

A Comparative Study of Problems Faced by the Young-Middle Aged- / Elderly-Adults during COVID Pandemic in Delhi-NCR (National Capital Region)

Anjana Goyal¹, Reena Doomra², Anushka Choudhary³, Anila Maria Varghese⁴,
Neha Atkaan⁵, Aryaman Jayaswal⁶, Zoha Siddiqui⁷

^{1, 3, 4, 5, 7} Department of Biochemistry, Manav Rachna Dental College, Faridabad, Haryana, India.

²Department of Pharmacology, Manav Rachna Dental College, Faridabad, Haryana, India.

⁶Department of Computer Science, Manav Rachna University, Faridabad, Haryana, India.

ABSTRACT

BACKGROUND

As the pandemic of COVID-19 has hit the globe, the associated uncertainty is progressively testing the psychological resilience of the masses in India too. Accordingly, the global focus has been mostly on scrutinizing, finding a cure and preventing its transmission; people are facing innumerable psychological problems, adjusting to the current lifestyles and also living in fear of the infection from disease. Since there is a severe dearth of research on this issue, it was decided to conduct an online survey to compare the problems faced by young and middle-aged / elderly adults in the society in Delhi-National Capital Region (NCR) during the lockdown period due to COVID-19. We wanted to analyse and compare the problems faced by young and the middle aged / elderly adults in Delhi NCR during the lockdown period of COVID-19 pandemic.

METHODS

A total of 450 people had given their consent to participate in this survey through a cross sectional survey during the lockdown period in Delhi-NCR region. Two separate questionnaires were created through google forms and were distributed via WhatsApp groups and other social media platforms. It consisted of 25 questions each based on the problems faced by the young and the middle aged / elderly adults.

RESULTS

The study revealed that the young aged and middle-aged / elderly adults were similarly affected due to the lockdown. It also showed that the young adults were concerned to some extent about the studies in the school, college and university through online classes, not able to mix up with their friends for happy hours, getting bored and spending time watching movies / web series, and faced some mood swings due to the restrictions of COVID-19; whereas, the middle-aged / elderly adults were under a fear of getting infected, isolation, work from home, not able to help their relatives, confusion due to change in their routine, losing jobs, and were also upset with the reduction of their salary.

CONCLUSIONS

Both the groups were similarly frustrated and stressed but for different reasons during this lockdown and in order to cope with the psychological stress, they should be counselled and given stress relieving sessions or should indulge in updating knowledge, skills etc. by attending to various online webinars, workshops etc.

KEY WORDS

Psychological Impact, Young Aged adults, Middle-Aged / Elderly adults, COVID-19, Lockdown

Corresponding Author:

Dr. Anjana Goyal,

H. No. 05, GF, Lilac - 1,

Sector - 49, Gurugram - 122018

Haryana, India.

E-mail: goyalanjana17@gmail.com

DOI: 10.14260/jemds/2020/703

How to Cite This Article:

Goyal A, Doomra R, Choudhary A, et al. A comparative study of problems faced by the young-, middle aged- / elderly-adults during COVID pandemic in Delhi-NCR (National Capital Region). J Evolution Med Dent Sci 2020;9(43):3204-3209, DOI: 10.14260/jemds/2020/703

Submission 11-07-2020,

Peer Review 20-09-2020,

Acceptance 25-09-2020,

Published 26-10-2020.

Copyright © 2020 Anjana Goyal et al. This is an open access article distributed under Creative Commons Attribution License [Attribution 4.0 International (CC BY 4.0)]

BACKGROUND

A newly discovered virus called Coronavirus (Covid 19) causing severe acute respiratory syndrome is creating havoc among the people throughout world. This virus was first discovered in Wuhan, Hubei, China in December 2019.² It spreads via droplets from the mouth and nose of an infected person and further spreads during close contact with an infected person.³ This virus is spreading all around the world and has killed more than 585727 people as on 18th July, 2020⁴ and resulted in an abrupt loss in the economy.⁵

