



## COVID-19 & STUDENTS: AN OBSERVATIONAL STUDY OF AWARENESS, STRESS, IMMINENT CONSEQUENCES & PERCEIVED MENTAL HEALTH CARE NEED AMONG THE STUDENTS OF RAJASTHAN

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### Abstract:

The coronavirus originated in Wuhan, China in December 2019 soon became a pandemic on 11th May 2020, spreading all over the world. The coronavirus "Covid-19" has affected people on an international level. The coronavirus has affected the world in all aspects of people's life. Due to lockdown, everyone is locked inside their houses which adds up to their stress level. People of every age face mental stress due to the virus. The adults have financial stress, the students have a lot of worrisome concerns about their future. The mental health aspects of the coronavirus being neglected. The financial stress in the adults is still recognized but the students' stress is highly ignored. Therefore, our study aims to highlight the awareness, stress, immediate consequences, and perceived mental health care about covid-19 amongst the students in Rajasthan, India of the age ranging from 14 to 25.

There was a cross sectional online survey conducted using google forms. A total 212 responses were collected.

*Index Terms- Covid-19, Pandemic, Mental Health, Stress, Student, Rajasthan*

### I. INTRODUCTION

COVID-19, a kind of pneumonia due to a kind of virus known as Corona virus was first diagnosed in Wuhan, China on 31 December 2019(1). On 30 January 2020 this disease was declared as a Public Health Emergency of International Concern. WHO named the new coronavirus disease as COVID-19 on 11 February 2020. WHO also characterized this disease as a pandemic on 11 March 2020, the first pandemic of coronavirus (2).

Coronaviruses, related to the family Coronaviridae are single-stranded, positive-sense RNA viruses [3]. In the year 1960, the scientists named the virus as 'corona' because the proteins associated with the envelope of the virus are of crown-like shape. In latin it is called corona. In 2003, 2012, 2015 there were outbreaks of the coronavirus: China in the year 2003 was named as 'Severe Acute Respiratory Syndrome' (SARS) outbreak; Saudi Arabia in 2012 [4]; South Korea in 2015 [5] were affected by 'Middle East Respiratory Syndrome' (MERS) outbreak.

Widespread outbreaks of infectious disease, such as COVID-19, are associated with psychological distress and symptoms of mental illness [6] (Bao et al., 2020). Complicated humanitarian crises can have a significant bearing on psychological health and quality of life of the affected people and remain for a protracted period even after the crises. [7] Outbreaks or epidemics like this can have a substantial impact on the infected patients, on persons who are quarantined, on social sustenance systems and also on the healthcare professionals and the healthcare system.[8, 9]. Fear, worry, and stress are normal responses to perceived or real threats, and at times when we are faced with uncertainty or the unknown. So it is normal and understandable that people are experiencing fear in the context of the COVID-19 pandemic. [10]

In case of patients established or doubted to be suffering from the infection, an immense sense of fear develops towards the magnitudes of the effects of the possibly deadly virus. This sense of fear can be contagious too as it could lead to fear amongst family members, caregivers and even health workers, leading to isolation and ostracisation of patients, which could further lead to mental health issues.[11, 12] The fear could be so devastating that having a fever or flu could always be linked with COVID-19, just like in the case of a person from Chittoor, Andhra Pradesh state of India who committed suicide. This man had been surfing through the media regarding COVID-19 and was convinced that he was infected with the virus. Even after repeated attempts of his family members and villagers trying to convince him, he kept isolating himself from his family members due to fear of infection; his belief remained firm.[13] Presentation of the infection like fever, hypoxia, cough as well as side effects of treatment can also cause worsening of anxiety symptoms and psychological stress. The persons in quarantine may experience fear, loneliness and depressive symptoms, as a result of the fear of the lethal virus as well as their staying away from near and loved ones. [11]

Added to the fear of contracting the virus in a pandemic such as COVID-19 are the significant changes to our daily lives as our movements are restricted in support of efforts to contain and slow down the spread of the virus. Faced with new realities of working from home, temporary unemployment, home-schooling of children, and lack of physical contact with other family members, friends and colleagues. [10] So it is important that we look after our mental, as well as our physical, health.

Psychiatrists across the world should be aware of these manifestations, their correlates, and strategies to manage them that encompass both the needs of specific populations [14] (Yang et al., 2020) and the precautionary measures necessary to contain the spread of COVID-19 [15] (Liu et al., 2020a). They should also be aware of lacunae in the existing literature, which may need to be filled in over time through more widespread clinical experience and research.

Some recent studies published in the Lancet have reported the clinical symptoms of patients infected with COVID-19 and forecasted the spread of COVID-19 [16, 17, 18]. However, few studies have reported the impact of the COVID-19 pandemic on mental health or quality of life in mainland China, even though the pandemic has severely affected China and many other parts of the world.

To date, there are limited studies that have investigated how severe the impact of COVID-19 with respect to stress, mental health and other fears especially to the students.

Therefore, the study aimed to investigate whether there was an immediate impact of the COVID-19 pandemic on mental health, its related lifestyle habits and quality of life among Indian students especially in a particular region i. e. Rajasthan after the lock down and travel restrictions by Indian government.

