



# PSYCHOLOGICAL IMPACT OF COVID 19 PANDEMIC AMONG HEALTHCARE PROFESSIONALS IN KERALA

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## ABSTRACT

*Mental health is a major concern as it is attributed to decreased quality of life and productivity in work. Psychological well being of all other professions discussed many times and interventions adopted. But the mental health of Health Care Workers (HCWs) are least mentioned and in this pandemic era it had raised its significance. This work aimed to identify the prevalence of Depression and Anxiety among front line HCWs deployed for COVID 19 patient care in reputed Hospitals in Kerala. The data collected by an online survey, circulated among frontline HCWs especially Doctors, Nurses and PG scholars. The sample size obtained was 130 participants in a random survey irrespective of gender. The data collection and analysis of the results was done using the Patient Health Questionnaire (PHQ 9) and Generalised Anxiety Disorder 7 item (GAD-7). Data revealed that HCWs on COVID 19 duty experience mild to moderate levels of depression and anxiety. In which anxiety is more prevalent in all categories. HCWs in younger age (25-28) are more responsible to take COVID care and they had moderate level of anxiety. Doctors experienced more psychological disturbances than nurses and PG Scholars. COVID 19 pandemic has significant levels of psychological disturbances in HCWs and it indirectly reflects in the patient care. It is recommended to take care of the mental health of HCWs by appropriate measures. HCWs should be aware of self care in the form of relaxation techniques like Yoga, Meditation and breathing exercises. There should be a team lead/supervisor to monitor the physical and mental wellbeing of each category of HCWs. Those who are identified with severe levels of symptoms referral, Yoga Therapy sessions and treatment should be ensured.*

**KEYWORDS** - *Depression, Anxiety, Psychological impact, COVID 19, Health Workers.*

## INTRODUCTION

Kerala the southernmost state of India, always had an international mention for its health care mechanisms which left behind its financial backwardness. Because of great achievements in population health it is always been referred as “Kerala Model Development” and it has become a reference model for many lower income countries. Many of Kerala healthcare systems surpass other Indian states, some of which can be even compared with developed countries. Effective and well organised healthcare system is the key contributor to these achievements. Ever since the formation of the state, health care was Government's top priority and which was practised in a fair combination between traditional system and modern system of medicine. The private health care provisions in Kerala also work in hand with the facilities of public sector, which in fact help to maintain high quality standards in health sector (Koji NABAE 2003). Kerala has also gained worldwide recognition for its fight against

COVID 19 Pandemic; it was all possible due to the Government and commendable contribution from Health Care Workers (HCWs). Since the reported first case in Kerala, the HCWs and all public sector employees responsible to ensure the population health including law and enforcement working double the time than before. This situation is bringing them under tremendous workload and emotional stress.

Frontline HCWs are those who are the first respondents to a reported case in a healthcare setting. There can be suspected or confirmed cases of COVID positive patients. The chance of infection and become a carrier of virus to transmit to other non infected colleagues, patients and staffs is another major stressor. The effective management of COVID 19 by Kerala health system enabled a worldwide discussion on “Kerala Model” management of the pandemic. This was due to effective management despite its vulnerabilities such as dense population, financial backwardness and contact exposure of



foreign contacts (Chathukulam J 2021). However, the HCWs who are on tireless service need much more attention and their health status should be discussed more. They are also humans need the same attention and care as the public population. The Physical and mental status of health care provider directly impact the lives of a patient who cares. More positive outcomes should be expected when the mental well being of all front line HCWs are maintained. During a Pandemic burden the health attention of public is more discussed in media and Government bodies, no intervention is practically applied.

The COVID 19 Pandemic had created significant global health burden. Psychological impact of infectious outbreak on healthcare professionals and general population happened in history also, one fine example could be the psychological disturbances observed in SARS (Severe Acute Respiratory Symptom) in 2003 (McAlonan 2017). The pandemic outbreak caused occurrence of varied psychological disturbances such as depression, anxiety, stigma, confusions, in significant feeling of getting affected by the disease. It had reflected in healthy people, high risk people and health care providers. Mass quarantine will generate a feel of fear and anxiety in Health Care Workers (HCWs) working in hospitals and isolation Units. Frontline Health workers are having direct contact with suspected and confirmed cases of COVID 19 cases. They are more exposed to infected patients and having more work stress due to long working hours and probably affected mental health.( Wang D et al. C2020).

