Impact on student behavior due to Covid-19 lockdown in India

Jyoti Singh, Jaya Chitranshi[2*]

[1,2]Symbiosis Institute of Management Studies, Symbiosis International (Deemed University), Pune, Maharashtra, India

Corresponding author:
jaya.chitranshi@sims.edu

Abstract

This paper aims to comprehend the change & impact on students' behavior during the COVID-19 Lockdown in India. The research is conducted by surveying to assess the different behavioral changes due to the COVID-19 spread. Novel coronavirus pandemic started from Wuhan, China, on 31/12/19. It spread across the globe affecting 1,00 000 people within the span of two to three months. People across the globe were affected not just in terms of physical health but also mental & psychological health, resulting in major changes in their behavior. The digital questionnaire assessed the status of pupils' mental and psychical nature while the COVID-19 lockdown was on. The questions were framed to answer how students felt about the pandemic and how it has affected their day-to-day life.

The results of the survey revealed the measure of the anxiety level of the students. The survey results are analyzed on SPSS, and Pearson Coefficient is the method used for statistical analysis. The survey results revealed that 74.2% of the respondents favored cleaning their hands more often due to the COCID-19 pandemic. In the same way, an overwhelming number of student respondents have become aware that wearing masks is crucial to prevent the spread, and 95.9% of student respondents have favored wearing masks if they decide to step outside of their house. Student respondents are more worried about the possibility that their family members will catch the COVID-19 virus than the concern of themselves catching the virus. The student respondents showed clear signs of worry and unpredictability due to the COVID-19 spread. More than have 37.6% have responded that they are in a constant state of worry during the lockdown. The paper states varied responses from the students on the anxiety levels and that they have been experiencing high anxiety levels during the lockdown. The measurement and correlation between emotional & preventive behavior can provide viable options to reduce the outbreak and further control it.

Keywords

Imprint

1 Introduction

The new coronavirus, first identified in China, Wuhan, in December 2019, is set to become the worst pandemic threat humanity collectively faces. Within a span of three to four months, the novel coronavirus has spread across the globe. The virus continues to spread, affecting and disrupting the lives of millions adversely [1].The initial incident in India was announced on 30 January 2020 in the state of Kerala (India, Indian Council of Medical Research-CMR).

As the cases continue to rise with every passing day, the pandemic has brought significant changes in people's lives. The effect of lockdown has caused harm to the economies and the mental and psychological behavior of the populations [2]. People have become aware of the preventive behavior to protect themselves from the virus and build a protective attitude towards their well-being throughout the crisis of the COVID-19 upsurge. The right information at the right time must be provided to restrain the extent of the infection and manage mental stress and uncertainty during the lockdown [3]. Additionally the perception of the society of being affected by the virus has a significant effect on the protective behavior and the steps taken to minimize the risk of catching the disease. People feel safe when they know what to do, and their beliefs are enhanced by knowing that they can take meaningful steps to prevent the spread. Pandemics are known to create an adverse impact on people's anxiety levels and increase psychological issues due to raised concerns about their well-being. Protective/preservative factors for mental health are signified by heavy use of face masks and following other notions of protective measures [4]. OCD and PST are few disorders related to anxiety. They result from the tense and stressed environment around us, which eventu-

ally are rampant, devitalizing, and expensive (Davies MR, 2020). The novel coronavirus pandemic has been reported to cause evident mental/psychological health issues across countries like China and Japan [5].

The COVID-19 outbreak is sudden and unpredictable. With the strong infectious nature of the virus, people usually show signs of stress and other related psychological problems. Control and contain the COVID-19 virus rules and regulations are set up through measures like avoiding physical contact with each other, restricting travel/movement, social distancing in public places, and quarantine or self-isolation [6]. Such prohibitions and precautions affect a human being's social life, emotional well-being, and psychological status. During such turbulent times, it is imperative to probe and observe people's mental health status. Suitably, it is important to measure and evaluate behavioral and psychological aspects [7]. Conducting psychological tests help in identifying specific disorders, tracking disease, and forecasting in such a manner that variables in human behavior can be reflected.

