

Effects of age, education and employment status on mental health during COVID-19 pandemic

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ABSTRACT

The rampant outbreak of COVID-19 has spread at an unconceivable rate affecting more than 215 countries across the world. In India, over 343K confirmed, 180K cases are recovered and over 7.82m are attributable to this deadly viral disease (June, 16, 2020). In the wake of this global health crisis, a country wide lockdown and stringent preventive and precautionary measures have been implemented by the government to contain the spread of this virus. Within this backdrop, the present survey was planned to examine the effect of age, education and occupational status on the data was retrieved from the questionnaire prepared using Google Forms. The correlational design with a total sample size of 489 respondents was utilized. An approximately equal number of male and females located in 70 cities covering 19 states of India volunteered to participate in the survey. The data collected on these participants was subjected to descriptive and inferential statistical analyses. The results revealed that an overwhelmingly large percentage of respondents have understood and have strictly abided to the precautionary and preventive guidelines issued by the government. A large number of respondents have reported that they are facing problems during the lockdown. Respondents were moderately involved in various educational, social and household activities in their residential environment. Half of the respondents reported almost no health problems while thirty and twenty percentage respondents reported psychological health related problems sometimes and almost often respectively. The stepwise regression results revealed that Problems encountered during lockdown, Age, Education, engagement in online games in the residential setting uniquely predicted emotional, social and cognitive components of Mental Health. Implications of the results are discussed.

Keywords: COVID-19, Pandemic, Lockdown, Quarantine, Preventive measures, Residential Activities, Mental Health

A virus is a submicroscopic entity which infects living cells and causes several diseases. The recent havoc is created by a novel strain of the coronavirus family. Coronaviruses are RNA (Ribonucleic Acid) viruses which cause mild to lethal respiratory tract infections in human

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beings. The infection fatality rate associated with this virus is not very high. Then what makes it such a petrifying foe to deal with? The coronavirus is found in the upper airway and can hence be transmitted through sneezes and coughs. In its initial stages, the person might be asymptomatic which makes its diagnosis difficult till it becomes clinically significant. An asymptomatic person is still a carrier of the disease and can spread it to other people. Also, since it is a new virus, no one is immune to it. It is transmitted through droplets which can be generated by an infected person's sneeze or cough. Close contact (less than 1m) can leave mucosal linings of the oral cavity or the nasal passage as well as the conjunctiva of eyes susceptible to exposure. Indirect contact through surfaces which might have the virus particles (railings, thermometers etc) are also a source of infection. Airborne transmission (particles remaining in the air for longer times and transmitted to people over distances greater than 1m) in the context of COVID-19 is still debatable.

Discovered in the Wuhan province of China, COVID-19 has reached the level of a pandemic, adversely affecting the health and well-being of people in more than 215 countries across the world. Before COVID-19, the world has already witnessed a number of pandemic such as smallpox, tuberculosis, plague, HIV/AIDS and so forth. However, of all the pandemics the most devastating pandemic was the plague which eliminated an estimated 75–200 million people in the 14th century. In addition, the world has witnessed that all the past pandemics have adversely affected the physical and mental health and have caused many lives and mass casualties.

The novel coronavirus detected at the end of 2019 continues to infect people at a fast pace besides eliminating hundreds and thousands of humans across the world and threatening the physical and mental health of millions. This highly contagious viral disease has quickly impacted governments and public health systems around the world. In the wake of this global crisis all countries have initiated stringent public health measures to prevent and curtail its contagion and limit its outbreak. Visualizing this threat, the Government of India has adopted extraordinary measures to prevent its transmission and minimize casualties. In this continuation, Prime Minister Modi in his address on March 22 urged the citizens to follow the self-imposed “Janata curfew” from 7 A.M to 9 P.M and consequently to prepare themselves for a disciplined fight against an invisible enemy by restricting themselves inside their residential setting and abiding to social distancing norms. Subsequently on March 23, an unprecedented lockdown of 21 days was imposed. To effectively deal with this global crisis various proactive measures like travel restrictions, community surveillance, contact tracing, social distancing, rapid clinical care and self- quarantine were implemented. The government and different statutory bodies have issued advisories and stressed upon the need to adopt preventive measures like social distancing, as washing hands at periodic intervals, wearing mask while going out, sanitizing all items purchased and so forth to flatten the exponential curve of infection. In this context it seems reasonable to expect some adverse social, psychological and health related consequences of lockdown on citizens. Within this backdrop the present study was planned to examine the effects of lockdown on mental health of respondents who differed in terms of age, education and occupational status.

