

# Impact of COVID-19 Pandemic on the Human Behavior

## **Mirza Waseem Hussain**

Dept. of School Education, Govt. of J&K, India  
E-mail: mirza.waseem.hussain@gmail.com

## **Tabasum Mirza**

Dept. of School Education, Govt. of J&K, India  
E-mail: tabasum.mirza@gmail.com

## **Malik Mubasher Hassan**

Dept. of Information Technology and Engineering, BGSB University Rajouri (J&K)-India  
E-mail: mubasher2003@gmail.com

Received: 11 June 2020; Accepted: 07 September 2020; Published: 08 October 2020

**Abstract:** The world has witnessed a sudden change of horizon in the legacy, lifestyle of the human being due to the COVID-19 (Corona virus). The set protocols made by the different states of the world to harness the available resources on earth for human development came under a halt due to COVID-19. We have conducted a study on the immediate effects and the unprecedented change in the world we live in due to the ongoing pandemic. The paper aims to discuss and analyze the impact of this on the people and suggesting the appropriate remedies. The data collected has been done through online modes and the behavior of the people is observed, analyzed, and finally the results are represented with suitable assessments. During the study, few important parameters taken under consideration are the impact of COVID-19 on health, relationships, lifestyle, online education, screen time and income, etc. The paper aims to highlight the immediate impact of the COVID-19 on the behavioral change of the people and assessment of awareness in the general population about COVID-19.

**Index Terms:** Pandemic, COVID-19, lockdown, and social distancing.

## **1. Introduction**

The 31st December 2019 corona virus outbreak came into limelight when China informed WHO about the outbreak of pneumonia in Wuhan, Hubei province [1-3]. Soon after identification of the pathogen for pneumonia [4] originally named as 2019 novel corona virus (2019-nCoV) [1,5] later officially renamed by the International Committee on Taxonomy of Viruses as severe respiratory syndrome coronavirus 2 (SARS-CoV-2) [6]. It was on 30th January 2020 SARS-CoV-2, the virus that causes COVID-19 was declared by WHO as Public Health Emergency of International Concern [1,5]. Soon after, on 11th March 2020 in a news brief, Director-General of WHO, Dr. Tedros Adhanom Ghebreyesus declared novel corona virus (COVID-19) as pandemic [5,7] and briefed that in just 2 weeks, the number of cases outside the China increased by 13 folds and the number of countries increased by 3 folds [5]. COVID-19 is very much different than the other viruses with this property that they have the highest rate of human transmission. It is considered very much fatal for the elderly people and those having some underlying problem, which leads to a weak immune system.

In JAMA researchers found from the samples of patients in China that COVID-19 is caused by the virus SARS-CoV-2. They also found that the live virus was not only present in the respiratory system but also in the faces of patients. Therefore, they concluded that due to respiratory and extra respiratory routes of the live virus may be the reason for its widespread [8]. In another study it was found that the reproductive number of COVID-19 is higher as compared to SARS coronavirus [3]. Some researchers claim bats could be the primary source of SAR-CoV-2 as it is closely related to two bats derived acute respiratory syndrome bat-SL-CoVZC45 and bat-SL-CoVZXC21 [6,9-11]. However, there is no confirmed study about the intermediate source of transmission of COVID-19 from bat to human. As of now the intermediate source of transmission of COVID-19 may not be known, but it's confirmed that COVID-19 has brought the world to a standstill in terms of economic, social, and political processes.

The ongoing race between the world military powers has received a jolt by the COVID-19 and the strategic military planning in terms of heavy legacy budgets reserved for weapon arsenal came under the question to revisit the future planning. The world has received a significant push towards improving the basic facilities, especially the health care

system, which has been under question due to the COVID-19 pandemic, including of the developed countries of the world, who were themselves claiming the best health care system of the world. The COVID-19 has alarmed the world towards looking into the actual human problems rather than fighting each other for merely showing the dominance of power. The policy of states to invest in healthcare has received an attention by the ongoing crises created due to pandemic.

COVID-19 the pandemic that shook the world by a storm with more than 4 million affected cases all over the world [12,13] and the number is still counting. COVID-19 not only affected political, social, and religious activities but also resulted in the collapse of the world economy. Developed countries, with the top economies like the US, China, UK, Japan, Germany, France, Italy are on the verge of collapse [14]. The stock market plunged very low, even the price of crude oil per barrel fell below \$0 [15]. In just a week, the number of unemployed youths in the US increased many folds, with the number increasing from 3.3 million to 6.6 million. India, the 5th richest country in terms of GDP [16,17] has been the worst hit among the world's top 10 economies [18]. According to data released by Monitoring Indian Economy, the unemployment rate has jumped from 8.7% to 27.1% [19]. Therefore, increasing stress and anxiety levels in the people with various psychological impacts and health implications.

Based on the data collected from different people with varying age groups across the country. We were able to draw various results; such as economic loss, psychological impact on humans, change in stress and anxiety levels, health implications, impact on the education system, and the effect of news related COVID-19 to people, whether people were able to distinguish between reliable and unreliable news. In addition to this we were able to find whether people were following WHO guidelines (washing hands regularly with soap or the sanitizer, Social distance, wearing masks while stepping outside) to contain widespread of COVID-19. Based on data we were also able to find out, whether total lockdown was the only option to stop widespread of COVID-19?

## 2. Related work

Sarah Dryhursta and et al [80] have carried out a study on risk factors by the COVID-19, wherein they have collected samples from ten countries including Europe, Asia, and America. They presented the first comparative evidence of COVID-19 perception among the people including various socio-cultural parameters across the country. They came up with the findings that risk factor is negotiable based on the people's experience, values, and trust on institutions. The experimental testing could benefit the observational evidence to follow the better understanding about risk perceptions, so that the policy makers can design effective guidelines to curb the pandemic.

Abid Haleem and et al [81] have identified the immediate effects of the COVID-19 pandemic on the day to day life, which intern had a negative effect on the economy. A large number of people got killed and in millions the people were affected by severe problems like fever, cough, respiratory complications, and cold, etc. the study suggests a precautionary measure laid down by a regulatory body, so that the pandemic can be stopped for making devastating effects. Apart from the health, the severe impact on the world economy is very much fatal and can be tough if COVID-19 continues.

Dana Rose Garfin and et al [82] carried out a study on media exposure to the consequences of COVID-19 pandemic and came up with the findings suggesting an increase in anxiety level among the people through media. They suggested that the health workers and scientists should design the realistic and factual information on scientific means about the consequences of COVID-19 and the authentic media should be responsible in receiving and communicating the reliable information to the general public instead of exaggerating or developing the stress level among the people by sharing the unreliable information. It is imperative that during the public crises, it is mandatory that the essential information should be conveyed to the public, especially whenever there is public health crises the health officials are responsible and trustworthy to propagate the urgent information to the populace.

Jay J. Van Bavel and et al [83] did a research on COVID-19 pandemic response by using social and behavioral science. They ascertain the massive global health crises with the large scale behavioral change. They also provided some clues from the Spanish Flu pandemic, which could be effective in mitigating the current pandemic. Their study focused on the social context, leadership, science communication, threat perception aligning, individual and collective interests, and stress and coping. They came with a strong opinion of having health communication an important portfolio to prevent the ongoing COVID-19 pandemic and also the future pandemic. The lockdown led to the forced proximity and gave rise to several ill factors into the society. One of the important aspects of their study id marinating healthy mindset, so that the stress level could be minimized.

Indranil Chakraborty and et al [84] have investigated the effect of COVID-19 pandemic on the society and global environment and they suggested the possible means to curb the COVID-19 Pandemic. We know that the nature has witnessed a thorough change in the environmental fabric from the last several decades and the investigation carried on has revealed that despite the devastating impact of COVID-19, the effect on the environment is favorable for the human race.

The aforementioned literature has been reviewed in order to provide deep insight what has been studied about the COVID-19 and how to proceed for better investigation. It helped in designing the research objectives by providing the clue to direct the study. The literature consulted is given a common collective impression about the effect of COVID-19 pandemic in one way or another on the human beings.

### 3. Impact of COVID-19 pandemic

It has been investigated that the COVID-19 pandemic has affected overall human life in various ways and the level of impact is very much strong in main sectors. Apart from the health, it has twisted the routine life into tremendous stress and which results panic and fear all across the world.

#### 3.1 Economic impact

COVID-19 the pandemic that brought the world on its knees [20], spreading like a wildfire across 212 countries and territories around the world with 288,201 deaths as of now [21-23].

To prevent the spread of COVID-19 the concept like staying at home and social distancing were widely adopted around the world. With more than 80 countries closing their borders and ordering them to shut down their business unit. People across the world started cancelling their holiday and business trips, this directly affected the hotel industry, event industry, travel industry, airline industry and other industries which were directly or indirectly associated with them. The hotel industry seeks the US \$150 billion corona relief [24], the same is the case with the airline industry. It is very much predicted that if the COVID-19 is not curbed as early as possible, there will be a huge loss in the airline industry estimated about US \$113 billion as per the IATA (International Air Transportation Association) [24].

Trading industry is set to plunge the global economy, with world trade in 2020 falling between 13% to 32% [20]. The global film industry incurred loss of US \$ 5 billion [20]. Private sector banks in India have the highest risk to the credit list during the outbreak [25].

According to a UN report, the global economy may drop by 1% in 2020 due to COVID-19 pandemic [26]. The dollar value of world merchandise export in 2019 fell by 3% to US \$18.89 trillion [27]. US \$6 trillion vanished from the global stock market in just a week's time. S&P 500's market values were dropped by US \$5 trillion in one week [28].

The story of India, the 5th richest country in terms of GDP [16, 17] is no different. Govt. of India pledged \$10 billion toward South Asian Association for Regional Cooperation (SAARC) for COVID-19 emergency fund [29]. 1.7 trillion rupees (\$22.6 billion) economic Stimulus plan for providing direct cash transfer and food security measures to give relief to millions of poor people hit by nationwide lockdown [30]. Medical insurance cover of 5 million rupees (\$66,000) for every frontline health worker, which includes doctors, nurses, paramedics, and those involved in sanitary work [29]. On 13-May-20, the Indian government announced rupees 20 lakh crore (\$265,197,400,000) economic package to fight against COVID-19 pandemic. This economic package amounts to 10% of the country's GDP [31]. BRICS provides India a loan amount of \$1 billion to help in containing the spread of COVID-19 [32-34]

#### 3.2 Mental Health

Expert suggestions, results of polls conducted by various agencies and lessons from various past disasters and especially pandemic outbreaks in history have revealed that the COVID-19 pandemic can have profound short term as well as long term effect on mental health of the whole population[35].

Experts and federal agencies are warning about another crisis i.e. mental health issues, depression, anxiety and rise in suicide rates that will outlive the corona virus pandemic and can last up to weeks, months and even years[36- 38].

COVID-19 pandemic has caused sense of isolation because of social distancing, fear of infection and death about themselves as well as loved ones, uncertainty about future, disruptions in daily routine, changes in dietary and sleep habits, prohibited gatherings, restrictions on travel, reduced access to social activities, unemployment or fear of losing jobs, business and school closures, closure of recreational centres, family responsibilities due to closure of day care facilities, absence of household helpers and decreased access to support networks leading to widespread social and physiological trauma in people[39-44]. This impact is more pronounced in following categories of population:

- Older people and people with chronic diseases
- Adolescents[45-47]
- Front line medical staff and their families[48,49]
- COVID infected patients[50]
- People with existing mental conditions[51].

Other vulnerable categories include the people who have experienced economic loss or unemployment, suspected Corona virus patients in administrative quarantine, people who have lost their loved ones due to pandemic, autistic children and children with special physical and mental needs who have lost access to mental health supports making their conditions worse[52,53].

Research suggests a strong link between economic loss and substance abuse use. With increased chances of infection from COVID-19 almost 63 % i.e. double then general community and increased risk of related health complications, greater barriers to rehabilitation and treatment because of COVID-19, drug and alcohol overdose is another major concern amidst the pandemic[54-56].

### 3.3 Increase in gender based violence

Media reports and data from various information sources has indicated an alarming rate of increase in gender based violence in the form of domestic violence, violence from intimate partner, child abuse etc. during the COVID outbreak[57]. In UK a project tracking violence against women has reported that deaths because of domestic violence have doubled in number in comparison to the average number of death cases in previous ten 10 years between 23 March and 12 April 2020[58]. With very few opportunities to distance themselves from the abuser, restricted access to social and protective support networks, increase in the stress levels and household tensions due to economic losses and other factors, disruption in business and office work have result in considerable increase in domestic violence during the pandemic[59-61].

### 3.4 Physical Health and Lifestyle

Lockdown and social distancing norms are forcing people to stay indoors, this can create a negative effect on the physical health and lifestyle of the masses especially people living in urban areas. Lack of physical activity, sedentary lifestyle, less time spent in sports activities and exercise due to closure of gyms and stadiums, irregular and increased sleeping time, overeating and intake of unbalanced food due to unavailability of certain foods can lead to increased adiposity levels thus resulting in obesity and other health issues[62-63].

### 3.5 Increased Screen time

With most of the young people working from home, online learning as an alternative to classroom learning, closure of cinemas, malls and other entertainment sources people tend to use screens (Televisions, Video Games, Smart phones, and Tablets) more often than they normally do either to attend professional duties, to entertain themselves by subscribing to web channels, paying utility bills online or for staying connected with friends and relatives via social media[64,65]. This can expose people to various hazards like exposure to harmful or violent content, cyber bullying, cyber-crimes, phishing attacks etc[66]. Excessive screen time also poses health hazards like brain damage, loss of attention and cognition control, eyestrain, chances to develop myopia and other eyesight problems[67-70].

### 3.6 Infodemics and rumors.

During the periods of Corona virus lockdown mischief mongers misused social media platforms to create anxiety and tension amongst the people who were already afraid and uncertain about the implications of COVID-19 by circulating fake and misleading information regarding COVID-19[71]. This fake news storm lead many people to fall in the trap by forwarding the unreliable and unauthentic information without verifying it causing anxiety to anyone who reads it. From claims of home remedies of COVID-19, how corona virus spreads to rumours of vaccine development for COVID-19 people had it all increasing their stress levels and falling prey to Infodemics related to COVID-19[72].

### 3.7 Education

COVID-19 emerged as a public health emergency leading more than 190 countries in the world to close down educational institutions affecting 1.725 billion learners worldwide (As per UNESCO report)[73]. This has caused a major disruption in the education system. Corona virus forced the \$600 billion higher education industry in the US to go online[74]. Indian Government also had to announce a lockdown of educational institutions with the number of COVID-19 infections rising all across the nation. About 0.32 million learners are affected in India due to school closures as on 18 may 2020[74] with the number in schools about 1.5 million and about 0.05 million higher educational institutes. Though most of the educational institutions are working hard to reduce the losses by moving to the online platform but the penetration of Internet and availability of digital devices remains as a major challenge in successful integration of online teaching especially in developing countries[75,76]. Other factors that hinder practical implementation of online teaching learning process is digital literacy of teachers, lack of training/guidelines to support use of online platforms/tools for teaching and learning process[77,78]. America has 1.5 million faculty members that constitute almost 70% of the teachers who have never taught using virtual platforms according to educational technology research[79].

## 4. Objectives

The objectives of this research study include:-

1. To study the impact of COVID-19 pandemic on various aspects of the general population. These aspects include physical health, mental health, economic health, Infodemics, online education, relationships with

spouse and family, use of social media platforms, perspective about lockdown, social distancing as a measure to curb spread of COVID-19 infection etc.