Additionally, these tests taken through web/online-based surveys render a quick and coherent method of recognizing difficulties, structuring and tracking a flow of treatment, and further evaluating the aftereffect of interference [8]. Specifically in the grave COVID-19 outbreak, data received by such methods offer useful information regarding human emotions, attitude, and behavior and provides immediate insight to researchers. The type and diagnosis of prevalent psychological disorders or how they are distributed throughout the population cannot be identified. Hence it is imperative to provide a quick estimation and analysis of Pandemic-associated psychological disorders to the population [9].

The present study has intended to ascertain the pervasiveness and spread of stress, sensitiveness/mental state, and guarding/preventive action amid the youthful Indian people & evaluate their interconnection amidst means of communications presentation through a prompt evaluation through the coronavirus pandemic lockdown [10].

2 Materials and methods

2.1 Design and respondents

A net-oriented online poll was carried on for the study, and respondents were students living in India.

The survey was designed on the online platform Google Forms which was automatically floated through URL. Participants answered questions related to demography, epidemiology, and preventive behavior for protection from the novel virus, perception and sentiments/emotions arising during the lockdown due to the pandemic, status of anxiety levels because of the outbreak, exposure to Coronavirus outbreak through news and media TV [11]. Respondents answered direct and prompt questions in Yes/No to support and show voluntary participation in the survey. Further, respondents willingly answered the self-report survey/ questionnaire. Respondents responded via platforms like Instagram, email, WhatsApp, LinkedIn, Twitter & Facebook [12].

2.2 Measure

Respondents answered questions about Name, Age, and Gender.

2.3 Protective and preventive behavior towards covid-19 lockdown

To measure responses related to epidemiology and behavior about epidemiology during the COVID-19 outbreak, respondents answered yes and No questions related to precautionary steps to be taken during the lockdown [13]. The questions directed towards the respondents were "Washing or cleaning their hands frequently with soap-based cleansers for twenty seconds," "wear masks in public places," "refraining from touching face and eyes with hands," "Proper ventilation of the residence" and "Maintaining social distancing." The medical practitioners endorse these precautionary steps to prevent the virus spread [14].

2.4 Psychological behavior and levels of anxiety due to covid-19 lockdown

To measure the impact of COVID 19 Lockdown on the Student respondent's emotional state of mind and change in levels of anxiety experienced during the ongoing crisis, they were presented with two important epidemiological questions:

"How fearful are you of being infected by the virus COVID-19?"

"How fearful are you of a family member getting infected by virus COVID-19?"

The questions have been answered on a Five-point (ordinal) Likert Scale with the level of agreement varying from (1) "Strongly Disagree," (2) "Disagree," (3)

"Neutral," (4) "Agree," (5) "Strongly Agree." These two questions were compared with each other for the frequency distribution of estimated risk and fear factor of the COVID 19 pandemic [15].

To evaluate the emotional state of the student respondents in the survey, they were asked to answer questions: "What are your thoughts and emotions related to the COVID-19 Lockdown?" Respondents were given five choices to choose from, namely "Scared," "Sad," "Indifferent," "worried," and "afraid." To measure the Anxiety level of respondents during the COVID-19 outbreak, they were asked to answer the question: "Experiencing increased Anxiety during Lockdown?" The question was answered on 5-point Likert Scale [16].

2.5 Exposure to news during the covid-19 lockdown

Exposure to news and media TV is assessed by the question where respondents were asked to answer about "How often they were exposed to news & Media related to COVID -19?" with options to choose from "Never," "1-2hours", "3-5hours", "6-8hours", and "8 or more hrs". Correlation amongst Preventive behavior, emotional state, and sleep pattern &COVID-19 related information exposure from Media TV is investigated [17].

