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Original Research Article

Impact of third wave of COVID-19 pandemic on mental health and its related lifestyle: a cross sectional survey

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ABSTRACT

Background: The coronavirus outbreak has a detrimental impact on human life. Various measures have been taken to reduce socioeconomic impact, but many problems still persist especially mental health, in particular anxiety. The aim of this study was to examine the prevalence and contributing factors of anxiety among the people aged 18 and above, residents of Noida, during the third wave of COVID-19.
Methods: This was descriptive cross-sectional study with semi structured questionnaire, completed by 401 participants. The questionnaire covered four parts: dysfunctional anxiety, mental health-related lifestyle changes, the indicators of negative mental health impact, and social and family support.
Results: The mean age of participants was 36.9±11.5, and 34.2%, aged between 18 and 30 years. Of 401 participants, only 29 participants (i.e., 7.2%) reported CAS≥9 indicating anxiety. CAS is significantly higher in females, housewives and non-working group. Also, 53% of respondents reported that the pandemic had worsened their financial burden. There was an association between some of the sociodemographic variables and anxiety, different responses of lifestyle choices, negative health impact and social and family support.
Conclusions: The pandemic had some positive results such as impact on social and family support, awareness of mental health issues and lifestyle changes. These positive results might operate as effective defences against the adverse COVID-19 effect. Further studies are required to investigate the positive impacts attributed to COVID-19 which can be supported.

Keywords: CAS, COVID-19, Mental health, Third wave

INTRODUCTION

As the coronavirus disease 2019 (COVID-19) pandemic approaches two years, it is critical to recognise the negative impact it is having on mental health at the individual level. The coronavirus outbreak threatens the global healthcare system and has an adverse impact on all facets of human life. Numerous steps have been taken to reduce the socioeconomic impact of the coronavirus, but many problems still exist. One of these problems is mental health and its related lifestyle.

When this study was started, India had entered the third wave and in the next 15 days saw the peak of the third wave with 2,115,100 confirmed cases on 17th January 2022.[1] Panic, anxiety, and depression are just a few examples of the mental health conditions that have emerged as a result of the COVID-19 pandemic's lack of endpoint and lack of treatment in sight. The COVID-19 pandemic increases the mental health problems of the global population, particularly health care workers. The general population and non-medical staff had a lower risk of distress than health workers.[2] Anxiety-inducing topics

connected to this emergence of the health and socioeconomic crisis need to be quickly identified in order to early detect dysfunctional processes and maladaptive lifestyle changes potentially leading to the onset of psychiatric conditions as the general population became more exposed to them.[3] Resilience and increased social support are protective factors that may help with regard to lifestyle changes and re-adaptation mechanisms, even though it has been hypothesised that specific and uncontrolled fears related to infection, pervasive anxiety, frustration, and boredom, and loneliness affect subjective wellbeing and quality of life.[3]

Massive global effects of the COVID-19 pandemic include high mortality and morbidity rates, income loss, and prolonged social isolation for billions of people. Worldwide, mental health disorders are a major public health concern. Due to the COVID-19 virus's complicated pathogenicity and ongoing mutation, the recent third wave of the pandemic has raised anxiety and fear about the virus worldwide.[4] Understanding and researching the causes, incidence, and prevalence of anxiety during the third wave of the COVID-19 pandemic in India receives insufficient attention. Due to its ignorance, India is unable to fully assist and support its citizens as they deal with the unprecedented COVID-19 pandemic. Given this context, the goal of this work was to study the impact of the COVID-19 pandemic on mental health, its related lifestyle habits, and quality of life among the Indian population.

METHODS

A cross-sectional study was performed from 28th December 2021 to 29th January 2022. Only adults (aged ≥18 years) who were able to provide written informed consent were recruited in the study using convenience sampling method. An online as well as written semi structured questionnaire, both in Hindi and English language was completed by the participants. Literate people coming to OPD were given written form and illiterate people were interviewed by trained staff of institute for verbal survey and people involved in neighborhood offices were provided with google form and approached by electronic medium. 401 participants completed a validated questionnaire which includes socio-demographic data and four parts that assessed dysfunctional anxiety associated with the coronavirus crisis via CAS-coronavirus anxiety scale, mental health-related lifestyle changes, the indicators of negative mental health impacts, and social and family support. Participant personal information including names was anonymized to maintain and protect confidentiality. Survey second section i.e., coronavirus anxiety scale was taken from CAS Sherman et al and third to fifth section was taken from Zhang et al.[5,6] The study protocol was approved by the ethical committee of the institute and the advisory committee of Central Council for Research in Homoeopathy.

