Original Article

Decoding Stress of Doctors and Nursing Staff during Covid-19 in Leading Social Entrepreneur Sponsored Hospitals in Odisha

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ABSTRACT

The present paper is an initiative to understand the various issues related to the stress faced by the doctors and nursing staff during the pandemic. As compared with other professions, the life of medical professionals is different due to their unique job expectation. A lot of researchers have tried to address this issue but during this period of pandemic very limited research has been undertaken. In this direction, the present paper will provide an additional contribution to the existing literature. The objectives of the study are to decode the dynamics of stress issues faced by these front-line workers and to suggest remedial measures. For this purpose, more focus is made on primary data, and the scope of the study is restricted to selected hospitals around the capital region of Odisha.

GRAPHICAL ABSTRACT
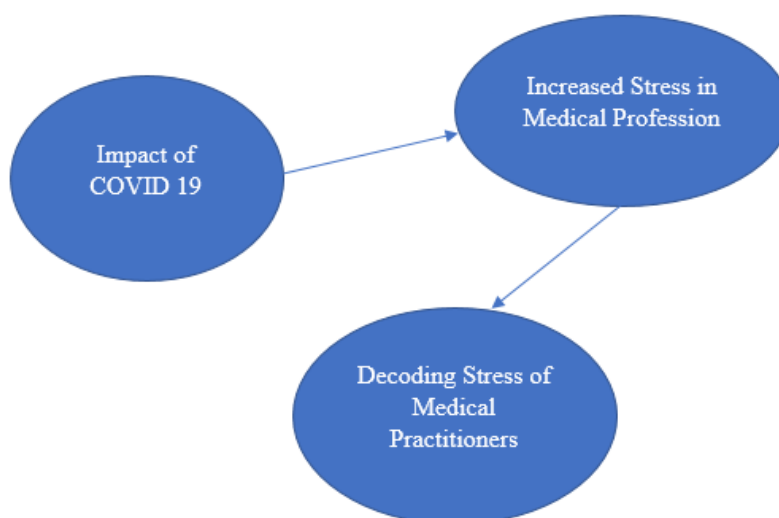
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Introduction

Stress is a hot-button issue in daily life. It is a key challenge for organizations because organizations with stressed employees are more likely to be unsuccessful in their professional life. Certainly, the employees of the medical sector are experiencing humongous stress. Stress is a complex fact in an individual's life with no easy answer. Generally, it is a condition of pressure or tension on an individual that affects an individual's health and performance at the workplace. Many organizations are facing day-to-day challenges to manage stress appositely. It is no wonder that in today's fast-paced society dealing with stress and adopting an effective stress management approach is a challenge for every organization. Individuals reflect a different behavior when they are stressed. More specifically the Covid-19 situation has made the life of the front-line workers very difficult. The present paper is also an initiative to understand the various factors that led to stress to the doctors and nursing staff. The present empirical findings will give food for thought for the policymakers to design an action plan to overcome this kind of future emergency or unforeseen calamities. However, this pandemic has given a lot of positive lessons. Now we can depend more on digital rather than physical mode. Through this, we can connect in seconds and be able to interact with each other very effectively and saving costs also. However, the medical profession is such that it is not possible to conduct everything digitally, it needs the physical presence of patients. In this direction, the contribution of private hospitals supported by social entrepreneurs cannot be ignored. The importance of this was immensely felt during this pandemic, especially hospitals like Utkal Hospital, KIMS Hospital, SUM Hospital, Aswini Hospital, and Aditya Care Hospital, Kalinga Hospital, etc. tried to collect the data and analyzed it accordingly.

