

Original Research Article

Role of training to reduce stress among health professionals during COVID 19: an analytical study in Meerut

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ABSTRACT

Background: A healthy job is likely to be one where the pressures on employees are appropriate in relation to their abilities and resources, to the amount of control they have over their work, and to support they receive from people who matter to them. Experiencing an infectious disease outbreak can cause fear, anxiety and stress.

Methods: A cross sectional study was conducted in Subharti Medical College, Swami Vivekanand Subharti University, Meerut in the month of September 2020–October 2020 on 127 health care professional (69 doctors and 58 nurses) who were interviewed randomly working in the level III COVID hospital using professional stress score by David Fontanna.

Results: Training received by the doctor and nurses during COVID-19 pandemic for infection prevention was more significantly associated with mild professional stress ($p < 0.00$) than moderate professional stress ($p < 0.027$).

Conclusions: Training showed positive impact by enhancing their confidence level to manage stress during pandemic situation.

Keywords: Stress, Training, Nurses, Doctors

INTRODUCTION

In a person, general consequence to any situation which demands physical and psychological response results in stress. Stress to certain limits which a person can tolerate have positive effect towards achieving goal, that is called as Eustress; but job performance and health of a person can be jeopardised if exposed to excessive stress.¹ Expectation are such that doctors and nursing staff must be in state of mind of devoid of worries to take care of others, but health care workers are more prone to stress as they are responding to demand of the society as well as peculiarity of the work situation together with other stress variables faced by general population. Medical professional by virtue of profession faces lots of stress related to irregular duty hours, Emotional charged situations, sleep deprivation, irregular social and family life and conflicts

with other staff. Gender difference has also noticed for job stress among medical health professionals.²

In the coronavirus disease 2019 (COVID-19) pandemic stress among medical professional about new diseases was overwhelming. Anxiety in prevention of infection along with performing duties was a much concern for job stress. Fear and worry their own health and health of their loved ones, worsening of chronic condition was prevalent. Corona virus was also associated with stigma; stigma of lack of knowledge about how COVID-19 spreads, stigma of blaming someone, stigma of fears about disease and death, and also gossip that spreads rumours and myths.

Therefore, we planned a study to measure professional stress and their training on prevention of infection among

health care professionals from corona virus during pandemic.

METHODS

A cross sectional study was conducted in Subharti Medical College, Swami Vivekanand Subharti University, Meerut in the month of September 2020–October 2020 after seeking ethical clearance from the institute. All the health care professionals were included in the study during that period. Total 127 health care professional (69 doctors and 58 nurses) were interviewed working in the level III COVID hospital by the investigators themselves, thus maintain the quality of data collection. Interview schedule has question related to their demography and training status in part I and professional stress score by David Fontanna in part II. The data was analysed using percentage and Chi square test.

Professional life stress scale was used by David Fontana which classify stress into four categories according to the score obtained- 0-15: stress is not a problem in your life; 16-30: this is a moderate range of stress for a busy professional person, it is nevertheless well worth looking at how it can reasonably be reduced; 31–45: stress is clearly a problem, and the need for remedial action is apparent, the longer you work under this level of stress, the harder it often is to do something about it, there is a strong case for looking carefully at your professional life; 46-60: at these levels, stress is a major problem, and something must be done.³

Please note scores on stress scales must be interpreted cautiously. There are so many variables which lie outside the scope of these scales, but which influence the way in which we perceive and handle our stress, that two people with the same scores may experience themselves as under quite different levels of strain.

Nevertheless, taken as no more than a guide, these scales can give us some useful information.

RESULTS

Demographic distribution

In our study 87% doctors and 70.2% nurses were in the age group of 21-30 years. 12.3% nurses were below 20 years. Male and female doctors almost equally present in the study (49.3% and 50.7%) whereas 79.3% nurses were females (Table 1).

Department posted and training status and stress level.

89.9% doctors were from clinical department; whereas among nurses 36.2% were posted in emergency and 63.8% nurses in clinical department like medicine, surgery, paediatrics, skin and dermatology, orthopedics, gynae and obstetrics.

72.5% doctors and all the nurses had received training on prevention of infection once or more than once during the time of working for COVID-19 pandemic.

Table 1: Distribution of doctors and nurses according to age and gender.

| Demographics | Profession | |
|-----------------------|------------|-----------|
| | Doctor (%) | Nurse (%) |
| Age (in years) | | |
| ≤20 | 0 (0) | 7 (12.3) |
| 21-30 | 60 (87.0) | 40 (70.2) |
| 31-40 | 8 (11.6) | 9 (15.8) |
| >41 | 1 (1.4) | 1 (1.7) |
| Gender | | |
| Male | 34 (49.3) | 12 (20.7) |
| Female | 35 (50.7) | 46 (79.3) |

Regarding the professional stress level, 62.2% doctors and 67.2% nurses have mild professional stress which is not a problem to manage. Moderate stress which needs attention was present among 31.9% doctors and 32.8% nurses. Severe professional stress which needs remedial action was present among 2.9% doctors only (Table 2).

