Original Research Article

ASSESSMENT OF ANXIETY, STRESS LEVEL AMONG AMBULANCE DRIVERS DURING COVID-19 PANDEMIC IN AMBIKAPUR CITY, CHHATTISGARH.

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ABSTRACT

Background: The Corona virus disease 2019 (COVID-19) was first identified in Wuhan in China in December 2019 and has now spread to 220 countries leading to 194.1 million confirmed cases and 4.2 million deaths. Worldwide the pandemic has impacted the physical and mental health of the frontline health workers and ambulance drivers than the general population. The present study was undertaken to study the socio-demographic profile of study population and to assess the various factors responsible for anxiety, stress level among ambulance drivers doing duties during COVID-19 pandemic in Ambikapur city, Chhattisgarh.

Materials and Methods: Sixty-five Ambulance drivers fulfilling the inclusion criteria were evaluated. The study performed was cross sectional. The Ambulance drivers who have working in different health care facilities (Government and private) during the ongoing COVID-19 pandemic of Ambikapur city, Chhattisgarh and having access to online google forms was included in the study after a taken informed consent. The study was completed over a period of 3months (July-September 2021). Detail interview of ambulance drivers are carried out in predesigned proforma. Participants were then assessed using the Depression, Anxiety, and Stress Scale-21 (DASS-21). Data analysis will be done using epi info software.

Results: Anxiety symptoms were present in significantly higher number of Ambulance drivers (67.7%) as compare to depression (32.4%) and 9.2% ambulance drivers showing the symptoms of stress. Among study participants, the total duty hours had a significant positive association (P < 0.02) to the depressive symptoms and with stress (P<.001) who performed their COVID duty for more than 48 hours per week.

Conclusion: During the COVID-19 pandemic, many ambulance drivers and health care workers faced extreme working conditions and were at higher risk of being infected with SARS-COV-2. Considering the current and future high workload and workforce shortages especially in healthcare sector, it is important to continue monitoring the mental health of Ambulance drivers for the long term. Provision of better facilities, adequate information, and appropriate interventions are required in this regard.

Keywords: Anxiety, COVID 19, depression, Ambulance drivers, stress.

INTRODUCTION

The Coronavirus disease 2019 (COVID-19) was first identified in Wuhan in China in December 20191 and has now spread to 220 countries leading to 194.[1] million confirmed cases and 4.2 million deaths.[2] As on July 26, 2021 India had reported 31.02 million cases and 0.42 million deaths from the day the first case was seen on January 30, 2020.[3] Worldwide the pandemic has impacted the physical

and mental health of the frontline health workers than the general population. During the initial phase of the pandemic, the health care workers (HCW) faced plenty of challenges because of the novel nature of the disease, limited treatment options, fear of infection of self and their loved ones, shortages of personal protective equipment's (PPE), extended workloads, and facing difficulties in making emotionally and ethically difficult triaging and resource-allocation decisions.[4]

A number of health care workers have shown hesitancy to go to work thereby facing the loss of jobs and reduced revenues. The unknown nature of the disease and also the conflicting alternatives of treatment and management have tested the tolerance of the patient's relatives. Psychological distress can manifest into adverse mental state and psychiatric outcomes including depression, anxiety, acute stress, post-traumatic stress and burnout. These may negatively impact day to day and social functioning of an individual.[5]

MATERIAL AND METHODS

The study performed was cross sectional. The Ambulance drivers who have working in different health care facilities(Government and private) during the ongoing COVID-19 pandemic of Ambikapur city, Chhattisgarh and having access to online social-media platform were included in the study after a taken written informed consent.The study was completed over a period of 3months (July-September 2021).Detail interview of ambulance drivers are carried out in predesigned proforma consisting of demographic details was initially filled up by all the participants who included in study. The participants were then assessed using the Depression, Anxiety, and Stress Scale-21 (DASS-21). DASS-21scale is a set of three self-report scales designed to measure the emotional states of depression, anxiety and stress. Each of the three DASS-21 scales contains 7 items, divided into subscales with similar content. The depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest / involvement, anhedonia and inertia. The anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The stress scale is sensitive to levels of chronic nonspecific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset / agitated, irritable / over-reactive and impatient. Scores for depression, anxiety and stress are calculated by summing the scores for the relevant items.