The COVID-19 pandemic has caused major interruptions and disruptions in our routine life style. This interference coupled with the threat of infection has led many people to experience stress, anxiety, depression and other mental health challenges. Past studies have reported negative effects of stress on physical and mental health (Schwarzer, R., & Gutierrez-Dono, B, 2000). However, to reduce the adverse effects of stress on health, social support, coping strategies and perceived feeling of control are found to be helpful (Lazarus & Folkman, 1984).

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If people are provided some control to terminate the stressor, the adverse effects on psychological health are very likely to reduce. (Dalal, & Ray., 2005., Nagar, 2006). To reduce or overcome the adverse effects of stressors supportive relationship with friends, family and acquaintances is beneficial (Baron & Kerr, 2003) and has been linked to different aspects of health and wellness. Research has also shown that in stressful conditions high social support is helpful in reducing trauma induced disorders. The effect of social support has been linked to boosting the immune system which further decreases the stress experienced by people or reduce the amount of health risks involved (Uchino, et al., 2012).

A large number of studies are conducted across countries like China, Canada, Iran, Japan, Singapore, India and Brazil to examine the mental health impact of Covid-19 on general population (Rajkumar, 2020., Nagar et. al, 2020). Evidence exists that widespread outbreaks of infectious disease, such as COVID-19, are associated with psychological distress and symptoms of mental illness (Bao et. al. 2020). A study conducted by Zandifar and Badrfam, (2020) in Iran examined the role of unpredictability, uncertainty, seriousness of the disease, misinformation and social isolation in contributing to stress and mental morbidity. Based on the results the researchers have recommended the need for mental health services, particularly for vulnerable populations, and the strengthening of social capital to reduce the adverse psychological impact of the outbreak. The economic impact of COVID-19 and its effects on well-being, fear and panic behavior, such as hoarding and stockpiling of resources, in the general population was investigated in Japan by Shigemura et.al. (2020). In a similar vein, to minimize the outbreak related stress in response to COVID-19, a research conducted by Bao et al (2020) in China highlighted the services and suggested strategies ranging from assessment of the accuracy of information, enhancing social support, reducing the stigma associated with the disease, maintaining as normal a life as feasible while strictly adhering to safety measures. In addition, use of available psychosocial services, particularly online services, when needed is also advocated by the researchers. Finally, implementation of all these methods is likely to empower the members of the society to handle the COVID-19 outbreak in an adaptive manner. The mental health impact of COVID-19 from the point of view of health anxiety was investigated in Canada by Asmundson and Taylor, 2000. The researchers have noted that during an outbreak of infectious disease, particularly in the presence of inaccurate or exaggerated information from the media, health anxiety can become excessive. Furthermore, at an individual level, this can manifest as maladaptive behaviours (e.g repeated medical consultations, avoiding health care even if genuinely ill, hoarding particular items). Finally, at the societal level, it can lead to mistrust of public authorities and scapegoating of particular populations or groups. The researchers have advocated the need for evidence-based research into health anxiety and its determinants, so that appropriate individual and population-level strategies can be developed to minimize health anxiety in the face of the COVID-19 pandemic.

