Original Research Article

A cross-sectional study on knowledge, and practice during COVID-19 and psychological impact of lockdown among work from home employees of Bengaluru

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Abstract

Background: COVID-19 pandemic presented as a black swan event, and as a measure to curtail it the governments of different countries took various approaches. The prime minister of India declared a three-week nationwide lock down starting from midnight the 25th of March 2020. Mental health is a crucial aspect that needs to be addressed during this lock-down. The COVID-19 epidemic has caused serious threats to people's physical health and lives. **Aims And Objectives:** The objective of this study is to assess the psychological impact of the current lockdown on the working from home population of Bengaluru, India **Materials and methods**: A quick online cross-sectional survey was performed among working from home population of Bengaluru during COVID-19 Pandemic. A pre-validated online questionnaire on COVID-19 was distributed through social media (Whatsapp), email. The questionnaire comprised of six sections to collect data regarding Consent, demographics, knowledge, perception, and practices and Kessler's psychological distress scale towards COVID-19 pandemic. Descriptive statistics like percentage, mean, SD (Standard Deviation) and association of demographics with knowledge, perception and practice scores about COVID-19. **Results:** 93.4% of the participants were able to answer the symptoms of covid-19. 87.03% of them were able to recognize the susceptible population for covid-19. 35.3% were likely to have mild-moderate mental disorder. **Conclusion:** knowledge and awareness regarding covid-19 symptoms, complication and preventive measures is adequate in the study participants. however, the actual practice of preventive measures is low when compared to the extent of knowledge of the disease. the prevalence of mild-to-moderate psychological distress, in 35.3% of the participants in the present survey indicate that the pandemic and the lockdown has led to a significant increase in the mental morbidity of mostly milder intensity among work from home employees and suggest a need to address the same.

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INTRODUCTION

Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. On 31st December 2019, a cluster of pneumonia of unknown aetiology was reported in Wuhan city, Hubei province of China1. It was determined as a Public Health Emergency of International Concern (PHEIC) on 30 January 2020, characterized as a pandemic on 11 March 20202. COVID-19 pandemic presented as a black swan event, and as a measure to curtail it the governments of different countries took various approaches3. COVID-19 has affected 219

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countries and territories till date and about 132 million cases have been confirmed. The prime minister of India declared a three-week nationwide lock down starting from midnight the 25th of March 2020 to the 14th of April 2020, explaining that it was an essential and effective measure for breaking the COVID-19 infection cycle. It was ordered after a 14-hour voluntary public curfew on 22 March, followed by enforcement of a series of regulations in the country's COVID-19 affected regions. On 1 May, the Government of India extended the nationwide lockdown further by two weeks until 17 May. The Government divided all the districts into three zones based on the spread of the virus—green, red and orange—with relaxations applied accordingly. On 17 May, the lockdown was further extended till 31 May by the National Disaster Management Authority. This pandemic experience with an unknown agent to this large scale was new to most Indians leading to great uncertainty and significant adverse consequences for mental health. Although the overall impact on education and mental health of the university environment is still unknown, it is expected to be very considerable4. While this may have been effective in helping to curb the spread of the COVID-19 in India, it has not, perhaps, been conducive to the emotional and mental health of some groups. Even before the global pandemic made working from home temporarily was a routine for many. But, then, in March 2020, the pandemic struck. Suddenly, everyone was forced to stay at home and develop new ways of working. The working environment significantly changed with thousands of jobs lost and women impacted at higher rates than men3, 4. For those employed in sectors able to work remotely, mostly white-collar professional workers, their homes have now become their workplace, school, and place for relaxation. Mental health is a crucial aspect that needs to be addressed during this lock-down. The COVID-19 epidemic has caused serious threats to people's physical health and lives. It has also triggered a wide variety of psychological problems, such as panic disorder, anxiety and depression5. We underestimate the cognitive and emotional load that this pandemic brings, or the impact it will have on your productivity, at least in the short term. The objective of this study is to assess the psychological impact of the current lockdown on the working from home population of Bengaluru, India.

METHODOLOGY

Study population: Adults above the age of 18years, who are working from home, were considered for study.

Sampling technique

Survey instrument Considering the current pandemic and lockdown situation in this study conducted using an online questionnaire. This is a quick online cross-sectional survey that was conducted for 15 days from 1st to 15th June, 2020. Due to nationwide lockdown during this period, difficulty to do sampling, convenience sampling done. The number of participants taking part in the study was considered as the sample size. We adopted a structured questionnaire in Google form format including consent form to collect the data. Questionnaire containing questions on knowledge, awareness, practice and Kessler's psychological distress scale (K10)[10] which is a 10-item questionnaire intended to yield a global measure of psychological distress based on questions about anxiety and depressive symptoms that a person has experienced in the most recent 4-week period.