The sections of questionnaire were as follow: I) The questionnaire was formed of five sections: first section has sociodemographic information included name, age, sex, education, occupation, contact no., if you are a healthcare professional, email id and pre-existing illness. II) Second section: the coronavirus anxiety scale (CAS) is a self-report mental health screener of dysfunctional anxiety associated with the coronavirus crisis. The CAS-coronavirus anxiety scale was created to assist clinicians and researchers in quickly identifying cases of people who are functionally impaired by coronavirus-related anxiety due to the significant number of people who experience clinically significant fear and anxiety during an infectious disease outbreak. Independent studies of adults from all over the United States have shown that the CAS is a trustworthy instrument (s>0.90), with strong construct (correlated with anxiety, depression, suicidal ideation, and drug/alcohol coping) and factorial (single-factor; invariant across socio-demographics) validity. The CAS has diagnostic qualities that are comparable to related screening tools as the generalized anxiety disorder-7 (90% sensitivity and 85% specificity). Based on experiences during the last two weeks, each CAS item is assessed on a 5-point scale, from 0 (not at all) to 4 (almost every day). The DSM-5's cross-cutting symptom measure is consistent with this scaling style. A CAS total score ≥9 indicates probable dysfunctional coronavirus-related anxiety. Elevated scores on a single item or a high total scale score (9) may indicate that the individual is experiencing significant symptoms that require additional evaluation and/or treatment. III) The third section deals with a validated questionnaire that was used to investigate the impact of the COVID-19 pandemic on mental health-related lifestyle changes. Participants were asked to rate whether they had paid less or more attention to their mental health in the previous fifteen days (response options: decreased, unchanged/same as before, increased). Participants were also asked whether they were spending less or more time resting, relaxing, and exercising. These questions included the following response options: unchanged/same as before, increased, and decreased. IV) Fourth section dealt with six questions assessing the negative mental health impact. These questions had a Cronbach's alpha of 0.88. These following domains assessed the changes in stress from work, financial stress, stress from home, horrified feelings due to the COVID-19 pandemic, apprehensive due to the COVID-19 pandemic, and helpless feelings due to the COVID-19 pandemic. These questions included the following response options: yes, no, and don't know much. V) The fifth section included a validated questionnaire that examined the influence of the COVID-19 pandemic on social and family support (Cronbach's alpha =0.87). This questionnaire's five items assessed support from friends, support from family members, sharing feelings with other family members, sharing sentiments with others, and caring for the feelings of family members. These questions included the following response options: unchanged/same as before, increased, and decreased.

Statistical methods

The data obtained was entered into an excel sheet, and responses were coded appropriately. Statistical analysis was performed using IBN SPSS version 12. All results of quantitative variables were reported either as mean±standard deviation or frequency. A Chi-square test was employed to assess if there was a significant association between categorical variables. The association between different forms of health impacts, adjusting for demographic factors were derived using logistic regression analysis methods. The results were interpreted and depicted appropriately in tables with 95% CI and $p<0.05$, considered to be significant.

RESULTS

Participant characteristics

401 participants (i.e., 174 males and 227 females) were recruited into the study. The mean age of participants was 36.9±11.5, and 34.2%, aged between 18 and 30 years. Near about half of the participants (42.9%) had a higher level of education. In terms of employment status, 33.7% of participants had a full-time job, 41.1% had no job, 6.7% were students, 8.7% were self-employed and 9.7% had a part-time job (Table 1).

Table 1: Sociodemographic characteristics of participants.

Demographic Variables		Gender		Total (n=401)	P value
		Female (n=227)	Male (n=174)		
Age (years)	18-30	90	47	137	0.117
		(39.6%)	(27.0%)	(34.2%)	
	31-40	66	59	125	
		(29.1%)	(33.9%)	(31.2%)	
	41-50	48	46	94	
		(21.1%)	(26.4%)	(23.4%)	
	51-60	15	16	31	
		(6.6%)	(9.2%)	(7.7%)	
	>60	8	6	14	
		(3.5%)	(3.4%)	(3.5%)	
Total	401	Mean±SD=36.96±11.58		Max. 80, min. 18	
Education	Illiterate	75	10	85	<0.001
		(33.0%)	(5.7%)	(21.2%)	
	Secondary school	48	30	78	
		(21.1%)	(17.2%)	(19.5%)	
	Senior secondary	35	31	66	
		(15.4%)	(17.8%)	(16.5%)	
	Higher education	69	103	172	
		(30.4%)	(59.2%)	(42.9%)	
Occupation	House-wife/not working	155	10	165	<0.001
		(68.3%)	(5.7%)	(41.1%)	
	Student	17	10	27	
		(7.5%)	(5.7%)	(6.7%)	
	Business/self employed	13	22	35	
		(5.7%)	(12.6%)	(8.7%)	
	Daily wages/part time	14	25	39	
		(6.2%)	(14.4%)	(9.7%)	
	Full time	28	107	135	
		(12.3%)	(61.5%)	(33.7%)	
Health care professional	Yes	2	3	5	0.451
		(.9%)	(1.7%)	(1.2%)	
	No	225	171	396	
		(99.1%)	(98.3%)	(98.8%)	
Pre-existing illness	No	177	145	322	0.181
		(78.0%)	(83.3%)	(80.3%)	
	Yes	50	29	79	
		(22.0%)	(16.7%)	(19.7%)	

Table 2: Impact of CAS scale by demographic factors.

