

Perceived threat and psychological impact of COVID-19 on families of health care professionals in India

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ABSTRACT

Corona virus pandemic has been the silent weapon that has not only infected and killed people around the globe but also bore a sense of perceived threat. The psychological impact of this pandemic is well known to us but its impact on families of health care professionals in India is yet unknown. Exposure to this virus can be contained in the general populations but the families where one or more members are serving on frontline to protect India from this pandemic while try to cure the infected. Regularly getting exposed to the carriers of the virus sometimes ; without proper personal protect gears has shown to increase the level of perceived threat in the families of health care professionals. In this review; we are trying to gather contributing factors of perceived stress and psychological impact of Covid-19 on families of Health care professionals via available literature in the time of Covid -9.

Keywords: *Perceived threat; psychological impact; Covid-19; Families of HCW's.*

Since December 2019, Corona virus disease 2019 (COVID-19) outbreak arose from Wuhan, Hubei Province, China, which has spread expeditiously throughout China and other parts of the world. The first case of the Corona virus pandemic in India was reported on 30 January 2020. On 30 January, India reported its first case of COVID-19 in Kerala, which hiked up a few cases by 3 February; those infected were students who had returned from Wuhan, China (David Reid ;2020; Wikipedia; 2020). According to latest figures from the Ministry of Health, there are 17,265 confirmed COVID-19 cases as of 20th April 2020 of which 2,547 are cured and discharged, 543 people have lost their lives in India (Ministry of Health and Family Welfare; 2020). Worldwide, as millions of people stay put at their homes, the health care professionals have to put their armors on to fight battle against the unknown, putting themselves into risk.

The current medical strength is 9.27 lakh doctors for active service in India i.e ratio of doctor to patient in India is 1:1445 which is much less than recommended by WHO is 1:1000; 3.07 million registered nurses in India with the nurse to patient ratio is 1.7:1000 which is much less than recommended by WHO is 3:1000 (Ministry of Health and welfare; 2020). The pressing situation of COVID-19 is additionally causing HCWs' mental state problems such as stress,

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anxiety and depressive symptoms in China. The foremost important reason is that several HCWs lacked contacting with families (*Yuchen Ying ;2020*). At present, they may also experience fear of getting infected and spreading the virus to their families (*Caitlin Fichtel; 2020*).

Perceived threat is a person's cognitive assessment of the likelihood a danger's effect on them and how bad will it get. Perceptions of threat, are key to predicting adaptive health responses (AHRs)—responses that help protect the self from danger (*Ryan Goei; Sage publications 2014*). Jianbo Lai, wrote. “Previous studies have reported adverse psychological reactions to the 2003 SARS outbreak among health care workers. Studies showed that those health care workers feared contagion and infection of their family, friends and colleagues, felt uncertainty and stigmatization, reported reluctance to work or contemplating resignation, and reported experiencing high levels of stress, anxiety and depression symptoms, which could have long-term psychological implications.”

Perceived threat among families of health care workers

In a survey of 12,000 people across 12 major countries from March 12th to 15th, countries within the Asia-Pacific region were most supportive of border closures – led by India (79%) and Vietnam (78%). The foundation for the growth for concern about COVID-19 is that more folks now believe someone they know is going to be infected by the virus. The bulk of individuals in Vietnam (67%), U.K (57%), India, Australia and Japan (51%) think someone they know will get infected with the Coronavirus (*Madhurima Bhatia; 2020*). With families having one or more health care professionals; it's a battle every day to watch them leave for work and get clouded by immense feeling of uncertainty.

Families with pregnant women in the family; elderly; members with chronic diseases like diabetes; hypertension; physical or mental disability; members who are dependent on the HCW have increased signs of perceived threat. 38 % of respondents to a survey conducted in Germany on the perceived threat of the coronavirus (COVID-19) rated the threat as high, as of February 15, 2020 (*Evgeniya Koptuyug, 2020*). The coronavirus pandemic has affected every Federal State in Germany, with both infected cases and deaths recorded thus far.