2. To understand their perspective about the situation and possible solutions to the worldwide crisis resulting because of COVID-19.
3. To assess the level of awareness among people regarding safety measures to curb the spread of COVID-19 infection.

## 5. Methodology

Data was collected through questionnaires developed to assess various parameters of human behavior during the COVID-19. The respondents included persons from the general population belonging to various age groups, professions and geographic locations. The survey questionnaire consisted of close ended multiple questions, self reports as well as some open ended questions about COVID-19 to study how COVID-19 has affected their day to day life, mental and physical health, social, and economic conditions, Infodemics, online education, relationships with the family, screen time etc. The paper reports the substantive findings with a focus on qualitative data provided by the respondents.

The questionnaire consisted of 32 closed ended and 4 open ended questions. The respondents were asked to report their perspectives regarding the effects of COVID-19 on their life. The factor variables were organized into 9 sections to make the results more discrete and quantifiable:

- Health
- Economy
- Online education
- Relationships
- Adherence to health guidelines regarding COVID-19
- Infodemics
- Work
- Spending time

## 6. Data analysis.

The survey instrument (questionnaire) was used for data collection. Data was collected from different geographical locations and mode of delivery of the survey instrument was online. We have used Google forms for data collection; the responses were collected in the month of May –June 2020. All the data collected was organized, cleaned and then analyzed properly. The data analysis uses the frequency procedure to tabulate the counts and calculate the percentages of responses. The data were classified using the self cognitive classifier to analyze its auto and cross correlation. The information retrieved from the analysis gives the probabilistic predicted behaviour during COVID-19. Qualitative responses were coded to identify the relationship among them. The quantitative and qualitative data were then graphically represented in the form of graphs and charts to illustrate relationships between various data elements.

## 7. Results and discussions

### 7.1 Gender (see Fig.1.):

Almost 49.4% of the respondents participating in the study were males and 49.39% were females.

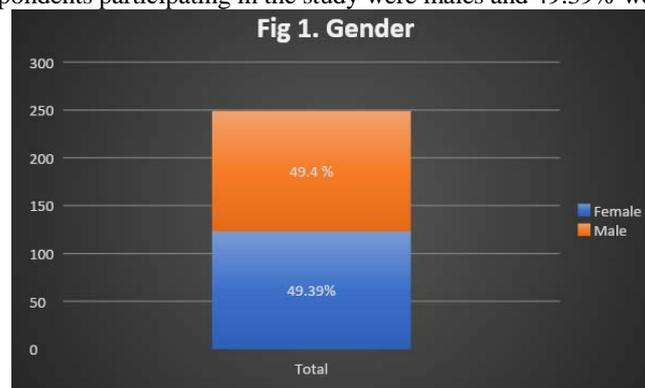


Fig. 1. Gender

7.2 Age group (see Fig.2.):

40.56% of the respondents participating in the research study were reported to belong to the age group 20-30 years, while as 32.1% belonged to the age group 30-40 years, 8% of the respondents belonged to the age group of 40-50 years, 7.23% to the 50-60 years, 4.82% to the 60-70 Years, 2.41% to the age group of 70-80 years and 4.819% of the respondents were below 20 years of age.

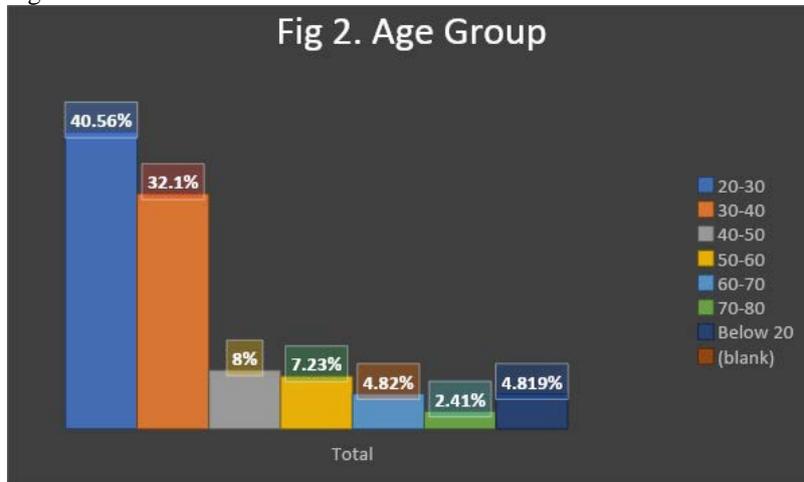


Fig. 2. Age Group

7.3 Feeling of obsession (see Fig.3.):

59.1% of the respondents reported that they felt obsessed while staying at home while 40.96% reported that they didn't feel obsessed while staying at home due to Corona virus lockdown. This indicates that the majority of the population is feeling frustrated while staying at home for a long period of lockdown.

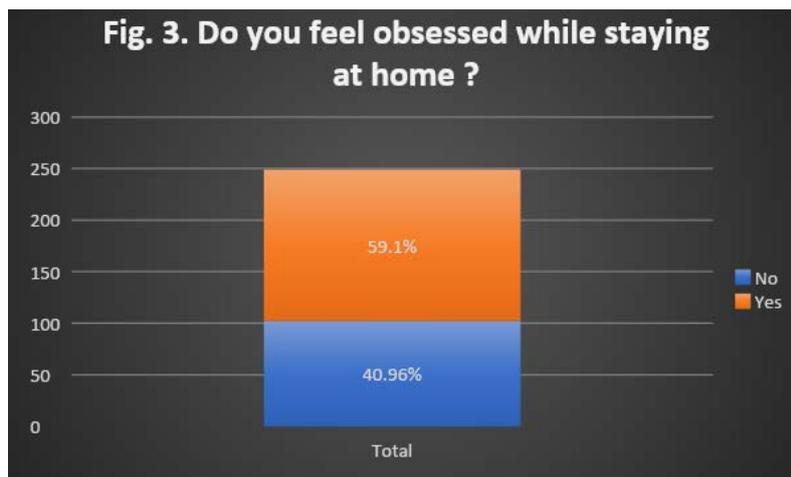


Fig. 3. Do you feel obsessed while staying at home?

7.4 Going for Exercise out of home (see Fig.4.):

While asking for an exercise routine before the lockdown, 51.3% of the respondents answered that yes they went for daily exercise before the COVID-19 and 49.79% of the respondents said they didn't exercise daily before COVID-19.

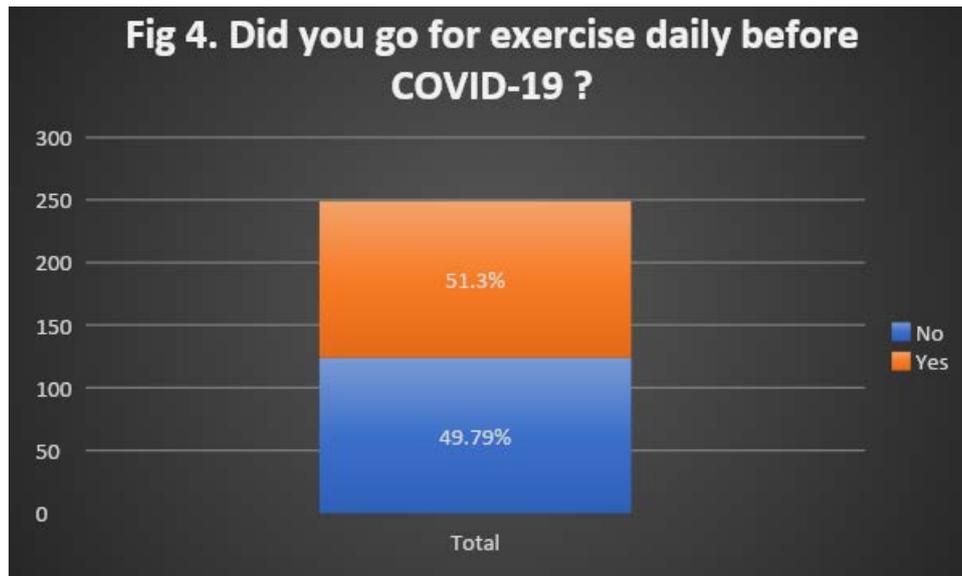


Fig. 4. Did you go for exercise daily before COVID-19?

#### 7.5 Exercise at home (see Fig.5.):

When asked about post COVID-19 routine only 28.6% of the respondents replied with yes, that they are exercising at home on a daily basis, while as the majority of the people 71.4% replied with no that they don't follow a daily exercise routine. This shows that physical activity of people has been negatively affected during the lockdown.

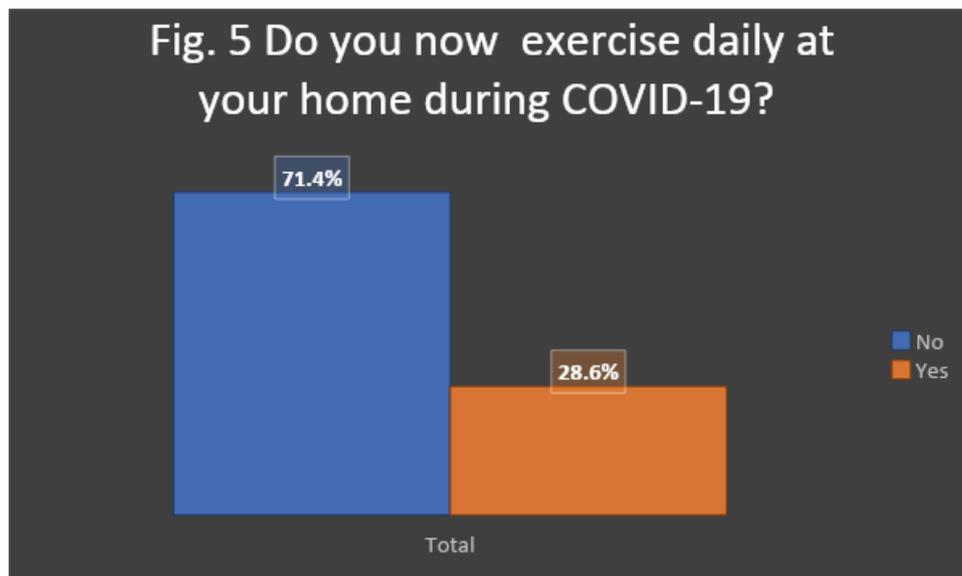


Fig. 5. Do you now exercise daily at your home during COVID-19?

#### 7.6 Forwarding messages related to COVID-19 (see Fig.6.):

When asked about forwarding the messages related to COVID-19 63% of the respondents responded with yes and only 36.5% replied with no. This suggests that most of the people forward messages related to covid-19 to their contacts without even checking the authenticity of the messages causing people to panic.

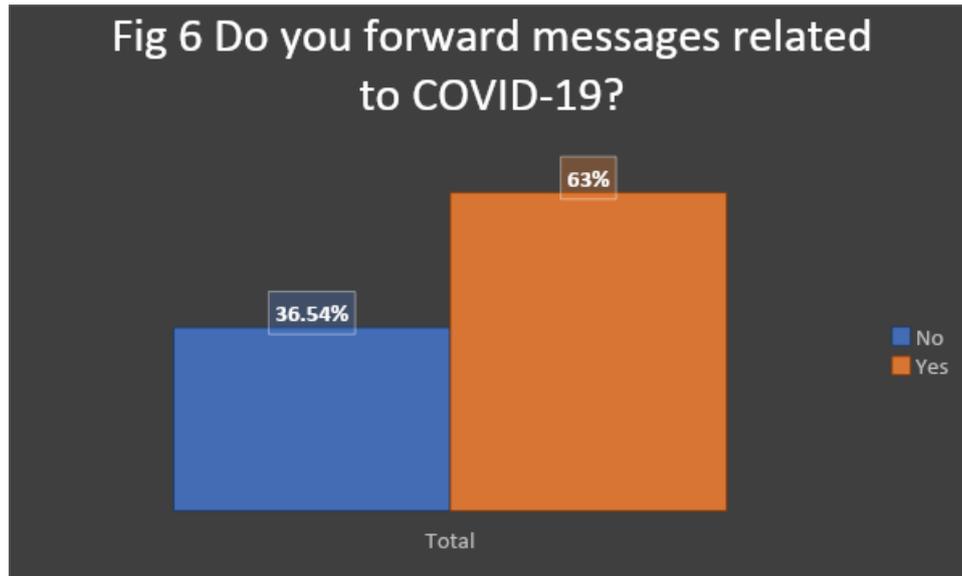


Fig. 6. Do you forward messages related to COVID-19?

#### 7.7 Effect on health (see Fig.7.):

When asked about effect of COVID-19 on health, majority i.e. 38% reported that their health has deteriorated and 34% reported no effect on health, 20% of the respondents were not sure about its effect on health and only 8% of the respondents believed that COVID-19 lockdown has benefitted their health. This indicates that COVID-19 had a negative impact on health of most of the people because of stress and reduced physical activity.

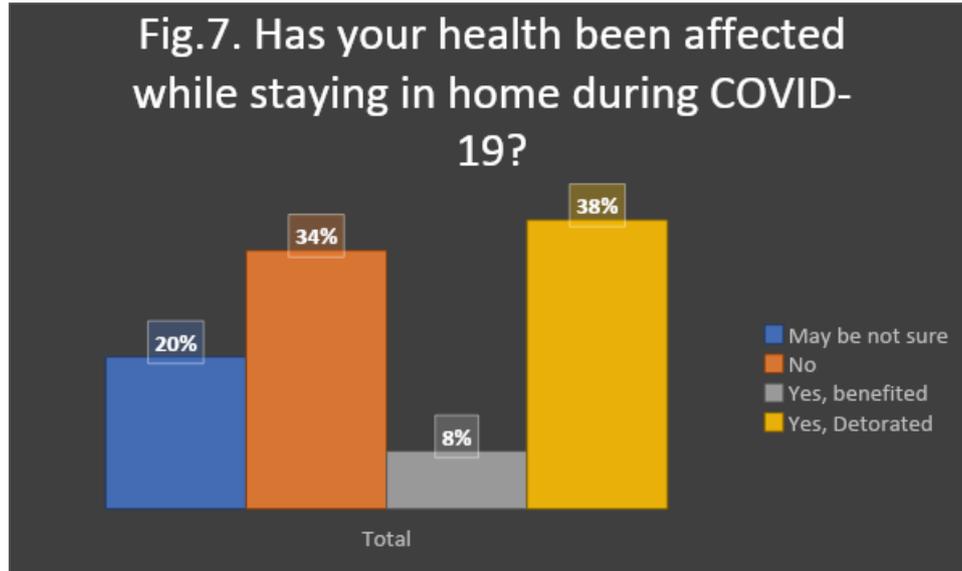


Fig. 7. Has your health been affected while staying in home during COVID-19?

#### 7.8 Effect on family relationship (see Fig.8.):

When asked about change in nature of relationship with family, parents and children during the period of lockdown, majority, i.e. 52.6% reported there is no change, 24.9% reported increase in bond and 21.7% of the respondents reported the decrease in bond.

