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# Is the Implication of COVID-19 Lockdown Leading to Stress and Anxiety? - A Questionnaire Based Study

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## ABSTRACT

**Introduction:** Coronavirus (COVID-19) is an infectious disease where the best way to prevent it is self-isolation. Due to COVID-19, people are experiencing mental stress, aggression, and depression. Covid19 can lead to an epidemic of clinical depression due to various reasons like personal loss, unemployment, or the unpredictability of the virus. The principal aim of this study is to know if the COVID-19 lockdown is having a stress impact on the mental health of the general population.

**Materials and Methods:** The study setting was done through an online survey among the general population. A questionnaire comprising of 12 questions were posted on an online survey platform. The collected data were then analyzed in SPSS online software and the results were plotted in the form of bar graphs.

**Results:** From the present study, it is inferred that 85% of the study participants are undergoing mental and emotional stress.

**Conclusion:** Hence, it is evident that the COVID-19 lockdown is bringing a great impact on people both mentally and physically. Thus, it is important for professional health care seekers to provide help in the current situation.

**Key Words:** COVID-19, Lockdown, Mental stress, Depression, Anxiety, Quarantine

## INTRODUCTION

Coronavirus is leading to a global pandemic which not only is affecting people's health but is also causing mental problems to most of the people due to the strict lockdown. Due to COVID-19, people are experiencing various mood swings like depression, sadness, irritability, aggression, emptiness, exhaustion, difficulty in concentrating, and making decisions<sup>1,2</sup>. COVID-19 is unique environmental stressors where a huge population may develop depression due to the personal losses and the unpredictability of this virus<sup>3</sup>. Some people with breathing problems like asthma<sup>4</sup> wheezing, high blood pressure, liver diseases<sup>5</sup> obesity<sup>6</sup> etc. are more susceptible to this virus. Thus people with these problems are experiencing more panic. But to avoid this panic, many studies are proving that certain health problems like thyroid disease<sup>7,8</sup> insomnia<sup>9</sup>, etc. are not linked with coronavirus.

During this time, muscular endurance<sup>10</sup> and a healthy diet play a major role. Most of them in lockdown are unable to continue with their regular routine. Some of them are experiencing trouble sleeping due to which they inhabit other problems like snoring<sup>11</sup> somniloquy, etc. Coronavirus is also causing a significant impact on the economy which could lead to massive unemployment causing depression, anxiety, and stress among various people. Many health care workers are at high risk due to this virus<sup>12</sup>. We are in the midst of an epidemic but have already caused a pandemic of anxiety and distress. Most of the people are worried about your family, finances, work, the unpredictability of viruses, insecurity, self verbalization, etc<sup>13</sup>. A similar crisis was observed in 2014 due to the Ebola virus<sup>14,15</sup> and in 2003 due to SARS (severe acute respiratory syndrome)<sup>12</sup>.

Many studies and surveys have been done on various diseases and problems<sup>16-18</sup>, and this present study has focused

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on the impact of mental health. Prolonged social isolation or self-quarantine has been put forward by the government but the past studies have shown that when people are forced to be in a shelter, they experience more depression due to loneliness. Due to the previously done studies<sup>19,20,21</sup>, it has led us to work on the impacts being brought by the coronavirus lockdown. Thus this study emphasizes whether the people who are in lockdown are experiencing stress, anxiety, or depression due to coronavirus.

## MATERIALS AND METHODS

The study setting was done through an online survey among the general population. The usage of online surveys is time-saving and also involves a varied number of people. There were a hundred participants involved in the survey. The sampling was done by a simple random sampling method. A questionnaire comprising 11 questions was posted on an online survey platform. It is a standard questionnaire used for measuring the perception of stress<sup>22</sup>. These questions ask about the feelings and thoughts like anger, irritations, stress, and nervousness experienced by a person.

### QUESTIONNAIRE

1. What is your gender?
2. What is your age?
3. During this lockdown period, how often have u been upset because of something that happened unexpectedly?
4. During this lockdown period, how often have u been anxious about u important things in life ?
5. During this lockdown period, how often have you felt nervous and stressed?
6. During this lockdown period, how often have you felt confident about your ability to handle your personal problems?
7. During this lockdown period, how often have you felt that things were going your way?
8. During this lockdown period, how often have you found that you could not cope with all the things you had to do?
9. During this lockdown period, how often have you been able to control irritations in your life?
10. During this lockdown period, how often were you angered because of things that were outside of your control ?
11. During this lockdown period, how often have you felt that difficulties were piling up so high that you could not overcome them?