As the cases are increasing on a daily basis, the mental health of the people is also getting adversely affected^{6,7} as many people are losing their jobs and livelihoods. In some places, the salaries of the employees have been cut down considerably. People are living in a fear of getting infected and falling ill.⁸ The prevalence of infection and other problems are making public anxious, depressed and worried.^{9,10} Sleep is also affected during this period.¹¹ In order to prevent the worldwide spread of this deadly virus resulting into community spread, most of the population across the world are restricted to their homes due to lock down, which has resulted in a stressful condition.^{12,13} Although, isolation is helping in decreasing the spread of infection by breaking the chain, it is causing increased mental issues like depression, stress, anxiety and loneliness.¹⁴ The long term negative emotions are leading to imbalance in the mind,¹⁵ resulting in major avoidant behaviours¹⁶ e.g. To avoid contact with the people having mild symptoms¹⁷ and blind conformity.¹⁶ During this period, the cases of domestic abuse has also increased considerably.¹⁸

The meagre resources of medical and health facilities and the control measures enforced to contain the epidemic in the country has developed a feeling of irritability, fear of infection among the family members, death, loneliness,¹⁹ frustration and has even led to situations wherein a few have taken the extreme steps like suicides.^{20,21,22,23,24} In India some cases of suicides have also been reported.²⁵

It is also observed that the middle / elderly age group people are more prone to infection and the mortality rate is high, hence they are impacted psychologically.²⁶ Young people usually take the help of social media to cope up with the stress.²⁷ As the middle / elderly age group people are, isolated during their isolation period, the government, hospitals and the educational institutions should try to help these people to deal with this type of psychological situation and prepare them to face such mental issues.^{28,29}

Above all, the health care workers are those who are facing the major mental and physical issues, it becomes important to share the stress management strategies with them.⁷ Some of the problems that the health care workers face are societal pressure, loneliness, lack of proper safety measures, i.e., provision of PPE (Personal Protection Equipment)³⁰ and stigmatization,³¹ long duty hours, deprivation from sleep etc. Stigmatizing factors are increasing like fear of isolation, marginalization, depression etc.

A stigmatized community may cause more harm to the society as they tend to hide their diseases and even their important medical histories further leading to community spread of the infection.^{32,33} India has reported some of the

health crimes resulting from the fear of being corona positive.^{34,35}

Some strategies that can beat loneliness, frustration, anxiety and stress are planning daily routine, performing different activities and hobbies which may help to cope up with anxiety and stress. Spending time with family and loved ones, staying active in social media, writing down emotions may help us to deal with loneliness. The most important is eating healthy food, exercise, yoga, adequate amount of sleep³⁶ and maintaining good hygiene. It may be mentioned that similar studies were also done in China which showed that the mental health of public was highly affected by this outbreak.³⁷ First study showed that more than half of the respondents were having moderate to severe psychological impacts and one-third of the respondents had severe anxiety issues.³⁸ The second study done among the medical staff, the SEM (Social Equation Modelling) showed that the medical staff had increased levels of anxiety which was due to poor quality of sleep and weak social support.³⁹ The third study was a comparison among the frontline nurses and non-frontline nurses. The results showed that the severity of vicarious traumatization in non-frontline nurses to be lesser than those of the frontline nurses.⁴⁰ The fourth study was done to analyse the sleep quality during home quarantine period. The results showed that the sleep quality was low, and the anxiety and stress were at high levels among the public during the pandemic.⁴¹

METHODS

Due to the prevailing circumstances of Covid-19 pandemic, an online survey was conducted in 'Manav Rachna University, Faridabad' a University of Delhi / NCR. A questionnaire was prepared and pretested on a group of 10 young and 10 middle / elderly people to validate it. The validation was done by pilot study. It was then used to collect the information from a group of 450 respondents, which included 300 young students and 150 middle-aged / elderly adults.

For this, a cross sectional survey was conducted in Delhi-NCR region. As it was not feasible to do a community-based sampling survey, it was decided to do it online via social media platforms after taking the consent from the young aged adults and the middle-aged / elderly adults who were either their parents, guardians, distant relatives and their known acquaintances who gave consent to fill the form. Two separate questionnaires were created through google forms and were distributed via WhatsApp groups. This questionnaire compared the problems faced by young and middle-aged / elderly group. It consisted of 25 questions out of which the first 15 questions were the same in both the questionnaires and the next seven questions gave only two choices i.e. agree and disagree whereas the rest of the questions had multiple choices therefore it represented the general views and psychological problems faced by young and middle-aged / elderly adults, whereas the next 10 questions were different in both the questionnaires and they could respond from multiple choices.