Demographic variables		CAS score		Total	P value
		<9 (n=372)	≥9 (n=29)		
Gender	Female	204	23	227	0.01
		54.8%	79.3%	56.6%	
	Male	168	6	174	
		45.2%	20.7%	43.4%	
Age (years)	18-30	124	13	137	0.184
		33.3%	44.8%	34.2%	
	31-40	113	12	125	
		30.4%	41.4%	31.2%	
	41-50	91	3	94	
		24.5%	10.3%	23.4%	
	51-60	30	1	31	
		8.1%	3.4%	7.7%	
	>60	14	0	14	
		3.8%	0.0%	3.5%	
Education	Illiterate	77	8	85	0.016
		20.7%	27.6%	21.2%	
	Secondary School	67	11	78	
		18.0%	37.9%	19.5%	
	Senior Secondary	65	1	66	
		17.5%	3.4%	16.5%	
	Higher Education	163	9	172	
		43.8%	31.0%	42.9%	
Occupation	House-wife/Not working	145	20	165	0.007
		39.0%	69.0%	41.1%	
	Student	26	1	27	
		7.0%	3.4%	6.7%	
	Business/self employed	31	4	35	
		8.3%	13.8%	8.7%	
	Daily wages/part time	39	0	39	
		10.5%	0.0%	9.7%	
	Full time	131	4	135	
Health care professional	Yes	5	0	5	0.53
		1.3%	0.0%	1.2%	
	No	367	29	396	
		98.7%	100.0%	98.8%	
Pre-existing illness	No	296	26	322	0.188
		79.6%	89.7%	80.3%	
	Yes	76	3	79	
		20.4%	10.3%	19.7%	

Impact on corona anxiety scale

Of 401 participants, only 29 participants (i.e. 7.2%) reported CAS≥9, 372 participants have CAS>9. Out of 29 participants, 23 were female and 6 males. Out of 29 participants, 86 % falls into age group 18-40 years.

Association of CAS score with demographic factors: CAS is significantly higher in female than in male. CAS is significantly higher in housewife and not working employment group (i.e. 69%) (Table 2).

Awareness and lifestyle

There were 18.2% of participants who reported that they were paying more attention to their mental health following the pandemic and in 72% there was no change. Additionally, 17.7% of participants reported that they were spending more time to rest and no change in 76%. 14.4% stated that they were spending more time to relaxing and no change in 77%. 19.9% reported that they were spending more time exercising and 66.5% reported no change. There was a significant association between

gender and some of the responses including 'did you spend enough time for rest?' (p=0.032) did you spend time for exercise? (p=0.004) There was a significant association between education and some of the responses including 'did you pay attention to mental health?' (p=0.001),'did you spend enough time for rest?' (p=0.009), 'did you spend time for exercise?' (p=0.001). There was significant association between occupation and some of the responses including 'did you pay attention to mental health?' (p=0.016), 'did you spend time for exercise?' (p=0.001). There was significant association between pre-existing illness and some of the responses including 'did you pay attention to mental health?' (p=0.012), 'Did you spend enough time for rest?' (p=0.001). The variable of age group was not associated with the indicators of lifestyle changes (Table 3).

Table 3: Awareness and lifestyles by demographic factors.