## II. RESEARCH METHODOLOGY

This was a cross-sectional, observational study executed in Rajasthan. For the data collection, a quantitative method that is a survey was used. A Google form was designed in the form of an online semi-structured questionnaire. After the questionnaire was completed a link was created in the Google form. Further, a message was drafted which had the instruction of how to fill the survey, eligibility of the participant (14 to 25 years), purpose of the survey with the link to the survey. Once the student decides to take the survey, on clicking the link they were redirected to the form where there were a set of questions related to awareness, stress, mental health care. The link was forward to the students of the age group 14 - 25 through email, social media like WhatsApp, Instagram. The snowball sampling technique was used. The participants were requested to forward the message to as many as students of age group 14-25 as possible. So, each participant shared it with 2-3 students which created a chain, helping us to recruit samples. Using this we were able to collect data from various cities of Rajasthan.

As this was an online study, students with access to an internet connection and electronic devices were able to participate. Also, only students between the age group of 14-25 who understood English could take part in the survey. The data was collected from 2 June 2020 8:00 PM IST to 18 June 2020 12:00 PM IST.

In the survey the only demographic information asked for is the participants' age. That is to make the survey as reliable as possible as the target audience is only the students. Moreover, the survey has 18 multiple choice questions which were mandatory to answer followed by 4 5-point Likert scales which were also mandatory to answer followed by an optional long answer type question.

The research has four major sectors to it: awareness, stress, immediate consequences and perceived mental health care. For awareness there were 7 multiple choice questions followed by 1 5-point Likert scale followed by 1 check box type question. For stress there were 6 multiple choice questions along with 3 5-point Likert scales. For the immediate consequences there were 3 multiple choice questions. For the perceived mental health care there were 2 multiple choice questions. Additionally, there was one more long type answer question in which the participant could write an elaborate answer on how the coronavirus pandemic is affecting their peace of mind.

## III. RESULT AND DISCUSSION

In epidemics and pandemics like the Covid-19 individuals often face several difficulties. Absence of awareness and mindfulness trends to prompt an indifferent demeanour, which may unfavourably influence the way to address these difficulties. Effects of these epidemics and pandemics are serious, which may also influence the psychological prosperity of a given populace in a negative manner. The dread and tension identified with the period often affect their mental well-being. The students get traumatized by the thoughts of the health of themselves and their family, of their future, of the uncertainty etc. Due to the presence of so many challenges, the mental health of the students is often neglected. Consequently, this study endeavours to assess the awareness, stress, imminent consequences, and perceived mental health care need among the students of Rajasthan. The participants of the survey were in the age group 14-25.

The participants had a moderate degree of awareness regarding the symptoms, prevention, precautions and reliable source of information. Most of the students were well-informed that government sites provide the accurate information than the social media sites. Despite the fact that there is no lockdown maximum students avoid going out or ordering food. The students who were going out were religiously putting masks and washing their hands for 20 seconds. This demonstrates that participants are taking care of their personal hygiene to evade Covid-19. Many of the participants keep themselves updated with the news of the Covid-19.

Often knowing all the information and the numbers of the people infected the students tend to face stress, anxiety, and fear. As one of the students stated in the long answer optional question of the survey, "We're surrounded with an extremely negative, anxious, muddled and chaotic aura because immunity is the sole cure for this fiendish virus up till now". The stress and the trepidation levels are accentuating daily between the people. The students fear about their own health and their families. Some of the students who are away from their family are extremely worried about their well-being. However, most of the students are with their families, spending quality time and mending relationships with them makes this period optimistic and positive. But they often find the quarantine suffocating. Students are circumscribed to their homes and to a limited number of activities to do except for munching food down your gullet every hour while sitting in front of the silver screen all day long with the online classes caused disturbance and difficulties in their sleeping patterns. Which is also affecting their studies.

Further, many students have a lot of clouds of uncertainty hovering over their heads about their future like will some industries shut down, will they have to change their streams, will the admission rates decrease. However, most of those students think that with time the things will settle down as it's a pandemic, the whole world is facing it, not just Rajasthan.

To deal with the stress, an efficient way is to take help from the professionals who deal with mental wellbeing to motivate the students. Most of the students feel this would be helpful but very few students are able to attend these online sessions. Some academic institutes do have frequent online sessions to motivate the students but not all. All the institutes should conduct sessions with the professionals as it is vital that they are optimistic and motivated. Students should not feel alone, and they should be provided with a platform where they can share their worries, concerns without any hesitation.

### 3.1 RESULT

An online survey assessing awareness, stress, imminent consequences, and perceived mental health care need among the students of Rajasthan was conducted. A sum of 212 responses was recorded. Only students who had access to the internet, electronic devices and knew English could participate. The age group of the participants was 14 - 25. The lowest level of education of the participants was 9th standard. All the participants belonged to Rajasthan. However, we could only record data from the urban areas of Rajasthan and not the rural areas as it was an online survey.

#### 3.1.1 Awareness about COVID-19 pandemic

A considerable number of participants had an adequate level of awareness about Covid-19. Most of the participants were aware about the symptoms of Covid-19 which was assessed by the checkbox type question. 92.4% participants answered fever and 91% of them answered difficulty in breathing or shortness of breath, in which fever is a common symptom and shortness in breathing is a serious symptom. The other common symptom is dry cough which 85.8% participants answered. However, some people also answered redness in eyes (10.4%), itching (6.2%), sweating (13.3%), which are not the symptoms. Most of the people knew COVID-19 is an asymptomatic disease, 54.7% answered yes and 30.2% answered maybe and 15.1% answered no. Out of the participants, 92.5% people avoided ordering food from outside. 54.2% avoid going out and 32.1% go out sometimes. 69.3% of the participants knew the most reliable source of information are the government sites. However, there were 7.5% of people who thought social media like WhatsApp, Facebook, which is not true. 92.9% of participants assure that they wear masks when they go out while 7.1% wear masks sometimes. 74.5% of the participants wash their hands frequently and after touching anything, while 24.1% of participants wash sometimes. But 1.4% participants do not wash.