HCWs having psychological distress ranging from sleep disturbances, feeling of helplessness, stigma, personal isolation and isolation from the family, lack of social support as well as over concern about family members and friends being exposed to infection.( Zheng W 2020). Mental health issues and psychological disturbances are quite often among HCWs, although they usually won't seek health care assistance or they neglect. (Xiang Y-Tet al. W2020).

The common psychological disturbances seen in HCWs on pandemic duty is "burnout". Classically it can be described as emotional exhaustion, depersonalisation (loss of caring, compassion and empathy) and low sense of personal achievement. This can be seen in varied presentation and one can be expressed more. Burnout can have significant impact on the capability and delivery of healthcare. HCWs on quarantine may experience anxiety and guilt because of the thought of they may infected their team, family or patients. They have to undergo a sudden separation from their family and working environment can cause more sense of social isolation. Doctors or team head have to often make strong decisions and choices about removing ventilation and

explain the situation to family members. This can put them under tremendous mental pressure. Professionals who are working in hospitals during pandemic have to experience stigmatising attitude from the general public. Friends and families may show hesitations to interact with them. There have been instances of landlord refuses to admit the healthcare workers after pandemic duty ( Abel Thamby & Jaisoorya TS 2020).

## LITERATURE REVIEW

The COVID 19 is latest in the list of pandemic which has wider community transfer. Discussions are going on the mental health of Patients who are affected with disease and their stress in quarantine or isolation. Effects are made to address the psychological disturbance faced by the public, but the research and literature on the mental health of HCWs are still not recognised much even amidst the pandemic. India has to face more medico socioeconomic challenges as it is not completely immune or prepared to fight a sudden onset of pandemic. As a low income country India has limited resource settings in health care to fight a global pandemic. To curb the community spread, different strategies had been administered in Health care settings such as Curfew, restrictions on regular OPD visits, elective surgical procedures, complete duty shifts, more working hours, and change in leave pattern and so on. This had probably affected the stability of mental health of most of the HCWs. India can learn and took guidance from the countries which affected earlier, in terms of the measures implemented to take care of psychological well being of front line HCWs (Snehil Gupta et al.2020).

A study in China found that female gender and direct contact with COVID-19 patients were significant risk factors associated with higher levels of psychological distress. Wearing full PPE is exhausting and proper work-rest cycles should be ensured. Skin damage due to frequent hand washing and enhanced infection-prevention measures could also compound one's psychological Personal coping style. Presence of job-related burnout might also have an important impact on levels of anxiety and depression among healthcare workers. A pandemic leads to short and long-term mental health burden for healthcare workers. Emerging, current literature suggests that psychological distress is a very real outcome for staff providing health care amidst the COVID-19 pandemic. A study published March 23, 2020, surveyed 1257 healthcare workers in 34 hospitals in China. It found that rates of psychological stress were high: 50.4% had symptoms of depression, 44.6% for anxiety, 34% for insomnia, and 71.5% for general psychological distress. Nurses,



female staff, staff in Wuhan, and staff working directly with patients were more likely to have “severe” scores on these outcomes (Lai et al., 2020).

HCWS have been highly strained during the pandemic. As they have higher risk of infection, and longer working hours without recovery time. The shortage of supplies of Personal Protective Equipment and they have to take ethically and mentally challenging decisions around resource allocation and patient care.(Kanchibhotla Divya et al.2021)

There should be a study shift to understand how the experience of patient care can be a positive activity for HCWs. The resource setting identification is needed to focus more on the wellbeing and empowerment of healthcare providers. There should be more research proposals and interventions to create evidence based frame work to adopt, examine an implement strategies to achieve the physical and mental health when they are exposed to stress. There are studies which show that positive

attitude development is possible with suitable interventions. Research evidence suggests improvements in quality of life of primary and secondary care givers are possible and promoting resilience to avoid the adverse impact of continues exposure to stressful environment. (Kalaitzaki, A. E et al 2020).

## RESEARCH METHODS

The data were collected using an online survey from April 2021 to June 2021. Patient Health Questionnaire 9 item (PHQ-9), Anxiety Disorder 7 item scale (GAD-7) and demographic data of participants collected from HCWs in reputed hospitals in Kerala. 130 Frontline HCWs including Doctors, PG scholars and Nurses were participated between 25 to 40 age group. In order to reach the survey to more HCWs participants were encouraged to share the Survey form to their colleagues through social media platforms.

### PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

SI No.	Question	Not at all	Several days	More than Half days	Nearly every day
1	Little interest or Pleasure in doing things	0	1	2	3
2	Feeling down, depressed, or hopeless	0	1	2	3
3	Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4	Feeling tired or having little energy	0	1	2	3
5	Poor appetite or overeating	0	1	2	3
6	Feeling bad about yourself or that you are a failure or have let yourself or your family down	0	1	2	3
7	Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8	Moving or speaking so slowly that other people could have noticed. Or the opposite being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9	Thoughts that you would be better off dead, or of hurting yourself	0	1	2	3
10	If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?	Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult

Scores are calculated based on how frequently a person experiences these feelings. Each “not at all” is scored as 0,several days as 1,more than half the

days 2 and each nearly every day is 3. For obtaining the result added together column scores to get a TOTAL score. Referred to the PHQ-9 Scoring Box for interpretation of the results.



**Interpretation of total score**

Total Score	Depression severity
1-4	Minimal Depression
5-9	Mild Depression
10-14	Moderate Depression
15-19	Moderately Severe Depression
20-27	Severe Depression

**GENERALISED ANXIETY DISORDER 7 ITEM (GAD-7)**

Over the **last 2 weeks** how often have you been bothered by the following problems?

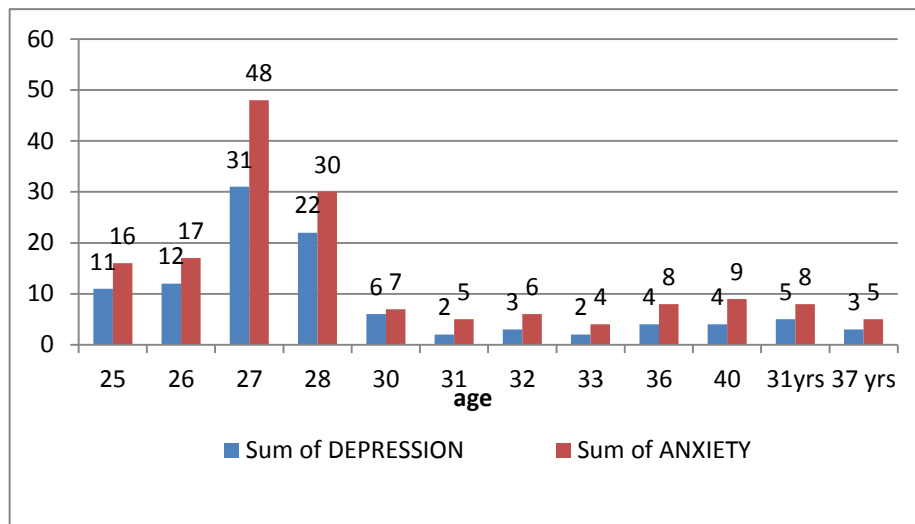
SI No.	Questions	Not at all	Several days	More than half the days	Nearly every day
1	Little interest or pleasure in doing things?	0	1	2	3
2	Feeling down, depressed or helpless?	0	1	2	3
3	Trouble falling or staying asleep or sleeping too much?	0	1	2	3
4	Feeling tired or having little energy?	0	1	2	3
5	Poor appetite or overeating?	0	1	2	3
6	Feeling bad about yourself or that you are a failure or have let yourself or your family down?	0	1	2	3
7	Feeling afraid as if something awful might happen?	0	1	2	3
	If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?	Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult

The GAD 7 score is calculated by assigning scores 0,1,2,3 to the response categories of not at all, several days, more than half the days, and nearly every day. Total score obtained by adding the columns of response. Cut of points of 5,10,15 might be interpreted as representing mild, moderate and severe levels of anxiety on the GAD-7.

**RESULT AND ANALYSIS**

Analysis of the survey was done in different ways so as to provide a clear conclusion. Obtained data analysed according to the age, job title of participants, overall depression and anxiety trend.