The assumption on which the DASS-21 development was based (and which was confirmed by the research data) is that the differences between the depression, anxiety and the stress experienced by normal subjects and clinical populations are essentially differences of degree. It is a self-report instrument consisting of a total of 42 questions where each question is rated from 0 to 3. DASS has 3 different subscales designed to evaluate the three related negative emotional states. Each subscale includes 14 questions and is rated from normal to extremely severe. The DASS has been demonstrated to be a reliable and valid measure which was previously used in research related to SARS.[6]

Recommended cut-off scores for conventional severity labels (normal, moderate, severe) are as follows:

NB Scores on the DASS-21 will need to be multiplied by 2 to calculate the final score.

	Depression	Anxiety	Stress
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-`14	19-25`
Severe	21-27	15-19	26-33
Extremely severe	28+	20+	34+

All the data collected were entered into an excel sheet and a master chart was prepared. The clinical correlates impacting the levels of depression, anxiety, and stress in the study population were further evaluated. Ethical Clearance was obtained from the local Ethics Committee to conduct the study.

Inclusion Criteria
- Ambulance drivers engaged in the ongoing COVID-19 pandemic.
- Participants having access to online social-media platform.

Exclusion Criteria
- Participants without access to an online social media platform.
- Those who declined to provide written, informed consent to participate in the study.

RESULTS

As shown in table 1, our sample consisted of 65 ambulance drivers who performed their duty in covid hospital. Out of the 65 ambulance driver's majority are (58.5%) age group between 30-39 years. Most of the Ambulance drivers were married (80%) and belonged to therural domiciles (70.8%). Around 72% ambulance drivers are working in private hospital and among them only 33.8% was living away from their family. [Table 1]

As shown in table 2, most of the study participants (75%) doing their duty in more than 48 hours in week and few (35.4%) had taken more than 3 cups caffeinated drinks per day.

About 32.3% had addiction (among them 16.9% take smoking on daily basis and around 29.2% consume alcohol (at-least once a week), whereas only 15.4% had pre-existing medical illnesses.

Majority of study participants had sleep 5-7 hrs per day and around 92.3% driver's perceived quality of PPE available at the health facility was good. [Table 2]

As depicted in table 3, on evaluation 32% have symptoms of depression, 67.7 have symptoms of anxietyand only 9.2% shows the symptoms of stress according to their DASS-21 score while doing their COVID duties. [Table 3]

We further tried to assess the impact of total number of duty hours on the level of depression, anxiety and stress. As shown in table 4, we found that those ambulance drivers who performed duty for more than 48 hrs had significantly higher prevalence of depression (52.4%) (p=0.002).

We also found that those ambulance drivers who performed duty for more than 48 hrs had higher level of anxiety (72.7%)

We found that those ambulance drivers who performed duty for more than 48 hrs had significantly higher prevalence of Stress (81.4%) (p= .001) as compare to less duty hours. [Table 3]

Table 1: Socio-demographic correlates of COVID Ambulance drivers

GENERAL INFORMATION	FREQUENCY (N=65)	PERCENTAGE (%)
AGE (Years)		
<18-29	18	27.7
30-39	38	58.5
>40	09	13.8
Residence		
Urban	19	29.2
Rural	46	70.8
Marital status		
Married	52	80
Unmarried	10	15.4
Divorced, Widow, Separated from spouse	03	4.6
Type of health facility		
Government	18	27.7
Private	47	72.3
Living arrangement		
I live with my family	43	66.2
I Live away from my family	22	33.8

Table 2: Clinical correlates of Study participants

Total hours of COVID duty per week (hrs/wk)		
24-36	04	6.2%
36-48	12	18.5%
>48	49	75.4%
Average cups of caffeinated drinks per day		
2 or less	42	64.6%
3-4	21	32.3%
5 or more	02	3.1%
Use of habit forming substance among drivers (Addiction)		
Yes	21	32.3%
No	44	67.7%
Smoking on daily basis		
Yes	11	16.9%
No	54	83.1%
Previous history of Alcohol consumption (at least once a week)		
Yes	19	29.2%
No	46	70.8%
Do you have history of any Medical illness		
Yes	10	15.4%
No	55	84.6%
Average hours of sleep per day		
<5 hrs	04	6.2%
5-7 hrs	35	53.8%
8 hrs or more	26	40%
Perceived quality of PPE available at the health facility		
Good	60	92.3%
Poor	05	7.7%

Table 3: Depression, Anxiety and Depression among study participants doing COVID duty