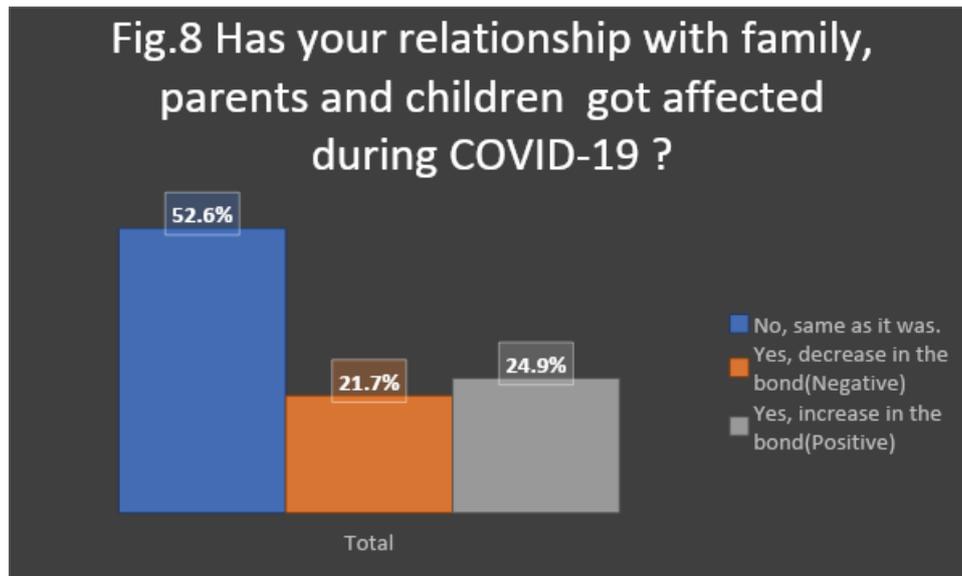


Fig. 8. Has your relationship with family, parents and children got affected during COVID-19?

#### 7.9 Effect on the food menu (see Fig.9.):

When respondents were asked about changes in food menu because of COVID-19 lockdown, majority i.e. 40.16% reported increase in food intake, 31.72% reported no change in menu and only 28.12% reported a decrease in intake of food.

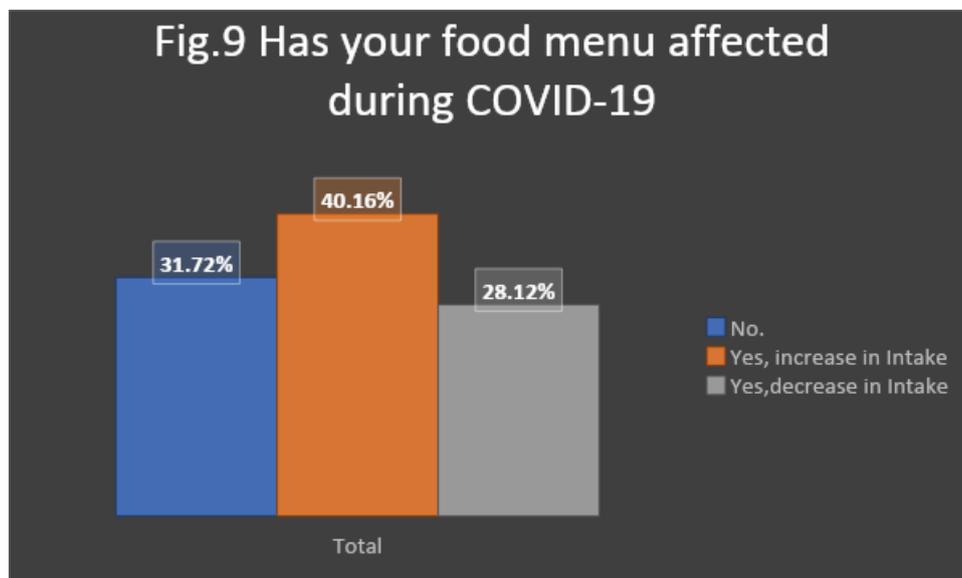


Fig. 9. Has your food menu affected during COVID-19

#### 7.10 Availability of essential items (see Fig.10.):

Majority i.e. 71.8% of the respondents reported that there is all time availability of essential items like food, medicine amidst COVID-19 lockdown, some of them, i.e. 25.3% reported that sometimes available and sometimes may not be available, only 2% of the respondents reported unavailability of essential items.

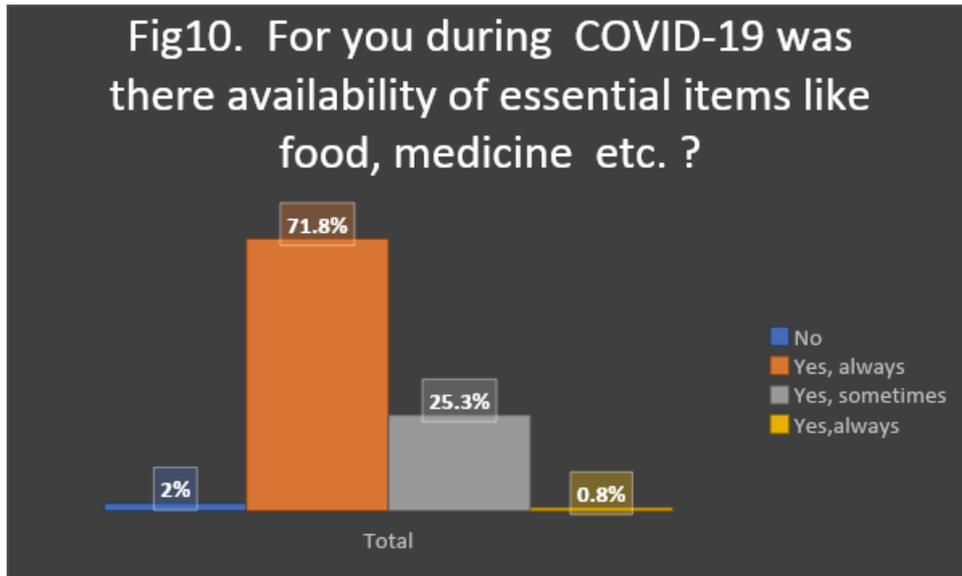


Fig. 10. For you during COVID-19 was there availability of essential items like food, medicine etc.?

7.11. Effect on the body weight (see Fig.11.):

The majority of the respondents i.e. 53% reported increase in body weight during the COVID-19 lockdown while 47% reported that their body weight has not increased during the lockdown. This indicates that the majority of people suffer from obesity because of lack of activity, oversleeping or overeating

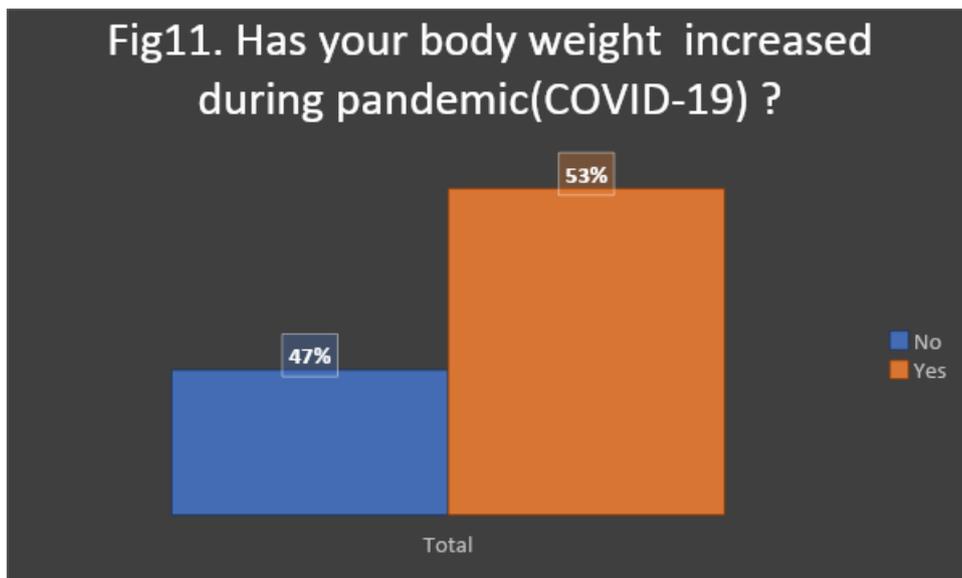


Fig. 11. Has your body weight increased during pandemic(COVID-19)?

7.12 Marital Status of the respondents (see Fig.12, 13, and 14.):

When asked about relationship status, 63% of the respondents reported they were married and 37% reported that they are not married. When asked about health of relationship with spouse before the pandemic majority of the respondent’s i.e. 41.76% reported healthy relationship and only 5.62% reported issues in the relationship with the spouse. But when compared with the relationship during the lockdown the percentage of respondents having a good relationship with a spouse decreased to 33.73% and the percentage of people facing relationship issues increased to 12.85% indicating that the COVID-19 lockdown has a negative impact on some marriage relationships.

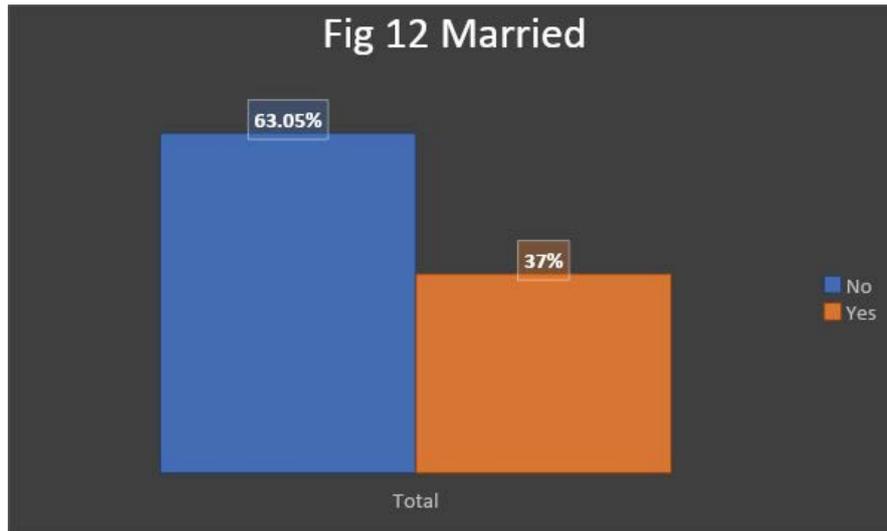


Fig. 12. Married

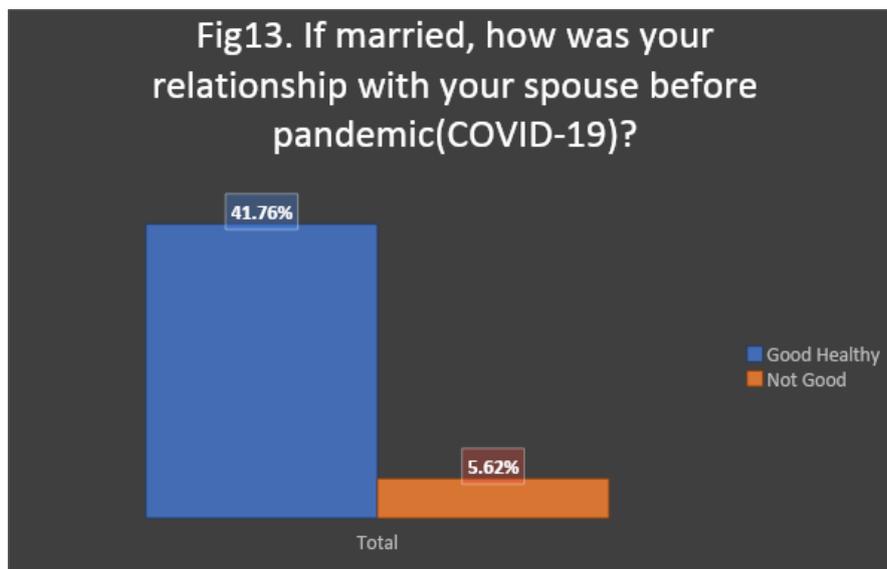


Fig. 13. If married, how was your relationship with your spouse before pandemic(COVID-19)?

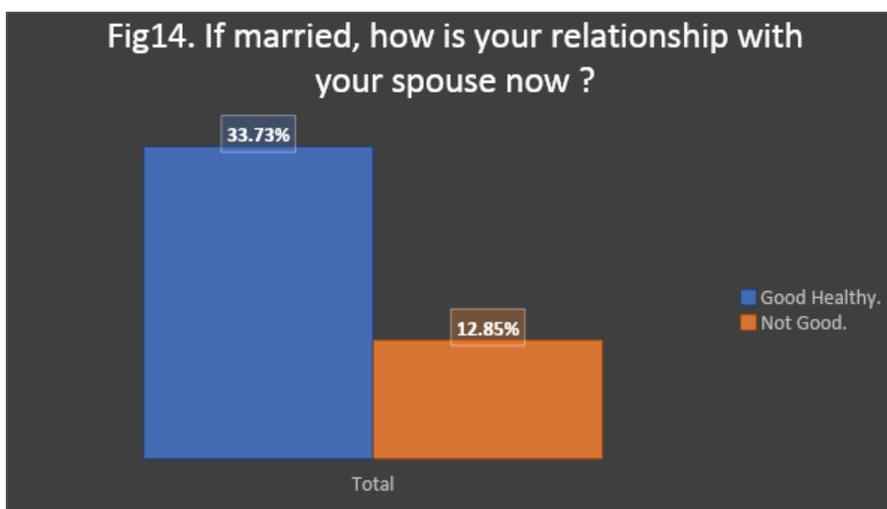


Fig. 14. If married, how was your relationship with your spouse now?

### 7.13 Effect on the workload (see Fig.15.):

When asked about the increase in workload due to unavailability of domestic household helpers and closure of day care facilities, schools and offices 48% of the respondents reported an increase in workload, 41% of the respondents had no change in workload and 11.2% were not sure about the increase in workload.

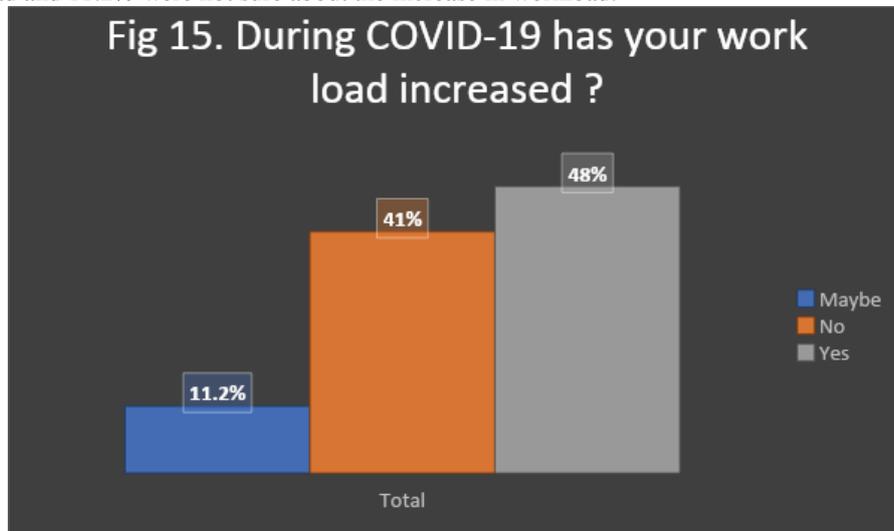


Fig. 15. During COVID-19 has your work load increased?

### 7.14 Engagement in domestic activities during COVID-19(see Fig.16.):

When the respondents were asked about time spent on household activities like washing clothes, washing dishes, home cleaning etc. 56% of the respondents reported that they spend most of their time in such activities, 34% of the respondents reported that they don't spend most of their time in household activities and 10.44% of the respondents were not sure about it.