Data Analysis

Results of this study were obtained by comparing intergroup parameters in the first part. Statistical analysis was performed using χ^2 test of independence.⁴² Psychological problems faced by young & middle-aged / elderly adults were analyzed using percentage distribution in second part.

RESULTS

Questions 1 – 15 (table 1) compared the general views of young aged and middle-aged / elderly adults, using statistical analysis in which the P value and χ^2 values were calculated, regarding effects of Covid 19 on their behaviour due to psychological impact on mind. The results have shown that both were equally affected mentally on almost all attributes of this study.

Study further revealed that 63 % of the young aged and 68 % of the middle-aged / elderly group agreed that the situation shown is quite bad from the point of view of number of tests being carried out on daily basis, number of ventilators available, no. of beds available in hospital, no of doctors and other health workers, no. of deaths reported etc. It also revealed that 83.7 % - young aged adults and 86.7 % - middle-aged / elderly adults felt that the fake news through social media is creating panic by posting videos and messages showing people smearing currency notes, fruits, vegetables etc. with their saliva. and 79.7 % of young aged adults and 83.3 % of middle-aged / elderly adults were equally worried about an increase in the number of cases.

Study also revealed that more than 90 % of respondents were concerned about the wellbeing of their near and dear ones either when going out for any purpose such as emergency work, religious places, family gathering, attending office etc. It was also found that 57.3 % of middle / elderly respondents stopped watching / reading news on Covid-19 events possibly due to fear in their mind and there is a significant difference in the young aged and middle-aged adults' respondents ($p < 0.05$). Respondents about 40 % did not believe in stocking of items of essential needs as possibly, they were aware that essential items would be available continuously during the lockdown period.

The study showed that 61.7 % of young and 62 % of middle / elderly people agreed on having a traumatic effect on their mental health due to posts regarding COVID-19 on social media platforms. It was observed that there is a significant difference between the young and middle aged ($p < 0.05$). The study further showed that young aged 47 % and middle-aged / elderly. 69 % were having sleep related complications due to stress, and the difference between the young and middle aged ($p < 0.05$) was found significant. About 50 % of the young adults felt that they were affected in lock down on account of on-line studies, social disruption & change in appetite whereas middle / elderly adults (about 55 %) were affected due to lack of physical fitness and change in appetite. Study also revealed that 31 % of the young aged adults felt frustrated (trapped) when they are with their families during this lockdown period whereas 53.3 % middle-aged / elderly adults felt safe with their families. Study showed a significant difference between the young and middle aged ($p < 0.05$). Around 60 % and more respondents both in young and middle / elderly group felt nervous, stressed and anxious due to changing scenario of

people losing jobs, sitting isolated at homes, depressed, not able to mix up with their friends etc. as established through question at 12.

