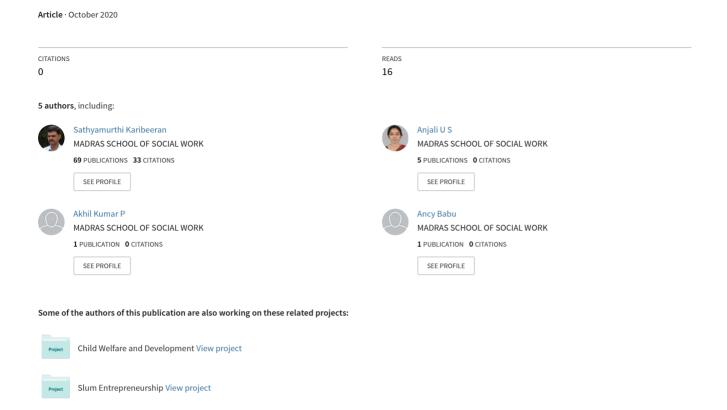
### Mental Health Status of Indian population during Covid19 outbreak





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#### **ABSTRACT**

The recent outbreak of respiratory illness caused by a novel Corona virus has affected most of the people globally and India is striving to eradicate the virus as India is the highest populated country next to China. It might cause various physical and mental health issues. Corona is a single stranded RNA virus that had its roots into the world from almost 60 years since its discovery in late 1960s. Corona viruses belong to the corona viridae family in the nidovirales order. The study focuses on anxiety and stress disorder during Covid19 among the general public India. The symptoms of anxiety and stress are common psychological reactions to the COVID-19 pandemic, and may be associated with disturbed sleep. When the global focus has mostly been on testing, finding a cure and preventing transmission, people are going through a myriad of mental health problems in adjusting to the current lifestyles and fear of the disease. Since lot of people in India are facing different mental illness due to long-term isolation and the new normal lifestyle we decided to conduct an online survey to evaluate the mental health issues faced by the Indian population during Covid19 outbreak. This paper focused on the level of anxiety and depression among Indian population during covid 19 pandemic outbreak.

**Keywords:** Anxiety, Stress, Mental Health, Covid 19, Indian Population

#### I. INTRODUCTION

As the pandemic outbreak in India was on-going, the Government of India took stringent measures to limit the cases by far in that stage only, by initiating a major lockdown in India and also by shifting the immigrants to the special quarantine facilities prepared by the Indian Military directly from the airports and seaports for a minimum of 14 days. Community health teams were also launched to spread awareness about the chances of spread and precautionary measures that one can use to protect them and others.

Due to the extended lockdown people in India have been isolated for past few months which caused various mental stresses and anxiety among the people including children, adolescents, youth, adult and elderly. Mental health is an important thing to be considered as it leads to various issues. It is well known that there are two main types of mental health issues. The first one is called as neurosis which causes minor mental dysfunctions in behavior which should be taken serious to cure it in the starting stage so further complications can be



avoided. The next type is called as psychosis which causes severe mental illness and clinical assistance is needed to recuperate from psychosis. The common mental health issue that exists during lockdown is Neurosis such as depression, stress, anxiety, grief and hyperactive behavior. Changes in sleep patterns, Difficulty in sleeping and concentrating, worsening of health issues, increased use of alcohol, tobacco or drugs are few of the symptoms of mental illness among individuals.

### II. BACKGROUND OF THE STUDY

After the outbreak of Covid19 among people in India, most of the people have fear that they would be infected by the virus which causes excessive stress and anxiety. The mental stress affects the people of all ages. The COVID-19 pandemic is having many life-altering short-and likely long-term effects. Fear and anxiety about a new disease and what could happen can be overwhelming and cause strong emotions in adults and children. Public health actions, such as social distancing, can make people feel isolated and lonely and can increase stress and anxiety. However, these actions are necessary to reduce the spread of COVID-19.

Persons who had previous mental illness may face newer challenges during self-isolation or Covid19 infection. They would also have the same fears and stress as others which may worsen their previous mental health condition. Social isolation may make them more withdrawn, moody and irritable. They may not seek/ get easy access to medicines and counselling. So there must be proper guidance and availability of mental health services in and around the country for a healthy mental life style of the individuals.