The data collection was done through Google forms (<https://forms.gle/LemJqp9gX3nmRSrQ9>) and data manipulation

through MS Excel. The data obtained were plotted in the form of a bar graph. Age and education were considered as independent variables whereas stress and anxiety was considered as dependent variables

### Statistical Analysis

The statistical software used for the analysis included the SPSS software. A descriptive analysis was used. Correlation analysis was done by Chi-square test using the SPSS software.

## RESULTS AND DISCUSSION

In the study, out of a hundred participants, 49% of them were male and 51% of them were female (Figure 1). 86% of the participants belong to the age group 20 to 30, 11% of the participants were between 30 to 40 years of age and 3% of the participants were above 40 years (Figure 2). In the study, 59% of the participants have sometimes been upset because of something that had happened unexpectedly and 41% of the participants were never upset (Figure 3). 56% of the participants felt sometimes that they were unable to control the important things in their life, 18% of the participants often had this feeling and 26% of the participants never had this feeling (Figure 4). 53% of the participants sometimes felt nervous and stressed, 32% of and felt nervous and 15% never felt nervous during this lockdown period (Figure 5). 46% of the participants sometimes felt confident about their ability to handle problems, 32% of the participants often had this feeling and 22% of the participants never had this feeling ( Figure 6).

59% of the participants felt that things were going on their way sometimes, 21% often had this feeling and 20% of the participants never felt that way (Figure 7). 51.5% of the participants sometimes felt they could not cope up with all the things they wanted to do, 28.3% often had this feeling and 20.2% never had this feeling (Figure 8). 52% of the participants were able to control their irritation, 27% of the participants often control their irritation and 21% were never able to control their irritations (Figure 9). . 53% of the participants sometimes were angered, 25% were often angered and 22% of the participants were never angered during this lockdown (Figure 10). 53.5% of the participants felt that difficulties were piling up so high, 20.2% of the participants often had this feeling and 26.3% never had this feeling (Figure 11).

Association between age and the feeling of being upset during the lockdown period among the respondents was found to be more in the age group 20-30 than other age groups where P-value is 0.427 which is statistically not significant (Figure 12). Association between age and the feeling of being nervous and stressed during the lockdown period among the respondents was found to be more in the age group 20-30

than other age groups where P-value is 0.934 which is statistically not significant (Figure 13). Association between age and the feeling of being confident to handle personal problems during lockdown among the respondents was found to be more in the age group 20-30 than other age groups where P-value is 0.404 which is statistically not significant (Figure 14). Association between age and the feeling of being angered during lockdown among the respondents was found to be more in the age group 20-30 than other age groups where P-value is 0.54 which is statistically significant (Figure 15).

In this study, the majority of the participants belonged to the 20 to 30 age group while in other studies, 47.9% of the participants were of the 21 to 30 age group and 52.1% of the participants were about 30 years. In the study male and female populations were equal but in other studies 67.7% of the participants were female and 32.3% of the participants were male<sup>23</sup> and in another study 56% were female and 44% were male<sup>24</sup>. In the present study, 59% of the participants were sometimes upset. In other studies, the prevalence of depression was found to be 48.3%<sup>23</sup>, 58.9% of the participants had psychiatric disorders<sup>24</sup> and 45% of the participants in another study also had psychiatric disorders<sup>25</sup> When we compare this study with other studies, the results were quite similar.

In this study, 53% of the participants felt nervous and stressed. A similar result was obtained from another study<sup>26</sup>, where 44% of the participants were worried about social distancing and had the fear of illness. But in another study<sup>23</sup>, the prevalence of anxiety was only 22.6% which is comparatively very less than this study. 52% of the participants were sometimes able to control their irritation in this study but in another study, only 23.2% of the participants were able to control their irritations<sup>27</sup>. In a previous study, 75% of the population wanted to seek professional mental health care due to this lockdown<sup>28</sup> Since, immunity and health are the major factors responsible to stay healthy during this time, many health care professionals are advising for a routine fitness workout<sup>29</sup> and to have a balanced diet.