Q. No.	Questions	Responses	Young Age	Middle Aged / Elderly	χ^2	P Value
1	Situation is not bad as Portrayed	Agree Disagree	111 (37 %) 189 (63 %)	48 (32 %) 102 (68 %)	1.09	0.295
2	Panic due to fake news Surfacing	Agree Disagree	251 (83.7 %) 49 (16.3%)	130 (86.7 %) 20 (13.3 %)	0.69	0.405
3	Worried due to Increase in Cases on Daily Basis	Agree Disagree	239 (79.7 %) 61 (20.3 %)	125 (83.3 %) 25 (16.7 %)	0.86	0.351
4	Worried of Family Member Outside	Agree Disagree	266 (88.7 %) 34 (11.3 %)	136 (90.7 %) 14 (9.3 %)	0.41	0.517
5	Avoidance of People Gatherings	Agree Disagree	280 (93.3 %) 20 (6.7 %)	141(94 %) 9 (6 %)	0.07	0.786
6	Avoidance to Watch / Listen Corona Related News	Agree Disagree	135(45 %) 165(55%)	86 (57.3 %) 64 (42.7 %)	6.08	0.013 (p < .05)
7	Cancellation of Trips for Family Gathering	Agree Disagree	261 (87 %) 39 (13 %)	137 (91.3 %) 13 (8.7 %)	1.87	0.175
8	Stocking of Grocery Items	Agree Disagree I already had the stock I reduced my requirements	119 (39.7 %) 65 (21.7 %) 73 (24.3 %) 43 (14.3 %)	65 (43.3 %) 36 (24 %) 25 (16.7 %) 24 (16 %)	3.45	0.326
9	Effect on Mental Health due to Post on Social Media	Almost every time Sometimes Does not affect me much	48 (16 %) 185 (61.7 %) 67 (22.3 %)	38 (25.3 %) 93 (62 %) 19 (12.7 %)	9.44	0.008 (p < .05)
10	Lockdown Effect	Studies / Physical fitness			0.197	0.905
		Very much	102 (34 %)	48 (32 %)		
		Somewhat	152 (50.67 %)	79 (52.67 %)		
		Not at all	46 (15.33 %)	23 (15.33 %)		0.345
		Irritability				2.12
Very much	104 (34.67 %)	43 (28.67 %)				
Somewhat	162 (54 %)	85 (56.67 %)				
Not at all	34 (11.33 %)	22 (14.66 %)				
Social Disruption					0.825	
Very much	111 (37 %)	57 (38 %)				
Somewhat	162 (54.33 %)	79 (52.67 %)				
Not at all	34 (8.67 %)	14 (9.33 %)				
Appetite					0.384	
Very much	62 (20.67%)	23 (15.33 %)				
Somewhat	167 (55.67 %)	90 (60 %)				
Not at all	71 (23.66%)	37 (24.67 %)				
11	Sleep Disorders due to Pandemic	Every time Sometime Does not affect me much	24 (8 %) 142 (47.3 %) 134 (44.7 %)	13 (8.7 %) 103 (68.7 %) 34 (22.7 %)	21.377 ³	0.00002 (p < .05)
12	Nervousness and Stress due to Pandemic	Every time Sometime Does not affect me much	36 (12 %) 203 (67.7 %) 61 (20.3 %)	17 (11.3 %) 104 (69.3 %) 29 (19.3 %)	0.1285	0.9377
13	Psychological Effect due to Pandemic	Highly Stressed Moderately Stressed I feel safe due to lockdown I feel	43 (14.3 %) 171 (57 %) 86 (28.7 %)	24 (16 %) 81 (54 %) 45 (30 %)	0.408	0.815
14	Effect of Symptoms on Mental Health	Distressed I feel Anxious Does not affect me much	78 (26 %) 136 (45.3 %) 33 (22 %)	41 (27.3 %) 76 (50.7 %) 33 (22 %)	5.088	0.78
15	Feelings on Staying with Family	Relaxed Happy Safe Frustrated (Trapped)	62 (20.7 %) 58 (19.3 %) 87 (29 %) 93 (31 %)	21 (14.1 %) 20 (13.3 %) 80 (53.3 %) 29 (19.3 %)	25.462	0.000012 (p < .05)

