

Psychological Impact Of COVID-19 On General Population**Dr Neetu Gupta****Department Of Home Science****Chaman Lal Mahavidyalaya****Roorkee****India****{Received:5September2020/Revised:12September2020/Accepted:2October2020/Published:14October2020}****Abstract**

This paper focuses on the psychological impact of COVID-19 on the general population of Uttarakhand. This disease poses a major scientific threat to humanity in recent times. The psychological effect of the pandemic itself and the shutdown of the normal life including the economy, in particular, is likely to be significant. Numerous psychological challenges and significant implications in terms of mental wellbeing including stress, anxiety, depression, anger, insecurity during COVID-19 outbreak emerged gradually. The study implied an online survey which was conducted using google form with a link shared through email, Facebook and WhatsApp. A 20-item self-designed questionnaire was used for the study. A total of 385 responses were received from the participants from the various parts of the Uttarakhand state. This study found that the respondents expressed their thoughts if someone in their family was having symptoms related to COVID-19 and to which the 48.05% of respondents testified that this may be due to weather change, while 23.37% felt that the person might be affected with COVID-19 and 28.57% responded that they did not worry at all if any of their family members were showing any symptoms of COVID-19. The results of the study suggested that stress-free life and fearless mind are major issues for common people to survive.

Keywords: COVID-19, Psychological Effect, Preventive Measure, Stress, Common People**Introduction**

The Corona Virus Disease (COVID-19) has affected the lives of every human being all over the world. The deadly virus is known to cause its ill-effects on humans as well as on animals. The outbreak has been infecting animals including chickens and pigs but there was no significant human contraction of humans (Varshney, Parel, Raizada, & Sarin, 2020). The severe acute respiratory syndrome (SARS) virus strain known as SARS-CoV is also a type of coronavirus which affected the world in the previous years. SARS spread rapidly in 2002 - 2003. The new strain of coronavirus is called severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).

The virus causes coronavirus disease COVID-19. The first and the most recent outbreak of COVID-19 started in Wuhan, a city in the Hubei province of China. The first case of the virus was reported in December 2019 (Kandola, A, 2020). The COVID-19 outbreak by the new coronavirus strain was recognized as a pandemic by the World Health Organization (WHO) on March 11, 2020. As the coronavirus pandemic rapidly sweeps across the world, it is inducing a considerable degree of fear, worry and concern in the population at large and among certain groups in particular, such as older adults, care providers and people with underlying health conditions (WHO Regional Office for Europe, 2020).

Human body system plays an important role in causing and preventing any disease. In most of the cases, the coronavirus disease only comes as the common flu and sometimes not even that (Chang, et al., 2020). Many positive cases have even reported without any symptoms at all. It could, however, be life-threatening to the new-born as well as to the elderly above the age of 50 and the ones already having various co-morbid conditions like diabetes, hypertension, renal disorders and many others. According to Brooks, et al. (2020), being forced to stay at home leads to adverse psychological consequences such as anxiety, dissatisfaction and rage. The adverse influence of isolation will have long-lasting consequences. One complication that could occur includes a cytokine release syndrome which is a syndrome that occurs due to an infection that causes our immune system to flood our bloodstream with an inflammatory protein called “cytokine” that affects various organs of our body like heart, liver, kidneys etc. (Liu, et al., 2020). The virus has a particular characteristic of conquering the cells in our body. They enter the human body through a host cell and thereby reproduce themselves affecting all the cells in the body henceforth.

Literature Review

Coronaviruses primarily impact the respiratory system. Respiratory conditions affect various parts of the respiratory system, such as the lungs. Coronavirus normally infects the inside of the throat, airways, and lungs. Early signs of coronavirus may include cough or breathlessness. For some cases, it can do significant damage to the lungs. For example, some people can experience respiratory distress syndrome, leading to serious respiratory problems. Normally, the immune system can recognise and respond to coronavirus early by sending specific proteins or antibodies to counter the infection that causes a person to develop a fever. White blood cells produce pyrogens, a compound that induces fever, during infection. A temperature of more than 100°F from the oral thermometer

suggests a fever. Other symptoms can occur along with fever, including shortness of breath, coughing, muscle aches, sore throat, headache, shivers, and loss of taste or smell. Such signs will eventually begin until the body battles the coronavirus (Nazario, 2020). Symptoms cannot turn up right away. For example, people with COVID-19 may develop symptoms two to fourteen days after infection due to the incubation period of the disease. Coronavirus can have severe complications, such as pneumonia. If COVID-19 infection starts to cause pneumonia, it will result in rapid heartbeat, shortness of breath or breathlessness and dizziness. Coronavirus affects various organs of the body in all its severity which could cause multiple organ failure. The affected organs could include heart, liver, lungs, kidneys etc.