Research [1] has identified the reasons for stress and their subsequent remedial measures to get a better performance-oriented result in the case of bank employees of nationalized banks. These employees are working under stress as most of the time they are dealing with financial matters. One mismatch may result in negative results regarding their performance. So, the banks should understand the causes of stress that may come as a result of job-related matters, and proper remedial measures like, counseling, quality consciousness awareness programs, and psychological support should be taken into consideration for better performance and efficiency. The impact of demographic variables on moral stress has been investigated [14]. It was explored that as compared with other job stressors and demographics, the moral stress is the only stress that has significant importance in determining employee fatigue, job satisfaction, and turnover intentions. The stress management programs has been surveyed among professionals working in the construction industries of Nigeria [2] and it was found that stress is a phenomenon that is affecting the physical and mental well-being of most of the employees working across the industries. The main reasons for stress are excessive pressure of work and the target to complete the job within a specific deadline. So, like other industries, in this sector also, the policy has been adopted to reduce the level of stress and some are the delegation of work, sharing the burden with colleagues, leaving family and time off to spend time with members, are reduction of work overtime. So, both the management as well as workers should work in favor of these initiatives to get a positive result. A study discussed the level of stress as experienced by the NWU employees in their day-to-day work-related matters [3]. The study has been conducted with the help of two groups of employees, one group represented by top-level management and the second group represented by the middle-level management. The outcome of the result found that middle-level employees were more stressed due to various job-related issues as compared with top-level management. The paper concluded that personal relationships and personal characteristics are not related to job stress but job position surely has a direct relationship with job stress. Another inquiry focused on stress levels across age, profession, type of jobs, duration of work, and the impact of

office atmosphere on the level of stress experienced by employees [5]. The stress is very individual. His study indicated an optimum level at which every individual can perform with his full capacity. He identified three conditions responsible for work stress: a) Role overload; b) role self-distance; and c) role stagnation. Occupational stress is the same as job stress that needs to be controlled at the workplace [6]; otherwise, it will affect negatively employee's work attitudes and behavior. He conducted a study to investigate the relationship between emotional intelligence and occupational stress. The findings of his study revealed that emotional intelligence is a significant predictor of occupational stress.

Psychological resources including virtual support groups, are facilitated by social workers and psychologists, virtual mindfulness and yoga [8]. Prevalence of anxiety, depression, and stress is higher among health workers when compared to similar studies. Effective strategies toward improving mental health like adequate rest, supply of protective equipment, frequent breaks, ensuring safety issues of their family members, training on management of stress might help reduce stress [9]. High resilience, emotional support, and quality of life place HCWs at reduced risk of longitudinal perceived stress and have a distinct physiological stress profile [10].

Material and methods

Objectives of the study
This study aimed to decode the various stress-related issues faced by doctors and nursing staff and suggest measures based on findings of the study.

Scope of study
The present study was conducted in the capital region of Odisha, the hospital includes Utkal Hospital, KIMS Hospital, Aditya Care Hospital and SUM Hospital and Aswini Hospital and Kalinga Hospital, etc.

Research methodology
Questionnaires were distributed and the sampling technique was snowball and cluster both. For the finalization of various attributes, 6 focus group discussions were carried out consisting of 5 members in each group who were having some association with the medical profession. Initially, 16 variables were identified but after the focus group compilation of data, 10 variables were retained. The sample size was 92, including 57 nursing staff consisting of 20 male nursing staff and 15 females. Similarly, out of 35 doctors who agreed to respond, 23 were male and 15 were female. The period of study was 3 months, from April 2021 to June 2021. The weighted score method and rank method were used for calculating the collected data with the help of 5 points Likert type scale. The ideal score was 5 and the least score was 1. Variables were mostly are from the outcome of focus group discussion from the doctors, nursing staff, and persons associated with the medical profession. The participants included both retired and currently associated with the medical profession.

Sample size determination
In the present study, the sample size was calculated in the ratio range of 1:4 to 1:10 (Rummel, 1970; Schwab 1980). As per the above method, the minimum sample size should be items multiplied by four and the maximum should be items multiplied by 10. As we took 10 items for the study, the minimum and maximum sample sizes should be 40 and 100, respectively. After deleting the common outlier, we took 92 observations that fell within the minimum and maximum sample size as per the above rule. Taking into consideration the rule of Rummel (1970) and Schwab (1980), the sample size of 92 was adequate for our study.

Result and Dissection

Source: Annexures 1,2,3 and 4
The total weighted score for the female nursing staff (FNS), male nursing staff (MNS), male doctors (MD), and female doctors (FD) were 1695, 953, 1071, and 578, respectively. In contrary, the ideal weighted scores were 1850, 1000, 1150, and 600. It shows that the total actual weighted scores were 91.62%, 95.3%, 93.13%, and 96.33% of the ideal score. In no case did the actual weighted score near the least score.

Similarly, the rank for the various individual variables shows that stress due to 24X7 work culture was 3rd rank for the female doctors, 4th rank for the male nursing staff, 5th rank for the male doctors, and 8th rank for the female nursing staff.