Also due to this coronavirus outbreak, other health surveillance and follow-up have become challenging. The present study has been done on a small population. The involvement of a large population would bring different results. A clinical trial study would bring a better understanding of depression and other mental problems during this lockdown.

## CONCLUSION

COVID-19 lockdown is bringing a major impact among the people regarding mental health. 85% of the participants who took this survey are undergoing mental and emotional stress due to the COVID-19 lockdown. Thus seeking the help of psychiatrists and psychologists in this situation can help peo-

ple mentally. Hence it is important for professional health-care workers to make people understand the situation and not to get panicked due to this virus.

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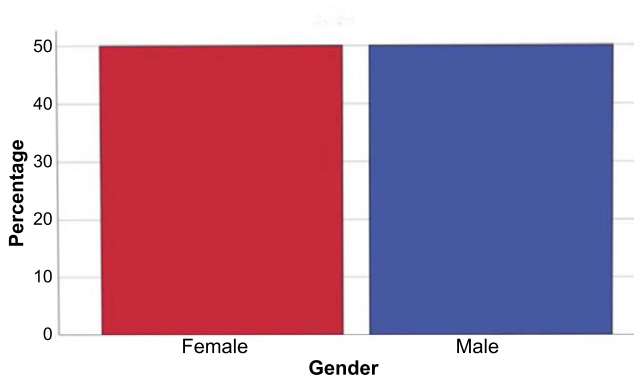
**Conflict of Interest:** Nil

**Source of Funding:** Nil

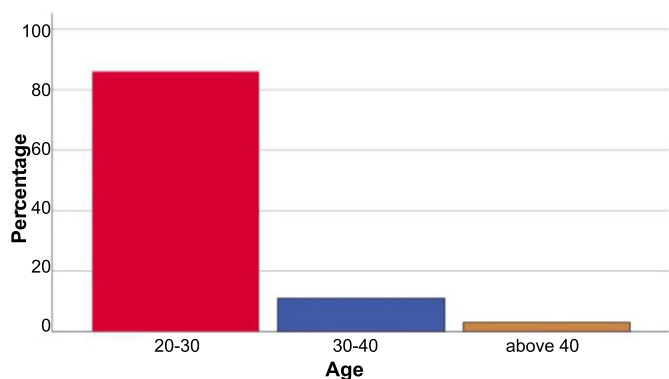
## REFERENCES

1. Fischhoff B, Luna K. Speaking of Psychology: Coronavirus Anxiety [Internet]. PsycEXTRA Dataset. 2020. Available from: <http://dx.doi.org/10.1037/e500942020-001>
2. Nair SS, Hiremath SG, Ramesh P, Nair SS. Depression among geriatrics: Prevalence and associated factors. *Int J Curr Res Rev.* 2013;5(8):110.
3. Gavin B, Lyne J, McNicholas F. Mental Health and the COVID-19 Pandemic [Internet]. *Irish Journal of Psychological Medicine.* 2020. p. 1–7. Available from: <http://dx.doi.org/10.1017/ipm.2020.72>
4. Dave PH, Preetha. Pathogenesis and Novel Drug for Treatment of Asthma-A Review [Internet]. Vol. 9, *Research Journal of Pharmacy and Technology.* 2016. p. 1519. Available from: <http://dx.doi.org/10.5958/0974-360x.2016.00297.3>
5. Choudhari S, Jothipriya MA. Non-alcoholic fatty liver disease [Internet]. Vol. 9, *Research Journal of Pharmacy and Technology.* 2016. p. 1782. Available from: <http://dx.doi.org/10.5958/0974-360x.2016.00360.7>
6. Baheerati MM, Gayatri Devi R. Obesity in relation to Infertility [Internet]. Vol. 11, *Research Journal of Pharmacy and Technology.* 2018. p. 3183. Available from: <http://dx.doi.org/10.5958/0974-360x.2018.00585.1>
7. Samuel AR, Devi MG. Geographical distribution and occurrence of Endemic Goitre [Internet]. Vol. 8, *Research Journal of Pharmacy and Technology.* 2015. p. 973. Available from: <http://dx.doi.org/10.5958/0974-360x.2015.00162.6>
8. Fathima F, Preetha P. Evaluation of Thyroid Function Test in Obese Patients [Internet]. Vol. 9, *Asian Journal of Pharmaceutical and Clinical Research.* 2016. p. 353. Available from: <http://dx.doi.org/10.22159/ajpcr.2016.v9s3.12959>
9. Rj I, R GD. Role of environmental factors on sleep patterns of different age groups [Internet]. Vol. 9, *Asian Journal of Pharmaceutical and Clinical Research.* 2016. p. 124. Available from: <http://dx.doi.org/10.22159/ajpcr.2016.v9i6.13832>
10. Abigail, Abigail, Priya J, Devi G. Evaluation of Muscular Endurance among Dentists [Internet]. Vol. 10, *Indian Journal of Public Health Research & Development.* 2019. p. 258. Available from: <http://dx.doi.org/10.5958/0976-5506.2019.02808.0>
11. Shruthi M, Preetha S. Effect of Simple Tongue Exercises in Habitual Snorers [Internet]. Vol. 11, *Research Journal of Pharmacy and Technology.* 2018. p. 3614. Available from: <http://dx.doi.org/10.5958/0974-360x.2018.00665.0>

