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Impact of COVID-19 on Healthcare and Lifestyle-an E-survey on Indian Population

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ABSTRACT

The 2019 novel coronavirus (2019-nCoV) is one of the most complex viruses that challenged humanity and became pandemic. Due to the rapid spread of COVID-19, the Indian government announced a lockdown. Strategies like social distancing, implementing travel bans, closing crowded public places and school, colleges etc., were used by Government to prevent individuals from getting infected. Sudden lockdown resulted in limitation on outdoor activities and disturbance in the daily routine of people, which affected their physical as well as mental health. Considering all this, an E-survey was conducted to analyse the changes related to healthcare and lifestyle amongst the Indian population. The E- the survey was conducted from 22nd September to 9th November 2020, among the Indian Population using Google forms accessible through any device. The link to Google form was circulated via e-mails and social networking sites like Facebook, Instagram, WhatsApp etc. Participants were informed about the aim of the project. After submission of the Google forms by the participants, their responses were analysed in a Microsoft Excel sheet. A total of 904 individuals responded for the survey. The basic observations included increased positive mentality of people towards their health. There were few instances where this pandemic affected the people in a negative way, some of which includes increased cases of anxiety, depression and increased screen time etc. There were many positive as well as negative outcomes of pandemic amongst Indian population, despite various limitations, many important aspects were taken into consideration.



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INTRODUCTION

The 2019 novel coronavirus (2019-nCoV) is one of the most complex viruses that challenged humanity. Almost all countries throughout the world are affected by disease caused by coronavirus. COVID-19 (coronavirus disease 2019) originated from Wuhan (Hubei, China) and spread throughout the world very rapidly. World Health Organization (WHO) declared COVID-19 a public health emergency on January 30, 2020. COVID-19 cases outside China were increased by 13 times till March 11, 2020, and the number of affected countries was increased threefold and the outbreak was declared

a pandemic (Sahu, 2020). India reported its first COVID-19 patient on January 31, 2020. Due to the rapid spread of COVID-19, the Indian government announced a lockdown to prevent individuals from getting infected. In the absence of vaccination, social distancing & lockdown strategies were used by the government, implementing travel bans, closing crowded public places, and school/colleges etc. (Srivastav et al., 2020).

The lockdown affected people's physical health due to reduced activity along with mental health. As outdoor activities, regular physical activity, and exercises were limited, it affected their daily routines. Studies reported that staying at home (which includes digital education, smart working, limitation of outdoors and in-gym physical activity) for a prolonged period lead to sedentary behaviours, such as spending more time on sitting activities, playing games, watching television/mobile/laptop, decreasing regular outdoor activity and exercises, etc. can lead to an increased risk of chronic health conditions (Srivastav et al., 2020; Varshney et al., 2020). Long-term physical inactivity can reduce the immune function of people and can affect the normal physiological system of the body. Meanwhile, individuals can be affected by multiple infections, drowsiness, lethargy, obesity, and other psychological problems due to physical inactivity.

The work routine disturbance caused by lockdown resulted in boredom. Previous studies reported that a lot of individuals experienced psychological stress. Other studies reported that people's mental health was affected. The magnitude of depression, anxiety, insomnia, and stress was increased (Rahman, 2020; Sahu, 2020). Considering this, an E-survey was conducted to analyse the effect of this pandemic amongst the Indian population regarding lifestyle and healthcare changes.

METHODOLOGY

Survey Methodology

An E-survey project entitled 'Impact of COVID-19 on Healthcare and Lifestyle of Indian People' was carried out by a small group of pharmacy students by conducting a web-based survey (Eysenbach and Wyatt, 2002) to obtain eligible data from every possible Indian state accessing the changes occurred in their routine lifestyle and health.

The survey was conducted from 22nd September to 9th November 2020, among the Indian population using Google forms accessible through any device. The link to the Google form was propagated through institutional (via Emails) and social networks (Face-

book, Instagram, WhatsApp) (Srivastav et al., 2020). As the project was carried for research purposes, it was spread widely. Participants were informed about the aim of the project as the personal information of participants, including names, age, etc., were protected confidentially. After submission of the Google forms by the participants, their responses were analyzed in a Microsoft Excel sheet (Shankar, 2020)

E-Analysis

After summation of google forms by the participants, their responses were collected in a Microsoft Excel sheet and analyzed for any error that occurred during submission. By the end of the day, our team used to analyze the collected data in percentile formats. Thus, the entire survey was analyzed sequentially with the help of certain pie charts and graphs. (Boroujeni and Mahmoudian-Sani, 2020)

RESULTS AND DISCUSSION

Focusing on the pandemic and the impact caused by it, the survey was organized based on a previous online survey study (Srivastav et al., 2020). This E-survey on the Indian population accessed the changes that occurred in healthcare and lifestyle due to COVID-19. The web-based survey was started on 22nd September 2020 with a response from Maharashtra state and concluded by the response of almost all states of India on 9th November 2020. To that date, the total number of confirmed positive cases in India reached 85,88,487 (including deaths) and the death toll was 1,27,005, and no. of people discharged from the hospitals was 79,38,535 (MoHFW, 2020)