Table 1. General Observations on Young and Middle / Elderly Adults

Q. No.	Questions	Attributes	Responses
a) Psychological Impact of Lockdown			
1	Activity to kill Boredom	Hobbies (Dancing, Singing etc.)	170 (56.7 %)
		Movies / Web Series	221 (73.7 %)
		Gaming (PUBG, GTA V etc.)	119 (39.7 %)
		Indoor Activities	149 (49.7 %)
2	Major Activities Being Missed	Going to School / College	76 (25.3 %)
		Outdoor Activities	71 (23.7 %)
		Spending Time with Friends (Parties etc.)	153 (51 %)
3	Emotions during Lockdown	Happy and Relieved	129 (43 %)
		Trouble and Discomfort	171 (57 %)
4	Psychological State due to Lockdown	Happiness	63 (21 %)
		Mood swings (Depressed, Restlessness)	202 (67.3 %)
		Relaxed	95 (31.7 %)
		Laziness	203 (67.7 %)
b) Knowledge, Attitude and Practices Towards Study Methods			
i) Knowledge Questions			
5	Available Information about COVID-19	Adequate	207 (69 %)
		Most of the Information is Creating Confusion	62 (20.7 %)
		Insufficient	13 (4.3 %)
		Disturbing and Scary	18 (6 %)
ii) Attitude Questions			
6	Feelings Regarding Educational Institute Closure	Not at all concerned	57 (19 %)
		Somewhat concerned	183 (61 %)
		Extremely concerned	60 (20 %)
7	Feelings about Online Assignments being Given	Easy to manage	82 (27.3 %)
		I work with same potential online / offline	117 (39 %)
		Difficult to manage	101 (33.7 %)
8	Feelings about Impact of COVID-19 on Future	Worried	147 (49 %)
		Not at all worried	27 (9 %)
		More concerned about the present	111 (37 %)
9	Methods to Keep Studies Continued	Never thought of it	15 (5 %)
		Practice Question	
9	Access to Technology to keep in Contact with Friends and Family	Online Classes	256 (85.3 %)
		No work	44 (14.3 %)
10		Agree	293 (97.7 %)
		Disagree	7 (2.3 %)

Table 2. For Young Adults

10 questions in table 2 show the reasons of psychological impact, knowledge, attitude and practices followed by Young adults.

a) Psychological Impact

The results showed that the majority of the young adults i.e. 73.7 % of them watched movies / web series to cope up with their boredom. 51 % of them missed spending good time with friends (parties, hanging out etc.). 67.7 % of the young adults felt laziness and 67.3 % of them faced mood swings (depression, restlessness) because of the tough times of the Covid-19 restrictions.

b) Knowledge, Attitude and Practices

i. Knowledge

The result showed that 69 % of the total young aged adults had adequate levels of knowledge about COVID-19.

ii. Attitude

The study showed that 61 % of the total young adults were concerned to some extent about their studies in school, college and university due to their closure. 39 % young adults experienced that working online / offline was not an issue whereas 34 % found it quite difficult. Majority of the young adults i.e. 49 % were worried about the impact of Covid-19 on their future avenues.

iii. Practice

The study showed that 85.3 % of them regularly attended online classes organized by their respective school / college. 97.7 % of the young adults agreed that they could access their friends and family members using the latest technology and had no difficulty.

Q. No.	Questions	Attributes	Responses
a) Psychological Impact			
1	Feelings Witnessed as per Changes in the job	Happy	44 (29.3 %)
		Hopeless	15 (10 %)
		Frustrated	56 (37.3 %)
		Anxious	35 (23.3 %)
2	Problems Leading to more Frustration during Lockdown	Loss of routine	23 (15.3 %)
		Lack of social contact	21 (14 %)
		Sense of isolation	11 (7.3 %)
3	Emotions Affected due to Lockdown Routine	All of the above	95 (63.3 %)
		Happy and relieved	47 (31.3 %)
		Frustrated and Confused	103 (68.7 %)
4	Main Concerns Regarding Present Situation	Job insecurity	27 (18 %)
		Increase of workload	44 (29.3 %)
		Decrease of salary	65 (43.3 %)
5	Any lost in Interest / Pleasure in daily Activities	Fear of infection	117 (78 %)
		Yes	57 (38 %)
		No	28 (18.7 %)
6	Feelings while Working from Home	I don't think so	65 (43.3 %)
		comfortable	48 (32 %)
		frustrated it does not affect me	57 (38 %)
7	Overwhelmed with Household Work	45 (30 %)	
		b) Impact of Lockdown on Daily Routine	
		No, as we live in domestic help	
7		No, as there isn't much extra work	5 (3.3 %)
		No, as the other family members share the work	23 (15.3 %)
		Yes, somewhat	76 (50.7 %)
8	Enough Money to meet Resources during Lockdown	Yes, somewhat	46 (30.7 %)
		Adequately	75 (50 %)
		Minimum needs	67 (44.7 %)
9	Psychological Pressure to not being able to Attend Needful Relatives	Not at all	8 (5.3 %)
		Tensed	57 (38 %)
		Frustrated	54 (36 %)
10	Working from Home or Still Attending Office	Does not relate to me	39 (26 %)
		Work from home everyday	54 (37.5 %)
		Attending office 1 - 2 days in a week	40 (27.8 %)
		Self-employed (i work online)	8 (5.6 %)
		Self Employed	42 (29.2 %)