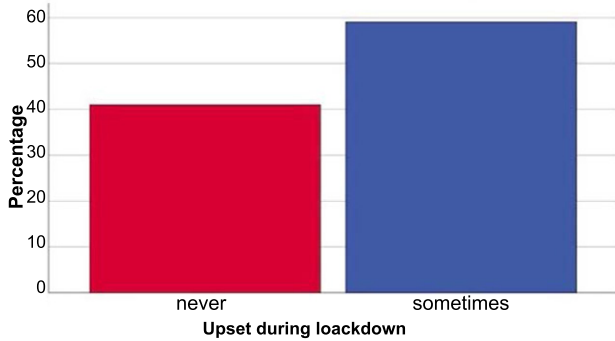
12. Chou R, Dana T, Buckley DI, Selph S, Fu R, Totten AM. Epidemiology of and Risk Factors for Coronavirus Infection in Health Care Workers. *Ann Intern Med* [Internet]. 2020 May 5; Available from: <http://dx.doi.org/10.7326/M20-1632>
13. Zhang Y, Zhang H, Ma X, Di Q. Mental Health Problems during the COVID-19 Pandemics and the Mitigation Effects of Exercise: A Longitudinal Study of College Students in China. *Int J Environ Res Public Health* [Internet]. 2020 May 25;17(10). Available from: <http://dx.doi.org/10.3390/ijerph17103722>
14. O'Leary A, Jalloh MF, Neria Y. Fear and culture: contextualising mental health impact of the 2014–2016 Ebola epidemic in West Africa [Internet]. Vol. 3, *BMJ Global Health*. 2018. p. e000924. Available from: <http://dx.doi.org/10.1136/bmjgh-2018-000924>
15. Jalloh MF, Li W, Bunnell RE, Ethier KA, O'Leary A, Hageman KM, et al. Impact of Ebola experiences and risk perceptions on mental health in Sierra Leone, July 2015 [Internet]. Vol. 3, *BMJ Global Health*. 2018. p. e000471. Available from: <http://dx.doi.org/10.1136/bmjgh-2017-000471>
16. Iyer PK, Gayatri Devi R, Jothi Priya A. A Survey Study on Causes, Treatment and Prevention of Onychocryptosis [Internet]. Vol. 10, *Indian Journal of Public Health Research & Development*. 2019. p. 807. Available from: <http://dx.doi.org/10.5958/0976-5506.2019.01990.9>
17. Swathy S, Gowri Sethu V. Acupuncture and lower back pain [Internet]. Vol. 8, *Research Journal of Pharmacy and Technology*. 2015. p. 991. Available from: <http://dx.doi.org/10.5958/0974-360x.2015.00165.1>
18. R GD, Sethu G. EVALUATION OF ADENOIDS BY ORONASAL AND NASAL SPIROMETRY [Internet]. Vol. 11, *Asian Journal of Pharmaceutical and Clinical Research*. 2018. p. 272. Available from: <http://dx.doi.org/10.22159/ajpcr.2018.v11i10.27365>
19. Renuka S, Sethu G. Regeneration after Myocardial Infarction [Internet]. Vol. 8, *Research Journal of Pharmacy and Technology*. 2015. p. 738. Available from: <http://dx.doi.org/10.5958/0974-360x.2015.00117.1>
