

THE PSYCHOLOGICAL EFFECT OF COVID-19 AMONG HEALTHCAREWORKERS IN DEPARTMENT OF OBG AND ITS ALLIED BRANCHES AT RL JALAPPA HOSPITAL AND RESEARCH CENTRE

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Abstract

Introduction: COVID-19 (Coronavirus disease 2019), an acute respiratory disease caused by Novel coronavirus (SARS-CoV-2) is declared to be a public health emergency of international concern by WHO and declared COVID-19 as a pandemic on March 11, 2020. Health care workers on the frontlines are vulnerable to infection and heavy stress. Objective : Assessment of psychological status in Health care workers in Department of OBG and its allied branches at RLJH and Research centre during COVID-19 outbreak. Methods: The study population included Health care workers in Department of OBG and its allied branches at RLJH. The study tool included questionnaire of 2 sections with 40 questions filled by staff mentioned above and stress levels were evaluated accordingly. Results: A total of 271 participants involved in this study completed the questionnaire which included various factors causing stress and also factors that helped to reduce stress. Conclusion: Covid- 19 outbreak was a stressful experience for healthcare workers. The preventive measures implemented by our Hospital administration as described in our study were useful to reduce stress among them. The experience of Healthcare workers can be enhanced by hospitals on targeting the present aspects in this study during future outbreaks.

COVID-19 (Coronavirus disease 2019), an acute respiratory disease caused by Novel coronavirus (SARS-CoV-2) is declared to be a public health emergency of international concern by WHO and declared COVID-19 as a pandemic on March 11, 2020. A large number of pneumonia cases caused by newly identified coronavirus in December 2019 in Wuhan, China. It was initially named as 2019-novel coronavirus (2019-nCoV), later officially named as SARS-CoV-2 by WHO on 11 February 2020. The Chinese scientists rapidly isolated this virus from a patient on 7 January 2020. It is a beta coronavirus, enveloped non segmented positive-sense RNA virus. Human to human transmission occurs mainly between family members, including relatives and friends who had contact with patients or incubation carriers. ACE2, Angiotensin converting enzyme 2 found in lower respiratory tract of humans acts as receptor for virus and regulates human to human transmission.⁸ The clinical diagnosis method of COVID-19 is nucleic acid detection in nasal and throat swab sampling by PCR and further confirmation by next generation sequencing.⁷

The rapid and extensive spread of COVID-19 has become major cause of concern for the healthcare profession about their personal safety, transmission of disease to family members, stigmatisation and interpersonal isolation.¹ The outbreak of COVID-19, caused not only extraordinary public health concerns but also tremendous psychological distress particularly among health care workers. Health care workers on the frontlines are vulnerable to infection.

It is a life threatening and life altering event is considered traumatic enough to elicit post traumatic stress disorder.

COVID-19 is transmitted mainly by respiratory droplets during human to human contact. It has become hazard for healthcare system, including pathogen exposure, long working hours, occupational burnout, stigma, physical and psychological stress, fatigue.² The differences in working conditions in hospital has lead to differences in psychological behaviour of health care workers. The present scenario of COVID-19 and its effect on health care workers psychology has become critical, this study assessed psychological status of health care system in Department of OBG and its allied branches at RLJH HOSPITAL AND RESEARCH CENTRE.

Methods

Study site-

The study was conducted among Health care workers in Department of OBG and its allied branches at R. L. Jalappa Hospital and research centre, a tertiary care hospital in Kolar, Karnataka.

Subjects-

All health care workers including Consultants, postgraduates, house surgeons, Nursing staff, Operation theatre staff and technicians, house-keeping and security members who worked during COVID-19 outbreak in Department of OBG and its allied branches.

Study tool-

The study tool included questionnaire derived data filled by staff mentioned above. It is derived and modified from MERS COV staff questionnaire. It consisted of 2 sections with 40 questions. Participation included voluntary staff worked in OBG department and allied branches during covid-19 outbreak.

The first section consists of 20 questions related to factors causing stress. Each question required yes or no answer. Those who answered yes were further evaluated the severity of stress factor (0-minimal, 1-mild, 2-moderate, 3-severe)

The second section consists of 20 questions regarding factors which helped to reduce stress either provided directly or indirectly by hospital. The responses include how effectively these factors helped to reduce stress (0-not effective, 1-mildly effective, 2-moderately effective, 3-extremely effective)

Results

Section 1 which was related to factors causing stress among the staff yielded the results as shown in table 1. No adequate protective measures, stress among colleagues, infection from patients, emotional exhaustion, increased number of new cases, lack of treatment were major factors causing Moderate stress. Transmission of disease to family and friends, colleagues with respiratory symptoms, shortage of staff, time of exposure to patients, chances of infection due to lack of concentration were identified as Mild stress factors among the staff.