2.6 Statistical analysis

SPSS program was used to analyze the data (Statistical Package for the Social Sciences). After determining the standard frequency distribution of responses, the Pearson Correlation Coefficient (PCC) is tested to ascertain whether there is a likely correlation between data regarding COVID-19 on Media& TV and Preventive Action. As a result, normalcy is verified. The PCC method is used to assess the relationship between COVID-19 data on Media TV and respondents' emotional states and sleep habits. The significance standard is set at $p=0.05$ for the statistical tests that were carried out for analysis [18].

3 Results

Indian students consisting of 49% females and 50% males and 1% others (preferred not to say) with age ranging from Eighteen years to Thirty years participated in the survey and filled the Web-Based Survey Named "Impact on Student behavior During COVID-19 Lockdown" is shown in Figure 1.

VARIABLE	RESPONDENTS (%)
Gender	
Male	49 %
Female	50%
Prefer not to say	1%
Age (Years) Below 18 18-24 25-29 30 & Above	3.6 % 53.6 % 35.6 % 7.2 %

Fig. 1. Depicts the demographic data of the student respondents

Content on Figure- 2 depicts the frequency Distribution of Preventive Behavior (Protective) Student respondents have shown to pay attention to keeping their hands clean and washing them more frequently (74.2 %), social distancing and isolation practices (93.3%), maintaining residence ventilation (82.5%), wearing masks (95.9%). [19].

Fig. 2. Frequency distribution of preventive behavior

Figure 3 and Figure 4 depict the frequency distribution to understand the COVID-19 fear and risk amid the respondents and their family members regarding catching the virus. In Figure 3, respondents answer the question "Scared of catching the Coronavirus?" and 69% of the respondents have a high fear of catching the infection, out of which 36% are extremely scared of picking the infection. However, 16.5% have a moderate fear of catching the disease, and the others do not fear the infection. When compared to the data of Figure 4, "Scared that a Family Member will catch
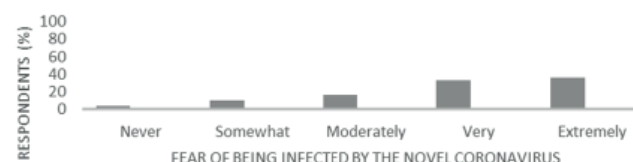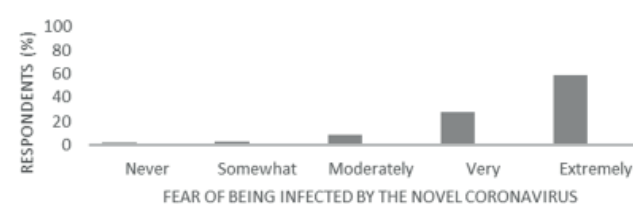

Fig. 3. Frequency distribution

Fig. 4. Frequency distribution

the COVID-19 infection?" maximum (85%), Respondents have found to be more (very & extremely) fearful about the well-being of their family members than themselves catching the virus [20].

As shown in Figure 5, respondents have answered the question "My Emotions around the COVID-19 Pandemic during Lockdown?" Most of the respondents feel worried (37.6%) about the COVID-19 crises; while the second-highest section feels indifferent towards it (20.6%) followed by feelings and emotions of sadness (15.5%), anger (15.5%), and being afraid (10.8%).