20. Timothy CN, Gayatri Devi R, Jothi Priya A. Evaluation of Peak Expiratory Flow Rate (PEFR) in Pet Owners [Internet]. Vol. 10, *Indian Journal of Public Health Research & Development*. 2019. p. 803. Available from: <http://dx.doi.org/10.5958/0976-5506.2019.01989.2>
21. Harsha L, Priya J, Shah KK, Reshmi B. Systemic Approach to Management of Neonatal Jaundice and Prevention of Kernicterus [Internet]. Vol. 8, *Research Journal of Pharmacy and Technology*. 2015. p. 1087. Available from: <http://dx.doi.org/10.5958/0974-360x.2015.00189.4>
22. Cohen S, Kamarck T, Mermelstein R. A global measure of perceived stress. *J Health Soc Behav*. 1983 Dec;24(4):385–96.
23. Gao J, Zheng P, Jia Y, Chen H, Mao Y, Chen S, et al. Mental health problems and social media exposure during COVID-19 outbreak. *PLoS One*. 2020 Apr 16;15(4):e0231924.
24. Mak IWC, Chu CM, Pan PC, Yiu MGC, Chan VL. Long-term psychiatric morbidities among SARS survivors [Internet]. Vol. 31, *General Hospital Psychiatry*. 2009. p. 318–26. Available from: <http://dx.doi.org/10.1016/j.genhosppsych.2009.03.001>
25. Corales TA. Focus on Posttraumatic Stress Disorder Research. *Nova Publishers*; 2005. 279 p.
26. Shigemura J, Ursano RJ, Morganstein JC, Kurosawa M, Benedek DM. Public responses to the novel 2019 coronavirus (2019-nCoV) in Japan: Mental health consequences and target populations. *Psychiatry Clin Neurosci*. 2020 Apr;74(4):281–2.
27. Cui L-B, Wang X-H, Wang H-N. Challenges of facing coronavirus disease 2019: Psychiatric services for patients with mental disorders. *Psychiatry Clin Neurosci* [Internet]. 2020 Apr 1; Available from: <http://dx.doi.org/10.1111/pcn.13003>
28. Roy D, Tripathy S, Kar SK, Sharma N, Verma SK, Kaushal V. Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic. *Asian J Psychiatr*. 2020 Apr 8;51:102083.
29. David, David, Jothi Priya A, Devi G. Physical Fitness among the Dental Physician, Dental Undergraduates and Postgraduates Students [Internet]. Vol. 10, *Indian Journal of Public Health Research & Development*. 2019. p. 223. Available from: <http://dx.doi.org/10.5958/0976-5506.2019.02801.8>