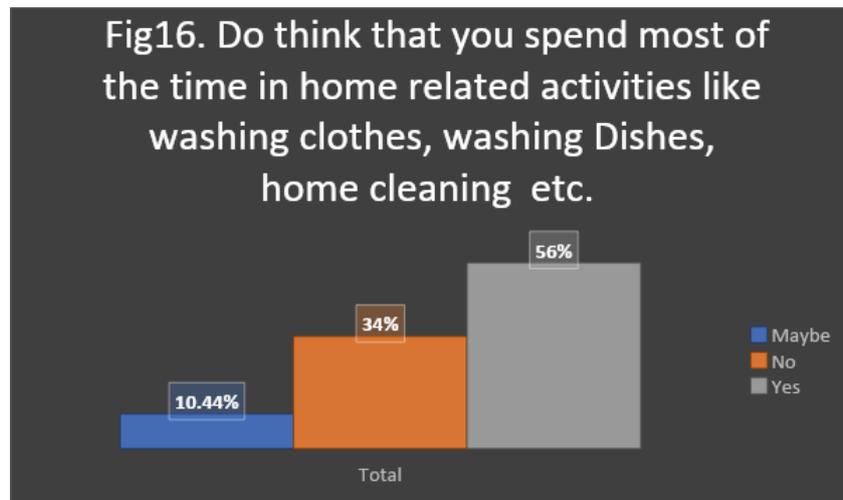


Fig. 16. Do think that you spend most of the time in home related activities like washing clothes, washing Dishes, hoe cleaning etc.

### 7.15 Engagement in domestic activities before COVID-19(see Fig.17.):

When asked about spending of time in household activities before the COVID-19 lockdown started, majority i.e. 72.7% of the respondents replied they didn't spend the same amount of time in such activities, only 27.3% reported the same amount of time spent on these activities before the lockdown.

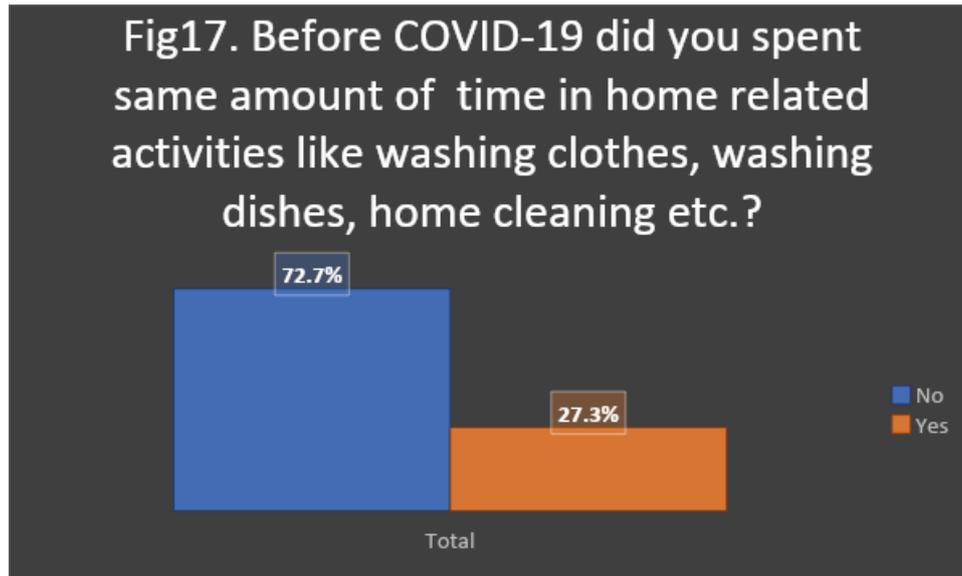


Fig. 17. Before COVID-19 did you spent same amount of time in home related activities like washing clothes, washing dishes, home cleaning etc.?

#### 7.16 Effect on the sleeping pattern (see Fig.18.):

While asking for change in sleeping pattern during the COVID-19 lockdown, 54% of the respondents reported increase in sleep time, 23% reported decrease in sleep time and same percentage of people i.e. 23 % reported no change in sleep patterns. This indicates that lockdown has affected sleep patterns among most of the people.

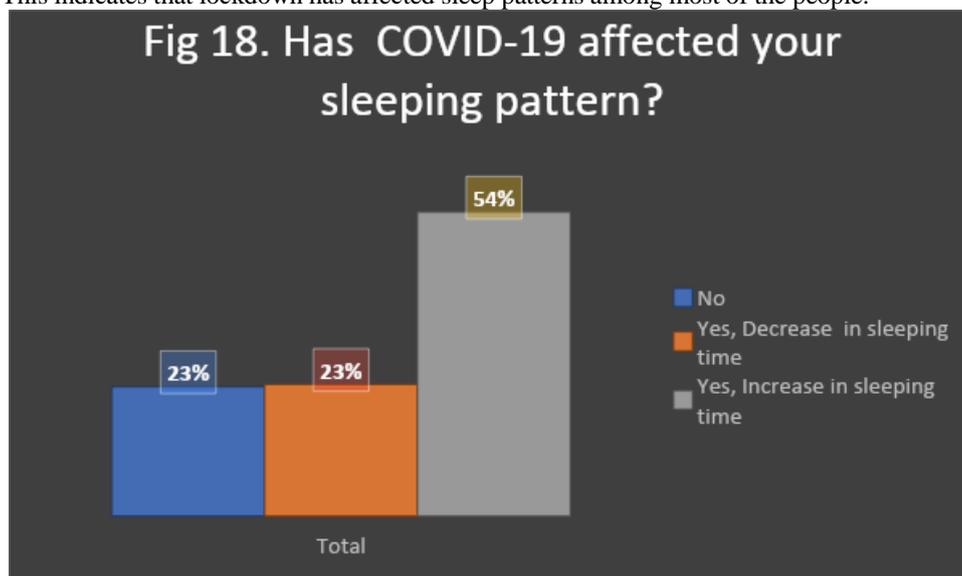


Fig. 18. Has COVID-19 affected your sleeping pattern?

#### 7.17 Effect on anxiety and stress level (see Fig.19.):

Majority i.e. 63% of the respondents reported that their anxiety and stress levels have increased during the COVID-19 lockdown, 24.5% reported no increase in anxiety due to COVID-19 and 12.5% was not sure about it. This indicates that COVID-19 has led to increase in anxiety and stress of people affecting their mental health.

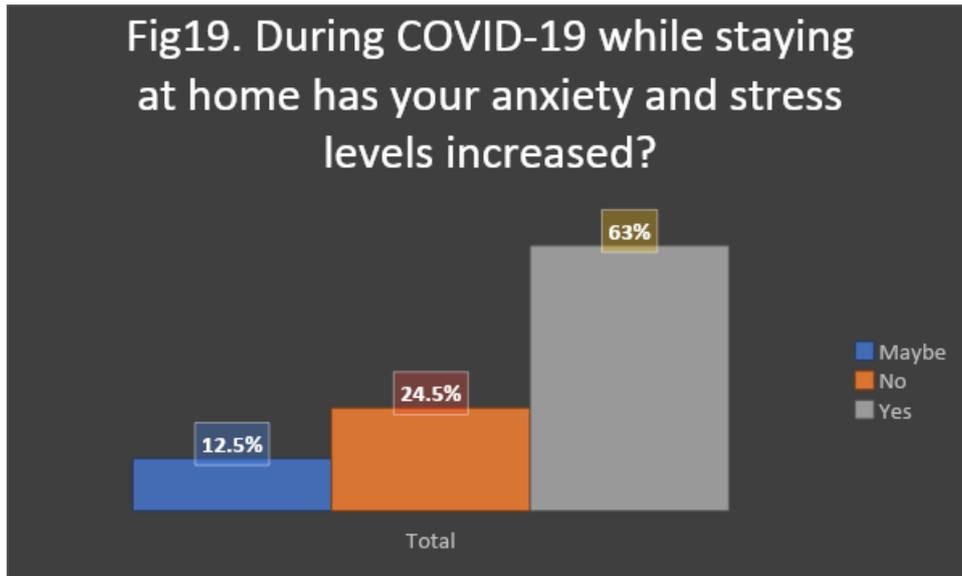


Fig. 19. During COVID-19 while staying at home has your anxiety and stress levels increased?

7.18 Updating of skills/knowledge (see Fig.20.):

55% of the respondents reported that they have utilised their free time during the lockdown to update their knowledge or skills while 45% of the respondents reported on the negative. This indicates most of the people have utilised their free time to acquire new skills and learn new things.

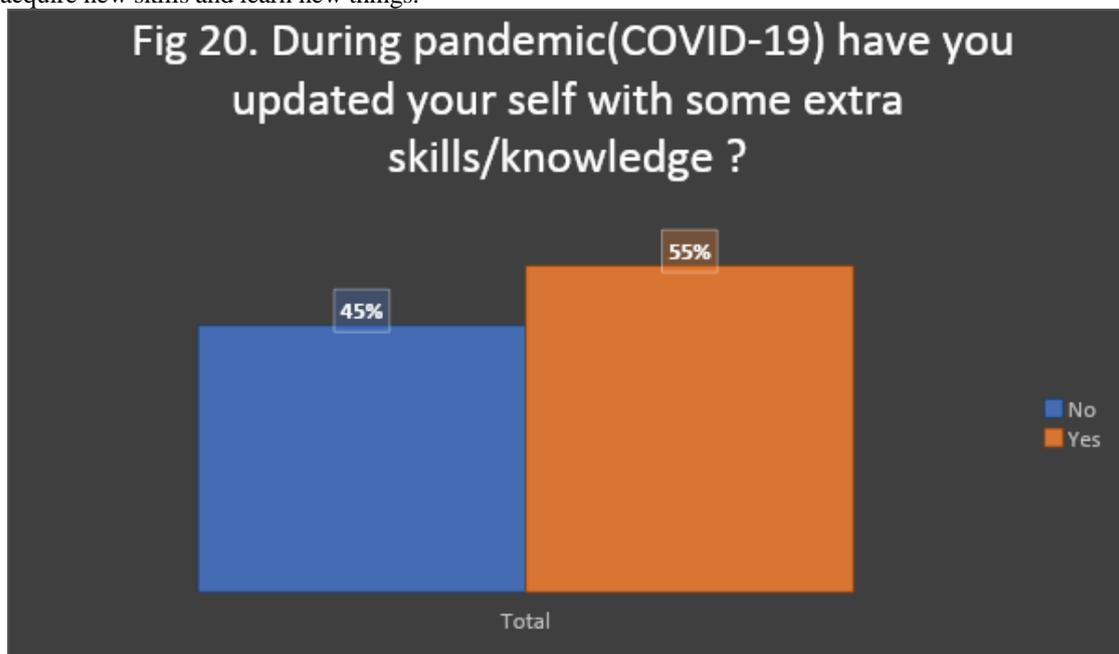


Fig. 20. During pandemic (COVID-19) have you updated your self with some extra skills/knowledge?

7.19 Times spend on using social networking (see Fig.21.):

When asked about increase in usage time of social networking platforms, majority of the respondent's i.e. 51.8% reported that yes they used social networking platforms to check latest updates about COVID-19 and stay connected with people, 26.41% used these platforms to kill time and 22.41% reported no increase in usage of social networking platforms. This shows that the majority of the people spend increased usage of social networking platforms either to check about COVID-19 updates, to stay connected with people or to relieve their boredom.

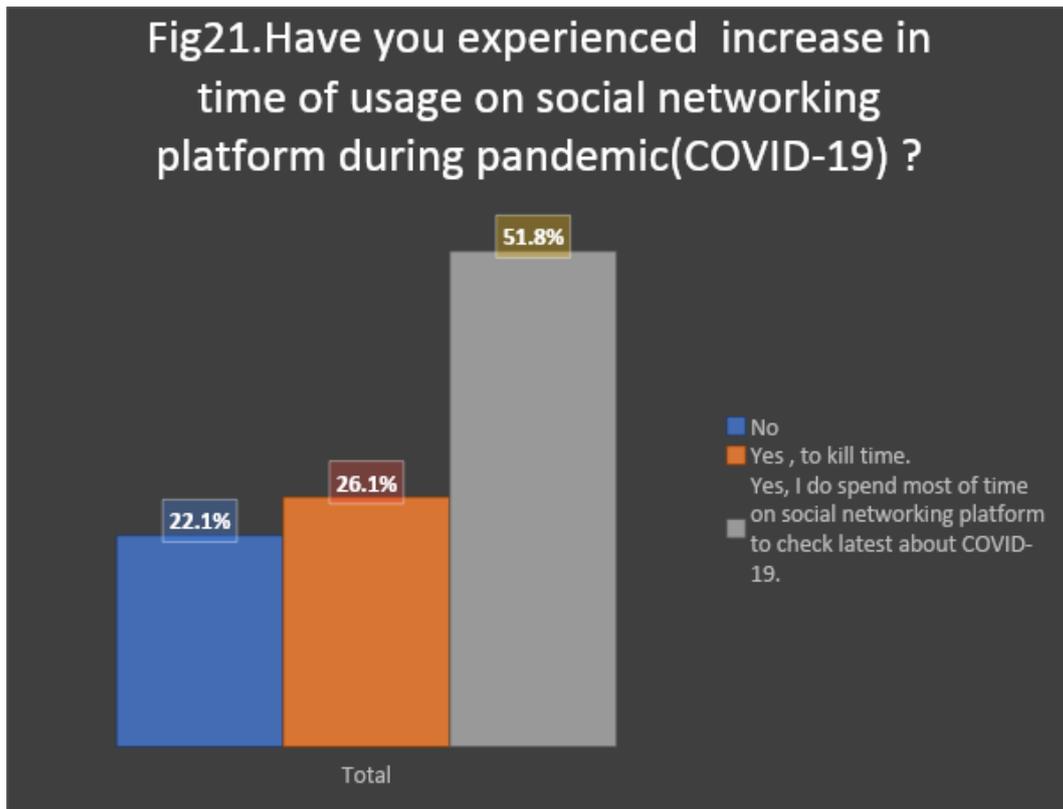


Fig. 21. Have you experienced increase in time of usage on social networking platform during pandemic(COVID-19)?

#### 7.20 Level of panic (see Fig.22.):

When we asked people, whether thinking about COVID-19 made them feel panicked most of the people, i.e. 59% of the respondents replied with yes, 23.5% replied with no and 16.5% of the respondents were not sure about it. This indicates that fear about COVID-19 causes most of the people to panic and feel worried.

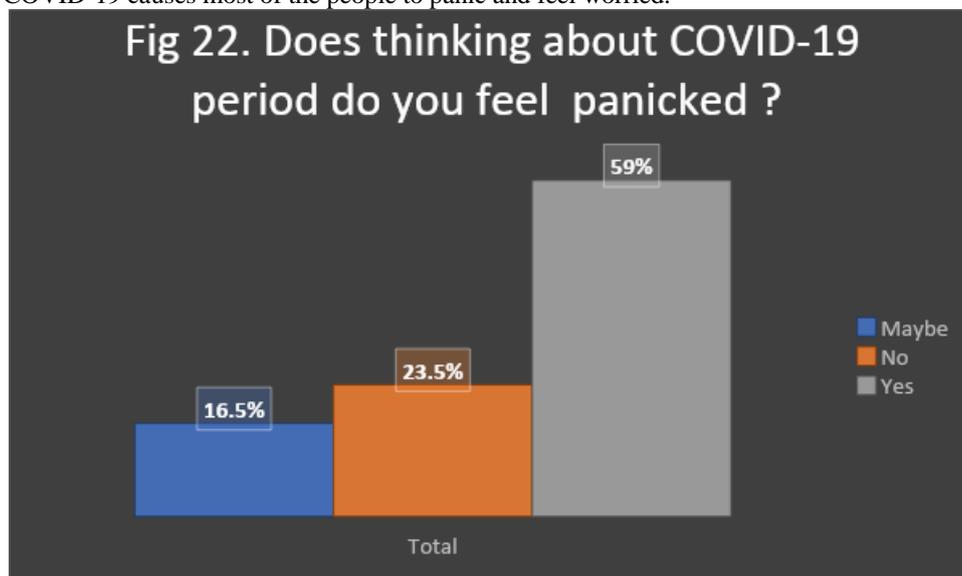


Fig. 22. Does thinking about COVID-19 period do you feel panicked?