Managing stress was difficult due to the death of a member of own family, it was ranked 1st by male nursing staff, 2nd rank by female doctors, 3rd rank by male doctors, and 5th rank by female nursing staff. Managing stress was difficult when the relatives of deceased person behavior were aggressive towards us after the death of the patient due to Covid-19; for this male doctor ranked 1st, female nursing staff ranked 2nd, male nursing staff and female doctors ranked 3rd. Managing stress was difficult when we were forced to stay away from the family members; it was ranked 1st by female doctors, 4th by male doctors and male nursing staff, and 7th rank by female nursing staff. Managing stress was difficult when we were completely disconnected from the rest of the world; it was incidentally ranked 5th by all the group of respondents. Managing stress was difficult when we were not able to do our regular physical exercise; it was preferred 2nd rank by male doctors, 6th rank by female doctors and male nursing staff, and 7th by female nursing staff. Managing stress was difficult when we were not able to get a balanced diet due to the overcrowding of hospitals; this variable was preferred to be the first rank by male nursing staff, 4th by female nursing staff, 5th rank by female doctors, and 6th rank by male doctors.

Managing stress was difficult when we were handling the print and news media; it was given 2nd rank by both female and male doctors, 3rd and 6th by male and female nursing staff, respectively. Managing stress was difficult due to the unhygienic situation in hospitals because of overcrowding of patients; it was found that 1st rank and 2nd rank were given by the female and male nursing staff. Similarly, it was given 3rd and 4th rank by male and female doctors. Managing stress was difficult due to being unable to manage work-life balance; it was given 1st rank by both male and female doctors, 2nd and 3rd by male nursing staff and female nursing staff, respectively.

Conclusion

Another reason for overcoming of Nostocodia limicola is the lack of nitrogen and phosphorus content, as the main food, in all industrial wastewater. Since the oil wastewater as one kind of Industrial wastewater often has encountered with nutrient deficiency, the dominance of this bacteria is justifiable in the desired petrochemical waste, due to deficiency in nitrogen and phosphorus compounds in this wastewater.

Table 1: Computation of Respondent's opinion: Ideal score and least score

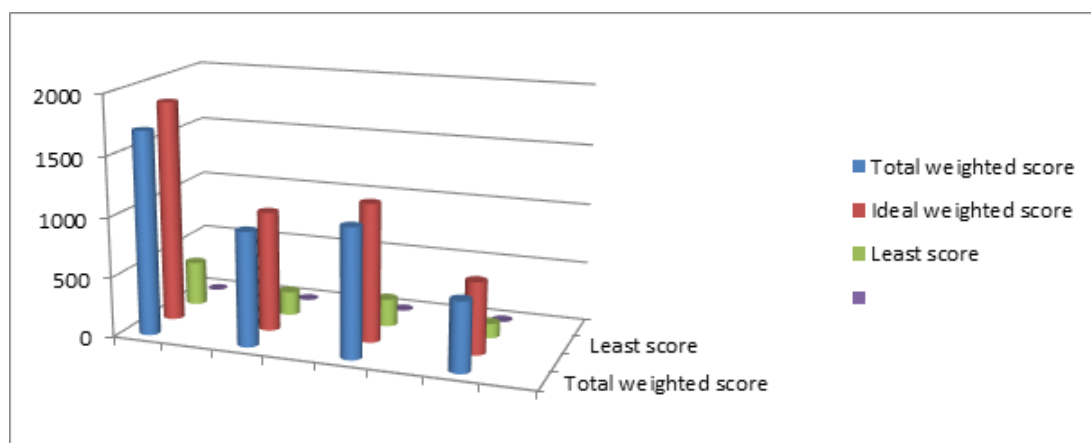| Category	Equation	Ideal score	Equation	Least score
Female Nursing Staff (**FNS**)	37 X5X10	1850	37X1X10	370
Male Nursing Staff (**MNS**)	20X5X10	1000	20X1X10	200
Male Doctor (**MD**)	23X5X10	1150	23X1X10	230
Female Doctors (**FD**)	12X5X10	600	12X1X10	120