The relentless number of hours exposed to news; media regarding the increase in the number of infected patients and the number of districts under lockdown with identified hotspots have started generating increase anxiety; sadness; decrease in the quality of sleep and feeling of being overwhelmed (*Yuchen Ying ;2020*). The chances of deterioration of the mental health increases even more if the areas where they live or the hospitals/clinics with whom HCW is affiliated reports increase in the number of cases. A study with 1,257 health care workers in 34 hospitals in China from Jan. 29 to Feb. 3, included those that worked in hospitals equipped with fever clinics or wards for patients with COVID-19. Out of 764 (60.8%) were nurses, 493 (39.2%) were physicians, 760 (60.5%) worked in hospitals in Wuhan and 522 (41.5%) were frontline health care workers. (*Lia. J; 2020*). A big proportion of respondents reported the subsequent symptoms: depression, 50.4%; anxiety, 44.6%; insomnia, 34%; and distress, 71.5%. Compared with other HCWs, frontline HCWs, those working in Wuhan, nurses and female workers reported more severe degrees of all measurements of mental health symptoms (*Lia. J ;2020*). Italy has had 41,000 COVID-19 cases a minimum of 2,609 of them among healthcare workers, with 15,000 hospitalized, 2,498 patients are in Covid care units and a minimum of 2,609 of them are among medical health professions. The death rate of medical health care workers has reached 3, 405 in China (*International Council of Nurses; 2020*). This

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grave situation has caused escalating anxiety; leading to either hoarding of medical & food supplies; obsessive cleaning while excessive exposure to chemicals is taking a toll on their physical and mental health. Increased irritability; over disciplining the children; frequent fights due to the fear of infection are some behavior manifestation of the buildup anxiety.

Epidemic psychology (*Philip Strong; 1990*), indeed, seems to involve at least three types of psycho-social epidemic. The first of these is an epidemic of fear is also an epidemic of suspicion. There is the fear that they might get infected and the suspicion that *others may* already have it and might transmit to us. Epidemic of irrationality, fear and suspicion, leads to a multitude of stigmatization; the stigmatization both of those with the disease and of those who belong to who we fear to be the most carrier groups. The second is an epidemic of explanation and moralization and the third is an epidemic of action, or proposed action. Hyper vigilance towards symptoms even closely related to Covid-19; over exaggeration of symptoms manifestation; frequently trying to reach a known HCW in order to keep the symptoms in check and over medicating in order to decrease health anxiety are seen in the family members of HCWs. The theory explains the disproportionate reactions from the family members of HCWs. It may also be the other way round; where neighbors; food Wenders; and other may try to keep distance and may label them as disease carriers and may stigmatize them. The irrationality; social isolation and feeling disconnected decreases their psychological endurance tending to decrease in their quality of life.

Psychological impact of covid-19 on families of health care professionals

However positive the families of HCWs try to be during this pandemic; behind closed doors the fear predominates. A study with 882 participants on the psychological impact on families of health care workers during Covid-19 pandemic in China showed that high evidence of GAD (33.73%) and depressive symptoms (29.35%) among them and recommended that along with the improving mental health of HCWs their family member's mental health showed be focused on. (*Yuchen Ying; 2020*). Based on neurobiological and evolution-theoretical postulations; the stress response could be an automatic response that's always “on” but inhibited by the prefrontal cortex when they perceive their safety. Supported by these postulates, the Generalized Unsafety Theory of Stress (GUTS) states; that prolonged stress responses are because of generalized and largely unconsciously perceived unsafety instead of stressors (*Brosschot JF, Verkuil B; 2018*. Chronic stress situations like work stress, the prolonged stress response could also be mainly caused by perceived unsafety in stressor (*Brosschot JF, Verkuil B; 2018*). This model explains the constant perceived threat leading to psychological distress in families of HCWs. Some of the concerns of family members of HCWs are the inadequate amount of proper personal protective equipment's for HCWs; uncooperative infected people in the Covid ward increasing the chances of transmission by spitting; coughing or sneezing without covering and keeping their ward unhygienic; low police security for doctors; HCWs getting attacked and stones thrown at by patients or suspected carriers including the long hours of working per week and inability to communicate with them. The study also analyzed that HCWs who were provided with proper personal protective equipment had families score low in GAD and depressive symptoms (*Yuchen Ying;2020*).