#### 7.21 Expected timeline of the end of COVID-19 (see Fig.23.):

When asked about the expectations of COVID-19 to end soon most of the respondent's i.e. 42% were unsure about it,

30% replied with a no and 29% replied with a yes. This indicates that most of the people are uncertain about the crisis to end soon, some of them are sure that it will take time to end and only a small percentage is hopeful that this will end soon.

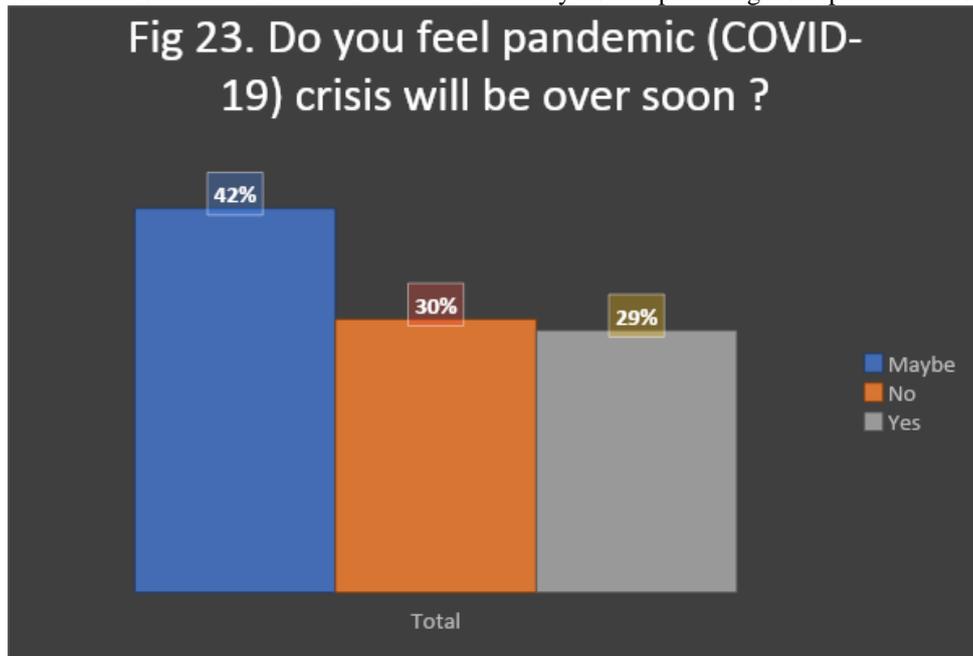


Fig. 23. Do you feel pandemic (COVID-19) crisis will be over soon?

7.22 Ability to differentiate between reliable and unreliable news (see Fig.24.):

Majority i.e. 53% of the respondents said that they cannot differentiate between the reliable and unreliable news regarding COVID19 and only 47% of the respondents could differentiate between the reliable and unreliable news regarding COVID-19. This indicates that unreliable news can cause false alarms and anxiety in most of the public.

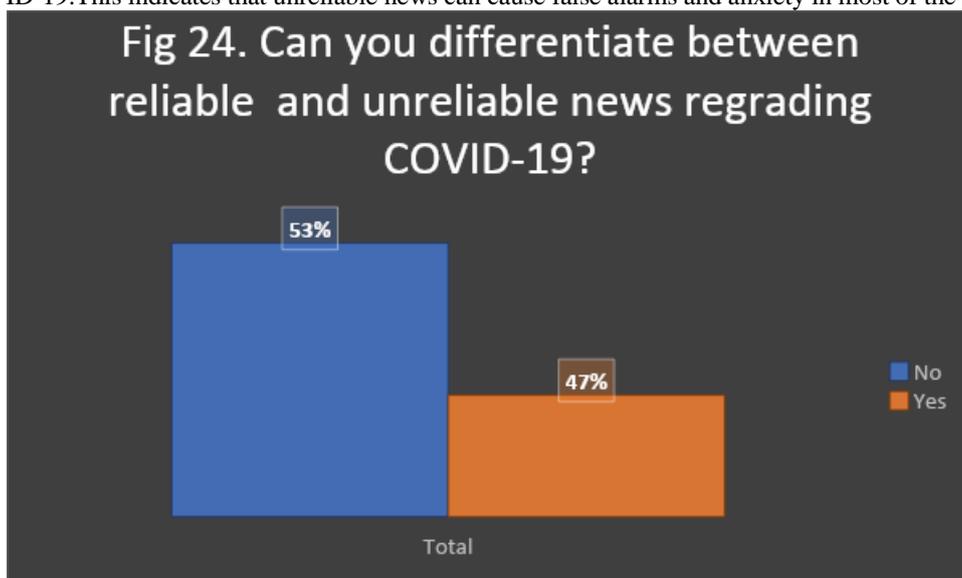


Fig. 24. Can you differentiate between reliable and unreliable news regarding COVID-19?

7.23 Effect on worries after watching news about COVID-19 news (see Fig.25.):

63% of the respondents reported that they feel worried after watching any kind of information related to COVID-19 that is circulated on the media and 37% respondents did not feel the same. This shows that most of the percentage of people is having negative thoughts after they watch any information related to COVID-19 circulated and forwarded to them.

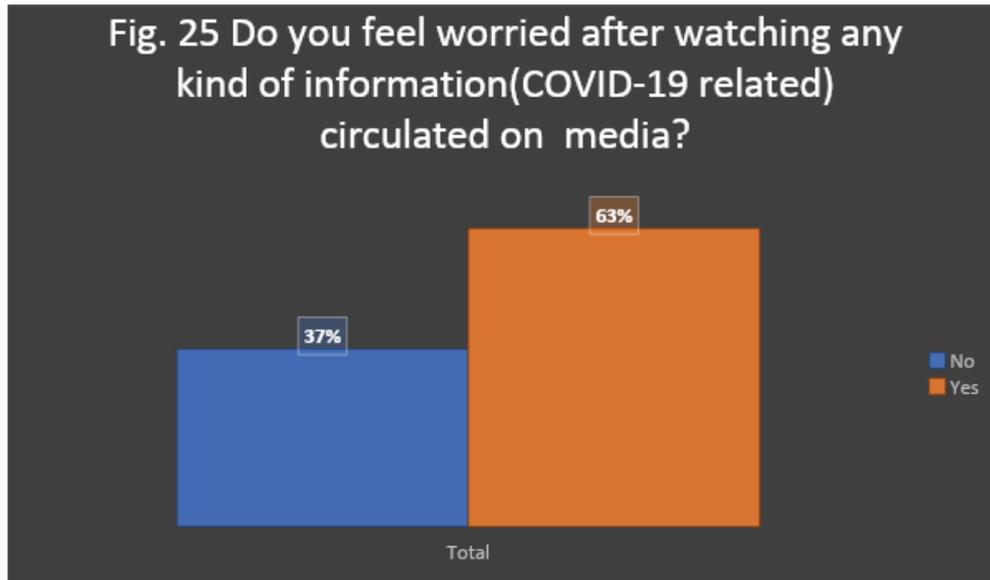


Fig. 25. Do you feel worried after watching any kind of information (COVID-19 related) circulated on media?

#### 7.24 Belief on social distancing (see Fig.26.):

When we asked respondents whether they believe in social distancing to protect themselves from COVID-19 infection, 97% replied with a yes and only 3% replied with no. This indicates that people believe in social distancing as an effective measure to control the spread of COVID-19 infection.

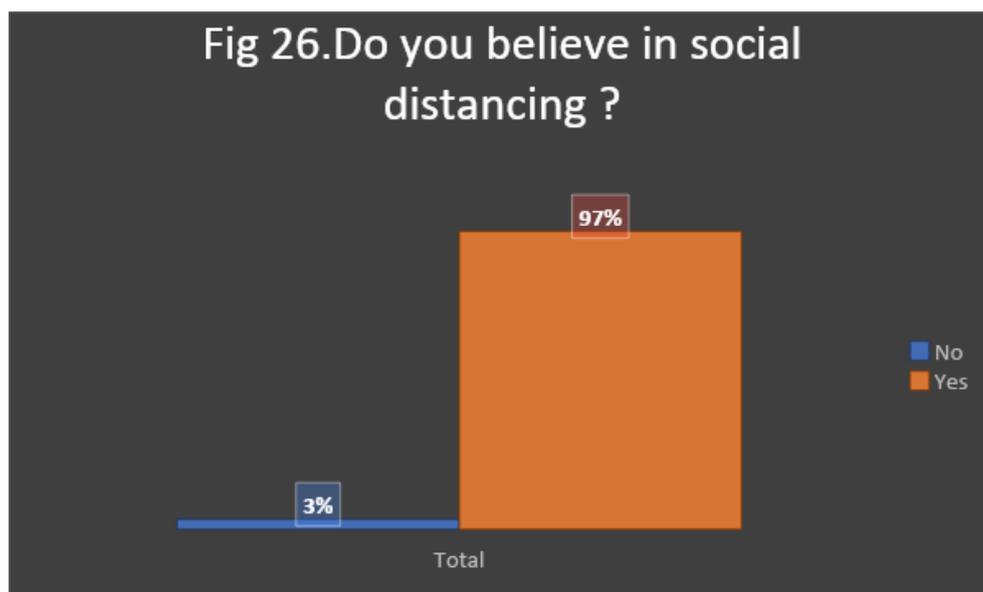


Fig. 26. Do you believe in social distancing?

#### 7.25 Washing of hands (see Fig.27.):

When we asked respondents about whether they wash their hands often to protect themselves from getting COVID-19 infections, 98% of the people responded with yes and only 2% replied with a no. this means people are aware about hand washing as an effective measure to curb spread of COVID-19 infection and follow the instructions carefully.

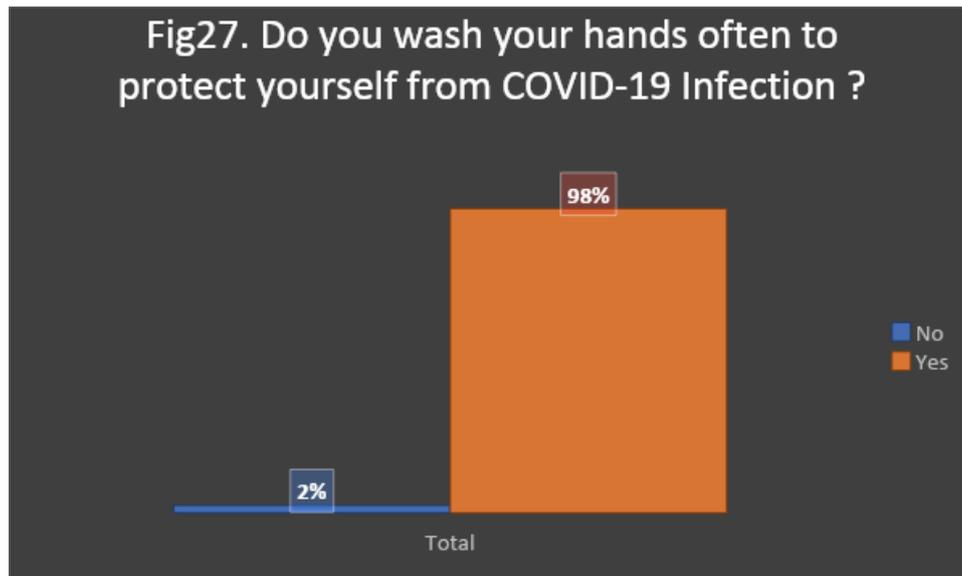


Fig. 27. Do you wash your hands often to protect yourself from COVID-19 infection?

#### 7.26 Wearing of mask (see Fig.28.):

When asked about the use of masks in public places 96% of the respondents replied that they use masks only 4% reported that they don't use masks in public places. This indicates most of the people are using masks to protect the spread of infection in the community.

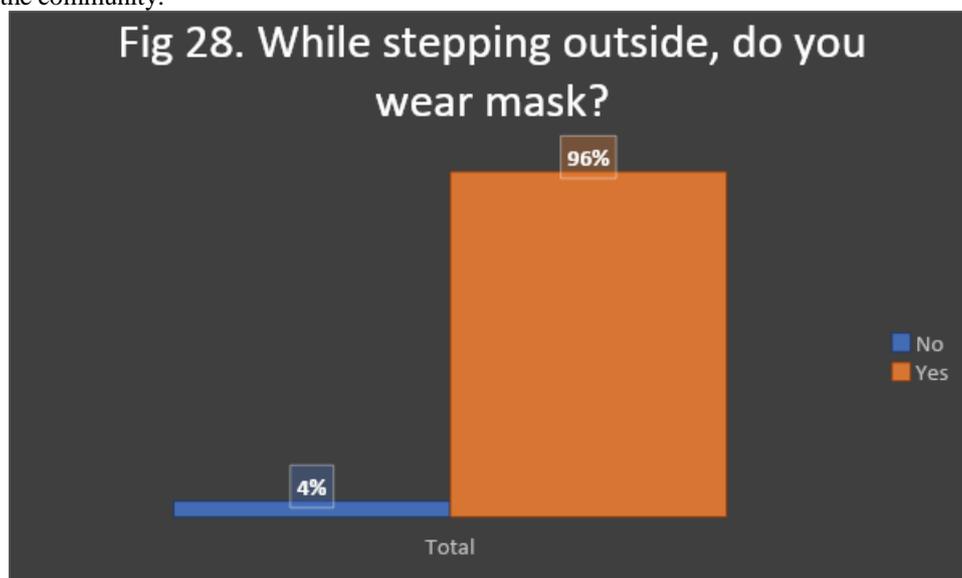


Fig. 28. While stepping outside, do you wear mask?

#### 7.27 Awareness about symptoms of COVID-19 (see Fig.29.):

When we asked people, whether they are aware about the symptoms and health implications of COVID-19, 99% of the respondents reported that yes they were already aware about it. Only 1% of respondents reported otherwise.

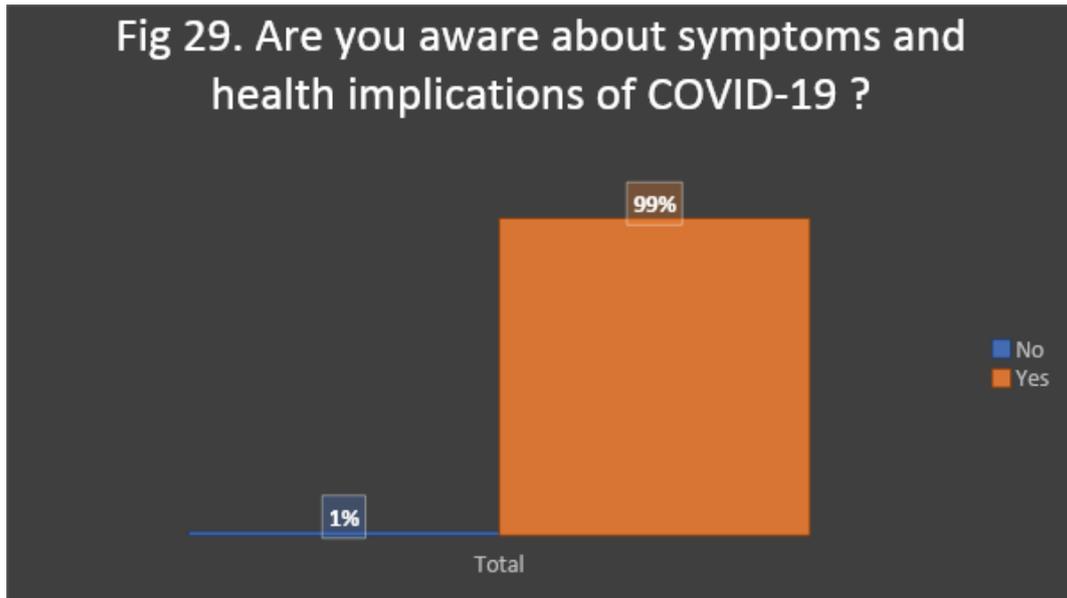


Fig. 29. Are you aware about symptoms and health implications of COVID-19?