Figure 1: Total Score, Ideal Score, and Least Score for the respondents

Table 2: Analysis table

Variables/ attributes	Weighted aggregate score and Ranks							
	FNS		MNS		MD		FD	
	Weight	Rank	Weight	Rank	Weight	Rank	Weight	Rank
Managing stress was difficult due to 24X7 working hours	162	8	95	4	104	5	58	3
Managing stress was difficult due to the death of a member of own family	169	5	98	1	108	3	59	2
Managing stress was difficult when the relatives of deceased person behavior were aggressive towards us after the death of the patient due to Covid-19	175	2	96	3	111	1	58	3
Managing stress was difficult when we were forced to stay away from the family members	166	7	95	4	105	4	60	1
Managing stress was difficult when we were completely disconnected from the rest of the world.	169	5	93	5	104	5	56	5
Managing stress was difficult when we were not able to do our regular physical exercise	164	7	88	6	109	2	55	6
Managing stress was difficult when we were not able to get a balanced diet due to the overcrowding of hospitals.	171	4	98	1	102	6	56	5
Managing stress was difficult when we were handling the print and news media	168	6	96	3	109	2	59	2
Managing stress was difficult due to the unhygienic situation in hospitals because of overcrowding of patients	179	1	97	2	108	3	57	4
Managing stress was difficult due to being unable manage work-life balance	172	3	97	2	111	1	60	1
Total weighted score	1695		953		1071		578	
Ideal weighted score	1850		1000		1150		600	
% of the total weighted score to the ideal weighted score	91.62		95.3		93.13		96.33	
Least score	370		200		230		120	
Total respondents	37		20		23		12	
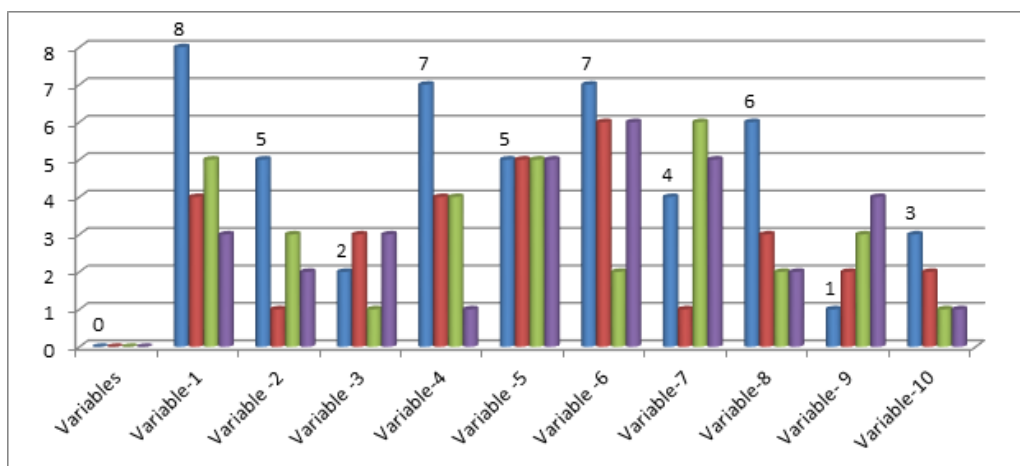
Figure 2: Rank for the various variable by FNS, MNS, MD, and FD

Annexure-1							
Attributes	**Opinion of Female Nursing staff -37**						
	Weight						
	CA	**A**	**N**	**DA**	**CDA**	**Weight**	**Rank**
	5	**4**	**3**	**2**	**1**		
Managing stress was difficult due to 24X7 working hours	24	7	3	2	**1**	**162**	**8**
Managing stress was difficult due to the death of a member of own family	**28**	**5**	**2**	**1**	**1**	**169**	**5**
Managing stress was difficult when the relatives of deceased person behavior were aggressive towards us after the death of the patient due to Covid-19	**30**	**5**	**1**	**1**	**0**	**175**	**2**
Managing stress was difficult when we were forced to stay away from the family members	**27**	**4**	**3**	**3**	**0**	**166**	**7**
Managing stress was difficult when we were completely disconnected from the rest of the world.	**28**	**4**	**3**	**2**	**0**	**169**	**5**
Managing stress was difficult when we were not able to do our regular physical exercise	**26**	**4**	**5**	**1**	**1**	**164**	**7**
Managing stress was difficult when we were not able to get a balanced diet due to the overcrowding of hospitals.	**29**	**5**	**1**	**1**	**1**	**171**	**4**
Managing stress was difficult when we were handling the print and news media	**27**	**6**	**2**	**1**	**1**	**168**	**6**
Managing stress was difficult due to the unhygienic situation in hospitals because of overcrowding of patients	**32**	**4**	**1**	**0**	**0**	**179**	**1**
Managing stress was difficult due to unable manage work-life balance	**30**	**4**	**1**	**1**	**1**	**172**	**3**