Denaturation Of Corona Virus

The thermolability of the transmissible gastroenteritis virus (TGEV) was studied between 31 and 55°C using two different strains. The loss of infectivity followed first-order kinetics except at the highest temperature. The figures of the thermodynamic parameters showed that the phenomenon involved above and below 45°C is different. The activation was higher at an alkaline PH rather than at a neutral PH, yet the nature of the reaction appeared unchanged (Laude, 1981). Laude (1981) used mutated stocks of four independent viral strains but did not find any thermal resistant mutants at 38°C. The authors also confirmed that thermal-resistant mutants were obtained at 54°C.

However, the latter did not show any increased stability at 38°C, confirming the fact that a different inactivation process takes place at high and at physiological temperatures (Laude, 1981). Successful inactivation of the virus allows the transfer of material from a BSL3 to a BSL2 environment and may reduce the risk of accidental infections through unsafe laboratory practices. Inactivated cell-culture derived viral stocks could aid in the development of vaccines and the study of their safety and immunogenicity (Darnell, Subbarao, Feinstone, & Taylor, 2004). Viruses such as coronavirus, influenza-causing viruses, Ebola, Zika have their genetic material encased in a layer of fat called the lipid envelop. The soap molecules' head is attracted towards water (hydrophilic) and the tail is oleophilic which means it is attracted towards oil. Being oleophilic, the tail portion of the molecule repels the lipids in the virus envelope. The chemical bonds embracing the virus together are weak and hence, the long oleophilic tail gets attached into the envelope and imposes a 'crowbar' effect breaking the lipid envelope of the virus. The tail also competes with the bond that binds the RNA and the lipid envelop thus dissolving the virus into its components which are then removed by water

(Prasad, 2020).

Elderly people are more likely to be affected by the infection to the core. 80% of people that died in China were elderly above the age of 60 years. After Japan, Italy has the second-highest population of the elderly. While death rates fluctuate wildly early in an outbreak, Italy has reported more than 80% of deaths so far were among those 70 years or old. People who have underlying health conditions like high blood pressure, kidney disease, cancer, or diabetes are also more likely to get very sick or die from COVID-19. Around 9 per cent of people with diabetes who contracted the virus died, for example, as did around 8 per cent of people with high blood pressure. The US- based Center for Disease Control and Prevention (CDC) also recommends that people in this group avoid crowds, stick close to home, and stock up on medication for their condition if they can (Associated Press, 2020).

Psychological Impact On General Population

The constant fear of contagion can modify our psychological responses to ordinary interactions and can lead us to behave in unexpected and abnormal ways. This has never been the case in the past. For months now, almost every newspaper is full of bounteous stories about the scary coronavirus pandemic on its front page; radio and TV programs have constant coverage on the latest death tolls and depending on who you follow, social media platforms are filled with frightening statistics, practical advice or gallows of humour. Most of the population are mentally shocked about health issues, home quarantine, economic issues and change in lifestyle (Patnaik, 2020). All these statistics and various kinds of alarming news are tremendously increasing our anxiety and therefore contributing to ill-effects on our mental health. The constant feeling of threat may have more insidious effects on our psychology. Considering the responses of the disease and the fear of spreading it, society is becoming rigid. Our moral judgements begin to become harsher and our social attitudes become more conservative when considering issues such as immigration or sexual freedom and equality. Daily updates about the pandemic are also influencing our political affirmations. If we begin believing in the credibility of the predictions of scientific research, they reflect much deeper social and psychological shifts.

Humans are a kind of species that are evolved to live in huge groups but our behavioural immune response is modified in such a way that prevents us from suffering from a life-threatening pandemic by maintaining gaps such as social distancing. The responses due to the pandemic could be very

harsh since our ancestors never knew about the spread, transmission and causes of all these diseases. “The behavioural immune system works on ‘better safe than sorry’ logic,” says Lene Aarøe at Aarhus University in Denmark meaning our responses are often wrong and misplaced and may be caused by irrelevant information – changing our decision making which has got nothing to do with the disease.