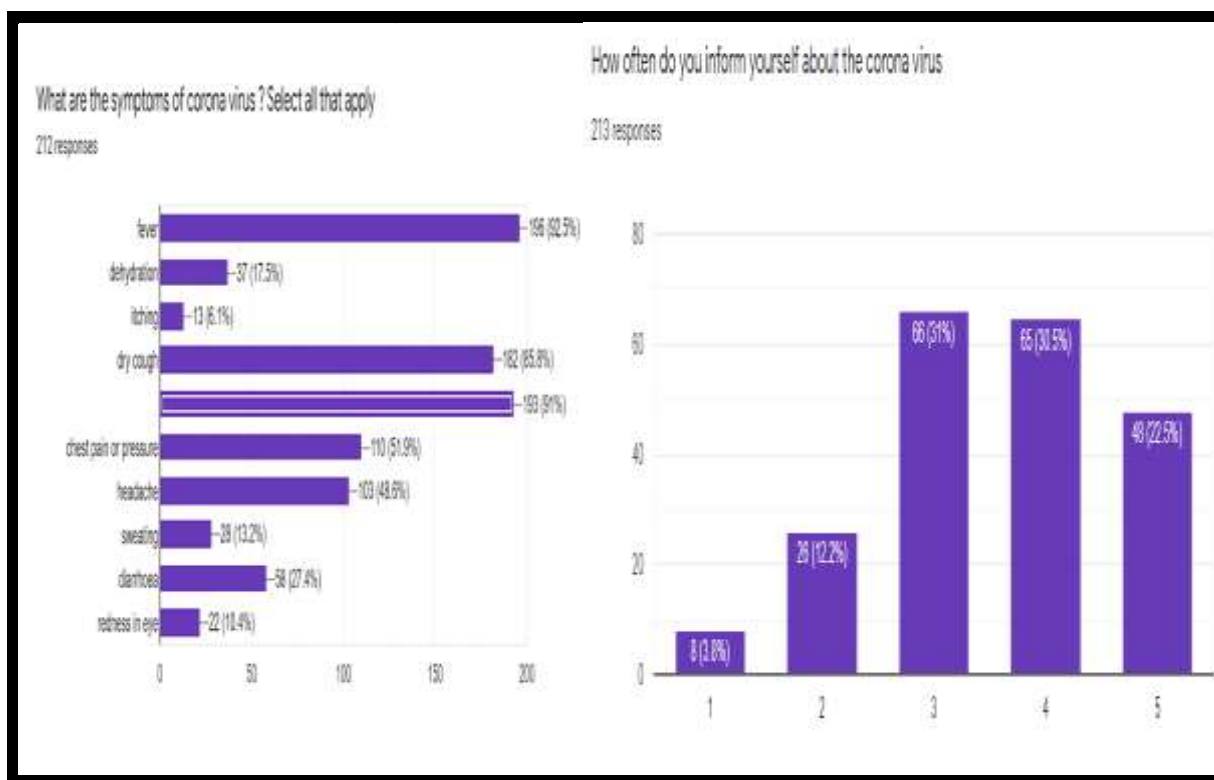


Figure 3.1.1(1): Awareness among the Participants for COVID-19 Pandemic

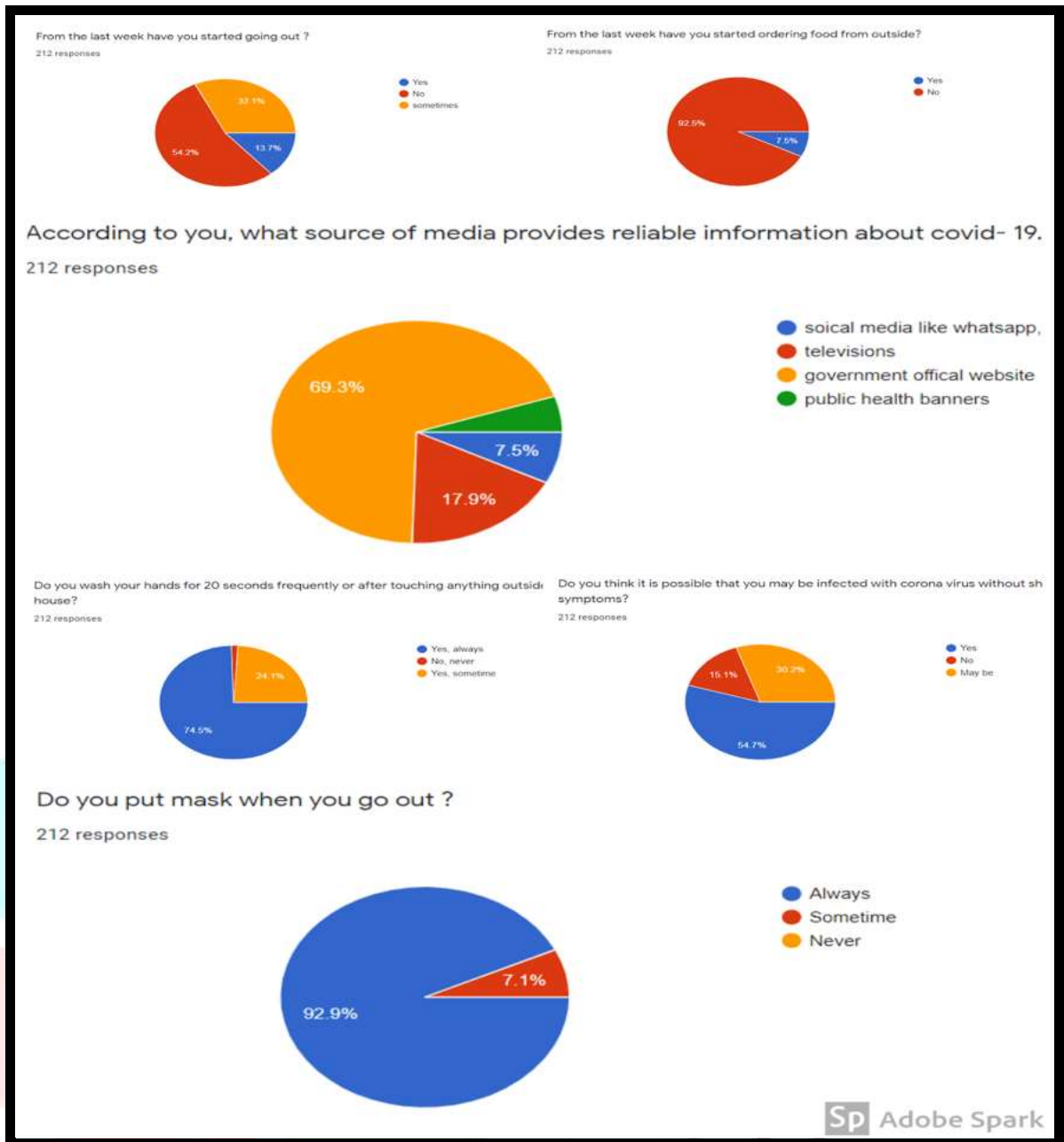


Figure 3.1.1(2): Awareness of Participants for COVID-19 Pandemic

Table 3.1.1: Awareness of Participants for COVID-19 Pandemic

S. N.	Items	% of responses who are aware
1	Do you think it is possible that you may be infected with coronavirus without showing any symptoms?	54.9
2	From the last week have you started ordering food from outside?	92.5
3	From the last week have you started going out?	54.5
4	According to you, what source of media provides reliable information about covid-19	69.5
5	Do you put mask when you go out?	93
6	Do you wash your hands for 20 seconds frequently or after touching anything outside your house?	74.6

### 3.1.2 Stress due to COVID-19 pandemic

Out of the participants 53.8% of them feel they are stressed. Discussions about COVID-19 with their family and friends invades the peace of 52.8% of participants' minds while it does not affect 47.2% of the participants. In the quarantine period 62.3% feel optimistic however, 5.2% participants feel extremely depressed and 32.5% people feel depressed. Being locked in the same place for days and days with the same people makes 25% participants feel suffocated and 42% of participants feel worried about their studies, future and their health. However, 33% of participants are enjoying being away from the hustle bustle of student life with their loved ones. Further, 41.5% of participants are always worried about their families' health and 44.3% are sometimes worried about it. 51.9% participants face difficulty in sleeping and problems in concentrating on their studies sometimes, 28.3% faced these problems a lot and 19.8% do not have any difficulty in sleeping or concentrating. The thoughts about the future are one of the major reasons for stress.