K-10 questionnaire scoring:

score < 20 - likely to be well
score 20-24 - likely to have a mild mental disorder
score 25-29 - likely to have moderate mental disorder
score >30 - likely to have a severe mental disorder

Statistical analysis

The data was collected and compiled in MS Excel and analysis was done. Descriptive statistics has been used to present the data. Data was analysed using SPSS (IBM SPSS Statistics for Windows, Version 26.0, Armonk, NY: IBM Corp. Released 2019). Qualitative variables are expressed as frequency and percentages and Quantitative variables are expressed as mean and standard deviation. Tests of significance such as chi square and correlation coefficient were applied.

RESULTS

A total of 270 participants who fulfilled the inclusion criteria participated in this study 63.7% of them are females and 36.29% of them males. Mean age 26.63±6.83 years.

Table 1: Age

Age Range	Numbers	%
18-25	132	48.9
26-35	119	44.1
36-45	13	4.8
46-55	6	2.2

Of the 270 study subjects, 48.9% were in the age group 18-25 years, 44.1% were in the age group 26-35 years and only 2.2% were in the age group 46-55 years.

Of the 270 participants, 88.5% of them were staying with family, 8.5% of them were staying alone and 2.9% in hostel or with roommates. The average no of days of lockdown was 41 days.

Knowledge and practice regarding COVID-19

35.2% of the participants gave history of travel in the last 14 days. 91.2% of the study participants were able to answer the modes of COVID-19 infection. 74.07% said COVID-19 is treatable. 93.4% of the participants were able to answer the symptoms of COVID-19. 96% of the participants agreed that the spread can be prevented by use

of masks, handwash and social distancing. 80.4% of them said that infection can spread by droplets via cough or exhalation. 65.2% of the study participants were of the opinion that majority of the people who got COVID-19 infection becomes seriously ill or develops breathing problem. 90.7% of them said a person with COVID 19 will definitely develop symptoms. 45.5% of the participants said virus cannot be transmitted in hot and humid climates. 50.4% of the participants were of the opinion that specific treatment was available for COVID-19. 87.03% of them were able to recognize the susceptible population for COVID-19. 35.19% of them were of the opinion that hot bath after an outing can prevent infection while 24.5% thought exposing themselves to hot climate or the sun prevents the infection. 72.6% said positive patients should be qauarantined for 14 days while 9.7% said isolation for 21 days. Among practice, 72.2% said they washed their hands for 10 seconds and only 4.4% said they washed hands for 20 seconds. 91% of them thought it was safe to travel within the country and 80% of them said they still shook hands or hugged while meeting family and friends. 89% of the participants said they would not stigmatize the patients with COVID-19. 87.03% said they follow social distancing of >1m when they go out and 90% said they regularly wash hand or sanitize in day-to-day activities. 87.03% also said they cover their moth and nose with tissue or elbow while sneezing or coughing. 82.2% of the participants said they would report to the local PHC or hospital if they developed symptoms while 17.8% said they would either take over the counter drugs or go about their daily routine.

Table 2: Knowledge and practice regarding COVID-19

KAP Questionnaire		Number (N=270)	Perecentage
Any h/o travel in the last 14 days.	Yes	175	35.2%
	No	95	64.8%
Corona virus (COVID-19) is spread through	Droplet infection (coughing, sneezing)	12	4.40%
	Fomite transmission (through objects or materials e.g. Metal surfaces, furniture etc.)	6	2.20%
	Close contact with COVID-19 positive person	6	2.20%
	All of the above	246	91.20%
Is COVID-19 infection treatable?	Yes	200	74.07%
	No	70	25.93%
Symptoms of COVID-19	Fever	6	2.20%
	Cough	6	2.20%
	Breathing Difficulty	6	2.20%
	All of the above	252	93.40%
COVID-19 can be prevented by use of masks, hand wash and social distancing	Yes	259	96%
	No	11	4%
People can also catch COVID-19 if they breathe in droplets from a person with COVID-19 who coughs out or exhales droplets	Yes	217	80.40%
	No	53	19.60%
The majority of people (about 80%) who get COVID-19 becomes seriously ill and develops breathing problem.	Yes	176	65.20%
	No	94	34.80%
The person infected with COVID-19 definitely develops symptoms	Yes	245	90.70%
	No	25	9.30%
COVID-19 virus CANNOT be transmitted in areas with hot and humid climates.	Yes	123	45.50%
	No	147	54.50%
Specific treatment is present for COVID-19 infection	Yes	136	50.40%
	No	134	49.60%
Taking HOT bath prevent corona virus infection	Yes	95	35.19%
	No	175	64.81%