Coping with COVID-19

Individual and collective behaviour is particularly important during a pandemic. In the absence of appropriate pharmacological interventions, the main method of controlling outbreaks is to change public behaviour. An individual’s behaviour can affect their family, social networks, organizations in which they participate, communities to which they belong, the information they obtain, and the impact on their society. When people learn about disease information, they usually have an emotional response that affects any immediate behavioural changes. The effect of the behavioural immune system changes from person to person; not all are affected to the same extent. Every individual has a varying degree of the behavioural immune response to a particular disease. In some people, the behavioural immune response may react extra violently towards a minimal dose of infection and in some, a potent cause of a highly infectious disease could be easily neglected as not so infectious by the immune response. The people with sensitive immune responses are generally the people who show distrust against various outsiders and consider them as sources of high infection.

It is not easy to free from the thoughts of helplessness and loss of a basic ability to envision a brighter future from the situations of the COVID-19 outbreaks. Fear of spreading disease from each other, of touching infected objects and of getting very close to any human being, brings an exceedingly common awake. All these psychological shifts and stigma might or might not influence the next events coming up in the country but all these certainly occurring is going to change human behaviour and responses towards various things happening around them. Whether we are expressing a conformist opinion, judging another’s behaviour or trying to configure the containment, we could ask ourselves whether our thoughts are rational or whether they are altered by an ancient response that evolved before the discovery of germ theory.

Research Methodology

To empirically examine the research questions, a quantitative research approach, based on online surveys, was undertaken in this study. The aggregate populace of this study comprised of the people who were common people of all states of Uttarakhand. The survey instrument used for the current

study consists of 20 items. Question 1 to 6 were related to general information of the respondents and the other 14 were related to the study. The researcher collected data by posting the questionnaire on social networking websites like WhatsApp and Facebook. Participation was voluntary and anonymity was ensured. The data was collected from March to mid-June 2020, and a total of 385 responses were collected. All the collected responses were found to be valid and usable. The data collected were entered into Microsoft Excel and then exported to IBM Statistical Package for Social Sciences (SPSS) version 20 for processing the data.

Results and Discussion

The data shown in Table 1, reveals that in response to the first statement ‘Are you suffering ... from hospital’, none of the respondents was suffering or had recovered from COVID-19. For the second statement, ‘Were you or your ... last few weeks’, the majority (91%) of the respondents again reported in the negative stating that they or none of their family members were quarantined during the past few weeks. In response to the third statement ‘What were your ... that quarantine’, the majority (78.7%) of the respondents reported that they did not have any particular feeling during the time of quarantine, while 11.16% felt lonely, and 7.03% felt tensed as they were fearful about having the COVID-19. There were another 3.11 % of respondents who mentioned that they were independent during the quarantine period. The next statement in the questionnaire asked the respondents to express their thoughts if someone in their family was having symptoms related to COVID-19 and to which the 48.05% of respondents testified that this may be due to weather change, while 23.37% felt that the person might be affected with COVID-19 and 28.57% responded that they did not worry at all if any of their family members were showing any symptoms of COVID-19. The following statement asked the respondents about their opinion if they think that increase in temperature will affect the virus. In response to this statement, 33.76% responded in ‘No’, while 21.81 were positive about this statement and 44.41% respondents were not sure about this and they responded as ‘Maybe’.

In the next statement, the respondents were asked to reveal their thoughts if and when the country is declared to be free from COVID-19. The majority (83.63%) of the participants responded that they will still take precautions and avoid gatherings, while 8.31% reported that they will still be fearful as the disease might bounce back and 8.05 % of participants will be tension free once the country is free of this disease. The next statement asked participants to respond when they will be able to travel or attend social gatherings once the government declares the country free from COVID-19. The

majority (43.11%) of the participants responded that they will be able to do these activities after 6 months, whereas 24.67% feel after one year and 20.25% feel after one month. Surprisingly, 4.41% of participants responded immediately and 7.53% after 15 days to start travelling or attend gatherings and parties. In response to statement eight, 45.71% of respondents feel that it will take more than a year for the economy to recover from the impacts of COVID-19. Similarly, 25.19% of participants felt that the economy will take at least a year to recover while 17.14% respondents think the economy will take at least six months to recover. 11.34% of respondents think that it will take 1 to 3 months for the economy to fully recover from the impacts of COVID-19.