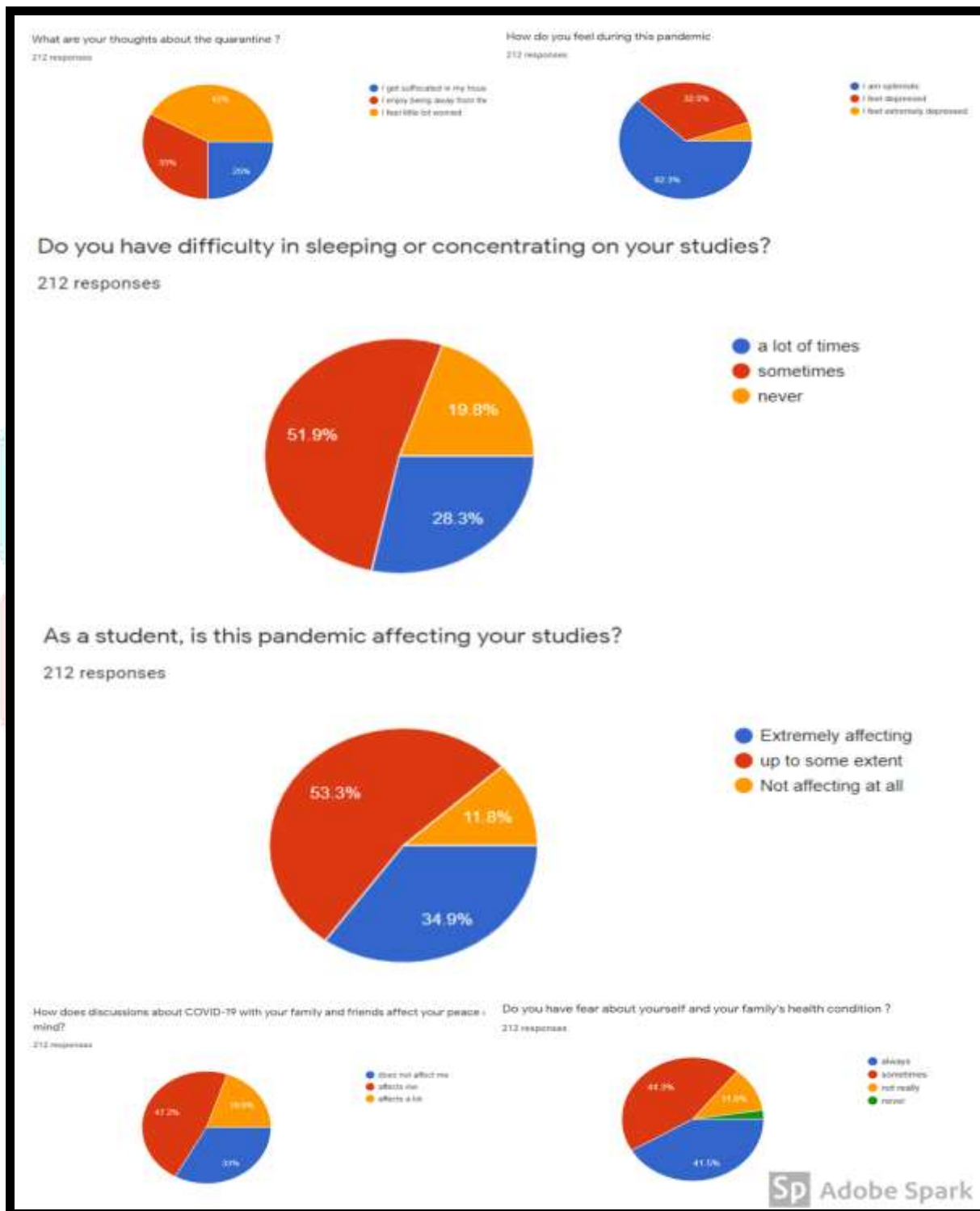


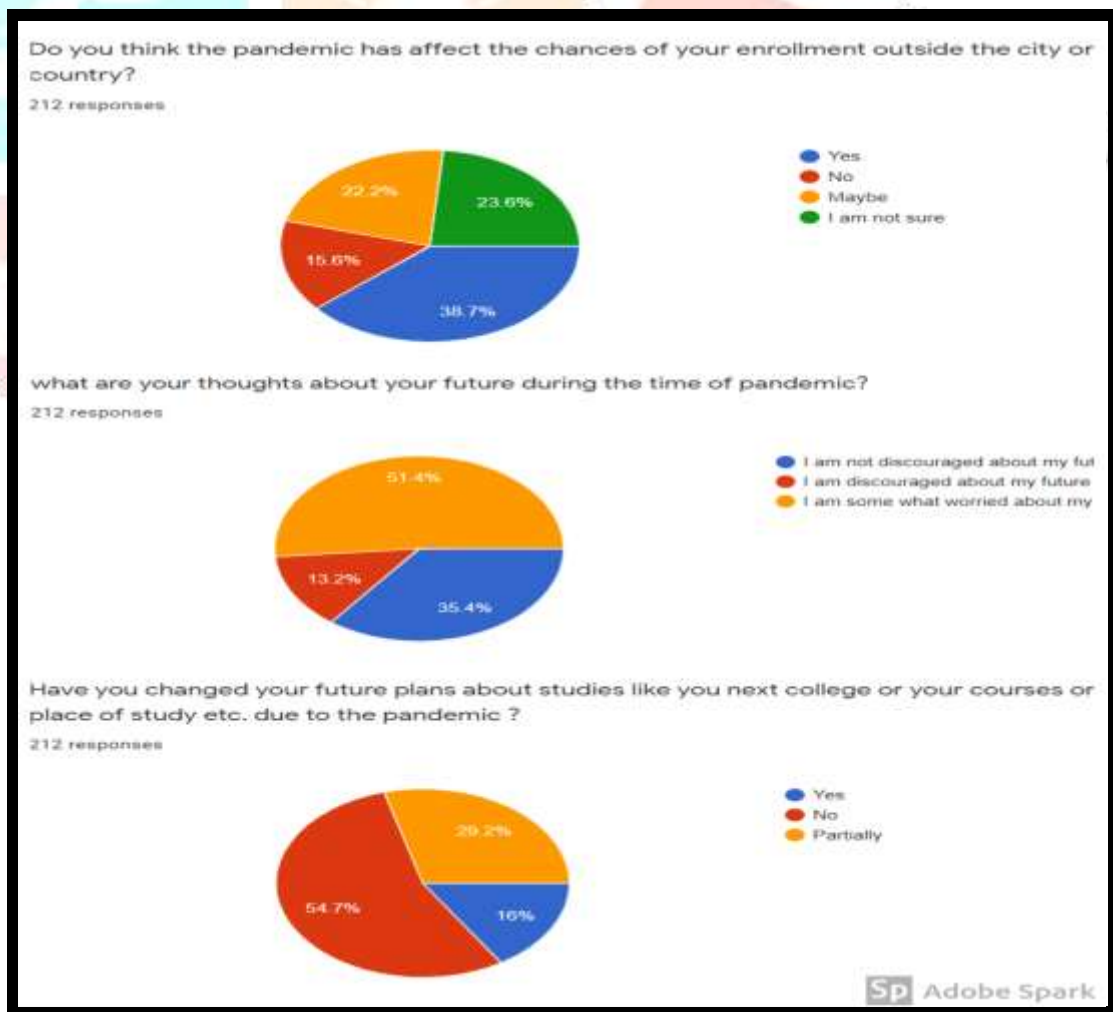
Figure3.1.2: Stress among the Participants due to COVID-19 Pandemic