Table 2: Distribution of doctors and nurses according to status of training received, department posted and professional stress score.

| Distribution | Doctors (%) | Department (%) |
|------------------------|-------------|----------------|
| Department | | |
| Clinical | 62 (89.9) | 37 (63.8) |
| Emergency | 0 (0) | 21 (36.2) |
| Pre and para | 7 (10.1) | 0 (0) |
| Training status | | |
| Yes | 50 (72.5) | 58 (100) |
| No | 19 (27.5) | 0 (0) |
| Stress level | | |
| ≤15 | 45 (65.2) | 39 (67.2) |
| 16-30 | 22 (31.9) | 19 (32.8) |
| >31 | 2 (2.9) | 0 (0) |

Determinants for professional stress among doctors and nurses

Age and gender

Professional job stress in all the three categories (mild, moderate and severe) do not significantly vary with age group distribution in both doctors and nurses i.e. it is equally present, which could be taken as a manageable stress for effective work output in the job.

Among mild professional stress 57.8% doctors were male and 84.6% nurses were female, which was significant in distribution indicating that male doctors and female nursing health professionals had manageable mild stress (Table 3).

For moderate stress, gender distribution among nurses and doctors do not vary significantly for their professional stress equally present in both sexes in all health care professionals.

Training status

Though all the nurses had received training on infection prevention during COVID-19 pandemic time, but 31.1% doctors of had not received any training for infection prevention had mild professional stress and 22.7% had

moderate professional stress who had not received any training (Table 4).

Training received by the doctor and nurses during COVID-19 pandemic for Infection prevention was significantly associated with professional stress, more significantly with mild professional stress (P<0.00) than moderate Professional stress (P<0.027). It suggests that training had increased their capacity to manage their stress during pandemic situation by improving their confidence level to deal with current scenario of work pressure with anxiety (Table 4).

Table 3: Distribution of professional stress among doctors and nurses according to their age and gender.

| Stress level | Parameter | Profession | | P value |
|---|----------------|------------|-----------|---------|
| | Age (in years) | Doctor (%) | Nurse (%) | |
| ≤15 | ≤20 | 0 (0) | 4 (10.5) | 0.056 |
| | 21-30 | 38 (84.4) | 26 (68.4) | |
| | 31-40 | 7 (15.6) | 8 (21.1) | |
| 16-30 | ≤20 | 0 (0) | 3 (15.8) | 0.277 |
| | 21-30 | 20 (90.9) | 14 (73.7) | |
| | 31-40 | 1 (4.5) | 1 (5.3) | |
| | >41 | 1 (4.5) | 1 (5.3) | |
| >31 | 21-30 | 2 (100) | 0 (0) | |
| | Gender | | | |
| ≤15 (n=45 for doctors 39 for nurses) | Male | 26 (57.8) | 6 (15.4) | 0.00 |
| | Female | 19 (42.2) | 33 (84.6) | |
| 16-30 | Male | 8 (36.4) | 6 (31.6) | 0.747 |
| | Female | 14 (63.6) | 13 (68.4) | |
| >31 | Female | 2 (100) | | |

Table 4: Distribution of professional stress among doctors and nurses according to status of training received.

| Stress level | Training | Profession | | P value |
|--------------|----------|------------|-----------|---------|
| | | Doctor (%) | Nurse (%) | |
| ≤15 | Yes | 31 (68.9) | 39 (100) | 0.00 |
| | No | 14 (31.1) | 0 (0) | |
| 16-30 | Yes | 17 (77.3) | 19 (100) | 0.027 |
| | No | 5 (22.7) | 0 (0) | |
| >31 | Yes | 2 (100) | | |

DISCUSSION

58% of health care professionals in the age group 20-30 and 60% males (n=144), and 58% females (n=185) had stress in the study done by Kushal et al in 2018.⁴ In our study moderate stress was present in the age group 21-30 years 90.9% for doctors and 73.7% for nurses. According to gender, female had more moderate stress both in case of nurses (68.4%) and doctors (63.6%) in comparison to male doctors (36.4%) and male nurses (31.6%). Severe professional stress which needs remedial action was present among 2.9% doctors only

In the study conducted by Haq et al in Pakistan showed that age, marital status had no impact on the psychological state and did not appear to be a factor for increased job

pressure.⁵ It is also evident in our study that job pressure of moderate category do not vary with age and gender.

In the study conducted by Sushama in Indira Gandhi Government Medical College, pre and post-test after training on knowledge of prevention and treatment were found to be significant under the heading of epidemiology that is from 5.9691 to 7.1111 followed by questions on prevention of the infection (from 4.0720 to 5.7305).⁶ Similar findings were observed in the study conducted by Bhagvathula et al where majority of the health care workers (87%) were aware that that washing hands with soap and water could help to prevent COVID-19 transmission and 84.3% of the participants had adequate knowledge about the epidemiology of the disease.⁷

According to four branch model of emotional intelligence, the ability to recognize your emotional state is essential in order to understand and manage your emotions. Therefore, if you skip the phase of acknowledging that you are stressed, you impede your ability to manage your stress.⁸ In the systematic review conducted by Kushal, it is shown that correlation exists between work stress and poor health of health professionals. Poor health in turn, reduces human efficiency due to lack of alertness, focus, absenteeism, and other similar problems. There was no significant difference in stress levels between different grades of doctors and administrative staff. All workers in health care profession were equally stressed in their study.⁴

Limitations

The study area was COVID hospital level III which could have influenced the stress level among the health professionals.

CONCLUSION

A healthy job is likely to be one where the pressures on employees are appropriate in relation to their abilities and resources, to the amount of control they have over their work, and to support they receive from people who matter to them. Experiencing an infectious disease outbreak can cause fear, anxiety and stress. For organisation, effective stress-free environment is possible when both employees and employers cooperate and develop mutual understanding for each other's needs. Thus, it is essential to provide training on infection prevention for the capacity building which in turn will reduce professional stress among health professionals.

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