During lockdown the residents were expected to stay inside their residential settings and thus experience quarantine. A recent review conducted by Brooks, Webster, Smith et.al (2020) has broadly concluded negative psychological effects of quarantine which includes post-traumatic stress symptoms, confusion and anger. In addition, few common symptoms were also observed in the people during quarantine which includes fear, sadness, numbness, insomnia, depressive symptoms, low mood, irritability, emotional disturbance and exhaustion. Consistent results were obtained in other studies have reported that quarantine wherein the respondents reported feeling of loneliness, social isolation, alcohol and substance abuse, and breakdown in relationship. (O'Connor & Kirtley, 2018) Similar results were obtained in other studies (Hawryluck et. al. 2004). Within this backdrop the major objectives

of this research is to examine the social, psychological and health related consequences of respondents who are confined in their dwelling environment during this emergency lockdown.

METHODOLOGY

The final draft of the present survey, entitled as “Novel COVID 19: A Psychological Survey on Lockdown” was transferred on google format and was initiated through online platform to various WhatsApp groups three days before the first lockdown period was over. A brief discussion of the methodology is given below:

Sample and Design:

The sample size of 489 was utilized with approximately equal number of males and female respondents participated in this survey. The sample was predominantly young, educated and belonged to unemployed category.

Measures:

A brief four-page questionnaire involving five sections was designed by the investigators using Google forms. The survey incorporated items pertaining various personal and demographical information about the respondents. Furthermore, items dealing with respondent involvement in various residential activities, precautions for protecting oneself from infection, problems faced and assessment of psychological health during the lockdown period were presented in separate sections of the survey. A brief description of the measures is given below:

Demographical information: In the first section demographical details of the respondents like age, gender, educational qualification, marital status, employment status, number of occupants residing under one roof and information about any existing medical illness were obtained.

Assessments of preventive measures: Eight items based on the major preventive and precautionary measures were prepared to assess the degree to which respondents abided with the preventive guidelines followed by the people during the lockdown. The items were focused on measuring the degree to which the respondents wash their hands with soap, sanitizing the goods which are delivered from outside, covering their mouth and nose while sneezing or coughing and throwing the tissue or mask in a closed bin immediately after using. Some of the items also dealt with restricting oneself in their residences, maintaining more than 1 meter distance from others while moving outside for needful purchases and washing the hands properly after returning from outside. The score on this scale ranged from 8 to 40 with the high score indicative of high level of compliance on precautions taken by the respondents during lockdown. To reduce the number of items exploratory factor analysis with varimax rotation was performed. The Item loadings with a minimum cut off of .50 were used to retain the items for the formation of subscales. Results of factor analysis indicated presence of one factor labelled as prevention against viral infection. Thus, the obtained scores ranged from 8 to 40.

Assessment of Problems Encountered: A twelve item scale covering major problems faced by the people during the lockdown period were prepared. In this section attempts were made to assess the respondent financial loss, adverse effects on regular studies, health facilities and unhealthy lifestyle. The items also dealt with increase in the urge to consume alcohol. Finally, other items were related to the perceived fear of administrative action if norms pertaining to lockdown were broken, fear of isolation from society and fear of judgement by

the society in case they contact the virus. The section also deals with likelihood of respondents to warn the neighbours if someone arrives from outside the city and seek medical help for them. The total score on this scale ranged from 11 to 55 with the high score indicative of more problems faced by respondents during lockdown.

To reduce the number of items exploratory Factor analysis with varimax rotation was performed. The Item loadings with a minimum cut off of .50 were used to retain the items for the formation of subscales. Results of factor analysis indicated presence of one factor labelled as problems encountered. One item which showed low loadings was dropped from the final analysis. Thus, the obtained scores ranged from 11 to 55.

Assessment of Residential Activities: Twenty items which tapped major activities performed by individuals in their home environment were prepared he respondents were required to rate their engagements in residential activities on a 5 point Likert type rating scale ranging from never to very often. The high score is indicative of the respondent's high involvement in activities at home during lockdown. The score on this scale ranged from 20 to 100 where high score is indicative of more involvement of respondents in various major activities in their home setting.