Table 3. For Middle Aged / Elderly Adults

10 questions in table 3 show the reasons of psychological impact, impact of lockdown on their daily routine in middle-aged / elderly adults.

a) Psychological Impact of Lockdown

This study revealed that a comparatively higher percentage (37.3 %) of the middle / elderly adults felt frustrated due to change in the nature of their job, 63.3 % got frustrated due to lack of social contact with sense of isolation, 68.7 % were confused due to change in their routines. 38 % of the middle / elderly adults were also frustrated because of 'work from home'. Another major impact that was noticed was due to 78 % of middle / elderly adults feared that they could be infected and another 43.3 % were upset with the reduction in their salary.

b) Impact of Lockdown on Daily Routine

The study showed that 50.7 % of middle / elderly adults realized that since other members of family also stayed at home, work was being shared among them. Only 50 % of the respondents had adequate money / resources to meet their daily requirements, however

38 % were tensed as they were unable to extend help to their distant relatives due to their own money crunch during this Covid 19 pandemic. The results also revealed that the majority of the middle / elderly people i.e. 37.5 % of them preferred working from home during this period and 28 % were ready to attend office.

DISCUSSION

The expected sample size for the survey was 500; however, data could be collected from 450 respondents only (300 young aged adults and 150 middle-aged / elderly adults). Analysing the situation, it was expected most of the people would agree to the statement 'the situation is not as bad as portrayed', however results showed that 63 % of the young aged adults and 68 % of the middle-aged / elderly adults disagreed to that statement.

The study was conducted to analyse the psychological impact of lockdown on the young aged and middle-aged / elderly adults. Study further showed that young aged adults faced trouble and discomfort whereas middle-aged / elderly adults were more frustrated and confused due to lockdown. Most of the young aged adults watched movies or web series or played games to cope up with their boredom. Majority of the young aged adults felt laziness, mood swings, depression and restlessness because they were felt trapped with their families. It was also observed that majority of the young aged adults had missed spending good time with their friends for parties, hangout etc. Also, the study examined the Knowledge, Attitude and Practice of young aged adults during the lockdown period. Young adults were also found to be having adequate knowledge about COVID-19 but concerned to some extent due to closure of school, college and universities. Most of the young adults found no difficulty working online or offline whereas a few of them had difficulty in managing it. Mostly, all young adults were worried of their future due to impact of coronavirus.

On the other hand, middle-aged / elderly adults were more frustrated due to change in the nature of their job and tense and confused due to missing of their normal routine, lack of social contact and sense of isolation during lockdown. Their other concerns included fear of infection and a few others due to reduction in their salary. Most of middle-aged / elderly adults were changed due to work from home atmosphere.

Seeing the results of the study, it is observed that both young and middle-aged / elderly adults were frustrated and anxious during Covid-19 lockdown although the reasons were found different.

CONCLUSIONS

The current COVID-19 pandemic is causing widespread depression, anxiety and stress among the people around the world. The study showed that the psychological impact of COVID-19 was almost the same on both young aged and middle-aged / elderly adults in our country too. It also revealed that the majority of the students were worried about their future and were majorly missing spending time with

their friends therefore they watched movies / web series to cope up with their boredom whereas in middle-aged / elderly adults, were more concerned about fear of infection, decrease in their salary, and work from home culture. Both the groups were found equally frustrated and stressed during this situation for different reasons. In order to cope with the psychological stress, both young and middle-aged / elderly adults should be counselled and involved to go through various innovative practices such as webinars, workshops etc., which would help them to motivate and update their knowledge, skills and attitude during this period.

Data sharing statement provided by the authors is available with the full text of this article at jemds.com.

Financial or other competing interests: None.

Disclosure forms provided by the authors are available with the full text of this article at jemds.com.