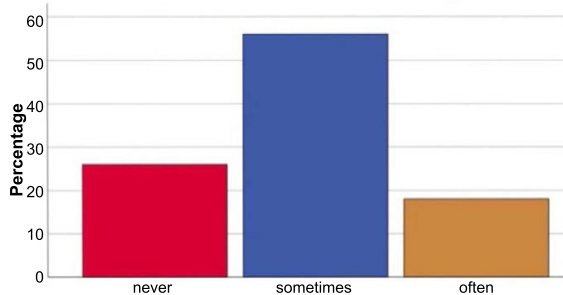
**Figure 1:** This bar chart represents the frequency distribution of the gender among the respondents. X-Axis represents the gender - red (female) and blue color (male), Y-Axis represents the percentage of responses. 49% were males and 51% were females.



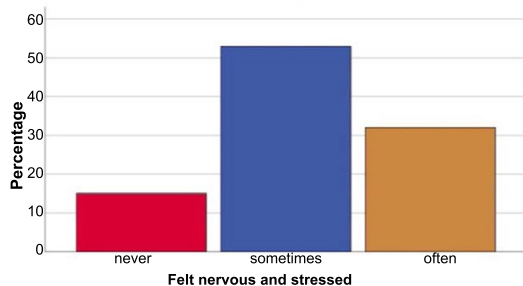
**Figure 2:** This bar chart represents the frequency distribution of age among the respondents. X-Axis represents age and Y-Axis represents the percentage of responses. 86% of the participants belong to the age group 20 to 30 (red), 11% of the participants were between 30 to 40 years of age (blue) and 3% of the participants were above 40 years (yellow).



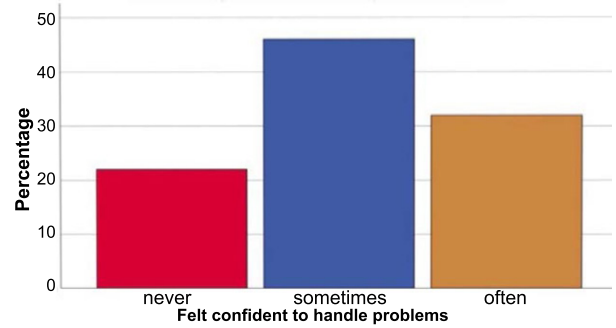
**Figure 3:** This bar chart represents the frequency distribution of the feeling of being upset during the lockdown period. The X-Axis represents the responses, Y-Axis represents the percentage of responses. 59% of the participants have sometimes been upset because of something that had happened unexpectedly (blue) and 41% of the participants were never upset (never).



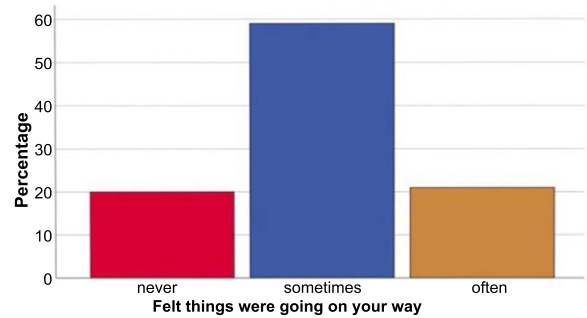
**Figure 4:** This bar chart represents the frequency distribution of the respondents being anxious about unimportant things during the lockdown. The X-Axis represents the responses and Y-Axis represents the percentage of responses. 56% of the participants sometimes felt anxious (blue), 18% of the participants often felt anxious (yellow), and 26% of the participants never felt anxious (red).



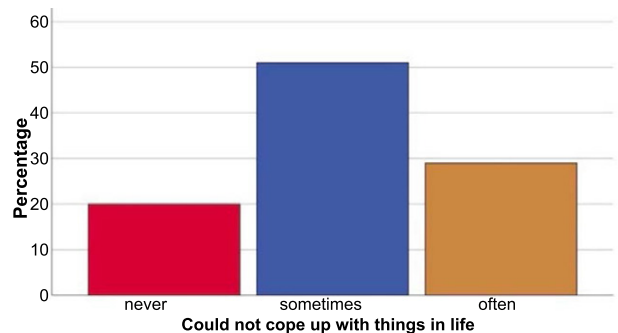
**Figure 5:** This bar chart represents the frequency distribution of the feeling of being stressed and nervous during the lockdown. The X-Axis represents the responses, Y-Axis represents the percentage of responses. 53% of the participants sometimes felt nervous and stressed (blue), 32% of participants often felt nervous (yellow), and 15% never felt nervous during this lockdown period (red).



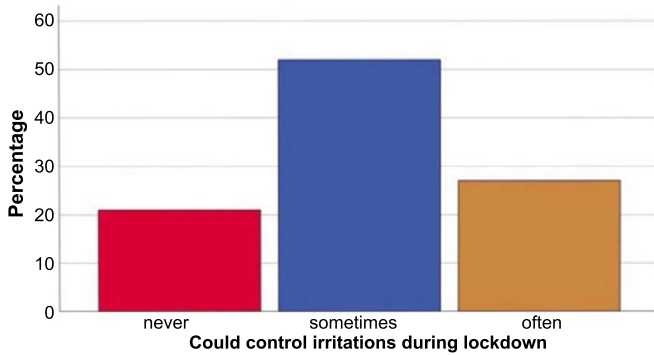
**Figure 6:** This bar chart represents the frequency distribution of being confident to handle problems during the lockdown. The X-Axis represents the responses, Y-Axis represents the percentage of responses. 46% of the participants sometimes felt confident about their ability to handle problems (blue), 32% of the participants often had this feeling (yellow), and 22% of the participants never had this feeling (red).