Figure 6 and Figure 7 depict the extent of anxiety experienced with fear for the near future due to the widespread COVID-19 Pandemic situation.
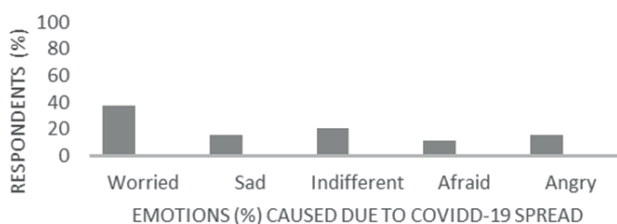

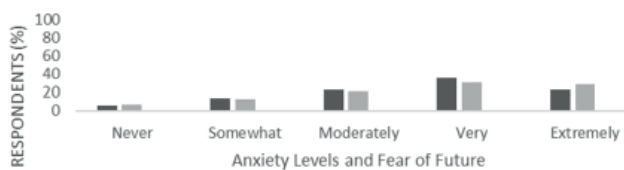Fig. 5. Respondents have answered the question
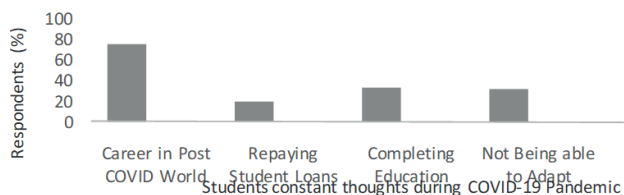

Fig. 6. Extent of anxiety experienced

Fig. 7. Extent of anxiety experienced

Almost 57% of the respondents feel very high and extremely high levels of anxiety and 22.7% have moderate anxiety levels

A major part of the respondents (75.3%) has constant thoughts about "career in post COVID world"; they are worried about "completing education" (33%) and "repaying Education loans" (19.6%). 31.4% of the respondents feel they face difficulties in Adapting to the new normal and are consistently have thoughts about the same.

Table 1 depicts a major correlation between exposure to media TV and information related to

COVID-19 outbreak and contact to hands, face & eyes, and maintaining residential ventilation.

On the other hand, in Table 2, exposure to Media and News shows a correlation with Disruption in sleeping patterns. All the correlations are summarized in Table 1 and Table 2.

The present study aims to discover the spread of anxiety and its effect on the emotional state, preventive behavior of the young Indian population, and understand their connection with each other. Additionally, examine the interconnection of media and news exposure during the COVID-19 crisis on student behavior [21].

4 Discussions

This paper demonstrates the behavior change during the COVID-19 Lockdown in India. Each passing day situation across the world is being contained. Medical institutes are working to find a vaccine for the novel coronavirus disease. In this study, a web (online)-the based survey was taken to examine the responses of behavioral questions as it is efficient and faster. It has been found that the behavior of the respondents varies in accordance to age, gender, exposure to media, emotional state. The regular variation corresponds to the demographic, psychological, and epidemiological behavior [22].

It has been found that the protective or preventive behaviors of people in the country have changed due to the COVID-19 crisis. Moreover, people are becoming aware of the crisis by taking more precautions due to fear and uncertainty of the pandemic. Respondents are in constant fear that a family member might catch the novel coronavirus. This fear is even more when compared to them being infected [23].

From the survey results and analysis, between the preventive behaviors examined, social distancing and wearing masks were the highest at 93.3% and 95.9%, respectively. According to the research by Do Freeman & Filter Smith, it has been stated that social isolation results in containing the transmission of novel coronavirus because the virus requires some amount of close vicinity of people to spread [24].

Additionally, the use of masks is extremely high in the protective behavior section even though it has not been made legal by the government. However, people are following guidelines, and hence the use of masks is quite high than expected. Few studies have shown that individuals with pulmonary respiratory disease

Table 1

Major correlation between exposures to media TV

Pearson Correlation	Hand Wash	Wearing Mask	Social Distancing	Contact Face & Eyes	Residence ventilation	Exposure to Media about COVID-19 on TV
Hand Wash	1	.237**	.128	.191**	.082	.104
Wearing Mask	.237**	1	.463**	.400**	.250**	.038
Social Distancing	.128	.463**	1	.315**	.372**	.116
Contact Face & Eyes	.191**	.400**	.315**	1	.234**	.164*
Residence ventilation	.082	.250**	.372**	.234**	1	.176*
Exposure to Media about COVID-19 on TV	.104	.038	.116	.164*	.176*	1