REFERENCES

- [1] Naming the coronavirus disease (COVID-19) and the virus that causes it. World Health Organization [https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-\(covid-2019\)-and-the-virus-that-causes-it](https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-(covid-2019)-and-the-virus-that-causes-it)
- [2] WHO novel coronavirus - China. Jan 12, 2020. <http://www.who.int/csr/don/12-january-2020-novel-coronavirus-china/en/>
- [3] Corona Virus https://www.who.int/health-topics/coronavirus#tab=tab_1
- [4] Coronavirus disease (COVID 19) Pandemic. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>
- [5] Global economy could witness losses worth up to \$8.8 trillion due to COVID-19: ADB (Asian Development Bank). May 15, 2020. https://m-timesofindia.com.cdn.ampproject.org/v/s/m.timesofindia.com/business/international-business/global-economy-could-witness-losses-worth-up-to-8-8-trillion-due-to-covid-19-ADB/amp_articles/75754361.cms?amp_js_v=a3&_gsa=1&usqp=mq331AQFKAGwASA%3D#aoh=15906609025232&referrer=https%3A%2F%2Fwww.google.com&_tf=From%20%251%24s
- [6] CDC. Outbreaks can be stressful. <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/managing-stress-anxiety.html>
- [7] Holmes EA, O'connor RC, Perry VH, et al. Multidisciplinary research priorities for the COVID-19 pandemic: a call for action for mental health science. *Lancet Psychiatry* 2020;7(6):547-60.
- [8] Xiang YT, Yang Y, Li W, et al. Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. *Lancet Psychiatry* 2020;7(3):228-9.
- [9] COVID 19- Protecting people and societies. https://read.oecd-ilibrary.org/view/?ref=126_126985-nv145m3l96&title=COVID-19-Protecting-people-and-societies
- [10] Wu KK, Chan SK, Ma TM. Posttraumatic stress, anxiety, and depression in survivors of severe acute respiratory syndrome (SARS). *J Trauma Stress* 2005;18(1):39-42.