To reduce the number of items exploratory Factor analysis with varimax rotation was performed. The Item loadings with a minimum cut off of .50 were used to retain the items for the formation of subscales. Results of factor analysis indicated presence of seven distinct factors labelled as online entertainment, watching news and spiritual TV shows, working online, household activities, chatting with friends, engaging in hobbies and physical activity. Two items which showed low loadings were dropped from the final analysis. The seven subscales together explained 69.28 percentage of variance. A brief description of these subscales is given below:

Online Entertainment: The scores on four items which showed high factor loadings were summed up to form the subscale. The items included in this scale dealt with watching web series and movies through online streaming, playing indoor and online games. The scores on this scale ranged from 4 to 20 where high score is indicative of more entertainment.

News and Serials: The three items which showed high loading for the formation of subscale were related to watching news and serials and reading newspaper. The scores on this subscale ranged from 3 to 15 where high score is indicative of more involvement in watching and reading news and light entertainment.

Working Online: The two items which formed this subscale were focused on working from home and attending online classes. The score on this scale ranged from 2 to 10 where high score is indicative of more involvement for working online.

Household activities: The two items which formed this subscale were focused on cleaning up the uncluttered places and investing time in doing household activities. The score on this scale ranged from 2 to 10 where high score is indicative of more engagement in doing household activities.

Chatting with friends: The two items which formed this subscale were focused on having and heartfelt conversation and chatting with friends on mobile. The score on this scale ranged from 2 to 10 where high score is indicative of more involvement in interacting with friends on mobile.

Hobbies: The two items which formed this subscale were focused on pursuing hobbies and learning to cook new dishes. The score on this scale ranged from 2 to 10 where high score is indicative of more investment in pursuing hobbies and interest.

Fitness activities: The two items which formed this subscale were focused on doing yoga/meditation and investing time in physical activity. The score on this scale ranged from 2 to 10 where high score is indicative of more involvement mental and physical activities.

Assessment of Psychological Health: To assess the psychological health 20 items covering different components of mental health were prepared. The respondents were required to rate the items on a five point Likert type rating scale. The score on this scale ranged from 20 to 100 where low score indicates good emotional but high score is indicative of good social AND cognitive health.

All the twenty items belonging to psychological health were subjected to exploratory Factor analysis with varimax rotation. For the formation of subscales the Item loadings with a minimum cut off of .50 were used to retain the items. The results of factor analysis indicated evidence of three subscales which were labelled as emotional health, social health and cognitive health. Only one item which showed low loadings was dropped from the final analysis. The subscales together explained approximately 70% variance. Brief descriptions of these subscales are given below:

Emotional Health: The thirteen items which formed this subscale dealt with anxiety, unable to control worry, sleep disturbance, irritation, aggression, hopelessness, depressive thoughts and so forth. The score on this scale ranged from 13 to 65 where low score is indicative of good emotional health.

Cognitive Health: The three items which formed this subscale were focused on checking news updates about virus, believing unforeseen circumstances will be tackled and been overwhelmed by watching news. The score on this scale ranged from 3 to 15 where high score is indicative of good cognitive health.

Social Health: The three items which formed this subscale were focused on measuring connectivity with family, enjoying with family and feeling energetic and rejuvenated. The score on this scale ranged from 3 to 15 where high score is indicative of good social health.

Procedure: The survey instrument designed was transferred in the google form format. A general instruction was written to appraise the respondents about the objective and purpose of the survey. The confidentiality of the responses given by the participants and their identity was assured. The respondents were asked for their consent to participate in the survey. For each section separate instructions were written which focused on the major theme covered while describing the procedure to record the response. The investigators used their contact list and forwarded the survey to various individuals and WhatsApp groups and other online forums to participate in the survey. The responses submitted by the participants were copied in Excel and subsequently after cleaning the data was transferred to SPSS for analyses. The participants were thanked for their cooperation.