**Table: 3.1.2: Stress among the Participants due to COVID-19 Pandemic**

sno.	Items	% of responses who are stressed
1	How do you feel during this pandemic?	37.6
2	Do you have fear about yourself and your family's health condition ?	85.9
3	Do you have difficulty in sleeping or concentrating on your studies?	71.8
4	As a student, is this pandemic affecting your studies?	88.2
5	What are your thoughts about the quarantine ?	66.7
6	How does discussions about COVID-19 with your family and friends affect your peace of mind?	80.3

**3.1.3 Imminent Consequences of COVID-19**

Imminent consequences of Covid-19 in students' life are reduction in the efficiency of studying. 34.9% of participants feel Covid-19 has extremely affected their studies, 53.3% participants feel it has affected studies up to an extent and only 11.8% participants feel it has not affected. 51.4% participants are worried about the future, 13.2% participants are discouraged about their future and 35.4% people are not discouraged. Till now 54.7% participants have not changed their future plans, courses but 29.2% have partially changed their plan and 16% have certainly changed. 38.7% of participants feel Covid-19 will alter the chances of their enrollment. 22.2% participants think it may or not, 23.6% are uncertain about it and 15.6% think it won't affect.



**Figure 3.1.3(1): Consequences due to COVID-19 pandemic**

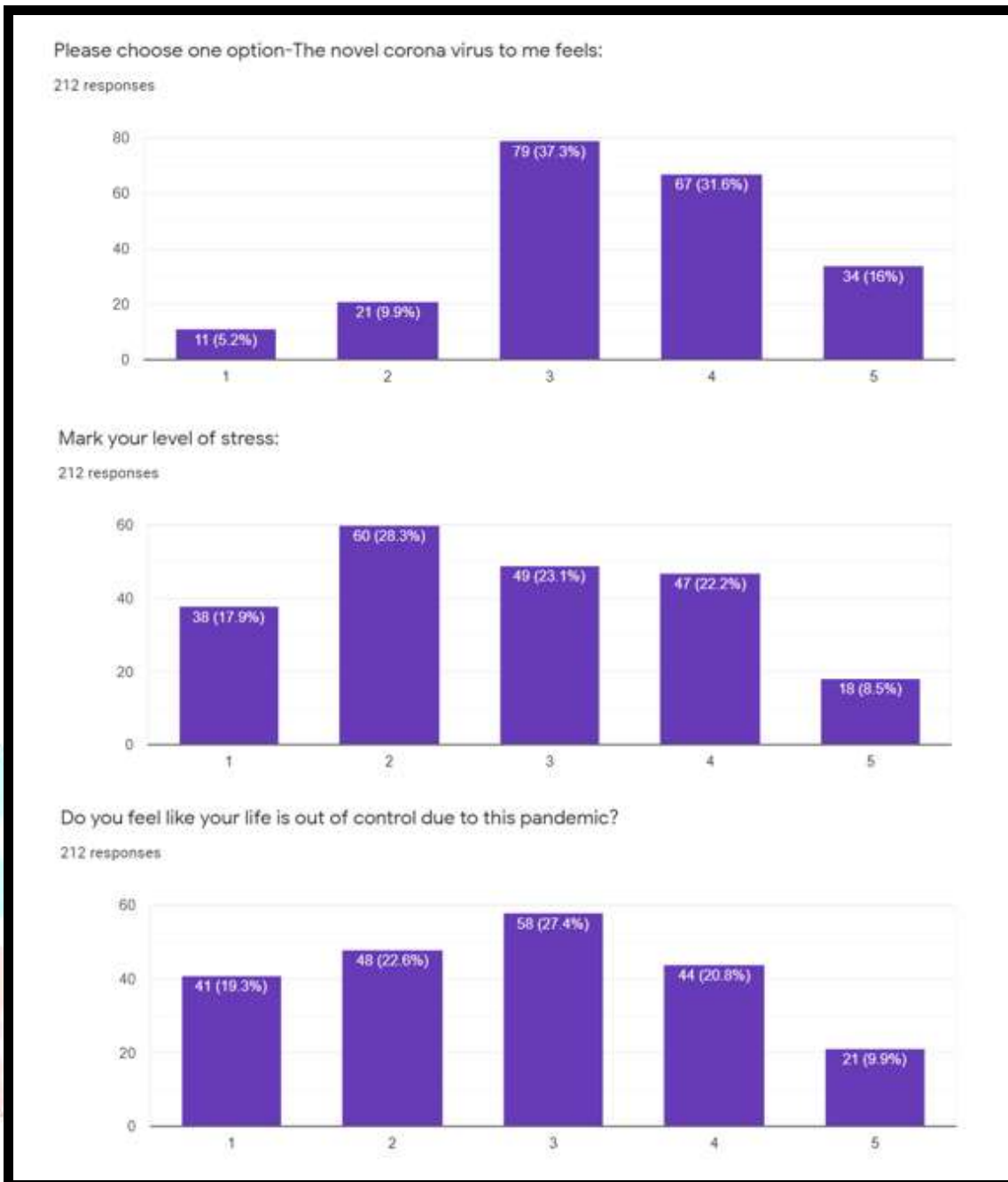


Figure 3.1.3(2): Consequences due to COVID-19 pandemic

Table: 3.1.3: Consequences due to COVID-19 Pandemic

S. N.	Items	% of responses who are worried by
1	What are your thoughts about your future during the time of pandemic?	64.7
2	Have you changed your future plans about studies like your next college or your courses or place of study etc. due to the pandemic?	45.1
3	Do you think the pandemic has affected the chances of your enrollment outside the city or country?	84.5