In these 48 days of the web-based survey, we investigated around 904 responses by retrieving the eligible data from the respondents throughout the states of India. Thus, the territorial coverage of our E-survey extends to almost all states of India and ranges from a minimum of 1 response from Assam, Mizoram, and Jammu and Kashmir to 646 respondents from Maharashtra. Female respondents' range about 46.2% and male ranged to about 53.7% and other to about 0.1%. As the lockdown had the positive effect of flattening the epidemic curve, thanks to the Indian government for imposing maintaining social rules for controlling the pandemic. Due to the closure of schools and colleges during a lockdown, the mentality of students and academic staffs have changed thoroughly (Rahman, 2020; Sahu, 2020; Son et al., 2020). By considering it, we accessed that during this pandemic, 59.1% had a positive impact on their mental health and socio-personal relationship whereas 32.7% had a

negative impact showing an increase in anxiety and depression, and 6.6% did not affect.

Considering that COVID-19 had no effective pharmacological treatments available, but for maintaining better health and to fight against such pandemic Government of India's Ministry of Ayush had imposed many health guidelines (GOI, 2020). Because of it, we decided to analyse food habit changes which state that major respondents started or increased their healthy diet by increasing intake of vegetables, cereals, pulses, milk, and other dietary nutrients. During the lockdown, Indians, for utilizing time, have more desired to cook at home. (Bailay and Bhushan, 2020; WHO, 2020). Thus, 75.2% of respondents have decreased intake of outdoor fast foods. Interestingly, those who previously managed to exercise sometimes now have more time to do it at home. But the scenario pronounces that 34.1% had decreased their time of exercise (Gym, Walking, Yoga) while 46.6% had increased the exercise time also 19.3% had no change in their exercise routines. World Health Organization had advised using masks while outdoors to combat the spread of COVID-19 (WHO, 2020). Thus 98.8% wear masks compulsorily while outdoors, but 1.2% are still not wearing the mask while outdoors.

Food Habit

Data on the food habits are presented in Figure 1. Considering the food habit changes, 69.8% of the people reported an increase in their water intake, 6.29% of them had a decrease and 23.09% did not report any change. Similarly, 52.7 % of the population under study reported an increase in their milk intake, 16.1% reported a decrease, 26.4% had a constant intake, while 4.75% of people chose the 'not applicable' option. Coming to Egg/Meat intake, there was an increase in 33.14% of people, a decrease in 29.2%, constant in 17.6%, and not applicable for 19.5% of them. The intake of vegetables and cereals was increased in 69.8% people, decreased in merely 6.6%, remained constant in 22.6%, while not applicable for only 0.8% people. The fast-food consumption was reported as increased by 7.7% people, decreased by 74.7%, constant by 7.5%, and not applicable by 9.7% people.

Fitness

Data on the fitness is presented in Figure 2. Of the population, 46.6% of people increased their exercise time while 34% decreased and 19.4% did not change their daily exercise routine. The sleeping time of 58.7% of people got increased while staying at home, 17.6% had a decrease while the other 23.7% were constant at their sleeping schedules.