RESULTS AND DISCUSSION

To analyse the results on major demographical and outcome measures for the total sample descriptive statistics including means and percentages was used. However, to examine the means differences of major predictor variables like age, education and employment status on outcome measures pertaining to precautions taken to deal with the possibility of infection, activities performed by respondents at their residence and psychological health, analysis of variance was used. Major results are systematically presented below:

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Demographical Findings: The demographical information revealed that 48, 28 and 24 percentage respondents belonged to the younger, middle and senior age group respectively. In addition, 74, 16 and 10 percentage respondents belonged to unemployed, employed and household category. With regard to gender sixty percentage of female and forty percentage of male participated in the present survey. During the period of lockdown 65% of the respondents were residing with 2 to 5 members, 10 %respondents were residing alone while the remaining 25 percentage respondents were living with more than 5 family members in their dwelling environment. In addition, 81 % respondents were physically healthy while 19% had a history of major diseases including diabetes and hearth. To sum up the major demographical information reveal that a very high percentage of respondents were below the age of 35, educated, physically healthy with no prior history of major disease. During the period of lockdown more than 90% respondents were residing with their family members.

Involvement in Residential Activities: The major results on home activities clearly suggest that more than fifty-five percentages of respondents spend their time watching spiritual serials, news and were using online streaming platforms like Netflix, Hotstar, Amazon Prime. Furthermore, the results indicate that during lockdown overwhelmingly high percentage of respondents were spending their substantial amount of time interacting with friends and helping their family in household chores. Finally, around fifty percentage respondents have reported spending their time in pursuing their hobbies and involving themselves in self-study.

Assessment of Precautions: The results of the survey based on guidelines and precautions are comprehensively presented for individual item and collectively for all the eight items in table 1. The result reveals that of the total respondents 88.41 percentage very often/often, 6.93% sometimes and 4.19% rarely/never followed the preventive guidelines against protecting themselves from viral infection. Thus, the results clearly indicate that the massive awareness campaigns initiated across all states particularly by the health, police and education departments have proven to be very effective with regard to precautions to be taken to protect themselves from viral infection was successful. Most of the respondents have overwhelmingly abided with the precautions and guidelines issued by the government. In other words the results clearly indicate that the awareness campaign launched by the Government was highly successful.

Table 1: Percentages depicting respondents adhering to precautionary measures for protection against COVID-19 infection.

Precautionary measures	Never/Rarely	Sometimes	Often/Very Often
Wash hands with soap regularly	1	6.5	92.3
Sanitized all items	4.6	8.7	86.6
Covered mouth & nose while coughing or sneezing	4.2	6.1	89.6
Discarding tissue immediately after coughing	8.6	5.5	86
Avoid touching eyes, ears & nose	7.5	19.7	72.8
Avoid going outside during lockdown	6.6	4.3	86
Maintained 1 meter distance	1	3.7	95.2
Wash hands after getting back from outside	0	1	98.8
Composite scores on Prevention against viral infection	4.19	6.93	88.41

Problems encountered: The major results on problems encountered by respondents reveal that during the complete lock down 55.7% vary often/ often, 20.15 % sometimes while 24. 14 % never/rarely faced problems during lockdown. The overall results seem to suggest that on average more respondents have reported facing various problems during the lockdown.

Psychological Health: Inspection of table 2 reveals psychological health of the respondents on all the nineteen items individually and on the three subscales dealing with emotional, cognitive and social health. The results reveal that approximately 51, 29 and 19 percentage of respondents never/rarely, sometimes and often/very often reported emotional health related problems respectively. Furthermore, 21.5, 33.3 and 45 percentage respondents often./very often, sometimes and never/rarely reported cognitive health related problems during lockdown. Finally, 22, 25 and 53 percentage respond often reported social health related problems.