Source: Compiled from survey, CA- Completely Agree, A- Agree, N- Neutral, DA- Disagree, CDA- Completely Disagree

Annexure-2							
Attributes	**Opinion of Male Nursing staff -20**						
	Weight						
	CA	**A**	**N**	**DA**	**CDA**	**Weight**	**Rank**
	5	**4**	**3**	**2**	**1**		
Managing stress was difficult due to 24X7 working hours	16	3	1	0	**0**	**95**	**4**
Managing stress was difficult due to the death of a member of own family	**18**	**2**	**0**	**0**	**0**	**98**	**1**
Managing stress was difficult when the relatives of deceased person behavior were aggressive towards us after the death of the patient due to Covid-19	**17**	**2**	**1**	**0**	**0**	**96**	**3**
Managing stress was difficult when we were forced to stay away from the family members	**16**	**3**	**1**	**0**	**0**	**95**	**4**
Managing stress was difficult when we were completely disconnected from the rest of the world.	**15**	**3**	**2**	**0**	**0**	**93**	**5**
Managing stress was difficult when we were not able to do our regular physical exercise	**14**	**3**	**1**	**1**	**1**	**88**	**6**
Managing stress was difficult when we were not able to get a balanced diet due to the overcrowding of hospitals.	**18**	**2**	**0**	**0**	**0**	**98**	**1**
Managing stress was difficult when we were handling the print and news media	**17**	**2**	**1**	**0**	**0**	**96**	**3**
Managing stress was difficult due to the unhygienic situation in hospitals because of overcrowding of patients	**18**	**1**	**1**	**0**	**0**	**97**	**2**
Managing stress was difficult due to unable to manage work-life balance	**17**	**3**	**0**	**0**	**0**	**97**	**2**

Source: Compiled from survey, CA- Completely Agree, A- Agree, N- Neutral, DA- Disagree, CDA- Completely Disagree

Annexure-3							
Attributes	**Opinion of Male Doctors -23**						
	Weight						
	CA	**A**	**N**	**DA**	**CDA**	**Weight**	**Rank**
	5	**4**	**3**	**2**	**1**		
Managing stress was difficult due to 24X7 working hours	16	4	2	1	**0**	**104**	**5**
Managing stress was difficult due to the death of a member of own family	**18**	**3**	**2**	**0**	**0**	**108**	**3**
Managing stress was difficult when the relatives of deceased person behavior were aggressive towards us after the death of the patient due to Covid-19	**20**	**2**	**1**	**0**	**0**	**111**	**1**
Managing stress was difficult when we were forced to stay away from the family members	**17**	**3**	**2**	**1**	**0**	**105**	**4**
Managing stress was difficult when we were completely disconnected from the rest of the world.	**16**	**4**	**2**	**1**	**0**	**104**	**5**
Managing stress was difficult when we were not able to do our regular physical exercise	**19**	**2**	**2**	**0**	**0**	**109**	**2**
Managing stress was difficult when we were not able to get a balanced diet due to the overcrowding of hospitals.	**16**	**2**	**4**	**1**	**0**	**102**	**6**
Managing stress was difficult when we were handling the print and news media	**18**	**4**	**1**	**0**	**0**	**109**	**2**
Managing stress was difficult due to the unhygienic situation in hospitals because of overcrowding of patients	**17**	**5**	**1**	**0**	**0**	**108**	**3**
Managing stress was difficult due to unable to manage Work-life balance	**19**	**4**	**0**	**0**	**0**	**111**	**1**

Source: Compiled from survey, CA- Completely Agree, A- Agree, N- Neutral, DA- Disagree, CDA- Completely Disagree