### III. LITERATURE REVIEW

COVID-19 widespread has the potential altogether influence the mental wellbeing of healthcare workers (HCWs), who stand within the cutting edge of this emergency. The point of this systematic review is to synthesize and examine existing prove on the predominance of depression, anxiety and sleep deprivation among HCWs amid the Covid-19 flare-up. Strategies used were a systematic literature review on the prevailing databases were conducted up to 17th April 2020. Two analysts freely evaluated full-text articles concurring to predefined criteria. Hazard of inclination for each person think about was surveyed and information pooled utilizing random-effects meta-analyses to appraise the predominance of particular mental wellbeing issues. Thirteen studies were included within the analysis with a combined add up to of 33,062 respondents. Anxiety was evaluated in 12 considers, with a

52-63



pooled predominance of 23·2% and depression in 10 studies, with a predominance rate of 22·8%. This precise survey and meta-analysis give a convenient and comprehensive blend of the existing prove highlighting the tall predominance rates of depression, anxiety and sleep deprivation of healthcare experts. Discoveries can offer assistance to measure staff support needs and illuminate layered and custom-made intercessions beneath widespread conditions that upgrade flexibility and relieve vulnerability.

The severe acute respiratory syndrome corona virus 2 (SARS-CoV-2), which showed up in early December 2019, had an atypical viral pneumonia flare-up in Wuhan, Hubei, China. There is a tall hazard of worldwide expansion and affect. The sudden increment in affirmed cases has brought huge stress and anxiety to frontline surgical staff. The comes about showed that the anxiety and depression of surgical staff during the outbreak period were altogether higher and mental wellbeing issues showed up, so mental interventions are fundamental. An add up to of 120 subjects from the surgical medical staff of Baoshan Department of Shanghai Shuguang Healing centre were isolated into two bunches (60 in each bunch) at two time periods (outbreak period: January 28,2020 to February 29, 2020; Non-epidemic flare-up period: March 2nd to March 21st, 2020) fill out four scales (Anxiety scale, Depression score, Dream anxiety score and SF-36 scale). Concurring to insights, the anxiety score of surgical staff amid the outbreak period was  $7.817 \pm 2.508$ , of which 28 were positive ( $\geq 8$  points). The anxiety score of surgical staff amid the non-outbreak period was  $5.283 \pm 1.738$ , of which 6 were anxiety positive. The anxiety score of the surgical staff amid the outbreak period was altogether higher than that of the surgical staff amid the non-outbreak period (t = 6.432, P <0.001) (Xu, Xu, Chang-ming Wang, & Wang, 2020).

Since the announcement of the corona virus 2019 (COVID-19) flare-up as widespread, there are reports on the expanded predominance of physical side effects watched within the common populace. These consider was on the affiliation between mental results and physical side effects among healthcare specialists. Strategies used was Healthcare specialists from 5 major hospitals, included within the care for COVID-19 patients, in Singapore and India were welcomed to take part in a study by performing a self-administered questionnaire within the period of February 19 to April 17, 2020.

Healthcare labourers included doctors, nurses, associated healthcare specialists, chairpersons, clerical staff and support labourers. This survey collected data on



socioeconomics, therapeutic history, and side-effect predominance within the past month, Depression Anxiety Stress Scales (DASS-21) and the Impact of Events Scale-Revised (IES-R) instrument. Out of the 906 healthcare specialists who taken part within the study, 48 (5.3%) screened positive for direct to very-severe depression, 79 (8.7%) for direct to extremely severe anxiety, 20 (2.2%) for direct to extremely severe stress, and 34 (3.8%) for direct to extreme levels of psychological trouble. The commonest detailed side effect was migraine (32.3%), with an expansive number of members (33.4%) announcing more than four indications. In general, mean DASS-21 anxiety subscale score was 3.21 (SD 4.29). Of the 142 patients who screened positive for anxiety, 55.6% of them (79) appeared direct to exceptionally extreme anxiety. There was no contrast in psychological results between consider members from the two nations. There is a critical affiliation between the predominance of physical side effects and mental trouble, which is likely bi-directional. We suggest the arrangement for opportune mental support and intercessions for healthcare labourers who display with physical side effects once an infection has been avoided. (Nicholas W S Chew, 2020).