			1.Did you pay attention to mental health?			2. Did you spend enough time for rest?			3. Did you spend time for relaxation?			4. Did you spend time for exercise?		
			Same as before	Increased	Decreased	Same as before	Increased	Decreased	Same as before	Increased	Decreased	Same as before	Increased	Decreased
Gender	Female	N	161	38	28	175	33	19	173	34	20	162	32	33
		%	70.93	16.74	12.33	77.09	14.54	8.37	76.21	14.98	8.81	71.37	14.10	14.54
	Male	N	128	35	11	130	38	6	136	24	14	105	48	21
		%	73.56	20.11	6.32	74.71	21.84	3.45	78.16	13.79	8.05	60.34	27.59	12.07
	P value [c]		0.112			0.032			0.899			0.004		
Age category	18-30 years	N	89	31	17	100	27	10	96	27	14	86	30	21
		%	64.96	22.63	12.41	72.99	19.71	7.30	70.07	19.71	10.22	62.77	21.90	15.33
	31-40 years	N	96	15	14	98	18	9	99	13	13	89	22	14
		%	76.80	12.00	11.20	78.40	14.40	7.20	79.20	10.40	10.40	71.20	17.60	11.20
	41-50 years	N	70	20	4	75	15	4	79	12	3	62	19	13
		%	74.47	21.28	4.26	79.79	15.96	4.26	84.04	12.77	3.19	65.96	20.21	13.83
	51-60 years	N	24	4	3	23	7	1	24	4	3	19	8	4
		%	77.42	12.90	9.68	74.19	22.58	3.23	77.42	12.90	9.68	61.29	25.81	12.90
	>60 years	N	10	3	1	9	4	1	11	2	1	11	1	2
		%	71.43	21.43	7.14	64.29	28.57	7.14	78.57	14.29	7.14	78.57	7.14	14.29
	P value [c]		0.202			0.780			0.263			0.831		
Education	Illiterate	N	72	3	10	75	4	6	76	4	5	78	2	5
		%	84.71	3.53	11.76	88.24	4.71	7.06	89.41	4.71	5.88	91.76	2.35	5.88
	Secondary School	N	61	13	4	54	20	4	59	11	8	56	10	12
		%	78.21	16.67	5.13	69.23	25.64	5.13	75.64	14.10	10.26	71.79	12.82	15.38
	Senior Secondary	N	48	11	7	54	9	3	48	13	5	41	13	12
		%	72.73	16.67	10.61	81.82	13.64	4.55	72.73	19.70	7.58	62.12	19.70	18.18
	Higher Education	N	108	46	18	122	38	12	126	30	16	92	55	25
		%	62.79	26.74	10.47	70.93	22.09	6.98	73.26	17.44	9.30	53.49	31.98	14.53
	P value [c]		0.001			0.009			0.08			0.001		
Occupation	House-wife / not working	N	129	17	19	135	21	9	134	18	13	129	16	20
		%	78.18	10.30	11.52	81.82	12.73	5.45	81.21	10.91	7.88	78.18	9.70	12.12
	Student	N	13	10	4	18	7	2	17	8	2	10	10	7
		%	48.15	37.04	14.81	66.67	25.93	7.41	62.96	29.63	7.41	37.04	37.04	25.93
	Business/ self employed	N	26	6	3	23	10	2	27	5	3	22	10	3
		%	74.29	17.14	8.57	65.71	28.57	5.71	77.14	14.29	8.57	62.86	28.57	8.57
	Daily wages /part time	N	28	8	3	26	9	4	29	8	2	31	4	4
		%	71.79	20.51	7.69	66.67	23.08	10.26	74.36	20.51	5.13	79.49	10.26	10.26
	Full time	N	93	32	10	103	24	8	102	19	14	75	40	20
		%	68.89	23.70	7.41	76.30	17.78	5.93	75.56	14.07	10.37	55.56	29.63	14.81
	P value[c]		0.016			0.298			0.336			0.001		
Pre-existing illness	No	N	241	56	25	255	46	21	256	42	24	218	65	39
		%	74.84	17.39	7.76	79.19	14.29	6.52	79.50	13.04	7.45	67.70	20.19	12.11
	Yes	N	48	17	14	50	25	4	53	16	10	49	15	15
		%	60.76	21.52	17.72	63.29	31.65	5.06	67.09	20.25	12.66	62.03	18.99	18.99
	P value [c]		0.012			0.001			0.06			0.27		

[c]chi-square test

Table 4: Negative health impact by demographic factors.