#### 7.28 Effect on the income (see Fig.30.):

72% of the respondents reported that COVID-19 has caused a negative impact on their income while 28% of the respondents reported no effect on income. This indicates that COVID-19 has negative impact on the income of most of the population.

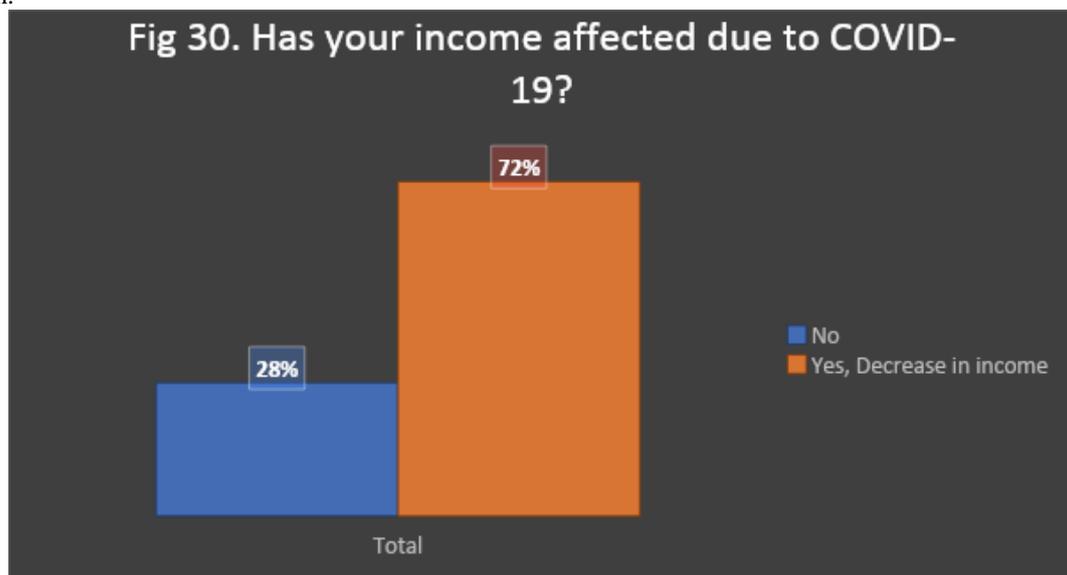


Fig. 30. Has your income affected due to COVID-19?

#### 7.29 Awareness about economical losses of the country (see Fig.31.):

96% of the respondents said they were aware about the economic losses of their country due to COVID-19 whereas 4% of the respondents said they were not aware about the losses. This indicates a high degree of awareness about the economic situation of the country by the population.

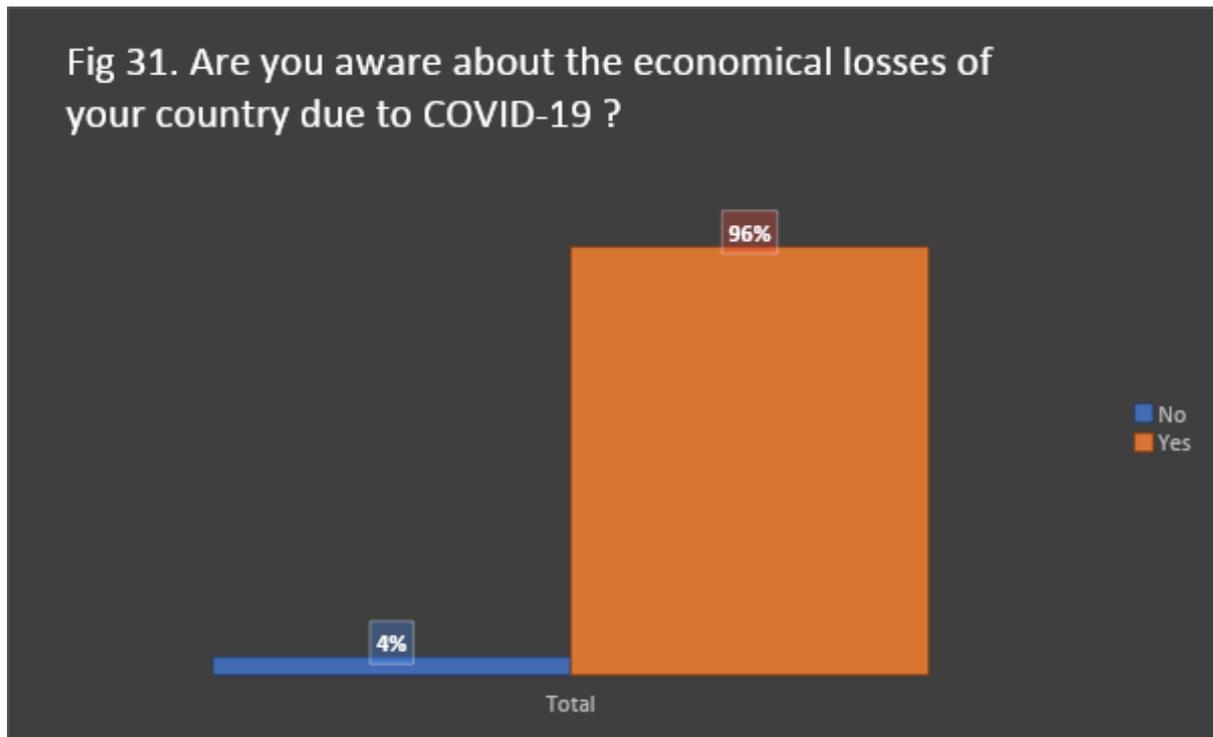


Fig. 31. Are you aware about the economical losses of your country due to COVID-19?

### 7.30 Cancellation of your outing plan (see Fig.32.):

Almost 90% of the respondents said that they have cancelled all plans for outing/travel this year, only 10% responded otherwise. This indicates that people are afraid to travel amidst prevailing circumstances due to COVID-19.

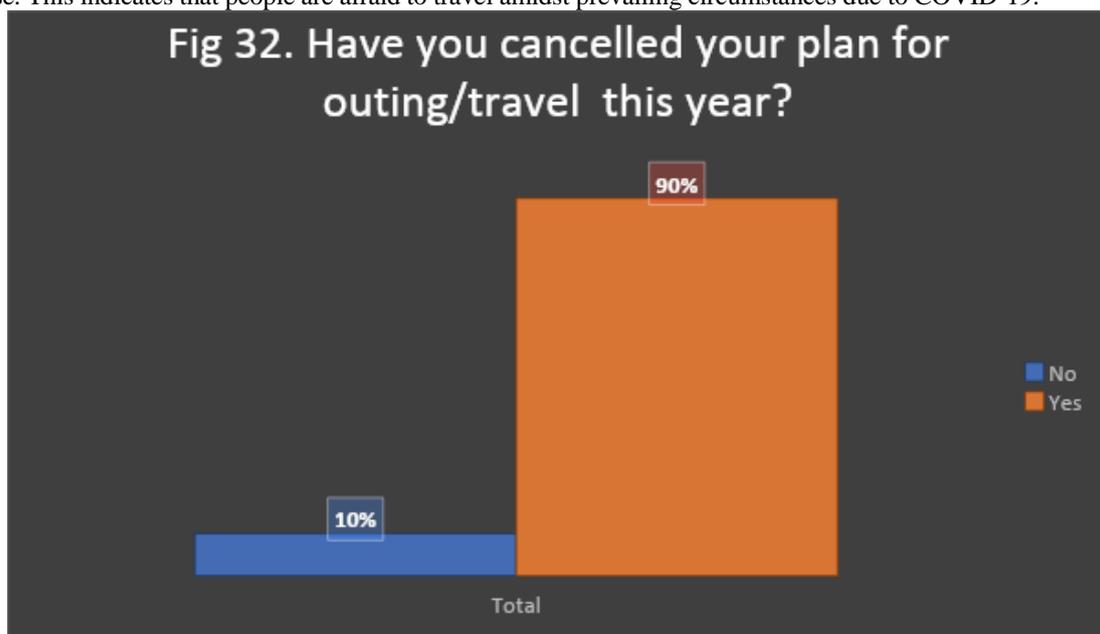


Fig. 32. Have you cancelled your plan for outing/travel this year?

### 7.31 Perception of effectiveness about online teaching (see Fig.33.):

Majority of the respondents 54.7% consider online classes to be ineffective but 45.3% consider it to be effective. This indicates the mixed response of respondents towards the acceptance of online learning as a suitable alternative to classroom teaching.

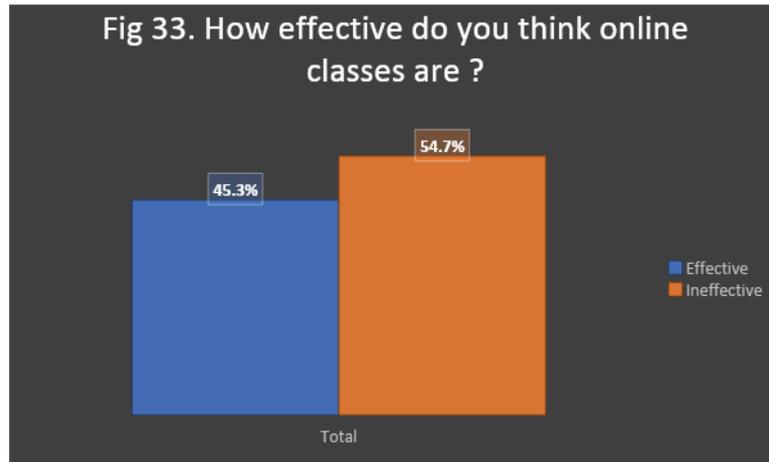


Fig. 33. How affective do you think online classed are?

### 7.32 Improvement in online classes (see Fig.34.):

When respondents were asked about the suggestions to improve online classes, majority of the respondents i.e. 30.52% suggested that teachers must be adequately trained to use online platforms, 13.7% suggested requirement of upgraded internet connectivity, 12.5% suggested need for interactive video lectures, 12% suggested need of awareness among students regarding use of online platforms, 7.2% suggested need for feedback and more interaction with students, 6% reported unavailability of student's access to smartphones as a challenge to online education, 1% said that they don't know about it and 17% of the respondents said there is no need for improvement in online classes.

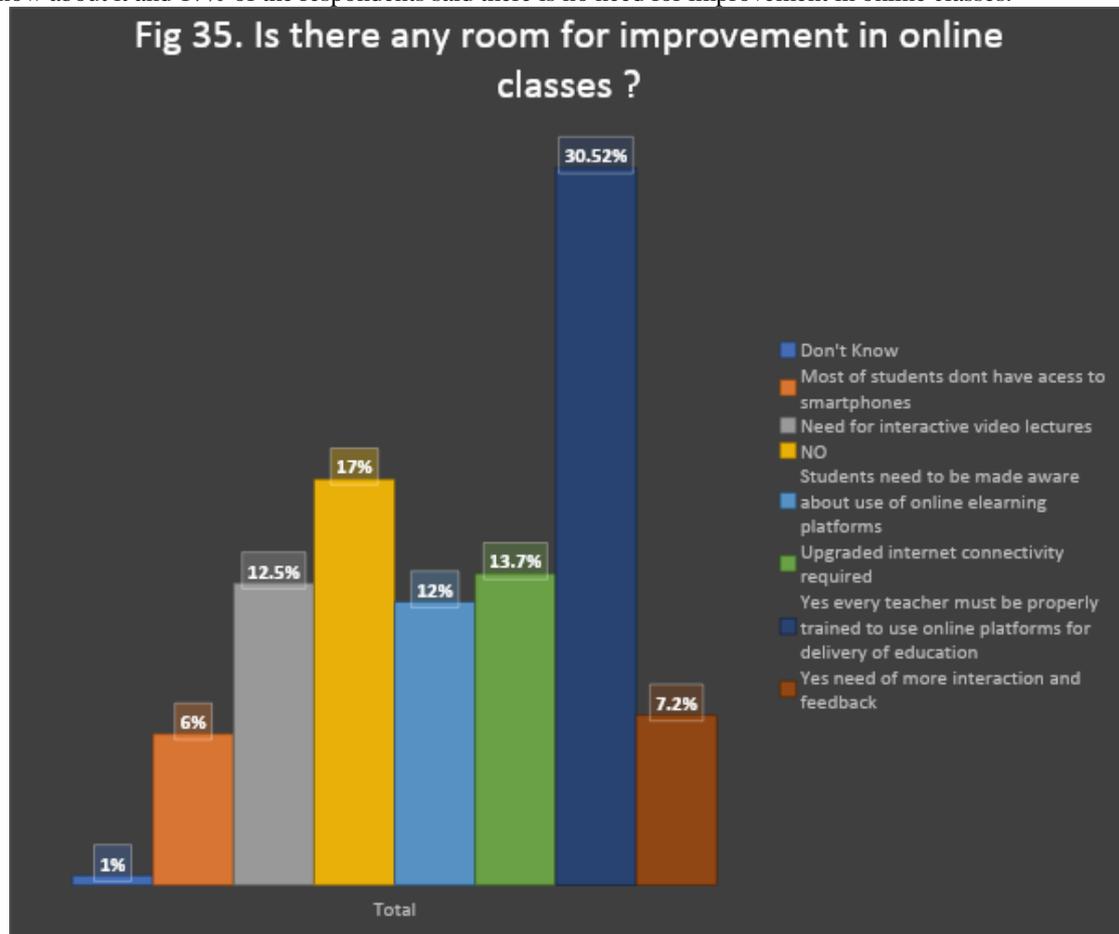


Fig. 34. Is there any room for improvement in online classed?

### 7.33 Your cooperation with lockdown (see Fig.35.):

When people were asked about their cooperation with lockdown, 95% of the respondents said that they cooperate with the lockdown; while as 5% reported they don't cooperate with the COVID-19 lockdown. This indicates that the majorities of the people cooperate with the lockdown and believe lockdown is an effective strategy in controlling the spread of COVID-19 infection.

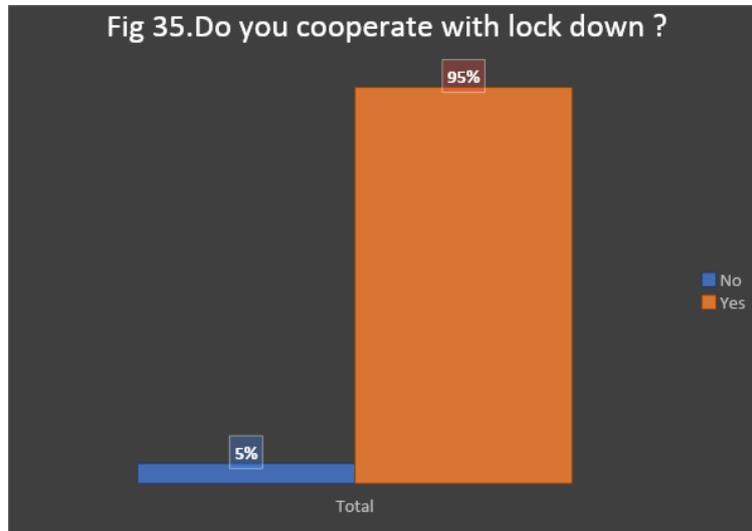


Fig. 35. Do you cooperate with lock down?