**3.1.4 Perceived mental health care need due to COVID-19 Pandemic**

To deal with stress 52.8% participants feel perceived mental health care help from professionals would be helpful while 31.6% of participants feel it may be helpful but 15.6% participants do not feel this. 64.6% participants are not able to attend such sessions, 16.5% participants attend it sometimes and only 18.9% participants have access to it.

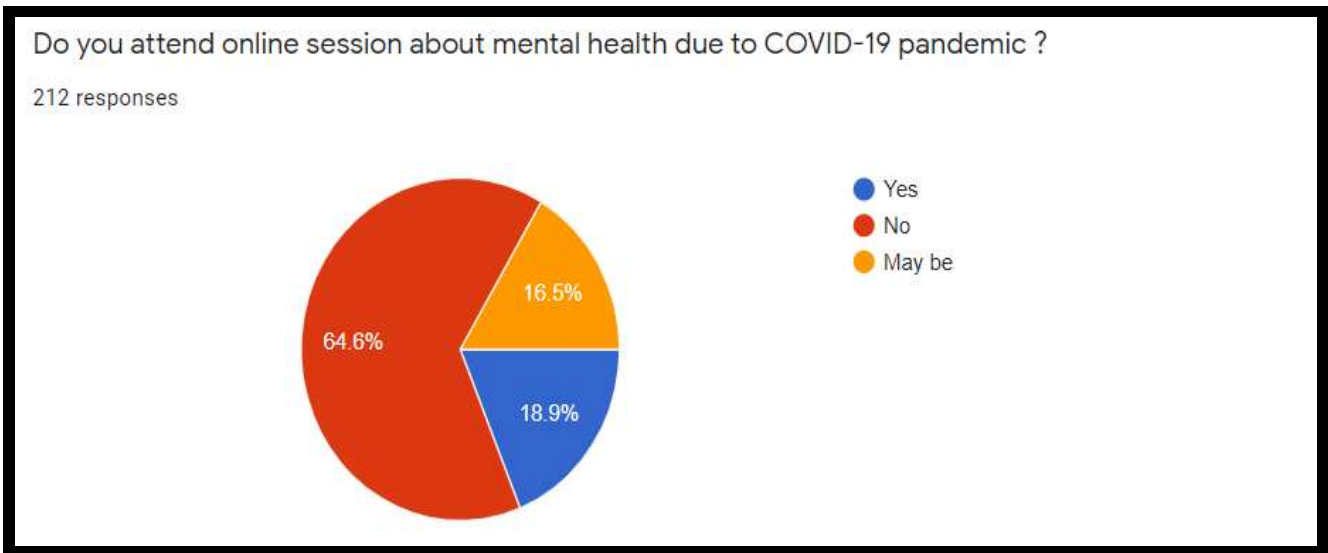


Figure3.1.4 (1): Perceived mental health care need due to COVID-19 Pandemic

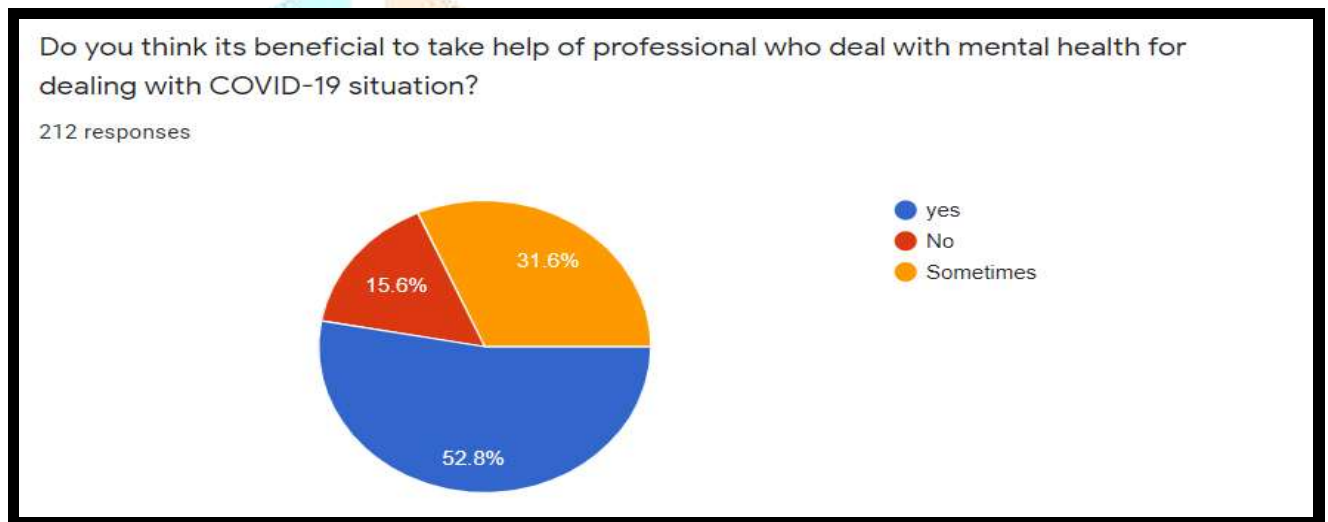


Figure3.1.4 (2): Perceived mental health care need due to COVID-19 Pandemic

Table 3.1.4: Perceived mental health care need due to COVID-19 Pandemic

S. N.	Items	% of responses who think medical help is needed
1	Do you think it's beneficial to take help from professionals who deal with mental health for dealing with COVID-19 situation?	84.6

**IV. Limitations**

This observational study was limited to the students who had electronic devices and were able to understand English. Therefore, the data was only collected by the urban areas of Rajasthan. So, it was not a study examining the whole populace of Rajasthan. If a study was conducted for the whole population of Rajasthan the results may differ.

**IV. ACKNOWLEDGEMENT**

Not applicable



## References

- [1] Hui DS, I Azhar E, Madani TA, Ntoumi F, Kock R, Dar O. (2020). The continuing 2019-nCoV epidemic threat of novel coronaviruses to global health :The latest 2019 novel coronavirus outbreak in Wuhan, China, *Int J Infect Dis*, 264–66.
- [2] World Health Organization (WHO). Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV)"2020. 2020.
- [3] Y. Chen, Q. Liu, D. Guo, Genome structure, replication, and pathogenesis Coronaviruses, *J. Med. Virol.* 92 (4) (2020) 418–423.
- [4] M. Killerby, H. Biggs, C. Midgley, S. Gerber, J. Watson, Middle East res-piratory syndrome coronavirus transmission, *Emerg. Infect. Dis.* 26 (4) (2020) 191–198.
- [5] M. Willman, D. Kobasa, J. Kindrachuk, A comparative analysis of factors influencing two outbreaks of middle eastern respiratory syndrome (MERS) in Saudi Arabia and South Korea, *Viruses* 11 (12) (2019) E1119.
- [6] Bao, Y., Sun, Y., Meng, S., Shi, J., Lu, L., 2020. 2019-nCoV epidemic: address mental health care to empower society. *Lancet* 22 (395), e37–e38.