There have been cases where the HCWs have taken measures of social isolation by living in the garage in a tent (*Caitlin Fichtel;2020*); living across their home & sleeping in the dormitory ward rooms in order to protect their families. This isolation has a huge impact which is causing adjustment difficulties in the HCWs as well as their family members. In case of a mishap in the family; they are unable to communicate with them. In families where the mother

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is HCWs, usually the father seems to face problems in balancing their work-home life. He is unable to juggle all the work without any assistance. Absence of mother take a toll on the health of the children usually infants and toddlers; it become very difficult for the father to take care of them. It is shown that families of HCWs invest more time in collecting information about HCWs from internet and media which in turn increases the GAD and depressive symptoms (*Zhu Yuncheng; 2020*).

The news of increasing number of infected numbers of medical health care workers by Covid-19 pandemic has stirred up immense emotions in people. With infected HCWs; the family feels despair; unjust; helpless and a loss of hope. The inability to meet their infected family member; the loss of in person connectivity makes it even worse for them. The inability to help; to be next to them; to know how they are; the impending sense of uncertainty is also contributing factor to their misery. Unanswered questions and inadequate information provided about their condition leads them to imagine the worse and thus they develop depressive symptoms. Breaking the news to the family members leads to reliving the trauma again. The plethora of emotions and knowledge about no evidence-based cure for Covid-19 is psychologically disturbing for the entire family leaving them in a sense of despair and dejection. In case of death of HCW, the family is unable to see them or perform their last rites; to not have had an opportunity for a final goodbye is devastating. A family in Amritsar refused to accept the body of a coronavirus victim, which led to the district administration performing his last rites (*Deccan Herald; 2020*). Similarly, a family in Ludhiana had refused to receive and cremate the body of a 69-year-old COVID-19 positive woman. The administration had to perform her last rites. His family didn't revert back to the administration when it asked them shoulder the body. Thereafter, officials approached the family, but they did not step up for the last rites. The residents of Verka village did not let the cremation of Padma Shri recipient and former Golden temple Hazuri Nirmal Singh Khalsa happen due to the fear of getting infected and spreading the infection (*Deccan Herald; 2020*).

The New India Assurance has initiated an immediate financial coverage for healthcare workers on March 30, 2020, the announcement by the Finance Minister recently a Government-funded scheme under the Pradhan Mantri Garib Kalyan Package was made soon after. In case of death of the HCW because of problems arising out of the COVID-19 pandemic, while treating or attending the patients with the identical illness, the contract pays Rs. 50 Lakhs to the worker's legal heir (*Money control; 2020*). This cover would be separate from the other insurance cover that the healthcare worker holds. The insurance amount are going to be paid only in case of death and not when quarantined or for hospital expenses (*Ministry of Health and Family welfare; 2020*). This initiative taken by the Government is a step forward in sharing the burden of the families with recent loss.

Recommendations

Firstly, health policy-makers and contributors should collaborate to supply timely & high-quality psychological interventions to the families of HCWs. Online psychological self-help intervention strategies, including online cognitive behavioral therapy for depression and anxiety would be appropriate for families of HCWs. Secondly, providing personal protective equipment, suitable working hour schedule, and accommodation to HCWs would benefit members of the family who would be concerned about HCWs being infected. Thirdly, in accordance with the findings of previous studies, asocial support appears as a shield on mental state problems within HCWs and their families. Thus, it is advocated that both sides take the

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initiative to effectively communicate with one another in order to emphasize their support. The supply of reliable and transparent epidemic information to the members of the family of HCWs is important to reinforce their sense of control and self-efficacy, thus enabling them to deal with the psychological impact of COVID-19 outbreaks effectively. Last but not least, government's combative strategies and measures should be well-organized and effective in rapid action mode.

CONCLUSION

Medical healthcare workers are being proved to be a high-risk group in covid-19 pandemic and their family member are also susceptible for it, if HCW's are living with them. Other than having insecurities of getting infected, families of them are also have significant mental health issues like anxiety, loneliness, adjustment problems, depression etc. Situation becomes more difficult when HCW have another high-risk family member at home. Increasing workload, less duration of sleep and insufficient safety gears are few significant factors of causing mental health difficulties at work front. It is evident from the studies done in countries where this pandemic has already cause significant damage. This article is highlighting such issues and recommended significant aspect to deal well with mental health of HCW and their families as well.

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Conflict of Interest

The author declared no conflict of interest.

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