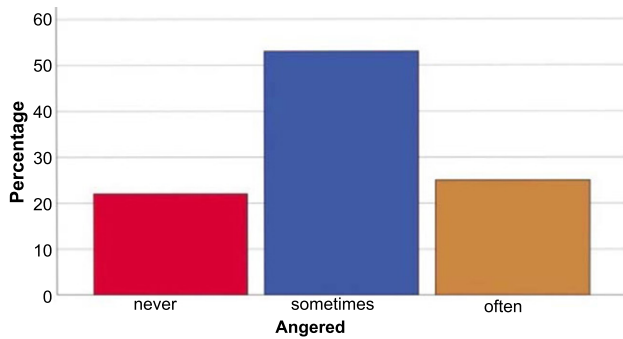
**Figure 7:** This bar chart represents the frequency distribution of the feeling if things were going on the right way during lockdown. The X-Axis represents the responses, Y-Axis represents the percentage of responses. 59% of the participants felt that things were going on their way sometimes (blue), 21% often had this feeling (yellow), and 20% of the participants never felt that way (red).



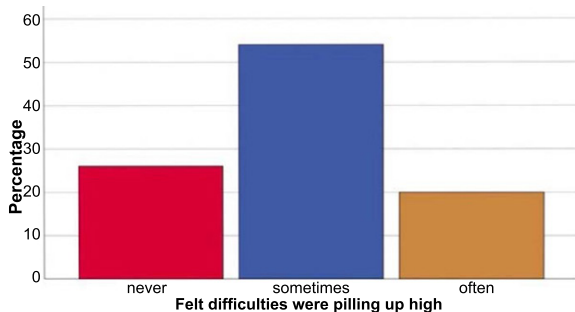
**Figure 8:** This bar chart represents the frequency distribution of responses of not being able to cope up with a situation during the lockdown. The X-Axis represents the responses, Y-Axis represents the percentage of responses. 51.5% of the participants sometimes felt they could not cope up with all the things they wanted to do (blue), 28.3% often had this feeling (yellow), and 20.2% never had this feeling (red).



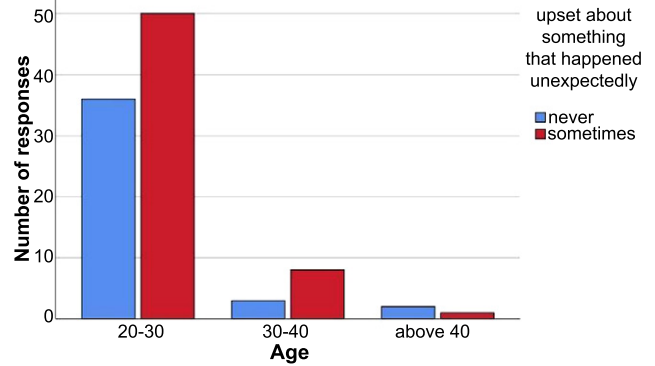
**Figure 9:** This bar chart represents the frequency distribution of the ability to control irritations during the lockdown. The X-Axis represents the responses, Y-Axis represents the percentage of responses. 52% of the participants were sometimes able to control their irritation (blue), 27% of the participants often control their irritation (yellow), and 21% were never able to control their irritations (red).



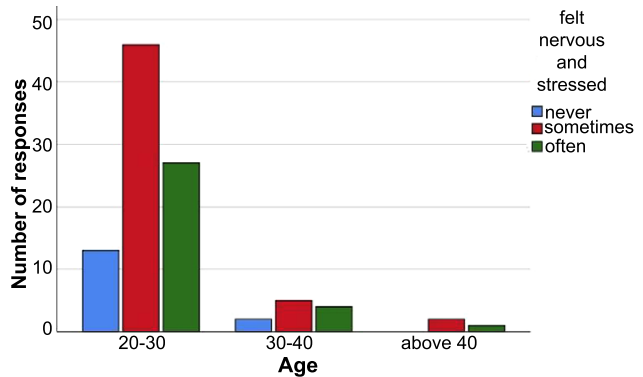
**Figure 10:** This bar chart represents the frequency distribution of the responses of being angered during the lockdown. The X-Axis represents the responses, Y-Axis represents the percentage of responses. 53% of the participants sometimes were angered (blue), 25% were often angered (yellow), and 22% of the participants were never angered during this lockdown (red).