Correlation is significant at the *0.05 level (2-tailed) and **0.01 level (2-tailed)

Table 2

Major correlation between exposure to media TV

Pearson Correlation	Exposure to news and information related to COVID-19 on TV?	Fear of infection	Fear Family Infection	No control of future	Anxiety experienced	Sleep Disruptions	Preference to Online Interaction	Physical Activity adversely affected
Exposure to news and information related to COVID-19 on TV	1	-.183*	-.058	.027	-.106	.120	-.011	-.020
Fear of infection	-.183*	1	.358**	.225**	.308**	.204**	.177*	.232**
Fear Family Infection	-.058	.358**	1	.150*	.084	-.026	-.003	.145*
No control of future	-.058	.358**	1	.150*	.084	-.026	-.003	.145*
Anxiety experienced	-.106	.308**	.084	.471**	1	.369**	.129	.350**
Sleep Disruptions	.120	.204**	-.026	.400**	.369**	1	.036	.352**
Preference to Online Interaction	-.011	.177*	-.003	.132	.129	.036	1	-.007
Physical Activity adversely affected	-.020	.232**	.145*	.412**	.350**	.352**	-.007	1

Correlation is significant at the *0.05 level (2-tailed) and **0.01 level (2-tailed)

or showing symptoms of respiratory disease should always wear masks; it has been observed that this particular preventive behavior reflects in containing the spread. Wearing a face mask and cleaning/washing hands with soap has been emphasized in yet another study. Doing so is important before one puts on the face mask [25].

The responses that the survey has received regards to the same it has been observed that the rate of washing hands by the student respondents is fairly high, but it is less than the rate of wearing masks, which is a surprising outcome [26].

The majority of the Respondents have answered the question "Your Emotions on COVID-19 Pandemic?" in favor of being "Worried" at 37.6%. This survey outcome can be considered normal because it is only natural to worry about one's health in a pandemic. It can be concluded that it is a positive outcome that students or young people have an encouraging message and positive information. It is observed in another study that "worry" can increase as an emotion due to misinformation and perception in society. Moreover, in the right amount, worry has previously been effective in containing pandemics like SARS and Ebola. However, on the other hand, excessive worry may lead to negative outcomes and context to the novel coronavirus disease spread [27].

Respondents have answered the question," How fearful are you of being infected by the virus (COVID-19)?" and 36.1% have said that they are ex-

tremely scared of catching the virus, with another 33% saying that they are highly scared of catching the virus. However, when the data is compared to the response of the question, "How fearful are you of a family member getting infected by a virus (COVID-19)?" the results were unusual and prominent, and 60% of the respondents have confirmed, "Extremely fearful." These results can be interpreted due to the quick and untraceable rate of the transmission of the disease and the mortality rates associated with it. Another interpretation is derived from the nature of humans that they believe it to be their moral responsibility to protect their family members, and hence they depict unconventional behavior. Therefore, increased fear and misinterpretation regarding novel coronavirus COVID-19 can lead to a disorder with a high emotional state [28].

The survey conducted has a few public health inferences. The responses received show that student's preventive behavior constantly changes with exposure to news TV or Media. Due to firm social distancing regulations and policies, people have to remain connected through digital platforms now even more than ever to provide a similar experience of people interactions and data sharing related to COVID-19. The respondents have reacted highly to the social distancing protective/preventive behavior in the COVID-19 lockdown. An earlier study shows that people had no idea that the novel coronavirus can be transmitted through droplets. In return may decrease the effectiveness of a few precautionary measures. On the contrary, this paper shows that people are more inclined towards protective and preventive behavior. Digital platforms consistently stream videos from highly influential people during the COVID-19 pandemic outbreak. Therefore, it has resulted in effective and correct information transfer to the public regarding the COVID-19 outbreak [29].

A suggestion can be made in this context that by imparting simple and continuous information through digital media platforms, these preventive and protective behaviors can be encouraged.