A ponder reports the physical wellbeing, mental wellbeing, anxiety, depression, distress, and job satisfaction of healthcare staff in Iran when the nation confronted its most elevated number of add up to dynamic COVID-19 cases. In a test of 304 healthcare staff (doctors, nurses, radiologists, professionals, etc.), we found a sizable portion come to the cut-off levels of disorders in anxiety (28.0%), depression (30.6%), and distress (20.1%). This consider makes a difference to distinguish the healthcare staff in got to empower more focused on offer assistance as healthcare staff in numerous nations are confronting crests in their COVID-19 cases. This ponder reports the wellbeing conditions (SF-12, K6, PHQ-4) and job satisfaction of healthcare staff amid the stature of the COVID-19 widespread in Iran in early April. A sizable rate of healthcare staff come to the cut-off values for mental clutter concerns on trouble (20.1% by K6), misery (20.6% by PHQ-4), and uneasiness (28.0% by PHQ-4) (Zhang, et al., 2020).

The first think about within the scientific literature announcing the psychological impact of the Covid-19 flare-up in a test of the Spanish populace. A cross-sectional think about this was conducted through a web overview of 3480 individuals. The presence of depression, anxiety and post-traumatic stress disorder (PTSD) was assessed with screening tests from 14 March. Clear investigations were carried out and linear regression models compiled. The 18.7% of the test uncovered depressive, 21.6% anxiety and 15.8% PTSD indications. The



impact on our psychological well-being caused by the widespread and the measures embraced amid the primary weeks to deal with it are apparent. In expansion, it is conceivable to recognize the requirement of more noteworthy psychological bolster in common and in certain especially defenceless groups (Sanquino, et al., 2020).

A cross-sectional ponder of medical students conducted in May 2020 with questionnaires with respect to social and statistic status and GAD-7 for anxiety and PHQ-9 for depression questionnaires. Analysis illustrated a better predominance of moderated and extreme anxiety and depression side effects among medical students amid COVID19 widespread, essentially among women and on medical students relating money related impedance related to COVID-19 epidemic (Carloz Izaias Sartorao Filho, 2020).

An online survey was run from February 19 to March 6, 2020; a add up to of 2,182 Chinese subjects taken part investigated whether medical health specialists had more psychosocial issues than nonmedical health specialists amid the COVID-19 flare-up. Mental wellbeing factors was evaluated through the Insomnia Seriousness File (ISI), the Symptom Checklist-revised (SCL-90-R), and the Patient Health Questionnaire-4 (PHQ-4), which included a 2-item anxiety scale and a 2-item depression scale (PHQ-2). Compared with nonmedical health workers (n = 1,255), medical health workers (n = 927) had the next predominance of insomnia (38.4 vs. 30.5%, p < 0.01), anxiety (13.0 vs. 8.5%, p < 0.01), depression (12.2 vs. 9.5%; p < 0.04), somatisation (1.6 vs. 0.4%; p < 0.01), and obsessive-compulsive indications (5.3 vs. 2.2%; p < 0.01). They too had higher added up to scores of ISI, GAD-2, PHQ-2, and SCL-90-R obsessive-compulsive indications (p  $\leq$  0.01). Amid the COVID-19 flare-up, medical health specialists had psychosocial issues and hazard variables for creating them. They were in need of consideration and recuperation programs (Zhang, et al., 2020).

Concurring to the consider conducted among 370 Covid-19 survivors of Wuhan Jinyintan Clinic utilizing PHQ-9 and GAD-7, almost 10% of COVID-19 survivors create anxiety or sadness, since of post-discharge leftover respiratory indications, stress about repeat, and contamination to others. Female COVID-19 survivors are more vulnerable to depression. COVID-19 survivors ought to not be excessively stressed approximately an uncommon occasion of repeat. In expansion, depression caused by home quarantine way of life ought to be moreover famous and calmed. (Chaumin Wu, 2020).



Mental wellbeing issues were at slightest twice as predominant as in non-pandemic circumstances. An open wellbeing reaction which incorporates widespread as well as particular and demonstrated clinical intercessions is required (Fisher, et al., 2020).

Agreeing to the consideration assessed mental wellbeing within the United Kingdom (UK) and Austria amid the COVID-19 lockdown. Strategies utilized are Cross-sectional, contemporaneous online studies pointing at agent tests according to age, sexual orientation, education, and region were performed after four weeks of lockdown within the UK as well as in Austria. Pointers of mental wellbeing were mental quality of life (WHOQOL BREF), wellbeing (WHO-5), sadness (PHQ-9), uneasiness (GAD-7), stretch (PSS-10), and rest quality (ISI). The predominance of depressive-, anxiety-, or insomnia side effects expanded altogether in Austria and the UK. To be that as it may, the predominance of serious side effects is around three times higher within the UK than in Austria. Psychological support ought to be direly advertised to check this improvement in both nations. (Pieh, D, & Probist, 2020).

