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STRESS IN HEALTHCARE PROFESSIONALS DURING COVID 19: A COMPARISON BETWEEN
GEORGIA AND UAE

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Abstract

The COVID-19 pandemic increased workload and stress for the healthcare workers leading to their burnout. To identify and compare the contributors and effects of increased stress between Georgia and the UAE. An e-questionnaire related to stress and its contributing factors was made on google forms and sent to HCP's throughout Georgia and the UAE. We received 75 responses, with 77% being HCP's from the UAE and 23% from Georgia. Most of the responders from Georgia stated that they felt hopeless. The increase in workload was more significant in HCP's of UAE, and the majority had chosen a score of 3 out of 5. This severe psychological impact was related to several stressors observed in this study. The lack of participants from Georgia curbed our results, and further investigations should be considered.

Abbreviations

UAE - United Arab Emirates; HCP - Healthcare Professionals; FHCW - Frontline healthcare workers; WHO - World Health Organization; RNA - Ribonucleic Acid; AKI - Acute Kidney Injury; ARDS - Acute Respiratory Distress Syndrome; SARS CoV- 2 - Severe Acute Respiratory Syndrome coronavirus – 2; COVID - 19 - Coronavirus disease of 2019; PPE - Personal Protective Equipment; USA - United States of America

Introduction

In the province of Wuhan, China, on 31st December 2019, there developed a case of pneumonia-like symptoms caused by a virus that started spreading like wildfire. This virus spread to other countries and was then declared a global pandemic on 11th March 2020 by the WHO. This RNA virus called the SARS- CoV2 or COVID 19 is transmitted through respiratory droplets. When acquired, it starts to show symptoms like fever, dry cough, malaise, fatigue, nausea, vomiting, diarrhea, etc., which means that it can affect any organ system [3]. People of all ages were affected by it, but the more severe manifestations were seen in those with other comorbidities like hypertension, diabetes, cardiovascular diseases, chronic lung diseases, etc. [15]. Of the fatal diseases, it also causes ARDS [6], pulmonary fibrosis [8], encephalitis, stroke, Guillain- Barre syndrome [4], AKI [1], etc. Hence the understanding of the disease is crucial at this point.

Due to its unfamiliarity, many countries took several measures to curb the spread of the virus, such as implementing masks, social distancing, routine sanitation regimens, use of hand sanitizers, etc. [10]. Developing countries like Georgia reported their first case of COVID infection on 26th February 2020. Since then, there have been 368,022 confirmed cases with 5,335 deaths reported [13]. The country handled the situation in four stages involving prevention, management, declaring a state of emergency, and placing movement restrictions [14]. In developed countries like UAE, the first case was diagnosed on 23rd January 2020, the total number of cases has been 632,907 confirmed cases of COVID-19 with 1,811 deaths, reported [12]. UAE implemented several initiatives to combat COVID-19, including surveillance and contact tracing, proper containment, mental health support, mass testing and treatment, government economic support, and national vaccination programs. However, despite these measures, the number of cases persistently rose due to noncompliance, increased testing, relapses, reopening, etc. [16] Healthcare workers faced the ultimate challenge of treating these patients with very little knowledge of the disease and its treatment.

As the workload for these frontline warriors started increasing, physician burnout became more and more imminent [2,7]. Burnout is a psychological syndrome characterized by emotional exhaustion, depersonalization, and a sense of reduced accomplishment in day-to-day work [10]. It meant that the frontiers were perishing and needed an immediate measure to combat this problem.

Therefore, this study aims to identify the contributors to increased stress and burnout in HCPs and suggest methods to alleviate the problem. We do so by in-depth comparing the stress levels experienced by HCPs in UAE and Georgia to find similarities and differences in how the situation affected

them, the contributors to the problem, and how well the situation was and could be managed.

Methods

We have used an online questionnaire, which we shared among health care professionals (HCPs) in Georgia and the UAE via emails, Facebook, and WhatsApp groups.

An e-questionnaire was conscientiously prepared on google forms; intended to be brief to complete the survey within 2-3 mins. The participants were informed about the purpose of the study and data confidentiality priorly. Upon clicking on the link, all the participants were directed to the survey, and they had to answer several questions.

Participants were required to be 20 years and above, be capable of reading and writing English. They must also be currently working as health care professionals in Georgia or UAE with access to the internet.

The survey consists of several questions. The first section involves socio-demographic details such as country of practice, designation, current specialty, age, and gender.