	Depression	Anxiety	Stress
Mean	1.38	1.91	1.09
Absent	44 (67.7%)	21(32.3%)	59 (90.8%)
Present	21(32.4%)	44(67.7%)	06 (9.2%)
Mild	17(26.2%)	29(44.6%)	06 (9.2%)
Moderate	04(6.2%)	15 (23.1%)	00

Table 4: Association of duty hour and symptoms of depression, anxiety and stressin ambulance drivers

Duty hours Hrs/wk	Depression		Anxiety		Stress	
	Present	Absent	Present	Absent	Present	Absent
24-36 hrs	04 (19%)	0 (0%)	04 (9.1%)	0 (0%)	02 (33.3%)	02 (3.4%)
36-48 hrs	06 (28.6%)	06 (13.6%)	08 (18.2%)	04 (19%)	03 (50%)	09 (15.3%)
>48 hrs	11 (52.4%)	38 (86.4%)	32 (72.7%)	17 (81%)	01 (16.7%)	48 (81.4%)
Total	21 (32.3%)	44 (67.7%)	44 (67.7%)	21 (32.3%)	06 (9.2%)	59 (90.8%)
p value	0.002		0.360		0.001	

DISCUSSION

Although there have been quite a few studies assessing the psychological impact of COVID 19 on ambulance drivers, of all the ambulance drivers, 32.4% reported symptoms of depression which falls within the range of 22%–75% as reported by various studies among health care workers.[7,8,9]

Chong et al. found an estimated prevalence of psychiatric morbidity in health workers to be about 75%.[10] In our study, 32.4% ambulance drivers reported depression, which is in accordance with other studies. This was statistically significantly (p= .002), reasons for this may be the fact that ambulance drivers are given priority as regards to the paramedical staff members including the nurses and the attendants are also answerable to their superiors as well as the doctors on duty. Our study shows that more than half (67.7%) of the total study participants reported anxiety symptoms as per their DASS score. We found no significant difference in the incidence of anxiety. Many studies which have assessed anxiety in HCWs have reported an incidence from 20.1% to 45%.[11] which was found in a study conducted in China.[10] The fear of contracting coronavirus, passing it on to family members, and the higher mortality rate among HCWs in the general population can be the factors contributing toward the higher prevalence of anxiety in our study. 9.2% of study participants in our study had symptoms of stress. As per meta-analysis done by General Hospital Psychiatry, 59% of HCWs had moderate to severe levels of perceived stress,[12] in a mini review by Jansson and Rello, HCWs in Pakistan reported moderate distress in 42% and severe distress in 26%.[13] Pappa et al. reported symptoms of stress in 38% of HCWs,[11] whereas Temsah et al. reported the same in 41.4%.[14] Various causes such as emergency postings without prior notice, not being able to take leave due to the Pandemic Act, not being able to meet family members during duties and quarantine periods, and the complete and sudden change in lifestyle and routines may be responsible for stress. Other important factors include the need to wear personal protective equipment for continuous 8 h without any breaks leading to excessive perspiration and dehydration causing subsequent weakness and malaise, lack of provision of rest areas, less than smooth administration in emergency situations leading sometimes to unnecessary duplication of efforts, and sometimes negligence of important issues.

The paramedical staff members and ambulance drivers feel anxiety significantly more during the first 2 weeks of their duty probably because of incomplete information about the illness, leading to uncertainty and confusion. During the sudden influx of large number of COVID patients in the hospital, many paramedical personnel and drivers had to be deployed to the COVID wards without sufficient training. This might have led to a feeling of being overwhelmed leading to a degree of chaos. However, as their duty progresses, they might feel familiar and well versed doing the duty, better adapted and equipped to handle the demanding situations arising in the COVID wards and ICUs, and therefore feel less anxious.

CONCLUSION

The degree of depression, anxiety, and stress faced by the Ambulance drivers is high in this pandemic due to extraordinary work pressure, physical exhaustion, extreme uncertainty, inadequate personal protective equipment, and high contagion rate. Longer COVID duty is positively correlated with the prevalence of depression among drivers. There was a higher level of anxiety among participants in the first 2 weeks of COVID duty. This implicates the need for mental health training before the assignment of COVID duty, provision of adequate supplies and rest areas, limitation of shift hours and duty spells, and availability of multidisciplinary mental health teams for counselling and pharmacotherapy as and when required. Clear communication and easy access to up to date guidelines on the management of COVID 19 could help reduce the perceived stress of the HCWs. Regular use of relaxation techniques and Yoga may also help in alleviating anxiety.

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