Table 2: Percentage depicting respondent Psychological health during lockdown

Factors	Never/Rarely	Sometimes	Often/Very Often
Nervous & Anxious	46.5	37.1	15.4
Unable to control worrying	51.1	33.9	15.1
Trouble Relaxing	53.1	32.3	14.6
Difficulty in Sleeping	54.5	27.4	18
Afraid something bad might happen	52.8	33.1	14.2
Irritated	46.2	33.1	20.7
Lonely	58.6	22.5	18.8
Angry	50	27.6	19.4
Hopeless	65.5	21.1	13.2
Depressive thoughts	58.5	29.2	12.2
Difficulty adjusting indoor	23.1	25.8	51.1
Unable to concentrate	50.3	29.6	20.1
Stressed	54.4	27	18.7
Average Emotional Health	51.45	29.21	19.34
Check updates related to Covid – 19	11.8	24.3	63.9
Feeling unforeseen circumstances could be tackled	14.4	37.7	47.9
Overwhelmed by watching news & media	38.5	37.9	23.5
Average Cognitive health	21.5	33.3	45.07
High connectivity with family	13.8	22.5	58.7
Enjoying family time	31.1	19.7	70.7
Feeling energetic and rejuvenated at home	43.5	32.9	23.7
Average Social Health	22.39	25	53

The major descriptive results on demographical characteristics reveal that during lockdown all the adequate precautions were taken by very high percentage of respondents to protect themselves from infection. Thus, the awareness campaign aggressively initiated by various implementing agencies was very successful in changing the attitude and behaviour of respondents. With regard to health approximately twenty and thirty percentage respondents

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did reported emotional, cognitive and social health related problems. Finally, fifty percentage of respondents did not report any problems pertaining to psychological health.

The analyses of variance results of major predictor variables pertaining to age, gender, marital status education, occupation on major outcome measures are presented.

Main effect of Age Groups on Major Outcome Measures: Mean difference on outcome variables with regard to three age groups are presented in table 3. Inspection of the table reveals that respondents of all age groups were taking all precautions to keep themselves away from infection. However, the results do suggest that middle aged respondents were significantly taken slightly more precautions than their counterparts.

With regard to time spend in various activities at home the respondents who belonged to the younger age group reported spending significantly more time in online activities and were spending more time playing games than their counterparts who were in the senior age brackets. Furthermore, very modest but significant difference was found on work related activities with respondents who were young and those who were in the senior age category exhibited spending significantly more time chatting with friends relative to their counterparts particularly those who were from the senior age groups. No significant difference was found on the remaining components of social activities. Finally, respondents belonging to higher age groups reported better emotional health. In contrast, the young respondents reported better cognitive and social health.

Table 3: ANOVA results depicting Mean differences on outcome measure and health as a function of age groups

Outcomes	Range of Scores	Age Groups			F (1,487)
		Junior	Middle	Senior	
Preventive measures	8-40	35.71	36.45	35.27	3.07*
Problems encountered	11-55	23.68	23.70	23.02	.54
Residential Activities					
Online entertainment	4-20	13.14	10.56	9.24	70.64**
News and Serials	3-15	10.46	10.12	10.51	.95
Working Online	2-10	6.61	5.95	5.32	9.05**
Household activities	2-10	4.60	4.13	4.33	2.25
Chatting with friends	2-10	7.38	7.31	6.84	3.37*
Hobbies	3-15	10.78	10.75	10.28	1.71
Fitness activities	2-10	4.65	3.45	4.85	5.60**
Psychological Health					
Emotional health	13-65	33.73	29.83	27.58	12.52**
Cognitive health	3-15	9.56	8.80	8.92	8.79**
Social health	3-15	7.17	6.31	6.63	4.98*

Main effect of Education and Employment Status on Major Outcome Measures:

The UG students reported slightly more problems during the lockdown as compared to the PG students. Of the seven components of residential activities significant difference between two levels of education was found on only two activities with UG students reporting more engagement in online entertainment and working online than PG students. The PG students reported significantly better emotional and cognitive health while UG students reported better social health than their respective counterparts.