			1.Did you felt increase in stress from work?			2. Did you find increase in financial stress?			3. Did you find increase in stress from home?			4. Did you feel horrified due to COVID-19?			5. Did you feel Helpless due to COVID-19?			6. Did you feel apprehensive due to COVID-19?		
			No	Yes	Don' t know much	No	Yes	Don' t know much	No	Yes	Don' t know much	No	Yes	Don' t know much	No	Yes	Don' t know much	No	Yes	Don' t know much
Gender	Female	N	119	103	5	99	124	4	106	117	4	96	128	3	121	101	5	89	132	6
		%	52.42	45.37	2.20	43.61	54.63	1.76	46.70	51.54	1.76	42.29	56.39	1.32	53.30	44.49	2.20	39.21	58.15	2.64
	Male	N	111	53	10	79	89	6	112	54	8	91	77	6	105	64	5	98	72	4
		%	63.79	30.46	5.75	45.40	51.15	3.45	64.37	31.03	4.60	52.30	44.25	3.45	60.34	36.78	2.87	56.32	41.38	2.30
	P value [c]		0.004			0.492			0.001			0.031			0.291			0.003		
Age category	18-30 years	N	73	57	7	56	78	3	71	63	3	69	66	2	73	59	5	61	71	5
		%	53.28	41.61	5.11	40.88	56.93	2.19	51.82	45.99	2.19	50.36	48.18	1.46	53.28	43.07	3.65	44.53	51.82	3.65
	31-40 years	N	68	51	6	56	64	5	69	54	2	51	72	2	71	53	1	57	65	3
		%	54.40	40.80	4.80	44.80	51.20	4.00	55.20	43.20	1.60	40.80	57.60	1.60	56.80	42.40	0.80	45.60	52.00	2.40
	41-50 years	N	59	34	1	41	51	2	50	39	5	45	45	4	52	40	2	47	45	2
		%	62.77	36.17	1.06	43.62	54.26	2.13	53.19	41.49	5.32	47.87	47.87	4.26	55.32	42.55	2.13	50.00	47.87	2.13
	51-60 years	N	20	10	1	16	15	0	19	10	2	15	15	1	20	9	2	16	15	0
		%	64.52	32.26	3.23	51.61	48.39	0.00	61.29	32.26	6.45	48.39	48.39	3.23	64.52	29.03	6.45	51.61	48.39	0.00
	>60 years	N	10	4	0	9	5	0	9	5	0	7	7	0	10	4	0	6	8	0
		%	71.43	28.57	0.00	64.29	35.71	0.00	64.29	35.71	0.00	50.00	50.00	0.00	71.43	28.57	0.00	42.86	57.14	0.00
	P value [c]		0.58			0.67			0.58			0.68			0.47			0.94		
Education	Illiterate	N	45	39	1	40	44	1	38	45	2	41	44	0	49	36	0	43	42	0
		%	52.94	45.88	1.18	47.06	51.76	1.18	44.71	52.94	2.35	48.24	51.76	0.00	57.65	42.35	0.00	50.59	49.41	0.00
	Secondary school	N	38	36	4	25	49	4	30	47	1	24	53	1	33	43	2	26	51	1
		%	48.72	46.15	5.13	32.05	62.82	5.13	38.46	60.26	1.28	30.77	67.95	1.28	42.31	55.13	2.56	33.33	65.38	1.28
	Senior secondary	N	42	20	4	32	31	3	42	21	3	38	27	1	45	19	2	35	30	1
		%	63.64	30.30	6.06	48.48	46.97	4.55	63.64	31.82	4.55	57.58	40.91	1.52	68.18	28.79	3.03	53.03	45.45	1.52
	Higher education	N	105	61	6	81	89	2	108	58	6	84	81	7	99	67	6	83	81	8
		%	61.05	35.47	3.49	47.09	51.74	1.16	62.79	33.72	3.49	48.84	47.09	4.07	57.56	38.95	3.49	48.26	47.09	4.65
	P value [c]		0.177			0.109			0.001			0.008			0.033			0.029		
Occupation	House-wife /not working	N	88	74	3	76	86	3	78	85	2	74	89	2	91	71	3	67	95	3
		%	53.33	44.85	1.82	46.06	52.12	1.82	47.27	51.52	1.21	44.85	53.94	1.21	55.15	43.03	1.82	40.61	57.58	1.82
	Student	N	17	7	3	12	13	2	15	10	2	13	13	1	14	12	1	12	14	1
		%	62.96	25.93	11.11	44.44	48.15	7.41	55.56	37.04	7.41	48.15	48.15	3.70	51.85	44.44	3.70	44.44	51.85	3.70
	Business/ self employed	N	20	13	2	15	18	2	20	13	2	15	19	1	20	15	0	20	15	0
		%	57.14	37.14	5.71	42.86	51.43	5.71	57.14	37.14	5.71	42.86	54.29	2.86	57.14	42.86	0.00	57.14	42.86	0.00
	Daily wages /part time	N	18	18	3	14	24	1	19	20	0	16	23	0	22	16	1	16	23	0
		%	46.15	46.15	7.69	35.90	61.54	2.56	48.72	51.28	0.00	41.03	58.97	0.00	56.41	41.03	2.56	41.03	58.97	0.00
	Full time	N	87	44	4	61	72	2	86	43	6	69	61	5	79	51	5	72	57	6
		%	64.44	32.59	2.96	45.19	53.33	1.48	63.70	31.85	4.44	51.11	45.19	3.70	58.52	37.78	3.70	53.33	42.22	4.44
	P value [c]		0.059			0.603			0.019			0.636			0.935			0.132		
Pre-existing illness	No	N	185	128	9	143	171	8	176	138	8	158	157	7	182	133	7	157	157	8
		%	57.45	39.75	2.80	44.41	53.11	2.48	54.66	42.86	2.48	49.07	48.76	2.17	56.52	41.30	2.17	48.76	48.76	2.48
	Yes	N	45	28	6	35	42	2	42	33	4	29	48	2	44	32	3	30	47	2
		%	56.96	35.44	7.59	44.30	53.16	2.53	53.16	41.77	5.06	36.71	60.76	2.53	55.70	40.51	3.80	37.97	59.49	2.53
	P value [c]		0.12			0.99			0.48			0.14			0.70			0.22		

Table 5: Changes in family and social support by demographic factors.