### 7.34 Your opinion about lockdown implementation (see Fig.36.):

When asked about whether there is a better strategy to deal with COVID-19 other than the lockdown, most of the people, i.e. 78.3% reported that the lockdown is the best option to deal with pandemic, 10.4% reported that social distancing is an alternative to lockdown, 9.6% considered mass testing as effective measure, 1.6% were not sure about it.

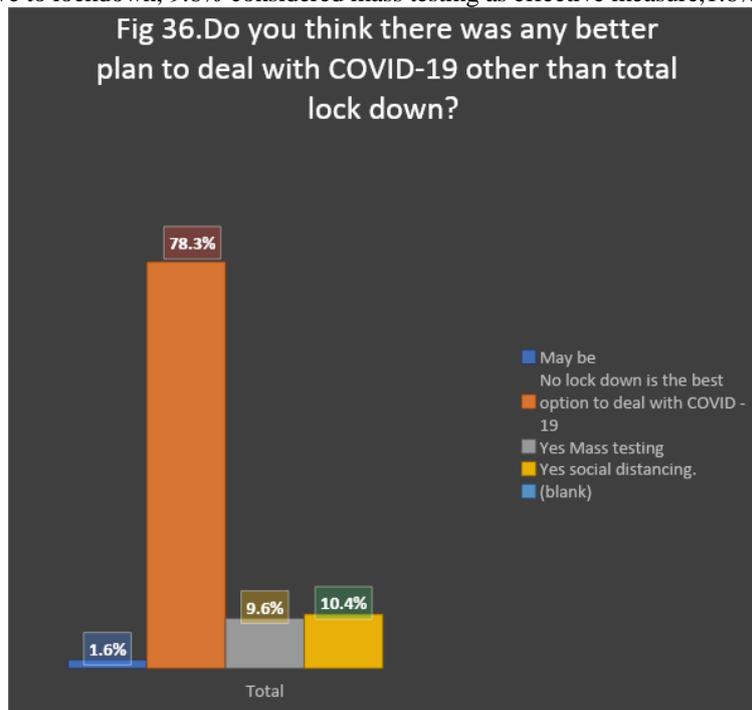


Fig. 36. Do you think there was any better plan to deal with COVID-19 other than total lock down?

## 8. Recommendations:

- Professional development of teachers with emphasis on digital literacy skills
- Awareness in students to use online platforms for learning.
- Availability of digital devices and high speed internet in all the sections of the population to reduce the digital divide.
- Involvement of the community and parents of children to mobilize use of online learning opportunities during the pandemic.
- Counselling for the general public to reduce anxiety and uncertainty regarding the COVID-19.
- To use free time as an opportunity for busy people for spending time with their families.
- Involvement of children in daily activities, indoor games to reduce stress and anxiety.
- Contributing towards lower sections of the economy or people who have suffered losses due to COVID-19.
- Providing support to young people, especially adolescents to help them control the feelings of self-isolation and alienation due to closure of schools, colleges and universities.
- Access to support organisations through virtual platforms to victims of gender based violence or domestic violence.
- Use of online or virtual help lines for people with mental health issues or people with depression.
- Development of online teaching infrastructure to support online teaching along with classroom teaching
- Use of home schooling as an effective alternative to formal schooling during the time of COVID-19 pandemic.
- IT infrastructure needs to be strengthened in the future.
- People need to be responsible for controlling Infodemics by avoiding forwarding of unauthentic and unreliable information.
- People must become the responsible netizens with regard of receiving and transmitting effective communication.
- People need to be made aware about growing cybercrime and internet safety while going online.
- Use of digital channels for banking, payment of utility bills, etc. to reduce footfall in banks and other organisations.
- Awareness about social distancing as an effective measure to control the spread of COVID-19 infection.
- Limited screen time to avoid eyestrain and other health related problems.
- Yoga and exercise at home to overcome stress arising due to COVID-19 and include some physical activity in daily routine.
- Eating a balanced diet and avoiding overeating, eating of processed foods to reduce the risk of obesity and related diseases.
- Following a healthy routine to sleep and avoiding oversleeping.
- Use this free time as an opportunity to update, acquire or enhance knowledge/skills.
- To realise the importance of the health sector and need for investment in this sector.
- In the need of encouragement and counselling of medical frontline workers to reduce stress arising due to exposure to risk and prolonged work durations during COVID-19.

## 9. Conclusion

The study investigates the immediate impact of COVID-19 on the general population. There are varying results in a certain segment of the people, but the average population shows the similar behavior. We have achieved the objective of the study by qualitative assessment on the data collected and the results represented became the basis for suggesting the suitable measures and recommendations.

The main objective of this research study is to understand the impact of COVID-19 on health, economy, education, lifestyle of the population and to assess the level of awareness of the general population regarding symptoms of COVID-19 and safety measures to control the spread of the infection in the community. The analysis of results determines that the COVID-19 has negative impact on physical, mental health of population restricting the access to support systems, particularly for people already having physical or mental health issues. The assessment and subsequent analysis on the data collected through the online survey suggests that the Lack of physical activity, closure of gyms, parks etc has affected the physical health of people. Lockdown resulting from pandemic has affected the sleeping routine of the majority of people. It has affected relationship with family and spouse also in a negative manner because of economic frustrations, loss of employment etc. Lack of entertainment and boredom has resulted in increased intake of food while as shortage of some food essentials have resulted in imbalanced food intake increasing risk of eating related health disorders like obesity. Results indicate the rise in screen time of people staying at home amidst lockdown. The results also indicate heightened negative emotions, stress levels and anxiety in people due to fear of COVID -19 infection and death because of it. Unreliable news and rumors circulated in social media has further increased negative perception about COVID-19 in people. The results indicate that the effect of the pandemic has detrimental on world economy and people revealed it has directly or indirectly adversely affected their income. Results regarding online education show that people believe online

learning as the only possible alternative solution in spite of some limitations. People believe there is much scope for improvement in the online, teaching learning process to increase its effectiveness. The results indicate a good level of awareness in the population regarding the spread of COVID-19 and safety measures like to maintain hygiene, use of masks, following lockdown protocols to control the spread of infection. People believe in social distancing as an effective measure to break the chain of COVID-19 infection and consider lockdown as the best possible strategy to flatten the curve of infections. The study suggests use of proper measures to tackle the resulting crisis because of the pandemic. Even though the recommendations made in this paper cannot be ensured in the present situation, but they must be taken into consideration for the future. Although this research study has some limitations like self reporting of responses still it can be helpful in understanding the impact of COVID-19 of life of people. Future research can focus on the detailed aspects of the impact of COVID-19 and cover larger samples of the population.

## Acknowledgements

We express our sincere thanks to the correspondents, who spare some time and provided feedback to us.

## References

- [1] Y.-Y. Zheng, Y.-T. Ma, J.-Y. Zhang, and X. Xie, "COVID-19 and the cardiovascular system," *Nat. Rev. Cardiol.*, vol. 17, no. 5, pp. 259–260, 2020.
- [2] TheHindu, "Coronavirus - The Hindu," thehindu, 2019. <https://www.thehindu.com/topic/coronavirus/> (accessed May 11, 2020).
- [3] Y. Liu, A. A. Gayle, A. Wilder-Smith, and J. Rocklöv, "The reproductive number of COVID-19 is higher compared to SARS coronavirus," *J. Travel Med.*, 2020.
- [4] D. Wang et al., "Clinical Characteristics of 138 Hospitalized Patients With 2019 Novel Coronavirus–Infected Pneumonia in Wuhan, China," *JAMA*, vol. 323, no. 11, pp. 1061–1069, Mar. 2020, doi: 10.1001/jama.2020.1585.
- [5] D. Cucinotta and M. Vanelli, "WHO declares COVID-19 a pandemic.," *Acta bio-medica Atenei Parm.*, vol. 91, no. 1, pp. 157–160, 2020.
- [6] C.-C. Lai, T.-P. Shih, W.-C. Ko, H.-J. Tang, and P.-R. Hsueh, "Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and coronavirus disease-2019 (COVID-19): The epidemic and the challenges," *Int. J. Antimicrob. Agents*, vol. 55, no. 3, p. 105924, 2020, doi: <https://doi.org/10.1016/j.ijantimicag.2020.105924>.
- [7] WHO, "Situation Report-18 SITUATION IN NUMBERS total and new cases in last 24 hours," World Health Organization. Coronavirus disease 2019 (COVID-19) situation report–51. Geneva, Switzerland: World Health Organization; 2020., 2019. Accessed: May 11, 2020. [Online]. Available: [https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200207-sitrep-18-ncov.pdf?sfvrsn=fa644293\\_2](https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200207-sitrep-18-ncov.pdf?sfvrsn=fa644293_2).
- [8] S. Murthy, C. D. Gomersall, and R. A. Fowler, "Care for Critically Ill Patients With COVID-19," *JAMA*, vol. 323, no. 15, pp. 1499–1500, Apr. 2020, doi: 10.1001/jama.2020.3633.
- [9] M. A. Shereen, S. Khan, A. Kazmi, N. Bashir, and R. Siddique, "COVID-19 infection: Origin, transmission, and characteristics of human coronaviruses," *J. Adv. Res.*, vol. 24, pp. 91–98, 2020, doi: <https://doi.org/10.1016/j.jare.2020.03.005>.
- [10] N. Chen et al., "Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study," *Lancet*, vol. 395, no. 10223, pp. 507–513, 2020, doi: 10.1016/S0140-6736(20)30211-7.
- [11] P. Zhou et al., "A pneumonia outbreak associated with a new coronavirus of probable bat origin," *Nature*, vol. 579, no. 7798, pp. 270–273, 2020, doi: 10.1038/s41586-020-2012-7.
- [12] Worldometer, "Coronavirus update (Live): 1,925,224 cases and 119,702 deaths from COVID-19 virus pandemic," Worldometers, 2020. <https://www.worldometers.info/coronavirus/%0Ahttps://www.worldometers.info/coronavirus/> (accessed May 11, 2020).
- [13] W. H. Organization, "Coronavirus disease (COVID-19) outbreak situation report-29," WHO, 2020. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019> (accessed May 11, 2020).
- [14] I. Mahar, "Impact of Covid-19 on Global Economy Structure," *Modern Diplomacy*, 2020. <https://moderndiplomacy.eu/2020/04/22/impact-of-covid-19-on-global-economy-structure/> (accessed May 11, 2020).
- [15] A. Mudgil, "why did crude oil prices fall: Here's why crude oil prices fell below \$0 a barrel - The Economic Times," *The Economic Times*, 2020. [https://economictimes.indiatimes.com/markets/commodities/news/what-led-crude-oil-prices-fall-below-0-a-barrel/articleshow/75264813.cms?utm\\_source=contentofinterest&utm\\_medium=text&utm\\_campaign=cppst](https://economictimes.indiatimes.com/markets/commodities/news/what-led-crude-oil-prices-fall-below-0-a-barrel/articleshow/75264813.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst) (accessed May 11, 2020).
- [16] IMF, "World Economic Outlook, January 2020," IMF, World Economic and Financial Surveys, World Economic Outlook Database 2020, 2020. <https://www.imf.org/external/pubs/ft/weo/2019/02/weodata/index.aspx> (accessed May 11, 2020).
- [17] L. Benfratello and S. K. Parida, "The Indian Economy Since Independence."
- [18] P. Mulye, "Covid-19 hurt Indian economy more than US, UK, China, or Italy's — Quartz India," *QUARTZ INDIA*, 2020. <https://qz.com/india/1852968/covid-19-hurt-indian-economy-more-than-us-uk-china-or-italys/> (accessed May 11, 2020).
- [19] K. S. Nikkei Staff, "India's unemployment at record high amid tough COVID-19 lockdown - Nikkei Asian Review," *Nikkei Asian Review*, 2020. <https://asia.nikkei.com/Economy/India-s-unemployment-at-record-high-amid-tough-COVID-19-lockdown> (accessed May 11, 2020).
- [20] P. Ozili and T. Arun, "Spillover of COVID-19: impact on the Global Economy," *SSRN Electron. J.*, Nov. 2020, doi: 10.2139/ssrn.3562570.
- [21] Worldometer, "Countries where Coronavirus has spread - Worldometer," 2020. <https://www.worldometers.info/coronavirus/countries-where-coronavirus-has-spread/> (accessed May 12, 2020).