Section 2 dealing with factors reducing stress were analysed in table 2.

Colleagues getting better, sharing jokes among colleagues, chatting with family and friends, by understanding mechanism of transmission and prevention were proved to be moderately effective in reducing stress. Protective measures and strict guidelines from hospital for infection prevention, personal safety, support from colleagues, reduction of working hours, minimal exposure to public places, improvement in patient condition were mildly effective to relieve stress in our staff.

Discussion

Health care workers are the one who risk their lives as they are on the frontline during any epidemic. They are facing an unprecedented workload in stressful and frightening work environments, inspite of which they

continue to work due to professional obligation. The dedication and selflessness behaviour of healthcare system allow the rest of world a degree of reassurance that outbreak can be controlled.⁶

The Covid-19 pandemic, very rapid in its transmission has caused many deaths across the world. The incidence was greater in China, European countries, USA, Russia, India. In India the attack rate was slow initially. The first case reported in India was on January 30, 2020 in Kerala. The diagnostic measures gradually increased leading to faster rate of case detection. The government of India took appropriate preventive measures such as quarantine, social distancing and complete lockdown from March 22, 2020. As per 8 May 2020, total number of 56,342 people were confirmed positive for COVID-19 in India. The highest incidence reported in Maharashtra followed by Gujarat, Delhi, Tamilnadu, Rajasthan, Madhyapradesh, Andhrapradesh. 16,540 people had recovered whereas 1,886 deaths occurred. In our hospital, 11 suspected cases got admitted, out of which 7 were confirmed as positive cases for which isolation measures were strictly followed.

Findings

The factors such as physical stress, shortage of staff, increasing cases reported on media, no protective measures, lack of treatment, colleagues developing respiratory symptoms, fear that they could transmit infection to families or friends were identified as extremely stressful for the staff. They were also concerned with lack of protective equipment, increased workload, small mistake or lapses in concentration leading to infection.

Protective measures for infection prevention by hospital, decrease in number of cases after implementation of preventive measures, support from colleagues, reduction of working hours, minimal exposure to public places, improvement in patient condition were the main factors that helped to relieve stress.

Strengths and Limitations

The strengths of this study were sufficient sample size, participation of all healthcare workers including not only medical staff, but also paramedical, housekeeping and security staff and study period conducted during the outbreak. Limitation was no positive cases in department of obstetrics and gynaecology.

Conclusion

COVID-19 outbreak caused psychological distress among healthcare workers. The main elements focussed were personal safety, provision of protective equipment, strict guidelines from hospital for prevention, knowing mechanism of transmission, support and positive attitude from colleagues. The experience of Healthcare workers can be enhanced by hospitals on targeting the above mentioned aspects during future outbreaks.

Disclosure of interests

The authors have no conflicts of interest to declare in relation to this article. Complete disclosure of interest forms are available to view online as supporting information.

Contributions to authorship

SSR contributed to concept and design of the study. SNS, VPK helped in acquisition of data, literature search and detailed workup. The manuscript was revised by SSR, SNS, VPK. PNS helped in administrative, technical and material support. All authors approved the final submitted version of the manuscript.

Ethics approval

This study was approved on May 27th 2020 by Ethical Clearance Review Board of SDUMC, Kolar, Karnataka.