The respondents belonging to unemployed category were significantly more engaged in online entertainment and working online relative to their counterparts who were employed. No significant differences were found on the remaining components of residential activities. With regard to psychological health the respondents who were employed reported significantly better emotional health while that unemployed reported better social health than their respective counterparts.

Table 4: ANOVA results depicting Mean differences on Outcome Measure and Health as a function of Education and Employment Status

Outcomes	Range of scores	Education		F (2,486)	Employment Status		F(2,486)
		UG	PG		Unemployed	Employed	
Preventive measures	8-40	35.77	35.86	.29	35.95	35.43	1.29
Problems encountered	11-55	24.06	23.01	4.12*	23.53	23.51	.01
Residential Activities							
Online entertainment	4-20	12.83	10.29	74.61**	11.69	10.64	5.90*
News and Serials	3-15	10.37	10.39	.01	10.35	10.53	.30
Working Online	2-10	6.41	5.90	4.50*	6.60	4.17	54.47**
Household activities	2-10	4.50	4.32	.99	4.39	4.41	.01
Chatting with friend	2-10	7.27	7.22	.08	7.23	7.36	.31
Hobbies	3-15	10.60	10.71	.29	10.71	10.49	.52
Fitness activities	2-10	4.70	4.04	1.59	5.60	5.76	.26
Psychological Health							
Emotional health	13-65	34.13	28.40	31.64**	31.95	28.75	4.87*
Cognitive health	3-15	9.52	8.90	13.75**	9.23	8.89	2.09
Social health	3-15	7.28	6.34	15.71**	6.97	6.16	6.38**

Stepwise Regression predicting Major Psychological Health:

The results of stepwise multiple regressions are presented in table 5. All the three major demographical variables, composite scores on preventive measure and problems encountered during lockdown and seven subscales measuring residential activities were entered as predictors for three major components of mental health. Thus, a total of twelve predictors were entered into the stepwise regression for predicting the components of mental health. The results revealed that problems encountered during lockdown was found to be the most potent predictor of emotional health explaining 25 percentage of the variance while age of the respondent and news and serial component of residential activities predicted 7 and 4 percentage respectively. Of all the predictors' only news and Ramayan serial subscale of

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residential activity significantly predicted 16 percentage of variance. Other predictors failed to enter the regression equation significantly. Finally, education, work online and Problems encountered significantly predicted cognitive health and all the three predictors together explained 10 percentage of variance.

To recapitulate, respondents belonging to senior age group and those involved in watching news and Ramayan serial during lockdown reported better emotional health. In additional, respondents reporting high levels of engagement in watching News and Ramayan serial during lockdown exhibited better social health. Finally, respondent who represented the youngest age group and those who were engaged in working online and those reporting less problems during lockdown reported better cognitive health.

Table 5: Stepwise Multiple Regression Predicting Psychological Health

Predictors	R	R square	Beta weight	F Values
(a) Emotional Health	F (3,124)			
Problems encountered	.50	.25	.48	41.96**
Age	.57	.32	-.27	29.75**
News and Ramayan Serial	.60	.36	-.19	23.09**
(b) Social Health	F (1,126)			
News and Ramayan Serial	.40	.16	.40	24.69**
© Cognitive Health	F (3,124)			
Education	.19	.04	-.22	4.90**
Work online	.27	.07	-.17	4.80**
Problem encountered	.32	.10	.17	4.65**

CONCLUSIONS

The sample represents a large percentage of respondents who were urban, young, educated, medically fit, and residing at home during lockdown with more than one family member. Thus, the results obtained can only make sense for population who are demographically similar. One of the very salient results revealed that during the first lockdown, an overwhelmingly large percentage of respondents have taken adequate preventions to minimize the possibility of contracting the infection. Thus, it can be concluded that the Government of India's awareness campaign for educating the masses about preventive and precautionary measures for minimizing the possibility of viral infection has proven to be very successful and that our sample has adopted the habit of wearing a mask, restricting their mobility outside their home, maintaining adequate physical distance with others, frequently washing their hands and so forth. The results further indicate that relatively large number of respondents have reported problems with regard to purchases of necessary products, high price of basic amenities, restricted mobility, and so forth. This result is also in the expected direction because during lockdown most of the commercial activities were disrupted leading to scarcity of amenities consequently causing the prices to go up. The young and highly educated respondents have understood the gravity of the situation and thus have complied with all the preventive instruction to protect themselves from infection.