- [7] 6. Inter-Agency Standing Committee (IASC). IASC guidelines on mental health and psychosocial support in emergency settings. Geneva: IASC; 2007.
- [8]7. Kang L, Li Y, Hu S, Chen M, Yang C, Yang BX, et al. The mental health of medical workers in Wuhan, China dealing with the 2019 novel coronavirus. *Lancet Psychiatry*. 2020;7:e14.
- [9]10. Tol WA, Barbui C, Galappatti A, Silove D, Betancourt TS, Souza R, et al. Mental health and psychosocial support in humanitarian settings: linking practice and research. *Lancet*. 2011;378:1581-91.
- [10] <https://www.who.int/teams/mental-health-and-substance-use/covid-19>
- [11] 2. Xiang YT, Yang Y, Li W, Zhang L, Zhang Q, Cheung T, et al. Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. *Lancet Psychiatry*. 2020;7:228-9.
- [12] 8. Ogoina D. Behavioural and emotional responses to the 2014 Ebola outbreak in Nigeria: a narrative review. *Int Health*. 2016;8:5-12.
- [13] 9. Kumar R. Fearing he has coronavirus infection, Andhra Pradesh man kills self. *The Times of India* [Internet]. 2020 Feb 12 [cited 2020 Feb 21]. Available from: <https://timesofindia.indiatimes.com/city/vijayawada/fearing-he-has-coronavirus-infection-andhra-pradesh-man-kills-self/articleshow/74091274.cms>
- [14] Li, Z., Ge, J., Yang, M., Feng, J., Qiao, M., Jiang, R., Bi, J., Zhan, G., Xu, X., Wang, L., Zhou, Q., Zhou, C., Pan, Y., Liu, S., Zhang, H., Yang, J., Zhu, B., Hu, Y., Hashimoto,
- [15] Liu, S., Yang, L., Zhang, C., Xiang, Y.T., Liu, Z., Hu, S., Zhang, B., 2020a. Online mental health services in China during the COVID-19 outbreak. *Lancet Psychiatry* 7 (4),E17–e18.
- [16] 8. Brooks, S.K.;Webster, R.K.; Smith, L.;Woodland, L.;Wessely, S.; Greenberg, N.; Rubin, G.J. The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *Lancet* 2020. [CrossRef] *Int. J. Environ. Res. Public Health* 2020, 17, 2381 12 of 12
- [17]10. Chan, J.F.; Yuan, S.; Kok, K.H.; To, K.K.; Chu, H.; Yang, J.; Xing, F.; Liu, J.; Yip, C.C.; Poon, R.W.; et al. A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating person-to-person transmission: A study of a family cluster. *Lancet* 2020. [CrossRef]
- [18] 11. Huang, C.; Wang, Y.; Li, X.; Ren, L.; Zhao, J.; Hu, Y.; Zhang, L.; Fan, G.; Xu, J.; Gu, X.; et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, china. *Lancet* 2020. [CrossRef]