**CHART 1: ACCORDING TO AGE**

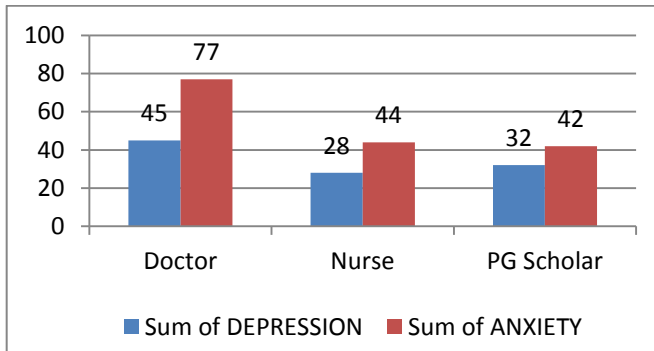




According to age it can be seen that age between 27 to 28 had experienced more psychological disturbance. This may be due longer working hours and more exposure to patients. HCWs of all age

experienced more anxiety than depressive symptoms irrespective of their age. HCWs aged above 30 had minimal mental health issues and they are having less number of duty days than younger HCWs.

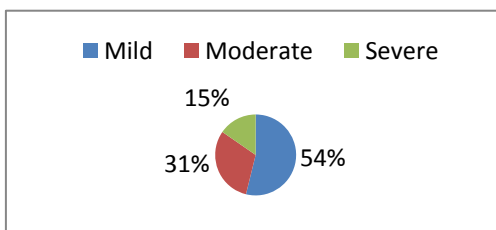
**CHAERT 2: ACCORDING TO JOB TITLE**



According to the position they hold HCWs showed significant result in survey report. Doctors experienced more psychological disturbances than nurses and Pg Scholars. Anxiety is more predominant than depressive symptoms in all categories. 77 % of

Doctors responded to anxiety symptoms and 45 % had depressive symptoms. Nurses and PG scholars share almost same proportions of psychological disturbances while performing duties.

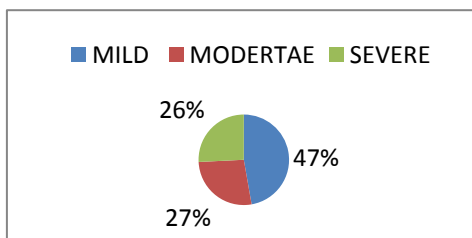
**CHART 3: ANXIETY IN HCWs**



In general HCWs are having more prevalent anxiety symptoms. Most of the participants responded for having mild to moderate level of anxiety. 15 % had

severe anxiety while they had to longer hours for COVID 19 patients care

**CHART 4: DEPRESSION IN HCWs**



47 % of HCWs had mild depressive symptoms and moderate to severe symptoms were seen in more than half of the participants.

working hours with COVID patient care. Mild to moderate level of depression and anxiety is observed in the majority of the respondents. Doctors had higher levels of emotional disturbances as they have more responsibilities like major decision making and new experience of the virus attack. They have to give proper explanations to media, authorities and government and guidance to subordinates during this

**CONCLUSION**

It is evident from the data that healthcare workers have a notable level of psychological disturbances while they are being exposed to long





pandemic surge. Lack of proper rest and sleep added more to ill health. Nurses and PG scholars on duty also experienced a similar proportion of psychological disturbances. They are not much concerned about their health status while on duty. Nobody reported seeking medical assistance after or before the duty. This could be a serious concern and not discussed much. HCWs are responsible for the control and recovery of the patients in this Pandemic time. Mental and physical well being is needed for everyone to give their maximum output in whatever duties they are holding. In case of HCWs their responsibilities have a wider spectrum of impact in the society. More measures should be adopted to take care of the Physical and psychological wellbeing of HCWs in stressful duty schedules.

### RECOMMENDATIONS

- All HCWs in the frontline should be made aware about the self care principles. Self care can be in the form of physical, relational, spiritual /religious wellness. This can be administered by setting a definite duty hour with breaks for proper rest and sleep. Provide time for recreational activities unrelated to their work; allow them to be connected with friends and family, Promote regular exercise, healthy diet and relaxation therapies like Yoga, Meditation and breathing exercises.
- Yoga Interventions – Yogic breathing technique Shad Kriya Yoga (SKY) can be advocated by trained Yoga professionals. For the convenience of HCWs in their busy schedule daily 10 minutes online session is advisable. It would reduce the stress and anxiety, sleep quality will improve. Can build resilience, Quality of work and Job satisfaction in HCWs.
- There should be a team leader/supervisor to ensure the wellbeing of HCWs. They can ensure good communication with the staff and take care of working hours and holidays to quality working experience. Regular team meeting to discuss the issues and create proper solutions.
- Flexible schedules can be provided for those who had an impactful issue within like deceased family members.
- Those who are in severe levels of psychological disturbance referral and needed medical care should be ensured.

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