A transverse study on attitude and practice on SARS COV-2 among Indian residents during covid 19 Lockdown in India revealed that females are good in attitude and practice during covid 19 pandemic. Similarly, joint family is having positive attitude and good practice. (Sathyamurthi et al., 2020)

### IV. METHODS AND MATERIALS

The major aim of the study is to understand the stress and anxiety related issues faced by the general public of India during Covid19 outbreak. The objectives of the study are to assess the demographic details of the respondents, to investigate the prevalence of stress and anxiety related mental health issues during Covid19 outbreak among the Indian population and to study the influence of demographic variables towards the mental health issues among the Indian population during Covid19 outbreak.

The study employed diagnostic research design and followed simple random sampling. There were 236 samples taken from all over India. A literature search was conducted to understand the mental health issues that prevail among people during Covid19 outbreak. A semi structured questionnaire includes the demographic profile, Patient health questionnaire and Generalized Anxiety Disorder questionnaire to understand the mental health status of the people in India during Covid19 Outbreak. The questionnaire is a self-administered version of the diagnostic instrument for common mental disorders. The PHQ-9 is the depression



module, which scores each of the nine DSM-IV criteria as "0" (not at all) to "3" (nearly every day). It has been validated for use in primary care. Using the threshold score of 10, the GAD-7 has a sensitivity of 89% and a specificity of 82% for GAD. It is moderately good at screening three other common anxiety disorders - panic disorder (sensitivity 74%, specificity 81%), social anxiety disorder (sensitivity 72%, specificity 80%) and post-traumatic stress disorder (sensitivity 66%, specificity 81%). The data analysis was done using SPSS 20.

#### V. <u>RESULTS AND DISCUSSION</u>

The major priority of the study is to understand the mental health status and the mental health issues prevailing among people in India during covid19 outbreak. Out of 236 samples, 145 respondents were females and 38.6% of the respondents were males. Figure 1.1 represents the education level of respondents in the study.

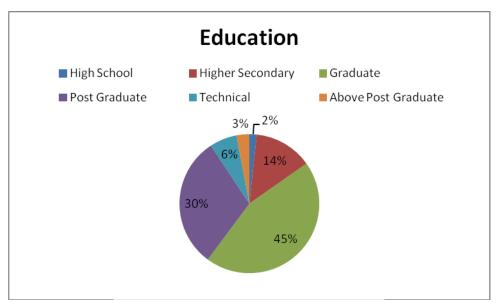


Fig 1.1 Education level of the respondents

It illustrated that 45% of the respondents were graduates which is high in number compared to other qualifications. Only a few number (6%) were from high school education and rest are having above high school level qualification. Respondents' representation from urban and rural areas doesn't differ much as it showed 53% and 47% respectively. From the analysis, it was found that 5.9% of the sample taken is suffering from moderately severe depression and 47% was not suffering from any symptoms of depression. Results of generalized anxiety disorder scale revealed that 32.3% is having mild and just 3% is having severe anxiety.



Table 1.1 Demographic profile wise Level of Psychological Health and Generalized
Anxiety Disorder