The next statement asked the respondents about their opinions if they feel stressed out, fearful or tensed, and to which 68.05% of participants answered in affirmative while 31.95% responded negatively. The statement number ten requested participants' opinion if immunity is important to prevent this disease. The majority (78.44%) of respondents reported in 'Yes', 17.14% answered 'Maybe' while 4.41% answered in 'No'.

Table 1. Psychological Impact Of COVID-19 On General Population

Items	Frequency (F)	Percentage (%)
1. Are you suffering ... from the hospital?		
Yes	0	0.00
No	100	100.00
2. Were you or your ... last few weeks?		
Yes	35	9.00
No	350	91.00
3. What were your ... that quarantine?		
Tense, that you might have COVID-19	27	7.03
Felt lonely	43	11.16
Felt Independent	12	3.11
Nothing	303	78.70
4. What were or ... COVID-19 infection?		
The person is/may be affected with COVID-19	90	23.37
Think that this may be due to weather change	185	48.05
Did not or would not worry at all	110	28.57
5. Do you think ... this virus?		
Yes	84	21.81

No	130	33.76
Maybe	171	44.41
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6. When the country ... your thoughts?		
Fearful as the disease might bounce back	32	8.31
Tension-free	31	8.05
Will still take precautions and avoid gatherings	322	83.63
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7. How many days ... or party?		
Immediately	17	4.41
After 15 days	29	7.53
After 1 month	78	20.25
After 6 months	166	43.11
After 1 year	95	24.67
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8. How long do ... ongoing impact?		
At least 1 month	13	3.37
At least 3 months	33	8.57
At least 6 months	66	17.14
At least 1 year	97	25.19
More than 1 year	176	45.71
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9. Are you stressed ... current scenario?		
Yes	262	68.05
No	123	31.95
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10. Do you think ... this disease?		
Yes	302	78.44
No	17	4.41
Maybe	66	17.14
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11. Do you think to visit... these days?		
Yes	90	23.37
No	212	55.08
Maybe	83	21.55
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12. Do you think government ... the problems?		
Yes	267	69.35
No	63	16.36
Maybe	55	14.29
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13. Do you think lockdown ... this problem?		
Yes	319	82.85

No	26	6.75
Maybe	40	10.40

14. Were you stressed out ... current scenario?

Yes	262	68.05
No	123	31.95
Total	385	100.00

For the statement eleven, it was noted that the majority of the respondents (55.08%) disagreed that visiting the hospital is a good idea due to any illness these days, while 23.37% respondents agreed and 21.55% were not sure about their answer. The response in statement twelve displayed that the majority of the respondents (69.35%) agreed about the government efforts to solve the problems, while 16.36% disagreed with that and 14.29% respondents were unable to express their views. The penultimate statement of the questionnaire reveals that the majority of respondents (82.85%) give their positive response about the lockdown is an effective solution to this problem and 6.75% disagreed to this statement, while 10.4% of respondents had no idea about that. The last statement of the questionnaire requested the participants to disclose their feelings about COVID-19 pandemic situation, 68.05% of respondents agreed that they were stressed out, fearful and tensed thinking of the current situation, while 31.95% disagreed with this statement.

Conclusion

The current research investigated the initial psychological effects of the epidemic of COVID-19 in Indian population. When the epidemic spread, environmental, cultural, health and livelihood problems grew every day. The findings of the impact of the pandemic on mental health could help inform health officials and the public about providing mental health interventions to those in need. This may help guide researchers to conduct observational research trials to determine the needs for care (Banerjee, 2020). There is a tremendous psychological impact of coronavirus disease in 2019. The consequences of an individual's mental condition are caused by the illness varies from person to person. It may also differ from generation to generation, from gender to age, etc. Young adults are most likely to suffer from diseases such as depression, anxiety etc. Before the illness comes out with pharmacological therapy, we must take care of its psychological impact on society since they are huge. For providing guidance and counselling, the Indian government has introduced different helpline numbers. World health organisation recommended that steps be taken to overcome the harmful effects of coronavirus transmission on mental health and well-being. Giving psychotherapy during an epidemic is paramount. It aims to minimise mental distress and promote stress

management techniques to address the situation (Patel & Jernigan, 2020). Given the interventions of the WHO and other public health authorities to curb the COVID-19 crisis, this time of outbreak is creating anxiety across the country (Chaturvedi, 2020), almost the same as the effects of COVID-19 outbreaks on the other parts of the world (Yao, Chen, & Xu, 2020).

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