- [11] Shen L, van Schie J, Ditchburn G, et al. Positive and negative emotions: differential associations with sleep duration and quality in adolescents. *J Youth Adolesc* 2018;47(12):2584-95.
- [12] Rubin GJ, Wessely S. The psychological effects of quarantining a city. *BMJ* 2020;368:m313.
- [13] Pulla P. COVID-19: India imposes lockdown for 21 days and cases rise. *BMJ* 2020;368:m1251.
- [14] Zhou X, Snoswell CL, Harding LE, et al. The role of telehealth in reducing the mental health burden from COVID-19. *Telemed J E Health* 2020;26(4):377-9.
- [15] Kiecolt-Glaser JK, McGuire L, Robles TF, et al. Emotions, morbidity, and mortality: new perspectives from psychoneuroimmunology. *Annu Rev Psychol* 2002;53:83-107.
- [16] Schaller M, Murray DR, Bangerter A. Implications of the behavioral immune system for social behavior and human health in the modern world. *Philos Trans R Soc Lond B Biol Sci* 2015;370(1669):20140105.
- [17] Houston V, Bull R. Do people avoid sitting next to someone who is facially disfigured. *Eur J Soc Psychol* 1994;24(2):279-84.
- [18] Domestic abuse surge in coronavirus lockdown could have lasting impact. MPs say <https://www.theguardian.com/society/2020/apr/27/domestic-abuse-surge-coronavirus-lockdown-lasting-impact-mps>
- [19] Lowe SR, Sampson L, Gruebner O, et al. Psychological resilience after Hurricane sandy: the influence of individual- and community-level factors on mental health after a large-scale natural disaster. *PLoS One* 2015;10(5):e0125761.
- [20] Brooks SK, Webster RK, Smith LE, et al. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *Lancet* 2020;395(10227):912-20.
- [21] Robertson E, Hershenfield K, Grace SL, et al. The psychosocial effects of being quarantined following exposure to SARS: a qualitative study of Toronto health care workers. *Can J Psychiatr* 2004;49(6):403-7.
- [22] Barbisch D, Koenig KL, Shih FY. Is there a case for quarantine? Perspectives from SARS to Ebola. *Disaster Med Public Health Prep* 2015;9(5):547-53.
- [23] Jeong H, Yim HW, Song YJ, et al. Mental health status of people isolated due to middle/elderly east respiratory syndrome. *Epidemiol Health* 2016;38:e2016048.
- [24] Liu X, Kakade M, Fuller CJ, et al. Depression after exposure to stressful events: lessons learned from the severe acute respiratory syndrome epidemic. *Compr Psychiatr* 2012;53(1):15-23.
- [25] Goyal K, Chauhan P, Chhikara K, et al. Fear of COVID 2019: first suicidal case in India. *Asian J Psychiatr* 2020;49:101989.
- [26] Roberts T, Esponda GM, Krupchanka D, et al. Factors associated with health service utilisation for common mental disorders: a systematic review. *BMC Psychiatry* 2018;18:262.
- [27] Cheng C, Jun H, Liang B. Psychological health diathesis assessment system: a nationwide survey of resilient trait scale for Chinese adults. *Stud Psychol Behav* 2014;12:735-42.
- [28] Banerjee D. The COVID-19 outbreak: crucial role the psychiatrists can play. *Asian J Psychiatr* 2020;50:102014.
- [29] Zandifar A, Badrfam R. Iranian mental health during the COVID-19 epidemic. *Asian J Psychiatr* 2020;51:101990.
- [30] Half of UK health workers suffering stress because of COVID-19. <https://www.theguardian.com/society/2020/apr/23/half-of-uk-health-workers-suffering-stress-because-of-covid-19> Society | The Guardian, (n.d.)
- [31] Verma S, Mythily S, Chan YH, et al. Post-SARS psychological morbidity and stigma among general practitioners and traditional Chinese medicine practitioners in Singapore. *Ann Acad Med Singapore* 2004;33(6):743-8.
- [32] Siu JY. The SARS-associated stigma of SARS victims in the post-SARS era of Hong Kong. *Qual Health Res* 2008;18(6):729-38.
- [33] World Health Organization. Mental health and psychosocial considerations during the COVID-19 outbreak. 2020. <https://www.who.int/docs/default-source/coronaviruse/mental-health-considerations.pdf>
- [34] The New Indian Express Bihar man beaten to death for informing COVID- 19 medical help center about arrival of two people from Maharashtra. 2020. <https://www.newindianexpress.com/nation/2020/mar/31/bihar-man-beaten-to-death-for-informing-covid--19-medical-help-center-about-arrival-of-two-people-fr-2123828.html>
- [35] Times of India COVID-19: doctors gone to collect samples attacked in Indore. 2020. <https://timesofindia.indiatimes.com/videos/news/covid-19-doctors-gone-to-collect-samples-attacked-in-indore/videoshow/74942153.cms>
- [36] Dickerson D. Seven tips to manage your mental health and well-being during the COVID-19 outbreak. *Nature* 2020: DOI: 10.1038/d41586-020-00933-5
- [37] Li X, Stanton B, Fang X, et al. Social stigma and mental health among rural-to-urban migrants in China: a conceptual framework and future research needs. *World Health Popul* 2006;8(3):14-31.
- [38] Wang C, Pan R, Wan X, et al. Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *Int J Environ Res Public Health* 2020;17(5):1729.
- [39] Xiao H, Zhang Y, Kong D, et al. The effects of social support on sleep quality of medical staff treating patients with coronavirus disease 2019 (COVID-19) in January and February 2020 in China. *Med Sci Monit* 2020;26:e923549.
- [40] Li Z, Ge J, Yang M, et al. Vicarious traumatization in the general public, members, and non-members of medical teams aiding in COVID-19 control. *Brain Behav Immun* 2020;88:916-9.
- [41] Xiao H, Zhang Y, Kong D, et al. Social capital and sleep quality in individuals who self-isolated for 14 days during the coronavirus disease 2019 (COVID-19) outbreak in January 2020 in China. *Med Sci Monit* 2020;26:e923921.
- [42] <https://www.socscistatistics.com/tests/chisquare2/default2.aspx>