			1.Did you get support from friends?			2. Did you get support from family members?			3. Did you share feeling with family members?			4. Did you share your feelings with others when in blue?			5. Did you care for family member's feelings?		
			Same as before	Increased	Decreased	Same as before	Increased	Decreased	Same as before	Increased	Decreased	Same as before	Increased	Decreased	Same as before	Increased	Decreased
Gender	Female	N	144	37	46	138	62	27	142	57	28	134	59	34	129	87	11
		%	63.44	16.30	20.26	60.79	27.31	11.89	62.56	25.11	12.33	59.03	25.99	14.98	56.83	38.33	4.85
	Male	N	119	36	19	118	50	6	118	52	4	118	43	13	91	78	5
		%	68.39	20.69	10.92	67.82	28.74	3.45	67.82	29.89	2.30	67.82	24.71	7.47	52.30	44.83	2.87
	P value [c]		0.035			0.009			0.001			0.050			0.310		
Age category	18-30 years	N	87	26	24	81	41	15	80	39	18	81	34	22	69	61	7
		%	63.50	18.98	17.52	59.12	29.93	10.95	58.39	28.47	13.14	59.12	24.82	16.06	50.36	44.53	5.11
	31-40 years	N	80	24	21	82	33	10	88	28	9	80	31	14	75	45	5
		%	64.00	19.20	16.80	65.60	26.40	8.00	70.40	22.40	7.20	64.00	24.80	11.20	60.00	36.00	4.00
	41-50 years	N	63	18	13	62	25	7	59	30	5	62	27	5	48	44	2
		%	67.02	19.15	13.83	65.96	26.60	7.45	62.77	31.91	5.32	65.96	28.72	5.32	51.06	46.81	2.13
	51-60 years	N	21	4	6	20	10	1	22	9	0	20	6	5	18	12	1
		%	67.74	12.90	19.35	64.52	32.26	3.23	70.97	29.03	0.00	64.52	19.35	16.13	58.06	38.71	3.23
	>60 years	N	12	1	1	11	3	0	11	3	0	9	4	1	10	3	1
		%	85.71	7.14	7.14	78.57	21.43	0.00	78.57	21.43	0.00	64.29	28.57	7.14	71.43	21.43	7.14
	P value [c]		0.85			0.729			0.101			0.462			0.533		
Education	Illiterate	N	64	5	16	67	13	5	64	13	8	67	11	7	69	13	3
		%	75.29	5.88	18.82	78.82	15.29	5.88	75.29	15.29	9.41	78.82	12.94	8.24	81.18	15.29	3.53
	Secondary school	N	43	18	17	44	21	13	47	23	8	46	24	8	42	31	5
		%	55.13	23.08	21.79	56.41	26.92	16.67	60.26	29.49	10.26	58.97	30.77	10.26	53.85	39.74	6.41
	Senior secondary	N	44	12	10	40	19	7	42	15	9	43	13	10	37	24	5
		%	66.67	18.18	15.15	60.61	28.79	10.61	63.64	22.73	13.64	65.15	19.70	15.15	56.06	36.36	7.58
	Higher education	N	112	38	22	105	59	8	107	58	7	96	54	22	72	97	3
		%	65.12	22.09	12.79	61.05	34.30	4.65	62.21	33.72	4.07	55.81	31.40	12.79	41.86	56.40	1.74
	P value [c]		0.019			0.001			0.012			0.012			0.001		
Occupation	House-wife /not working	N	113	16	36	112	32	21	114	31	20	109	31	25	111	45	9
		%	68.48	9.70	21.82	67.88	19.39	12.73	69.09	18.79	12.12	66.06	18.79	15.15	67.27	27.27	5.45
	Student	N	14	9	4	12	14	1	12	12	3	11	10	6	9	17	1
		%	51.85	33.33	14.81	44.44	51.85	3.70	44.44	44.44	11.11	40.74	37.04	22.22	33.33	62.96	3.70
	Business /self employed	N	27	5	3	28	6	1	27	7	1	25	8	2	23	12	0
		%	77.14	14.29	8.57	80.00	17.14	2.86	77.14	20.00	2.86	71.43	22.86	5.71	65.71	34.29	0.00
	Daily wages/ part time	N	23	8	8	21	15	3	24	13	2	25	11	3	22	14	3
		%	58.97	20.51	20.51	53.85	38.46	7.69	61.54	33.33	5.13	64.10	28.21	7.69	56.41	35.90	7.69
	Full time	N	86	35	14	83	45	7	83	46	6	82	42	11	55	77	3
		%	63.70	25.93	10.37	61.48	33.33	5.19	61.48	34.07	4.44	60.74	31.11	8.15	40.74	57.04	2.22
	P value [c]		0.002			0.001			0.006			0.037			0.001		
Pre-existing illness	No	N	218	56	48	207	87	28	212	85	25	205	80	37	183	125	14
		%	67.70	17.39	14.91	64.29	27.02	8.70	65.84	26.40	7.76	63.66	24.84	11.49	56.83	38.82	4.35
	Yes	N	45	17	17	49	25	5	48	24	7	47	22	10	37	40	2
		%	56.96	21.52	21.52	62.03	31.65	6.33	60.76	30.38	8.86	59.49	27.85	12.66	46.84	50.63	2.53
	P value [c]		0.18			0.61			0.69			0.78			0.14		

Negative health impact

During the survey, more than half of the participants (57.3%) reported no increased stress from work. Additionally, 54% of participants reported that they did not experience increased stress from home. 53% mentioned that they experience increased financial stress arising from the pandemic. On the other hand, 51% of participants reported that they felt horrified and apprehensive due to the COVID-19 pandemic. However, the majority of participants (56%) did not feel helpless due to the pandemic. There was a significant association between gender and some of the responses including 'did you feel increase in stress from work?' (p=0.004), 'did you find increase in stress from home?' (p=0.001); 'did you feel horrified due to COVID-19?' (p=0.031); 'did you feel apprehensive due to COVID-19?' (p=0.003). There was a significant association between education and some of responses including 'did you find increase in stress from home?' (p=0.001); 'did you feel horrified due to COVID-19?' (p=0.008); 'did you feel helpless due to COVID-19?' (p=0.033) 'did you feel apprehensive due to COVID-19?' (p=0.029). There was a significant association between occupation and some of the

responses including 'did you find increase in stress from home?' (p=.059); 'did you find increase in stress from home?' (p=.019). Other sociodemographic variables including age group and pre-existing illness were not associated with the indicators of negative mental health impact (Table 4).