Exposing yourself to sun or hot climate (>25degree Celsius) prevents COVID-19 infection.	Yes	66	24.50%
	No	204	75.50%
Who is more susceptible to COVID-19 infection?	Elderly above 60 years of age	14	5.27%
	Children	12	4.40%
	Comorbidities like DM, Heart conditions and Lung Diseases	9	3.30%
	All of the above	235	87.03%
If someone tests positive for COVID-19 , for how long are they quarantined?	14 days	196	72.60%
	10 days	30	11.10%
	3 weeks	26	9.70%
	21 days	18	6.60%
How long you should wash your hand for prevention against this infection?	1 minute	32	11.90%
	10 minutes	31	11.50%
	20 seconds	12	4.40%
	10 seconds	195	72.20%
According to you, is travelling within country safe?	Yes	91	33.70%
	No	179	66.30%
Do you shake hands or hug upon the meeting of friends/family members/others?	Yes	55	20%
	No	215	80%
If you know anyone who has been suspected or treated for COVID-19 what will you do?	Banish them from community	15	5.50%
	Complain against them	15	5.50%
	Not stigmatize them and treat them like any other illness	240	89.00%
Do you touch frequently your mouth, nose, and eyes?	Yes	259	96%
	No	11	4%
If you develop fever with dry cough or sore throat, what should you do?	Report to local hospital or PHC or call the helpline	222	82.20%
	Take over the counter drugs	16	5.92%
	Ignore and go about your daily activities	32	11.88%
Do you cover your mouth and nose with a tissue or elbow when sneezing?	Yes	235	87.03%
	No	35	12.97%
Do you follow social distancing (>1 m) when you go and meet other people?	Yes	240	89%
	No	30	11%
Do you wash hands or use Sanitizer regularly in your daily routine activities?	Yes	245	90.70%
	No	25	9.30%

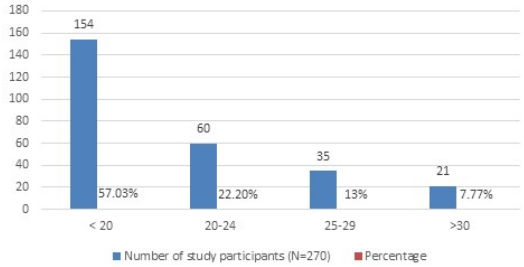

Figure 1: Kessler's Psychological distress scale (K-10) scoring of the study participants

57.03% with score < 20 (likely to be well) while 22.2% had scored between 20-24 (likely to have mild mental disorder). 13% were likely to have moderate mental disorder while 7.77% were affected severely affected.

Table 4: Kessler's psychological distress scale (K10)[10] to yield a global measure of psychological distress

K-10 SCORING	<20	20-24	25-29	>30	Chi-square	Degrees of freedom	p-value	Interpretation
GENDER								
Male	58	15	17	8	5.75	3	0.125	Not
Female	96	45	18	13				Significant
EDUCATION								
Highschool	1	0	0	0	12.1	6	0.06	Not
Undergraduate	63	38	21	8				Significant
Postgraduate and above	90	22	14	13				
ACCOMODATION								
Alone	17	8	1	1	24.8	9	0.003	Significant
Roommate	1	0	2	2				
Hostel	6	6	3	3				
Family	135	56	15	14				
LOCKDOWN								
Going out <1hr a day	46	8	10	7	13.3	6	0.039	Significant
Going out >1 hr a day	10	10	3	3				
Not going out at all	98	49	16	10				
DURATION OF LOCKDOWN								
15-30 days	59	24	7	7	16.1	9	0.064	Not
31-45 days	41	27	3	3				Significant
46-60 days	48	11	10	10				
>60 days	13	5	1	1				

Table 4: On assessment using kessler's psychological distress scale to yield the measure of psychological distress, statistically significant association was found between the type of accommodation with severity of distress. also, significant association was found between the number of hours in a day then person was isolated and distress. there was no significant association found between gender and education with psychological distress.