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SECTION-I	SECTION-I	SECTION-I
NO	<i>FACTORS CAUSING STRESS.</i>	<i>FACTORS CAUSING STRESS.</i>
1	YOU COULD TRANSMIT COVID-19 TO YOUR FAMILY / FRIENDS	YOU COULD TRANSMIT COVID-19 TO YOUR FAMILY / FRIENDS
2	TAKING CARE OF YOUR OWN COLLEAGUES WITH SYMPTOMS OF COVID-19.	TAKING CARE OF YOUR OWN COLLEAGUES WITH SYMPTOMS OF COVID-19.
3	SMALL MISTAKE OR LAPSES IN CONCENTRATION COULD INFECT YOU / OTHERS.	SMALL MISTAKE OR LAPSES IN CONCENTRATION COULD INFECT YOU / OTHERS.
4	NOT KNOWING WHEN THE OUTBREAK WILL BE UNDER CONTROL.	NOT KNOWING WHEN THE OUTBREAK WILL BE UNDER CONTROL.
5	AT THE TIME OF EXPOSURE TO COVID-19 PATIENT.	AT THE TIME OF EXPOSURE TO COVID-19 PATIENT.
6	LACK OF TREATMENT FOR COVID19.	LACK OF TREATMENT FOR COVID19.
7	NEWS OF NEW CASES REPORTED IN TV OR NEWSPAPER.	NEWS OF NEW CASES REPORTED IN TV OR NEWSPAPER.
8	COLLEAGUES DISPLAYING COVID LIKE SYMPTOMS.	COLLEAGUES DISPLAYING COVID LIKE SYMPTOMS.
9	YOU DEVELOPED RESPIRATORY SYMPTOM AND FEARED THAT YOU HAD COVID-19.	YOU DEVELOPED RESPIRATORY SYMPTOM AND FEARED THAT YOU HAD COVID-19.
10	YOU COULD GET INFECTION FROM A PATIENT IN HOSPITAL.	YOU COULD GET INFECTION FROM A PATIENT IN HOSPITAL.
11	YOU ARE EMOTIONALLY EXHAUSTED.	YOU ARE EMOTIONALLY EXHAUSTED.
12	YOU HAD PHYSICAL STRESS / FATIGUE.	YOU HAD PHYSICAL STRESS / FATIGUE.
13	CONFLICT BETWEEN YOUR DUTY AND YOUR OWN SAFETY.	CONFLICT BETWEEN YOUR DUTY AND YOUR OWN SAFETY.
14	SEEN YOUR COLLEAGUES STRESSED / AFRAID.	SEEN YOUR COLLEAGUES STRESSED / AFRAID.
15	YOU FELT THERE WERE NO ADEQUATE PROTECTIVE MEASURES.	YOU FELT THERE WERE NO ADEQUATE PROTECTIVE MEASURES.
16	YOU HAD TO WEAR PROTECTIVE GEAR ON A DAILY BASIS.	YOU HAD TO WEAR PROTECTIVE GEAR ON A DAILY BASIS.
17	SHORTAGE OF STAFF AT TIMES.	SHORTAGE OF STAFF AT TIMES.
18	POSITIVE ATTITUDE FROM COLLEAGUES IN YOUR DEPARTMENT.	POSITIVE ATTITUDE FROM COLLEAGUES IN YOUR DEPARTMENT.
19	PERFORMING DUTIES ON ROTATION BASIS.	PERFORMING DUTIES ON ROTATION BASIS.
20	IMPROVEMENT IN PATIENT CONDITION.	IMPROVEMENT IN PATIENT CONDITION.
NO	NO	NO
0	0	0
1	1	1
2	2	2
3	3	3

SECTION-II	SECTION-II
NO	FACTORS THAT HELPED TO REDUCE STRESS

SECTION-II	SECTION-II
1	YOUR COLLEAGUES WHO WERE INFECTED GETTING BETTER.
2	NONE OF THE STAFF GETTING COVID19 AFTER STARTING STRICT PROTECTIVE MEASURE.
3	CLEAR GUIDELINES FROM HOSPITAL FOR INFECTION PREVENTION.
4	YOUR FAMILY MEMBERS OR FRIENDS OUTSIDE HOSPITAL DID NOT GET COVID-19.
5	DECREASE IN NUMBER OF CASES REPORTED IN NEWS.
6	IF YOU WOULD GET EXTRA COMPENSATION FOR YOUR WORK DURING OUTBREAK.
7	ALL HEALTHCARE PROFESSIONALS WORKING TOGETHER ON FRONTLINE.
8	SUPPORT FROM HOSPITAL STAFF IN CASE YOU GOT SICK.
9	NOT TO DO OVER TIMING.
10	SHARING JOKES AMONG COLLAEGUES.
11	KEPT SEPARATE CLOTHES FOR WORK.
12	BY READING MECHANISM OF TRANSMISSION AND ITS PREVENTION.
13	AVOIDED GOING OUT IN PUBLIC PLACES TO MINIMISE EXPOSURE.
14	DOING RELAXATION ACTIVITIES.
15	CHATTING WITH FAMILY AND FRIENDS.
16	TALKING TO YOURSELF AND MOTIVATING WITH POSTIVE ATTITUDE.
17	AVOIDING MEDIA NEWS.
18	AVAILABLE CURE OR VACCINE FOR DISEASE.
19	REDUCED WORKING HOURS.
20	WORK LOAD INCREASED WHEN COMPARED TO NON EXPOSED STAFF.
0	NOT EFFECTIVE
1	MILDLY EFFECTIVE
2	MODERATELY EFFECTIVE
3	EXTREMELY EFFECTIVE