Impact on social and family support

Participants reported that they received increased support from friends (18.2%) and no change in 65.5 %. There was increased support from family members (27.9%) and no change in 63.8%. They also experienced an increased shared feelings with family members (27.1%) and no change in 64.8%, increased shared feelings with others when feeling blue (25.4%) and no change in 62.8%, and increased caring for family members' feelings (41.1%) and no change in 54.8%. There was a significant association between gender and responses including, 'did you get support from friends?' (p=0.035); 'did you get support from family members?' (p=0.009); 'did you share feeling with family members?' (p=0.001); 'did you share your feelings with others when in blue?' (p=0.05); did you care for family member's feelings?'. There was a significant association between education, and responses like 'did you get support from friends?' (p=0.019); 'did you get support from family members?'(p=0.001); 'did you share feeling with family members?' (p=0.012); 'did you share your feelings with others when in blue?' (p=.012); 'did you care for family member's feelings?' (p=0.001). There was association between occupation and responses like 'did you get support from friends?' (p=0.002); 'did you get support from family members?' (p=0.001); 'did you share feeling with family members?' (p=0.006); 'did you share your feelings with others when in blue?' (p=0.037); 'did you care for family member's feelings?' (p=0.001). Other sociodemographic variables including age group and pre-existing illness were not associated with the indicators of changes in family (Table 5).

The association between items of family support and awareness and lifestyle and negative mental health is summarized in Table 6. Awareness and lifestyle could be better if family support was there whereas negative mental health impact could decrease in presence of family support. The odd ratios were statistically significant for all items of awareness and lifestyle, except time spend for exercise verses share feelings with family members [adjusted odd ratio =1.5 (0.94-2.35)]. It was seen that friends support and support from family members is significantly associated with all the items of awareness and lifestyle. Sharing feelings with others when in blue was statistically associated with attention to mental health and spend time for relaxation with adjusted OR=2.9. Care for family members feeling was highly significant with adjusted ratio =2.9 (1.74-4.94). Similarly, items indicator of family support was statistically associated with items of negative mental health impact except increase in stress from home and increase in stress from work. It was observed that getting friends and family support was significantly required while horrified due to COVID-19 with adjusted odd ratio =2.8 (1.77-4.3) and adjusted OR=2.7(1.75-4.23). Share feeling with family members and others were significantly associated while helpless due to COVID-19 and apprehensive due to COVID-19. Care for family member's feelings was significantly associated when apprehensive due to COVID-19 adjusted OR =2.5 (1.59-3.84).

Table 6: Association between social and family support and awareness and lifestyle and negative health impact.

Variables	Attention to mental health OR[a] (95% CI)[b]	Spend enough time for rest OR[a] (95% CI)[b]	Spend time for relaxation OR[a] (95% CI)[b]	Spend time for exercise OR[a] (95% CI)[b]	Increase in stress from work OR[a] (95% CI)[b]	Increase in financial stress OR[a] (95% CI)[b]	Increase in stress from home OR[a] (95% CI)[b]	Horrified due to COVID-19 OR[a] (95% CI)[b]	Helpless due to COVID-19 OR[a] (95% CI)[b]	Apprehensive due to COVID-19 OR[a] (95% CI)[b]
Support from friends	3.5 (2.17-5.61)*	2.9 (1.78-4.69)*	3.6 (2.16-5.85)*	2.3 (1.47-3.72)*	1.7 (1.11-2.61)*	2.3 (1.49-3.6)*	1.9 (1.24-2.95)*	2.8 (1.77-4.3)*	2.1 (1.37-3.2)*	2.1 (1.37-3.28)*
Support from family members	2.3 (1.47-3.74)*	2.8 (1.73-4.6)*	2.8 (1.7-4.58)*	2.6 (1.61-4.06)*	1.6 (1.07-2.51)*	2.1 (1.38-3.29)*	1.4 (0.91-2.14)	2.7 (1.75-4.23)*	2.5 (1.64-3.87)*	2.7 (1.75-4.26)*
Share feeling with family members	2.2 (1.35-3.43)*	1.8 (1.12-2.95)*	1.9 (1.17-3.12)*	1.5 (0.94-2.35)	1.3 (0.84-1.95)	1.8 (1.2-2.84)*	1.3 (0.85-2.01)	2.1 (1.38-3.29)*	2.2 (1.42-3.31)*	2.1 (1.34-3.19)*
Share feelings with others when in blue	2.9 (1.84-4.71)*	2.6 (1.59-4.23)*	2.9 (1.77-4.81)*	2.0 (1.25-3.13)*	1.5 (1.01-2.36)*	1.7 (1.11-2.63)*	1.4 (0.9-2.12)	1.9 (1.24-2.94)*	2.0 (1.28-3)*	2.5 (1.62-3.91)*
Care for family member's feelings	2.4 (1.47-3.85)*	2.8 (1.7-4.71)*	2.9 (1.74-4.94)*	2.5 (1.6-4.03)*	0.9 (0.57-1.35)	1.6 (1.07-2.51)*	1.5 (0.97-2.32)	2.2 (1.42-3.38)*	2.3 (1.47-3.5)*	2.5 (1.59-3.84)*

* p<0.05; ** p<0.001.
[a] Odds ratio, adjusted for age, gender, education, occupation and Pre-existing illness (logistic regression analysis).
[b] 95% confidence interval (in brackets).