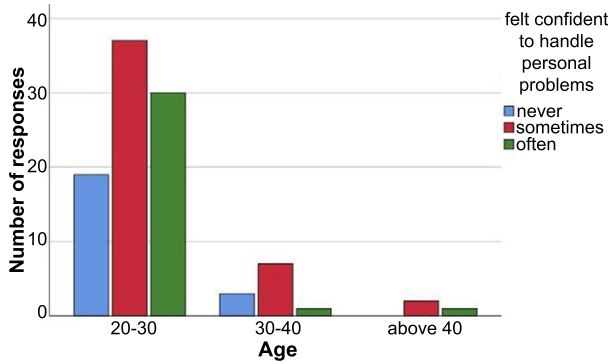
**Figure 11:** This bar chart represents the frequency distribution of the difficulties felt by the responders during the lockdown. The X-Axis represents the responses, Y-Axis represents the percentage of responses. 53.5% of the participants felt that difficulties were piling up so high (red), 20.2% of the participants often had this feeling (yellow), and 26.3% never had this feeling (red).



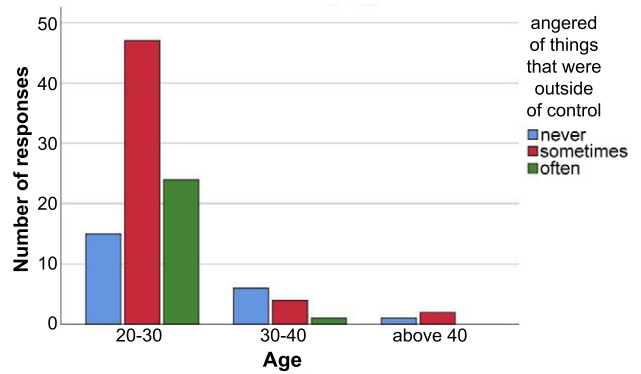
**Figure 12:** The graph represents the association between age and the feeling of being upset during the lockdown period among the respondents. X-Axis represents the age group and Y-Axis represents the feeling of being upset. The response 'never' is denoted by blue color, 'sometimes' is denoted by red color. The age group 20-30 years was more upset (red) than other age groups. Chi-square test was analyzed, P-value is 0.427 ( $p > 0.05$ ) which is statistically not significant.



**Figure 13:** The graph represents the association between age and the feeling of being nervous and stressed during the lockdown period among the respondents. X-Axis represents the age and Y-Axis represents the feeling of stress and nervousness. The response 'never' is denoted by blue color, 'sometimes' is denoted by red color, and 'often' is denoted by green color. The age group 20-30 years felt more nervous and stressed than other age groups. Chi-square test was analyzed, P-value is 0.934 ( $p > 0.05$ ) which is statistically not significant.



**Figure 14:** The graph represents the association between age and the feeling of being confident to handle personal problems during lockdown among the respondents. X-Axis represents the age and Y-Axis represents the feeling of being confident. The response 'never' is denoted by blue color, 'sometimes' is denoted by red color, and 'often' is denoted by green color. The age group 20-30 and above 40 years feel more confident in handling problems than other age groups. Chi-square test was analyzed, P-value is 0.404 ( $p > 0.05$ ) which is statistically not significant.



**Figure 15:** The graph represents the association between age and the feeling of being angry during lockdown among the respondents. X-Axis represents the age and Y-Axis represents the feeling of being angry. The response 'never' is denoted by blue color, 'sometimes' is denoted by red color, and 'often' is denoted by green color. The age group 20-30 feels more angered than other age groups. Chi-square test was analyzed, P-value is 0.54 ( $p > 0.05$ ) which is statistically significant.