impact on people's safety concerned regarding purchasing product from stores.

Null Hypothesis Testing: Region of stay does not have significant effect on Large business/corporation.  
Alternative Hypothesis Testing: Region of stay has significant effect on Large business/corporation.

Chi-square test between location and large business is used as both were two categorical variables. P- Value = 0.1175 as p-value greater than 0.05, we accept null hypothesis. So, large business/corporation is affected according to region of stay.

Null Hypothesis Testing: gender does not have a significant effect on unemployment in the pandemic situation.

Alternative Hypothesis Testing: gender does have a significant effect on unemployment in the pandemic situation.

Chi-square test between gender and unemployment data is used as both were two categorical variables. p - Value = 0.0007077 as p-value less than 0.05, we reject null hypothesis. So gender has an effect on unemployment in the pandemic situation.

Null Hypothesis Testing: Region of stay does not have significant effect on Small business/corporation.

Alternative Hypothesis Testing: Region of stay has significant effect on Small business/corporation.

Chi-square test between location and small business data is used as both were two categorical variables. P-value = 0.03392, since the p value is less than 0.05 we reject the null hypothesis. So, Small business/corporation will be affected according to region of stay.

Null Hypothesis Testing: There is significant change in use digital payment apps (like paytm, google pay, amazon pay etc.) in the last 10-15 days by men and women.

Alternative Hypothesis Testing- There is no significant change in use digital payment apps (like Paytm, google pay, amazon pay etc.) in the last 10-15 days by men and women.

Chi-square test between gender and digital payment data is used as both were two categorical variables. P-value = 0.5261, i.e,  $p > 0.05$ , so we accept null hypothesis. Thus there is a significant increase of people using digital payment methods during COVID crisis.

Null Hypothesis Testing: There is significant change for out of home entertainment based on region of stay.

Alternative Hypothesis Testing: There is no significant change for out of home entertainment based on region of stay.

Chi-square test between location and out of home entertainment data is used as both were two categorical variables. P-value = 0.2636, i.e,  $p > 0.05$ , so we accept null hypothesis. Thus there is a significant change of people availing out of home entertainment facilities, i.e., it has decreased.

Null Hypothesis Testing: There is no change in comparison to pre COVID crisis based on location of stay.

Alternative Hypothesis Testing: There is a significant decrease in Food delivery/takeaway (Zomato and Swiggy) compared to pre COVID crisis.

Chi-square test between location and food delivery option data is used as both were two categorical variables. P-value = 0.4197, i.e,  $p > 0.05$ , so we accept null hypothesis. Thus there is no significant change of people availing food delivery.

H12: Null Hypothesis Testing: There is no change in comparison to pre COVID crisis in Travel (Road, Rail and Air) in comparison to pre COVID crisis.

Alternative Hypothesis Testing: There is significant decrease in travel (Road, Rail and Air).

Chi-square test between location and food delivery option data is used as both were two categorical variables. P-value =  $1.584 \times 10^{-5}$ , i.e,  $p < 0.05$ , so we fail to accept null hypothesis. Thus there is a significant decrease of people travelling right now.

#### **4.2. Models built using Regression**

Logistic regression is used to develop model for each section. The main sections are: General Awareness, Health Awareness, Purchase Decision and Economic Effect.

The following are the models we have created for general awareness:

*Model 1:* In this model, we have only considered region for comparison with the dependant variable, i.e, general awareness. The AIC of the model is 143.53.

*Model 2:* In this model, region and gender is considered with the dependant variable. The AIC of the model is 138.15.

*Model 3:* In this model, region, gender and confidence of persons regarding healthcare facility of the country is considered with the dependant variable. The AIC of the model is 138.92.

*Model 4:* In this model, region, gender, confidence of persons regarding healthcare facility of the country and expected duration when the pandemic will subdue is considered with the dependant variable. The AIC of the model is 139.49.

*Model 5:* In this model, region, gender, confidence of persons regarding healthcare facility of the country, expected duration when the pandemic will subdue and whether there is any change in daily routine of the respondent is considered with the dependant variable. The AIC of the model is 116.26.

*Model 6:* In this model, region, gender, confidence of persons regarding healthcare facility of the country, expected duration when the pandemic will subdue and respondent is washing hands regularly considered with the dependant variable. The AIC of the model is 139.41.

*Model 7:* In this model, region, gender, confidence of persons regarding healthcare facility of the country, expected duration when the pandemic will subdue and his/her usage of mask when going outdoor factors are considered. The AIC of the model is 138.67.

Interpretation: As we see from the above models, model 5 is the best model since the AIC value of 116.26 is least.

The following are the models we have created for purchase Decision:

*Model 1:* In this model, we have only considered the safety concerns of buyers while purchasing items from outside for comparison with the dependant variable, i.e., general awareness. The AIC of the model is 140.95.

*Model 2:* In this model, safety concerns of buyers while purchasing items from outside and whether they are anticipating a sale to buy items at discounted cost for comparison with the dependant variable. The AIC of the model is 139.66.