DISCUSSION

The COVID-19 pandemic has wiped out human civilization worldwide since 2020. Because the virus genetic makeup is constantly changing, the pandemic is recurring in waves. In this study we investigated the impact on mental health, lifestyle choices related to it, and quality of life, family and social support as well as the variables linked to the impact of the COVID-19 during the third wave of the COVID-19 pandemic.

The overall CAS score in participants indicated anxiety in 7.2 % only. One possible reason for this finding is that the most of study population consists of the patients attending the OPD and the institute is conducting regular awareness and sensitization program on covid appropriate behaviour under Jan Andolan campaign and conducted regular counselling sessions at OPD as well.

In this study CAS is found to be higher in female (79.3%) than in male. CAS is significantly higher in housewife and not working employment group (i.e. 69%). Previous studies have implicated that being female increases the risk for developing anxiety and depression during an outbreak.[7] The strongest predictor for anxiety and depression is the female gender.[8-12]

Out of 227 females 23 have anxiety i.e. 10.1%. Among the females who have anxiety only 8.6% were involved in increased physical activity and the females who do not have anxiety have 14.7% physically active females. It is in correlation with one study which identified that women who were engaged in less physical activity due to COVID-19 reported significantly lower mental health scores, lower social, emotional and psychological well-being, and significantly higher generalized anxiety, while women who engaged in more physical activity had improved mental health scores.[13]

Our findings suggest that no elder above the age of 60 years have the anxiety related to COVID-19 outbreak. It was consistent with one study where the physical, psychological, and spiritual well-being of the elderly had not been seriously impaired by the events related to the pandemic, although most of the participants reported a worsening of their social life and a moderate/high fear of COVID-19.[14]

There was no significant relation between age group and lifestyle choices, negative health impact and social and family support in our study. There was significant relation of gender, education and occupation with lifestyle choices.

About 18-20% respondents paid more attention to their mental health, and took more time to rest, for relaxation or doing exercise. During the survey, more than half of the participants (57.3%) reported no increased stress from work. Additionally, 54% of participants reported that they did not experience increased stress from home. So, these were the positive impacts, however 53 % mentioned that they experience increased financial stress arising from the pandemic. The association between income and mental health has been well documented.[15,16] Our study also found that income affected by the pandemic is a predictor for anxiety. On the other hand, 51% of participants reported that they felt horrified and apprehensive due to the COVID-19 pandemic. However, the majority of participants (56%) did not feel helpless due to the pandemic. There was significant relation of gender, education and occupation with negative health impact and social and family support.

This situation has brought some positive impacts on social and family support. Despite the fact that more than half of the respondents in several situations reported no changes, positive change percentages were substantially higher than negative change percentages. Over 41% of the respondents stated that they cared more about the family members' feelings. About 18-30% stated that they found increased support from friends and family members. They also experienced an increased shared feelings with family members (27.1%), increased shared feelings with others when feeling blue (25.4%). Awareness and lifestyle could be better if family support is there whereas negative mental health impact could decrease in presence of family support.

The gradual changes in the affected person's mental health outcomes may not be revealed by this cross-sectional study. Cross-sectional analysis can only identify associations, not causes and effects. We did not evaluate the psychological health of our individuals prior to the pandemic, so we were unable to rule out any pre-existing anxiety or depression in them. Furthermore, comparisons cannot be performed because we did not also collect data from other pandemic stages. The study's result and application are all constrained by these considerations.

CONCLUSION

Only a small percentage of research participant i.e. 7.2 % experienced anxiety, of whom 79.3% were female. 53% of respondents reported that the pandemic had exacerbated their financial burden. The pandemic had some beneficial effects on social/family support, mental health awareness, and lifestyle adjustments. These good outcomes were linked to other significant negative impacts and may serve as important buffers against the negative impact. According to research, public health activities should concentrate on women and those whose financial situations deteriorate as a result of the pandemic. Interventions that encourage psychological adaptability may lessen the pandemic's effects. The development of suitable methods and policies to support women in any crisis, such as the covid pandemic, requires the collaboration of policymakers, healthcare providers, and social support organisations. The foundation of public health is mental health. Important elements of mental health include caring for feelings and maintaining healthy

family relationships. This justifies raising awareness of the need for mental health care at all levels and developing suitable interventions, particularly for the vulnerable population. The significant lessons learnt so far can be used to improve public health intervention and prevention methods as well as personal mental health recommendations.

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