The survey's outcome has emphasized that the correlation between exposure to news TV media and sleep pattern disruption is significant. Earlier studies concur with the results that increased screen time on social media, and the internet leads to poor sleep quality [30].

On comparing the anxiety experienced due to the COVID-19 outbreak, the highest level of seriousness

was observed due to fear of losing a family member due to the disease and about the career in the future with constant thoughts of worry and uncertainty associated with it. As a result, the anxiety experienced by the respondents is extremely high and emotions reflected are fear of a career in the post-COVID-19 world, not being able to adapt to new normal, and feeling of sadness. Since more than 50% of respondents have responded negatively to the switch from face-to-face interaction to online interactions, and sleep pattern being adversely affected due to increased social media and digital media exposure and social distancing and other restrictions, the high levels of anxiety are visible in the results. The students have not responded positively to the online medium of classes and would rather prefer classroom education. Following the same emotion, studies have shown that the delay in educational/academic year is related to the increase of anxiety indicators in the universities of China. In another research, it has been found that the increased levels of anxiety in the students are due to fear of future career prospects and completion of education. Our study confirmed these results, with 74.3% of respondents saying they are constantly thinking about their career in the future, 33.5% saying they are worried about completing education, and 19.6% are thinking about repaying student loans. Lockdown has led to a negative impact on the mental health of the student respondents, and they are showing signs and symptoms of high psychological effects due to the COVID-19 outbreak in China as well. In response to the crisis, medical institutes worldwide are working on a vaccine, but no cure has been found. The same is that the COVID-19 crisis has resulted in very high anxiety levels due to its uncertainty about the cure [31].

In the survey results, it has been predicted that the protective and anxious nature of people, the adaptation to the new normal, and their protective/preventive behavior may have impacted by the COVID-19 crisis. Hence, this study is imperative for scientifically proving that widespread information and its connection to anxiety level and change in behavior due to a pandemic crisis is evident [32].

5 Limitations

In the current study, a few limitations are required to be noted. There is no investigative proof of exposure to news, media, TV-related to COVID-19 lockdown. Additionally, Meng et al. have stated that in the

protection and cure of COVID-19 treatments, gender must be taken as a biological factor/variable.

Irrespective of their age, men have been found to have a higher risk than women of dying due to the COVID-19 virus in a study. Considering all these studies, a major limitation of the current study is that 50% of the respondents are females and only young adult students whose financial status has not been examined.

6 Conclusions

This study provides effective and efficient insight into creating a compassionate individual and more supportive society that would respond appropriately to the turbulent outbreak. The behavioral and psychological study like this sheds light on the uncertain future, and finding can help in paying a more structured process for the time ahead. Given that the survey was filled online, it still has a partial limit in context to the general population; its quick execution, the discovery of new and critical data may increase the extent of public awareness and consequently may provide life-saving measures. Educational programs in the Public Health domain can enhance and encourage a positive approach in dealing with COVID-19.

Further cognitive behavior therapy may help in calming down stress levels and provide coherent coping mechanisms. This study has implications for student's public health provisions amidst the pandemic of infectious crisis, combined with improvements in preventive behavior.

Post COVID-19 crisis, studies on behavior and psychological effects of an outbreak can be conducted. The data that the current study provides can be referred by the researchers for critical processes and beyond.

Data Availability Statement

The paper consists of all the datasets presented in this study.

Ethics Statement

The name, age, gender of the respondents is taken with due written consent and will not be made public. According to the World Health Organization guidelines (WHO) on Ethical Issues in Public Health Surveillance, a study during an outbreak is exempted from ethical review and oversight. The web-based survey is taken in August 2020 in India, where the lockdown is ongoing. Respondents participated voluntarily in the complete report survey.

Conflict of Interest

The study was conducted without any financial or commercial relationship that may lead to any potential conflict of interest. It is completely for academic purposes.

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