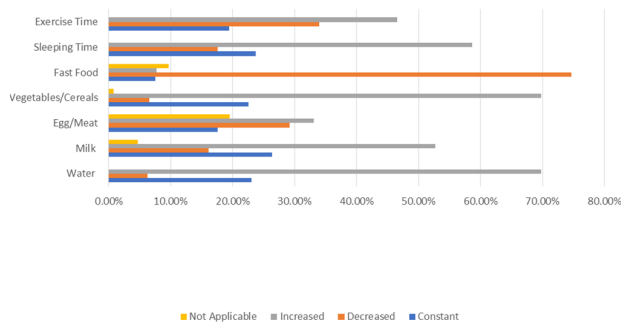


Figure 1: Major changes occurred in Food intake and Healthcare

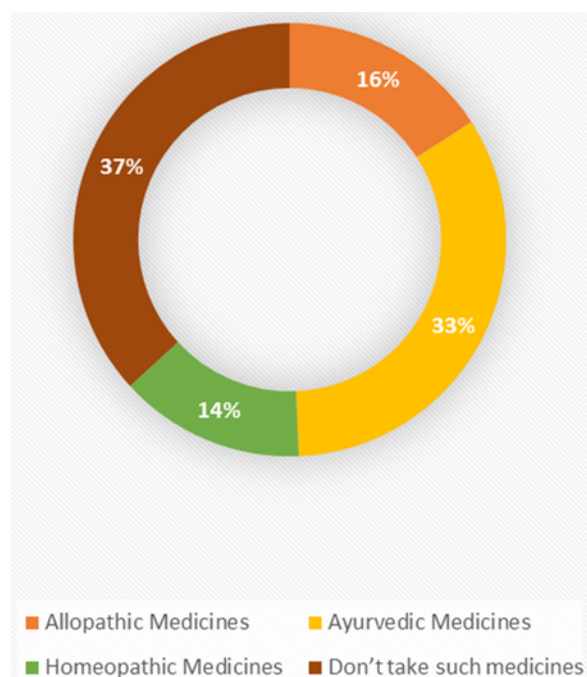


Figure 2: Use of Immunity Boosters during Pandemic

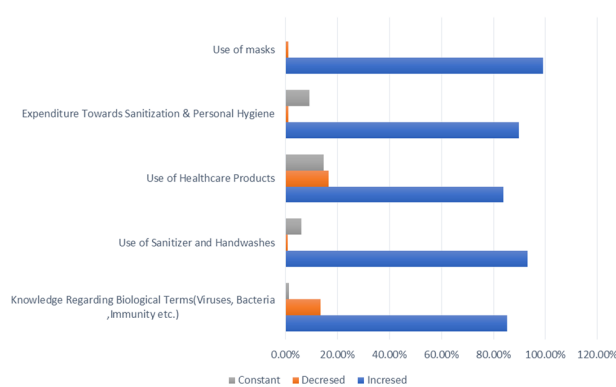


Figure 3: Awareness Regarding Sanitization and Personal Hygiene during Pandemics

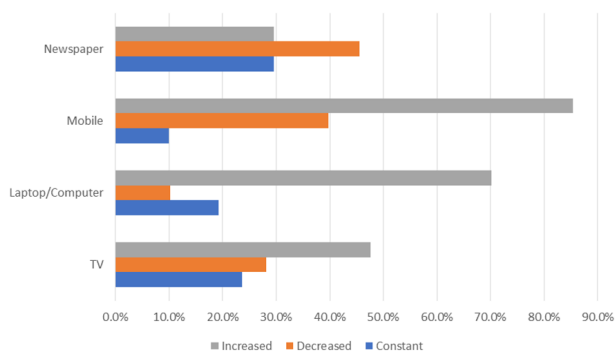


Figure 4: Exposure to Multimedias during Pandemic

Healthcare and awareness

Data on healthcare and awareness is presented in Figure 3. There was a tremendous increase noticed regarding the knowledge of biological terms such as viruses, bacteria, etc., with 85.3% of people responding in a yes. There were still some around 13.5% who did not have much increase in their knowledge regarding the same and responded as constant and very few, 1.2% who responded as decreased. The use of sanitizers, hand washes and other healthcare products increased for 93% and 83.7% people respectively while decreased for 0.8% and 16.5% respectively and remained constant for 6.1% and 14.6% people respectively. This led to an overall increase in the expenditure on sanitization and personal hygiene products for 89.8% people, a decrease for 1.1%, and was constant for 9.1% people.

Out of the total respondents, 99% agreed to wear masks while outdoors, and the rest 1% refused to do so. Furthermore, 76.1% of people agreed to take immunity booster medicines, out of which 19.1% chose allopathic medicines, 40.3% chose ayurvedic medicines and 16.7% went for homeopathic medicines, 44.3% people disagreed with taking any such medicines. 66.4% of people preferred to consult a doctor if they had a normal cough and cold, 21.8% preferred going to the nearest pharmacy, while 11.2% ignored their health as before. 95.1% of people felt that the mindset towards maintaining good and personal hygiene has changed permanently, while 4.5% felt that this mindset is only till the pandemic ends. 57.7% of people had a positive impact on their mental health, 31.3% had a negative impact like depression, anxiety, etc., while the rest 11% of them did not have any significant positive or negative effects.

Professional

The study showed that 60.3% of the total respondents are pursuing online education, 21.6% are

working from home and 17.4% are still working from their offices, including 5.2% of them having visiting jobs. While maximum, 69.5% people felt that the changed pattern of working served their purpose of working, there were still many, 25.7%, who were not satisfied.

Multi-Media

Data on the use of multimedia is presented in Figure 4. The survey revealed that there was a tremendous increase in the usage of TV, mobiles, and Laptops/computers by 47.6%, 85.4%, and 70.1 % people respectively. It also decreased for some of them with the usage of TV being decreased by 28.2%, mobile by 39.8%, and laptop/computer by 10.2% people and remained constant for 23.6%, 10% and 19.2% people respectively. The exposure to print media, i.e. newspapers were reported as increased by 24.3%, decreased by 45.6%, and constant by 29.5% people.

CONCLUSION

There were many positive outcomes of the COVID-19 pandemic, such as increased consumption of water, milk, and vegetables/pulses/cereals and decreased consumption of fast food, which shows that people have moved towards a healthy lifestyle. Also, increased awareness regarding sanitization practices and the realization of the importance of immunity-boosting proved to be a valuable outcome of this survey. On the contrary, there were various negative outcomes of the pandemic as well, including the increased exposure to multimedia (TV, mobiles, Laptops/computers) and increased sleeping time which is not good for a healthy body and a healthy mind. Despite various limitations, many important aspects were taken into consideration. Since the pandemic is still going on, there are further possibilities of large-population based research and surveys.

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Conflict of Interest

The authors declare that they have no conflict of interest.

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