Annexure-4							
Attributes	**Opinion of Female Doctors -12**						
	Weight						
	CA	**A**	**N**	**DA**	**CDA**	**Weight**	**Rank**
	5	**4**	**3**	**2**	**1**		
Managing stress was difficult due to 24X7 working hours	10	2	0	0	**0**	**58**	**3**
Managing stress was difficult due to the death of a member of own family	**11**	**1**	**0**	**0**	**0**	**59**	**2**
Managing stress was difficult when the relatives of deceased person behavior were aggressive towards us after the death of the patient due to Covid-19	**10**	**2**	**0**	**0**	**0**	**58**	**3**
Managing stress was difficult when we were forced to stay away from the family members	**12**	**0**	**0**	**0**	**0**	**60**	**1**
Managing stress was difficult when we were completely disconnected from the rest of the world.	**9**	**2**	**1**	**0**	**0**	**56**	**5**
Managing stress was difficult when we were not able to do our regular physical exercise	**8**	**3**	**1**	**0**	**0**	**55**	**6**
Managing stress was difficult when we were not able to get a balanced diet due to the overcrowding of hospitals.	**9**	**2**	**1**	**0**	**0**	**56**	**5**
Managing stress was difficult when we were handling the print and news media	**11**	**1**	**0**	**0**	**0**	**59**	**2**
Managing stress was difficult due to the unhygienic situation in hospitals because of overcrowding of patients	**10**	**1**	**1**	**0**	**0**	**57**	**4**
Managing stress was difficult due to unable to manage work-life balance	**12**	**0**	**0**	**0**	**0**	**60**	**1**

Source: Compiled from survey, CA- Completely Agree, A- Agree, N- Neutral, DA- Disagree, CDA- Completely Disagree

Suggestions

During the Covid-19, it was felt that shortage of these front-line workers might be the reason for

the 24X7 work culture. However, as far as possible, back workforce should be planned to overcome this situation in future. It is also true that these front-line workers have to pass through personal loss due to the death of family members. As far as possible some consideration should be provided on the humanitarian ground to present with their dear ones during this critical period of their life. Dealing with family members and relatives after the death of a deceased person creates many challenges for the hospital staff during this pandemic. Every effort should be made so that these hospital staff should be protected from these deceased family members.

To stay with family members is a must and cannot be helped. However, the hard reality is that the Covid-19 impact is such a huge extent it was not possible to stay with family members. We need to prepare ourselves to stay mentally strong and fit to overcome this kind of situation if any in the future.

The impact of the pandemic has been so extensive that it has forced us to disconnect from the rest of the world to these front-line workers. However, alternative options may be to stay connected with the digital platform with the rest of the world.

Those who do not have access to outdoor physical fitness options can try to involve themselves in the indoor whenever any free time is available.

Having a balanced diet during the pandemic is more important to keep oneself mentally and physically fit. The hospital authority should make a provision for such things in future uncertainties.

Nowadays handling print and news channels is very difficult. As far as possible the hospital authorities should not allow these doctors and nursing staff to interact with these people. This will help immensely and this will reduce the stress level of these people.

The pandemic has created the shortage of medical facilities for the first time in Indian medical history. To overcome this, the government should take more and more initiative for establishing new hospitals in various parts of the country and also should encourage the social entrepreneurs and industrialists to join in the establishing medical colleges for safeguarding the health of Indian people during this kind of emergency.

Due to an imbalance of work-life balance, stress is present in every profession. However, it was more for security personal (police) and doctors, nursing staff, and other supporting staff of medical who were associated with Covid-19 duty. However, a break-even in work-life balance should be explored so that it will not derail the family life and professional life.

Conclusion

Covid-19 has affected the lives of millions of people across the globe. Many have lost their dear ones untimely due to this pandemic which is irreparable for the rest of our life. However, during this emergency period, those who have dedicated their life for the service of mankind whatever possible way are commendable and the country will be indebted for their services. This study focused on doctors and nursing staff related to stress during Covid-19. They might have dedicated for the well-being of mankind but they also have every right to lead their life as per their wishes. To be precise, the day when these people choose their career, they restrict themselves with no alternatives except serving the people without any ifs and buts. However, to this extent, possible efforts or measures should be initiated to reduce job burnouts and support them emotionally and enable them to manage work-life balance, and also help them to overcome stress-related issues so that they can give their best to society in return.

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Authors' contributions

All authors contributed toward data analysis, drafting and revising the paper and agreed to be responsible for all the aspects of this work.

Conflict of Interest

We have no conflicts of interest to disclose.

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