Variable		PHQCLASS					GAD CLASSIFICATION				
		No ne	Mild	Moder ate	Modera tely severe	Tota l	Non e	Mild	Moder ate	Seve re	Tota l
Gender	Male	50	29	9	2	90	52	30	6	2	90
		45 %	34.9	32.1%	14.3%	38.1	41.6	39.5 %	21.4%	28.6	38.1
	Female	61	54	18	12	145	73	45	22	5	145
		55 %	65.1 %	64.3%	85.7%	61.4 %	58.4 %	59.2 %	78.6%	71.4 %	61.4 %
		111	83	28	14	236	125	76	28	7	236
Total		100 %	100 %	100%	100%	100 %	100 %	100 %	100%	100 %	100 %
Place of Reside nce	Rural	70	40	13	2	125	77	33	12	3	125
		63. 1%	48.2 %	46.4%	14.3%	53.0 %	61.6	43.4 %	42.9%	42.9 %	53.0 %
	Urban	41	43	15	12	111	48	43	16	4	111
		36. 9%	51.8 %	53.6%	85.7%	47.0 %	38.4 %	56.6 %	57.1%	57.1 %	47.0 %
		111	83	28	14	236	125	76	28	7	236
Total		100 %	100 %	100%	100%	100 %	100 %	100 %	100%	100 %	100 %
Educat	High School	1	2	1	0	4	3	1	0	0	4
		.9%	2.4%	3.6%	0.0%	1.7%	2.4%	1.3%	0.0%	0.0%	1.7%
	Higher Secondar y	19	10	3	0	32	21	8	2	1	32
		17. 1%	12.0 %	10.7%	0.0%	13.6	16.8 %	10.5	7.1%	14.3	13.6
	Graduate	52	33	12	9	106	57	31	16	2	106
		46. 8%	39.8 %	42.9%	64.3%	44.9 %	45.6 %	40.8 %	57.1%	28.6	44.9 %
	Post Graduate	28	29	11	4	72	32	29	9	2	72
		25. 2%	34.9 %	39.3%	28.6%	30.5	25.6 %	38.2 %	32.1%	28.6	30.5
	Technica 1	7	6	1	1	15	8	4	1	2	15
		6.3 %	7.2%	3.6%	7.1%	6.4%	6.4%	5.3%	3.6%	28.6 %	6.4%
	Above Post Graduate	4	3	0	0	7	4	3	0	0	7
		3.6 %	3.6%	0.0%	0.0%	3.0%	3.2%	3.9%	0.0%	0.0%	3.0%
Total		111	83	28	14	236	125	76	28	7	236
		100 %	100 %	100%	100%	100 %	100 %	100 %	100%	100 %	100 %

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Bivariat analysis showed that 85.7% of moderately severe cases of depression were accounted by females. In the case of anxiety, 71.4% of severe anxiety was expressed by females. Mild (51.8%) and moderate (53.6%) level of depression as well as 56.6 and 57.1 mild and moderate level of anxiety respectively showed in urban area which is comparatively high with respect to rural areas. Majority of the respondents (83.1%) admits covid 19 as a pandemic situation but meagre (9.7%) experienced covid 19 as irritated.

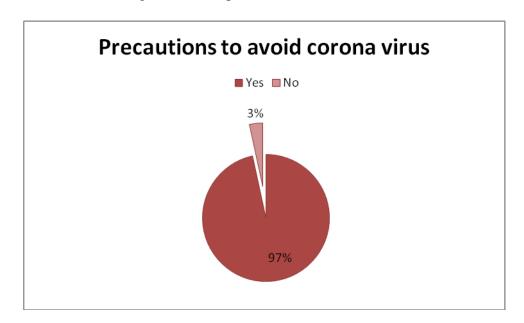


Fig 1.2 Precautions to avoid corona virus

As Fig 1.2 showed, majority of the respondents (96.6%) are taking precautions to avoid covid 19 whereas meagre (3.4%) is not taking precautions like social distancing, frequent hand wash and wearing mask.

#### VI. <u>CONCLUSION</u>

The main focus of the study is to understand the mental health issues prevailing among people in India during Covid19 outbreak. Though there are people with healthy mental status there were people who were suffering from mild to severe mental health issues and it was identified by evaluating the mental health status of the people using PHQ-9 and GAD-7. From the above illustrated results, it was found that females are having quite higher level of depression compared to males. In the case of anxiety also, females have higher level compared to males. There are few studies which showed that major depression is higher among women than in men (Cyranowski, Frank, Young, & Shear, 2000; Ford & Erlinger,



2004). This may be because females are having overburden which they face at the time of lockdown in home. As they are responsible to take care of the entire family and their career, they might end up in stress at the time of pandemic situation. People from urban area are more anxious and depressed compared to rural areas. In the urban area, the spread of corona virus may be higher as the population density is higher. The analysis showed that people are more conscious in taking precautions against covid 19. This can be because of the influence of social media awareness campaigns and the ability of public to understand the risk of the particular disease which sowed drastic effects in other countries.

This study is limited to few demographic variables and focuses on anxiety and depression. It can be extended by including more variables such as type of family, marital status, income and so on. Further influence of precipitative factors of mental health can be deeply looked into and taken for future studies in connection to the current research.

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