The results further revealed that respondents have reported moderate level of engagement in various indoor activities in their home like watching news and spiritual episodes, working online, playing online games, doing household chores, interacting with friends and family members and revisiting their hobbies in their residential settings. Respondents belonging to the student population significantly engaged themselves in working online and made

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themselves busy in online entertainment. Finally, approximately half of the total respondents reported that they never or rarely faced any psychological health related problems. In contrast, thirty percent reported that they had sometimes while the remaining twenty percentage respondents felt that they have often and very often faced mental health related problems during lockdown. As can be seen from the regression results that of the total of twelve only five predictors like problems encountered during lockdown, age, education, working online and watching news and Ramayan serial inside the home were able to enter the regression equation and were potent causes of mental health. The respondents who belonged to the younger age group and those who reported experiencing more problems during lockdown relatively reported more emotional health problems. However, respondents who engaged themselves in watching news and Ramayan serial reported less emotional health problems. Similarly, respondents who were more engaged in watching news and Ramayan serials reported good cognitive health. Finally, respondents pursuing their undergraduate course, and those having less online engagement and having reported more problems encountered during lockdown reported cognitive health problems.

The respondents belonging to the younger age group, pursuing UG/PG courses perceived better social and cognitive health but reported more emotional health problems relative to their older counterparts. The overall result on all components of mental health taken together seems very understandable. Before the lockdown the young respondents pursuing their UG/PG courses spend their considerable amount of time outside their residential setting and were overwhelmingly engaged in attending their regular classes in universities/ colleges besides many students also attend prolonged hours of coaching largely because they are concerned about their career. The students might have perceived the sudden lockdown of prolonged duration as an impediment to their studies, job and career. The sudden lockdown gave a psychological shock to all but it seems that the teaching learning process got severely and adversely affected. The educational institutions were not able to equip themselves professionally to deal with the challenge of delivering the educational inputs effectively on line through E- learning platforms. While a large number of educational resources are available free of cost online but the educational atmosphere of the classroom setting and curriculum based inputs are not comprehensively available besides it cannot be substituted by monotonous online lectures. All these factors might have contributed to emotional health related problems for students. However, the availability and accessibility of laptops and mobiles have made communication amongst peers and friends easy. Even the feeling that everyone is on the same boat might have provided social and cognitive health related relief to the students.

After the first lockdown the country was locked again for approximately two months because the numbers of infected cases and deaths continues to show an upward trend. However, the relief for the country was the high recovery rate and very low percentage of death rate. At present the country is unlocking itself to arrest the slide down of its crashing economy. Normalcy would be restored after a preventive vaccine is made accessible to the masses. A curative approach to this problem is not feasible long term due to the imbalance in medical resources and the size of the population.

It is very plausible that people have to change their life styles and have to take all precautions to minimize the possibility of infection till some permanent medical solution is not achieved. Educational institutions should now prepare themselves professionally to create online learning platforms so that the teaching and learning process is made more students centric, lively and interesting. A proper mix of online education and classroom driven lectures may

be worked out to reduce the presence of number of students at one point of time. In a similar vein both government and private sector work may be shifted from offline to online to reduce the density of people in service centered organizations. Online marketing and shopping is gradually picking up. People have to restrict themselves more and more in their residential settings and will have to take extra precautions while leaving their premises at least till the time viral infection is eradicated.

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Conflict of Interest

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