DISCUSSION

With no treatment or vaccine in sight to control the spread of COVID pandemic, almost all the countries have adopted the lockdown as a potentially effective strategy. India was also quite early in its response by imposing lockdown, as early as, March 25, 2020 (WHO declared COVID-19 to be pandemic on March 11, 2020). Even though lockdown was an important measure to tackle the exponential rise of COVID cases, it had a widespread impact on the economy, mental health, and daily living of the public. Hence the current study was planned to evaluate the psychological impact of lockdown on the work from home employees with an objective to assess the likeliness of developing psychological distress among them. Working from home may have seemed conducive for many employees prior to the Covid19 pandemic and the lockdown situation. However, this perception had changed in the current year when the whole world was affected by the Covid19 pandemic. It seems clear that many employees may have found working from home acceptable at the initial stage, but as the lockdown extended to months, many of these employees were also finding it exhausting to work from home[7]. Our study found that. Majority (93.4%) of the participants were able to answer the symptoms of COVID-19 and 96% of the participants agreed that the spread can be prevented by use of masks, handwash and social distancing which were similar to a study by Nagpurkar K at al[8], majority (99.20%) of the participants had showed right practices to avoid spread of COVID-19. Prabina *et al.*[9] in their study in Nepal reported that both awareness (89.2%) as well as self-reported practice (91%) regarding hand hygiene was high among the study participants. In the current study, majority (93.4%) could identify the symptoms of COVID correctly, 87.03% correctly answered who were susceptible for COVID-19. A study by Nama S *et al.*[10], 74.6% could identify the symptoms of COVID correctly, 74.6% correctly answered who were susceptible for complications. In our study 57.03% reported mild distress and 22.2% reported moderate distress. In a study by Grover S *et al.*[11], 70% of the participants reported moderate level of stress.

CONCLUSION

Knowledge regarding COVID-19 symptoms, complications and preventive measures is adequate in the study participants. However, the actual practice of preventive measures is low when compared to the extent of knowledge of the disease. This reluctance to maintain the COVID Appropriate Behaviour (CAB) does not contribute to stopping the transmission and ending the pandemic. The present survey was done at the beginning of the epidemic in the country and not many studies are

available regarding this topic. In the present study, the association of psychological distress and longer duration of lockdown was seen, which could be an indicator of increase in likeliness of developing mental disorders with increase in lockdown duration and work from home. The prevalence of mild-to-moderate psychological distress, in 35.3% of the participants in the present survey indicate that the pandemic and the lockdown has led to a significant increase in the mental morbidity of mostly milder intensity among work from home employees and suggest a need to address the same.

REFERENCES

1. https://www.who.int/emergencies/diseases/novel-coronavirus-2019
2. https://www.who.int/news-room/detail/08-04-2020-statement-of-the-twenty-fourth-ihr-emergency-committee
3. Tandon R. The COVID-19 pandemic, personal reflections on editorial responsibility. Asian J. Psychiatry. 2020;50 doi: 10.1016/j.ajp.2020.102100. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
4. Closure of universities due to coronavirus disease 2019 (COVID-19): impact on education and mental health of students and academic staff Cureus, 12 (2020), p. e7541 https://doi.org/10.7759/cureus.7541
5. Qiu J, Shen B, Zhao M, Wang Z, Xie B, Xu Y. A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations. General Psychiatry. 2020 Mar 6;33(2):e100213. doi:10.1136/gpsych-2020-100213.
6. Kessler, R.C., Andrews, G., Colpe, *.et al.* (2002) Short screening scales to monitor population prevalences and trends in non-specific psychological distress. Psychological Medicine, 32, 959-956.
7. Marimuthu, Pravinah and Vasudevan, Hemaloshinee. (2020). THE PSYCHOLOGICAL IMPACT OF WORKING FROM HOME DURING CORONAVIRUS (COVID 19) PANDEMIC: A CASE STUDY. 6. 18-29.
8. Karan B Nagpurkar, Rajesh V Bhosale. Knowledge, perception and practices towards COVID-pandemic among epidemiologists of India during period of the COVID-19 Pandemic: Online cross-sectional survey. MedPulse International Journal of Community Medicine. April 2021; 18(1): 01-06. https://www.medpulse.in/
9. Prabina Ghimire, Samriddh Dhungel. Knowledge, Attitude and Practice of healthcare workers Towards Coronavirus Disease 2019(COVID-19) Pandemic. Journal of Nepal Health Research Council, 2020, Apr-Jun;18(47): 293-300
10. Suman Nama, Pratima Matli, Aswan Gaddala, J Rajamouli, Sachin Gurnule. A cross-sectional study on knowledge and practices regarding prevention of COVID-19 among hospital personnel in a tertiary care hospital of Karimnagar, Telangana. MedPulse International Journal of Community Medicine. April 2021; 18(1): 07-10. https://www.medpulse.in/
11. Grover, Sandeep *et al.* "Psychological impact of COVID-19 lockdown: An online survey from India." Indian journal of psychiatry vol. 62,4 (2020): 354-362. doi:10.4103/psychiatry.IndianJPsychiatry_427_20.

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