*Model 3:* In this model, safety concerns of buyers while purchasing items from outside, avoiding unnecessary purchases right now or whether they are anticipating a sale to buy items at discounted cost for comparison with the dependant variable. The AIC of the model is 135.71.

*Model 4:* In this model, safety concerns of buyers while purchasing items from outside, avoiding unnecessary purchases right now or whether they are anticipating a sale to buy items at discounted cost for comparison with the dependant variable. The AIC of the model is 140.12.

Interpretation: As AIC of 135.71, lowest among all the other models, we have considered model 3 as the best model. The significant components are more here. We have done outlier test and Durbin Watson test. P-value is less than 0.05 for outlier test. So data is normal, no residuals are there. P -value >.05 for Durbin Watson test, hence autocorrelation does not exist. Multicollinearity assumption is met too.

The following are the models we have created for economic conditions:

*Model 1:* In this model, we have only considered how large businesses are affected by the pandemic in comparison with the dependant variable. The AIC of the model is 145.96

*Model 2:* In this model, we have only considered how large businesses are affected by the pandemic and economic expenditure varied by the respondents for comparison with the dependant variable. The AIC of the model is 145.03

*Model 3:* In this model, how large business are affected by the pandemic, economic expenditure varied by the respondents and economic slowdown with the dependant variable. The AIC of the model is 144.31

*Model 4:* In this model, how large business are affected due by the pandemic, economic expenditure varied by the respondents, economic slowdown and the available healthcare services with the dependant variable. The AIC of the model is 136.47

**Interpretation:** The best model is model four. We can clearly see large business affected, Finance expenditure, recession and Healthcare service has more effect on economic condition in our country during pandemic. As AIC is 136.47, lowest among other model, we have considered it as best model. The significant components are more here. We have done outlier test and Durbin Watson test. P-value is less than 0.05 for outlier test. So data is normal, no residuals are there. p -value >.05 for Durbin Watson test, hence autocorrelation does not exist. Multicollinearity assumption is met too.

The following are the models we have created for lifestyle usage habits:

*Model 1:* In this model, we have only considered the rate of use of digital payment apps after the pandemic hit in comparison with the dependant variable. The AIC of the model is 156.75.

*Model 2:* In this model, we have considered the rate of use of digital payment apps after the pandemic hit and clothes purchases in comparison with the dependant variable. The AIC of the model is 151.1.

*Model 3:* In this model, we have considered the rate of use of digital payment apps after the pandemic hit, rate of gadgets usage and clothes purchases and compared it with the dependant variable. The AIC of the model is 142.59.

*Model 4:* In this model, we have considered the rate of use of digital payment apps after the pandemic hit, rate of gadgets usage, clothes purchases and outdoor travelling via air, bus etc. and compared it with the dependant variable. The AIC of the model is 133.98.

**Interpretation:** We have created four models, the best model is model four. We can clearly see Digital pay app usage, cloths shopping, Gadget usage, and travelling rate has best effect on People lifestyle changes during pandemic. As AIC is 133.98, lowest among other model, we have considered it as best model. The significant components are more here. We have done outlier test and Durbin Watson test. P-value is less than 0.05 for outlier test.

So data is normal, no residuals are there.  $p$ -value  $> .05$  for Durbin Watson test, hence autocorrelation does not exist. Multicollinearity assumption is met too.

### **5. Practical Implication**

The paper will be informative to Government and Research Scholars who are further researching on impact of Covid-19 on people's lifestyle and economy. As Covid-19 is new in India and there is no vaccine available right now, containing the spread of the disease by taking preventive measures are only way to make people safe from this virus. Government is trying their best to create awareness but still a lot of people are not maintaining social distance and other rules. This study will give a clear idea on people awareness and what kind of measures they are taking. This study will give idea about the various sectors of economy which are affected due to pandemic which will help the government and organisation to overcome and revive business strategy. Also, this study gives idea about purchasing decision about different products which will help the companies to decide what kind of products should be in market right now.

The main limitation of the study is the sample size. Due to time constraint, we could collect data from only 200 respondents. The main objective of our study is to understand the awareness of people regarding Covid19 spread and how much it has affected their lifestyle in Indian context. A sample size of 200 is very less for data analysis as India is a country where population is 135 crore. Also, most of the sample is collected from urban and metropolitan cities and most of them are young population and are student or private sector employees by profession. To get a real scenario, we must collect data from different demographic variables too. In Future we want to continue our study and collect more samples for a better result.

### **6. Conclusion**

This report has discussed the COVID19 awareness of people and impact of lifestyle and various sectors of the economy in the pandemic situation. The objectives of this research survey to understand the awareness of people about COVID-19 impact on their lifestyles and their views on how the economy and various sectors of the society will be affected by the pandemic. The objective was met by adopting an exploratory research study for our findings via Google form survey to have a better understanding of the pre- COVID-19 and existing lifestyles of people, this report includes interpretation of the result, including the new findings from the research, with proven hypothesis testing and data interpretation results, the result does support the hypothesis. Finally, the overall significance of the project is to understand the awareness of people and impact of lifestyle and various sectors of the economy in the pandemic situation and as stated in the hypothesis that there will significance change in future.

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