- [22] European Centre for Disease Prevention and Control An agency of the European Union, "COVID-19 situation update worldwide, as of 12 May 2020," 2020. <https://www.ecdc.europa.eu/en/geographical-distribution-2019-ncov-cases> (accessed May 12, 2020).
- [23] The Visual and Data Journalism Team and BBC News, "Coronavirus pandemic: Tracking the global outbreak - BBC News," BBC NEWS. <https://www.bbc.com/news/world-51235105> (accessed May 12, 2020).
- [24] Brian Pearce, "Potential for revenue losses of \$113bn due to COVID-19 'crisis' | Airlines.," Airlines IATA, 2020. <https://airlines.iata.org/news/potential-for-revenue-losses-of-113bn-due-to-covid-19-crisis> (accessed May 12, 2020).
- [25] F. Times, "Coronavirus threatens India's banking recovery before it even starts," Financial Times, 2020. <https://www.ft.com/content/153f2922-6e15-11ea-89df-41bea055720b> (accessed May 12, 2020).
- [26] The Economic Times, "Coronavirus Impact on Global Economy: Global economy could shrink by almost 1% in 2020 due to COVID-19 pandemic: United Nations - The Economic Times," moneycontrol, 2020. <https://economictimes.indiatimes.com/news/international/business/global-economy-could-shrink-by-almost-1-in-2020-due-to-covid-19-pandemic-united-nations/articleshow/74943235.cms?from=mdr> (accessed May 13, 2020).
- [27] World Trade Organization, "Trade set to plunge as COVID-19 pandemic upends global economy," Press Release, vol. 2020, no. PRESS/855, pp. 1–13, 2020, Accessed: May 13, 2020. [Online]. Available: [https://www.wto.org/english/news\\_e/pres20\\_e/pr855\\_e.htm](https://www.wto.org/english/news_e/pres20_e/pr855_e.htm).
- [28] N. Randewich, "Coronavirus, oil collapse erase \$5 trillion from U.S. stocks," Reuters, 2020. <https://www.reuters.com/article/us-health-coronavirus-stocks-carnage/coronavirus-then-oil-collapse-erase-5-trillion-from-u-s-stocks-idUSKBN20W2TJ> (accessed May 12, 2020).
- [29] M. N. Jackson, James K., Martin, A Weiss, Andres, B. Schwarzenberg and Rebecca, "Global Economic Effects of COVID-19," pp. 5–69, 2020, Accessed: May 12, 2020. [Online]. Available: <https://crsreports.congress.gov>.
- [30] Aftab Ahmed, "India outlines \$23 billion stimulus to help poor hit by lockdown," World Economic Forum, 2020.
- [31] Hindustan Times New Delhi, "From Rs 20 lakh crore economic package to Lockdown 4: Key points from PM Modi's speech - india news - Hindustan Times," Hindustan Times, New Delhi, 2020. <https://www.hindustantimes.com/india-news/from-rs-20-lakh-crore-economic-package-to-lockdown-4-key-points-from-pm-modi-s-speech/story-sNqTCwoYUucKvvR2qDoNO.html> (accessed May 13, 2020).
- [32] The Economic Times, "BRICS' New Development Bank provides USD 1 billion loan to India to fight COVID-19 - The Economic Times," The Economic Times, 2020. <https://economictimes.indiatimes.com/news/economy/finance/brics-new-development-bank-provides-usd-1-billion-loan-to-india-to-fight-covid-19/articleshow/75710148.cms> (accessed May 13, 2020).
- [33] Deccan Chronicle, "India gets USD 1 billion loan from BRICS' New Development Bank to fight Covid19," deccanchronicle, 2020. <https://www.deccanchronicle.com/business/economy/130520/brics-new-development-bank-provides-1-billion-loan-to-india-to-fight.html> (accessed May 13, 2020).
- [34] The Financial Express, "BRICS' New Development Bank provides \$1 billion loan to India to fight COVID-19," The Financial Express, 2020. <https://www.financialexpress.com/economy/brics-new-development-bank-provides-1-billion-loan-to-india-to-fight-covid-19/1957362/> (accessed May 13, 2020).
- [35] T. Jose Luis, "Implications on mental health by the coronavirus disease 2019 (COVID-19) pandemic: The role of general practitioner," Arch. Psychiatry Ment. Heal., vol. 4, no. 1, pp. 035–041, May 2020, doi: 10.29328/journal.apmh.1001016.
- [36] "Mental Health in a Time of Pandemic | Psychology Today." <https://www.psychologytoday.com/us/blog/talking-about-health/202003/mental-health-in-time-pandemic> (accessed Jun. 05, 2020).
- [37] B. Pfefferbaum and C. S. North, "Mental Health and the Covid-19 Pandemic," N. Engl. J. Med., Apr. 2020, doi: 10.1056/nejmp2008017.
- [38] "COVID-19: Experts Hasten to Head Off Mental Health Crisis." <https://www.medscape.com/viewarticle/929058> (accessed Jun. 05, 2020).
- [39] "'Urgent studies needed' into mental health impact of coronavirus | World news | The Guardian." <https://www.theguardian.com/world/2020/apr/15/urgent-studies-needed-mental-health-coronavirus-lockdown> (accessed Jun. 05, 2020).
- [40] E. A. Holmes et al., "Multidisciplinary research priorities for the COVID-19 pandemic: a call for action for mental health science," The Lancet Psychiatry. Elsevier Ltd, 2020, doi: 10.1016/S2215-0366(20)30168-1.
- [41] "COVID-19: Mental Illness the 'Inevitable' Next Pandemic?" <https://www.medscape.com/viewarticle/928756> (accessed Jun. 05, 2020).
- [42] "New study shows staggering effect of coronavirus pandemic on America's mental health." <https://theconversation.com/new-study-shows-staggering-effect-of-coronavirus-pandemic-on-americas-mental-health-137944> (accessed Jun. 05, 2020).
- [43] "Implications on mental health by the coronavirus disease 2019 (COVID-19) pandemic: The role of general practitioner." <https://www.heighpubs.org/hjcap/apmh-aid1016.php> (accessed Jun. 05, 2020).
- [44] K. Shah, D. Kamrai, H. Mekala, B. Mann, K. Desai, and R. S. Patel, "Focus on Mental Health During the Coronavirus (COVID-19) Pandemic: Applying Learnings from the Past Outbreaks," Cureus, vol. 12, no. 3, Mar. 2020, doi: 10.7759/cureus.7405.
- [45] "Concerns for the Mental Health of Children and Adolescents during the Coronavirus Pandemic - ESCAP." <https://www.escap.eu/index/coronavirus-and-mental-health/> (accessed Jun. 05, 2020).
- [46] "Mental health effects of school closures during COVID-19 - The Lancet Child & Adolescent Health." [https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642\(20\)30109-7/fulltext](https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642(20)30109-7/fulltext) (accessed Jun. 05, 2020).
- [47] "Mitigate the effects of home confinement on children during the COVID-19 outbreak - The Lancet." [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)30547-X/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30547-X/fulltext) (accessed Jun. 05, 2020).
- [48] K. Tsamakis et al., "[Comment] COVID-19 pandemic and its impact on mental health of healthcare professionals," Exp. Ther. Med., vol. 19, no. 6, pp. 3451–3453, Apr. 2020, doi: 10.3892/etm.2020.8646.
- [49] M. S. Spoorthy, "Mental health problems faced by healthcare workers due to the COVID-19 pandemic—A review," Asian Journal of Psychiatry, vol. 51. Elsevier B.V., p. 102119, Jun. 01, 2020, doi: 10.1016/j.ajp.2020.102119.

- [50] “Mental health effects expected to long outlast COVID-19 | Local News | enidnews.com.” [https://www.enidnews.com/news/local\\_news/mental-health-effects-expected-to-long-outlast-covid-19/article\\_a0a850a7-276d-549c-9798-f50c6069c2c1.html](https://www.enidnews.com/news/local_news/mental-health-effects-expected-to-long-outlast-covid-19/article_a0a850a7-276d-549c-9798-f50c6069c2c1.html) (accessed Jun. 05, 2020).
- [51] A. A. Eshraghi et al., “COVID-19: overcoming the challenges faced by individuals with autism and their families,” *The Lancet Psychiatry*, vol. 7, no. 6, pp. 481–483, Jun. 2020, doi: 10.1016/S2215-0366(20)30197-8.
- [52] R. Armitage and L. B. Nellums, “The COVID-19 response must be disability inclusive,” *The Lancet Public Health*, vol. 5, no. 5. Elsevier Ltd, p. e257, May 01, 2020, doi: 10.1016/S2468-2667(20)30076-1.
- [53] “People with substance use disorders face greater challenges during the COVID-19 pandemic.” <https://theconversation.com/people-with-substance-use-disorders-face-greater-challenges-during-the-covid-19-pandemic-137476> (accessed Jun. 05, 2020).
- [54] “The Implications of COVID-19 for Mental Health and Substance Use | KFF.” <https://www.kff.org/coronavirus-covid-19/issue-brief/the-implications-of-covid-19-for-mental-health-and-substance-use/> (accessed Jun. 05, 2020).
- [55] “What Past Disasters Tell Us About COVID-19 and Substance Abuse.” <https://www.medscape.com/viewarticle/930594> (accessed Jun. 05, 2020).
- [56] “Coronavirus Crisis: No lockdown for domestic violence | Deccan Herald.” <https://www.deccanherald.com/specials/insight/coronavirus-crisis-no-lockdown-for-domestic-violence-829941.html> (accessed Jun. 05, 2020).
- [57] E. Roesch, A. Amin, J. Gupta, and C. García-Moreno, “Violence against women during covid-19 pandemic restrictions,” *BMJ (Clinical research ed.)*, vol. 369. NLM (Medline), p. m1712, May 07, 2020, doi: 10.1136/bmj.m1712.
- [58] J. S. Chandan, J. Taylor, C. Bradbury-Jones, K. Nirantharakumar, E. Kane, and S. Bandyopadhyay, “COVID-19: a public health approach to manage domestic violence is needed,” *Lancet Public Health*, vol. 5, no. 6, p. e309, May 2020, doi: 10.1016/s2468-2667(20)30112-2.
- [59] “‘Coronavirus murders’: media narrative about domestic abuse during lockdown is wrong and harmful.” <https://theconversation.com/coronavirus-murders-media-narrative-about-domestic-abuse-during-lockdown-is-wrong-and-harmful-137011> (accessed Jun. 05, 2020).
- [60] K. Usher, N. Bhullar, J. Durkin, N. Gyamfi, and D. Jackson, “Family violence and COVID - 19: Increased vulnerability and reduced options for support,” *Int. J. Ment. Health Nurs.*, p. inm.12735, May 2020, doi: 10.1111/inm.12735.
- [61] “COVID-19 lockdowns worsen childhood obesity globally: Study.” <https://www.nationalheraldindia.com/international/covid-19-lockdowns-worsen-childhood-obesity-globally-study> (accessed Jun. 05, 2020).
- [62] “COVID-19 lockdown can worsen obesity issues in children, suggests study | Lifestyle News, The Indian Express.” <https://indianexpress.com/article/lifestyle/health/covid-19-lockdown-worsen-obesity-in-children-study-6442648/> (accessed Jun. 05, 2020).
- [63] “Screen time goes up during coronavirus lockdown - How to keep your eyes healthy, and safe from infections | Health Tips and News.” <https://www.timesnownews.com/health/article/screen-time-goes-up-during-coronavirus-lockdown-how-to-keep-your-eyes-healthy-and-safe-from-infections/578467> (accessed Jun. 05, 2020).
- [64] “Increasing screen time during the coronavirus pandemic could be harmful to kids’ eyesight.” <https://theconversation.com/increasing-screen-time-during-the-coronavirus-pandemic-could-be-harmful-to-kids-eyesight-138193> (accessed Jun. 05, 2020).
- [65] “Cybercrime and COVID-19 - News.” <https://www.coe.int/en/web/cybercrime/-/cybercrime-and-covid-19> (accessed Jun. 05, 2020).
- [66] “Eye health concerns exacerbated as COVID-19-induced quarantine increases screen time.” <https://www.nutritioninsight.com/news/eye-health-concerns-exacerbated-as-covid-19-induced-quarantine-increases-screen-time.html> (accessed Jun. 05, 2020).
- [67] “Report: Screen Time and Neurological Symptoms Rising Due to COVID-19 - National Headache Foundation.” <https://headaches.org/2020/05/14/screen-time-covid-19/> (accessed Jun. 05, 2020).
- [68] “Rethinking screen-time in the time of COVID-19 | UNICEF Office of Global Insight & Policy.” <https://www.unicef.org/globalinsight/stories/rethinking-screen-time-time-covid-19> (accessed Jun. 05, 2020).
- [69] A. Orben and A. K. Przybylski, “Screens, Teens, and Psychological Well-Being: Evidence From Three Time-Use-Diary Studies,” *Psychol. Sci.*, vol. 30, no. 5, pp. 682–696, May 2019, doi: 10.1177/0956797619830329.
- [70] [70] “Myths, Rumours and Spectacles in India’s Fight Against COVID-19.” <https://thewire.in/politics/covid-19-diwali-spectacle> (accessed Jun. 05, 2020).
- [71] “Fake News In The Time Of Coronavirus: A BOOM Study.” <https://www.boomlive.in/fact-file/fake-news-in-the-time-of-coronavirus-a-boom-study-8008> (accessed Jun. 05, 2020).
- [72] “UNESCO: Over 154 cr students hit by schools,colleges closure due to COVID-19; girls to be worst hit - Times of India.” <https://timesofindia.indiatimes.com/home/education/news/unesco-over-154-cr-students-hit-by-schoolscolleges-closure-due-to-covid-19-girls-to-be-worst-hit/articleshow/75294123.cms> (accessed May 28, 2020).
- [73] “Colleges Are Going Online Because of the Coronavirus - Bloomberg.” <https://www.bloomberg.com/news/articles/2020-03-19/colleges-are-going-online-because-of-the-coronavirus> (accessed Jun. 05, 2020).
- [74] “e-learning: COVID-19 Pandemic: Impact and strategies for education sector in India, Government News, ET Government.” <https://government.economictimes.indiatimes.com/news/education/covid-19-pandemic-impact-and-strategies-for-education-sector-in-india/75173099> (accessed May 28, 2020).
- [75] “COVID-19: Indian Internet infra not prepared for shift to online teaching-learning, says QS report - The Economic Times.” <https://economictimes.indiatimes.com/tech/internet/covid-19-indian-internet-infra-not-prepared-for-shift-to-online-teaching-learning-says-qs-report/articleshow/75269679.cms?from=mdr> (accessed May 28, 2020).
- [76] “Six key messages on the protection of the right to education of people in situations of mobility in the context of COVID-19.” <https://en.unesco.org/news/six-key-messages-people-mobility-covid-19> (accessed May 28, 2020).

- [77] "COVID-19 effect: Schools shut, colleges conducting online classes; get latest updates here." <https://www.shiksha.com/boards/articles/covid-19-effect-schools-shut-colleges-conducting-online-classes-get-latest-updates-here-blogId-32375> (accessed May 28, 2020).
- [78] "Coronavirus meant teachers had little training for online classes." <https://www.usatoday.com/story/news/education/2020/04/17/coronavirus-teachers-online-class-school-closures/2972529001/> (accessed May 28, 2020).
- [79] "Coronavirus Forces \$600 Billion Higher Education Industry Online." <https://www.bloombergquint.com/businessweek/colleges-are-going-online-because-of-the-coronavirus> (accessed Jun. 05, 2020).
- [80] Sarah Dryhurst, Claudia R. Schneider, John Kerr, Alexandra L. J.Freeman, Gabriel Recchia, Anne Marthe van der Bles, David Spiegelhalter and Sander van der Linden, "Risk perceptions of COVID-19 around the world" JOURNAL OF RISK RESEARCH <https://doi.org/10.1080/13669877.2020.1758193> April, 2020
- [81] Abid Haleem1, Mohd Javaid," Effects of COVID-19 pandemic in daily life" Current Medicine Research and Practice, journal homepage, [www.elsevier.com/locate/cmrp](http://www.elsevier.com/locate/cmrp). March-2020.
- [82] Dana Rose Garfin, Roxane Cohen Silver, and E. Alison Holman, "The Novel Coronavirus (COVID-2019) Outbreak: Amplification of Public Health consequences by Media Exposure" © 2020 American Psychological Association, ISSN: 0278-6133, 2020, Vol. 39, No. 5, 355–357
- [83] Jay J. Van Bavel and et al, " Using social and behavioural science to support COVID-19 pandemic response" Perspective <https://doi.org/10.1038/s41562-020-0884-z>, Nature Human Behaviour | VOL 460 4 | May 2020 | 460–471 | [www.nature.com/nathumbehav](http://www.nature.com/nathumbehav)
- [84] Indranil Chakraborty, Prasenjit Maity," COVID-19 outbreak: Migration, effects on society, global environment and prevention" Science of the Total Environment journal homepage: [www.elsevier.com/locate/scitotenv-2020](http://www.elsevier.com/locate/scitotenv-2020)

### Authors' Profiles



**Dr. Mirza Waseem Hussain:** He has received a Masters Degree in Computer Applications from University of Kashmir in 2012 and he was awarded Ph.D in "Congestion Control in Computer Networks" in 2017 from BGSB University Rajouri-J&K. He is presently working as Lecturer in the Department of Computer Science, School Education, Government of Jammu and Kashmir, India. His research interests are computer networks, neural networks, Data Mining and e-learning.



**Tabasum Mirza:** She has received a Masters Degree in Computer Applications from University of Kashmir in 2008. She is presently working as Lecturer in the Department of Computer Science, School Education, Government of Jammu and Kashmir, India. She has a 6.5 years experience of working in JK Bank Pvt. Ltd. Her specialization is software Engineering, Java Programming, Data Mining and e-learning.



**Malik Mubasher Hassan:** Received his B.Tech degree from the University of Jammu followed by M.Tech degree from NIT Srinagar in 2007. He is presently serving as Principal University Polytechnic Baba Ghulam Shah Badshah University (BGSBU) Rajouri (J&K), India-185234. Former Head, Dept. of ITE BGSB University Rajouri. His research interests include communication systems, optical wireless, computer Networks, data mining and ICT.

**How to cite this paper:** Mirza Waseem Hussain, Tabasum Mirza, Malik Mubasher Hassan. " Impact of COVID-19 Pandemic on the Human Behavior ", International Journal of Education and Management Engineering (IJEME), Vol.10, No.5, pp.35-61, 2020. DOI: 10.5815/ijeme.2020.05.05