The second section consists of the stress questionnaire: level of stress during the pandemic - scored from 1-10, where one is mildly stressed, and ten is highly stressed, symptoms experienced during the pandemic (for example, anxiety, depression, irritability, etc.), change in workload due to COVID-19 - scored 1-5 where one is no effect, and five is severely affected and what helped you during this pandemic (for example, friends and family, acceptance that you cannot control everything, etc.).

The third section involves a series of yes or no or maybe questions. The questions mainly relate to mental stress, lack of knowledge regarding prevention and protection against COVID-19, moments of hopelessness/pessimism, anxiety being infected during the pandemic, changes in motivation to work during this pandemic, and their opinion regarding the management of COVID-19 by their respective country.

The final section of the questionnaire was intentionally kept open-ended to gather a wide range of suggestions from the HCPs and to increase the depth of responses which would ultimately assist the health care community in coping with the stress of the pandemic.

Results

We received a total of 82 responses from both Georgia and the UAE. Out of 82, seven responses had to be excluded due to repetitions. The remaining 75 were considered for evaluation and comparison, of which 17 responses (22.7%) were from Georgia, and the remaining 58 (77.3%) were from UAE. The majority of those who responded were doctors - 35 (46.7%), closely followed by nurses - 34 (45.3%) (**Figure 1**). From Georgia, almost all of those who responded were doctors. On the other hand, there were mixed responses from UAE, predominantly from the nurses.

What is your designation?

75 responses

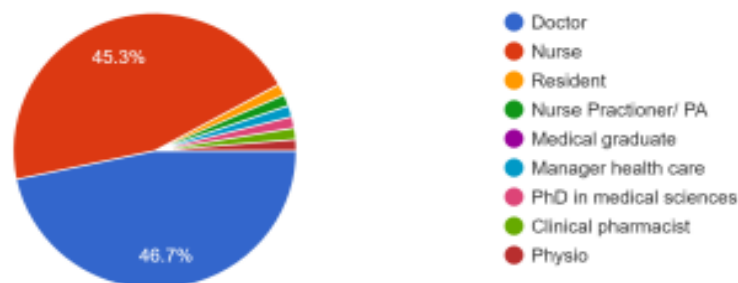


Figure 1: Designation of participants from both UAE and Georgia.

According to the age, 31 participants (41.3%) were between 30-39, which claimed the majority, 27 (36%) were between 40-49, 10 (13.3%) were 50-59, and 7 (9.3%) were 20-29.

In general, the stress level experienced by healthcare professionals during this time was similar in both countries. Participants were asked to score their stress levels from 1-10, and the prevailed level for both countries was seven. In Georgia, most doctors rated their stress >5 (**Figure 2**). In the UAE, most of them chose scores ≥ 5 , with scores of 7 and 8 dominating (**Figure 3**). Concerning the stress, when asked to choose or describe some of the symptoms they experienced, the most common complaint was anxiety -

19 HCPs (25.3%). The other common complaints were irritability [N = 11 (14.7%)], insomnia [N = 10 (13.3%)], body pain [N = 7 (9.3%)] headaches and dizziness [N = 4 (5.3%)]. Additionally, 3 of the participants experienced symptoms of depression during this period.

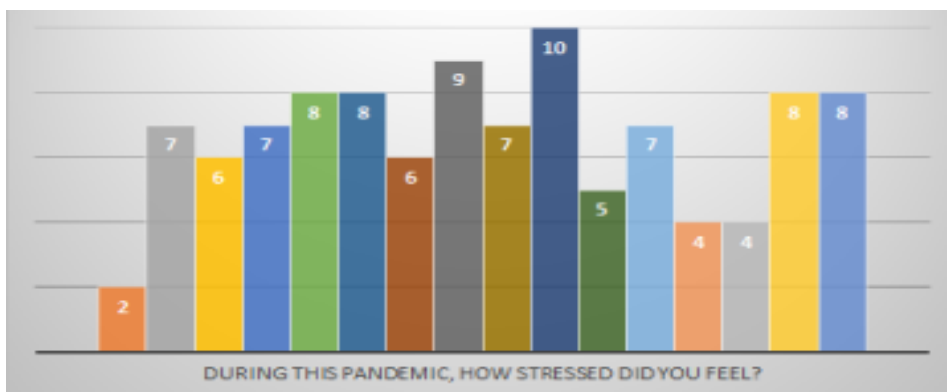


Figure 2: Stress scores in Georgia.

In this graph, each bar represents an individual and the score they chose for their stress levels (1 - 10). The most commonly chosen scores were 7 & 8.

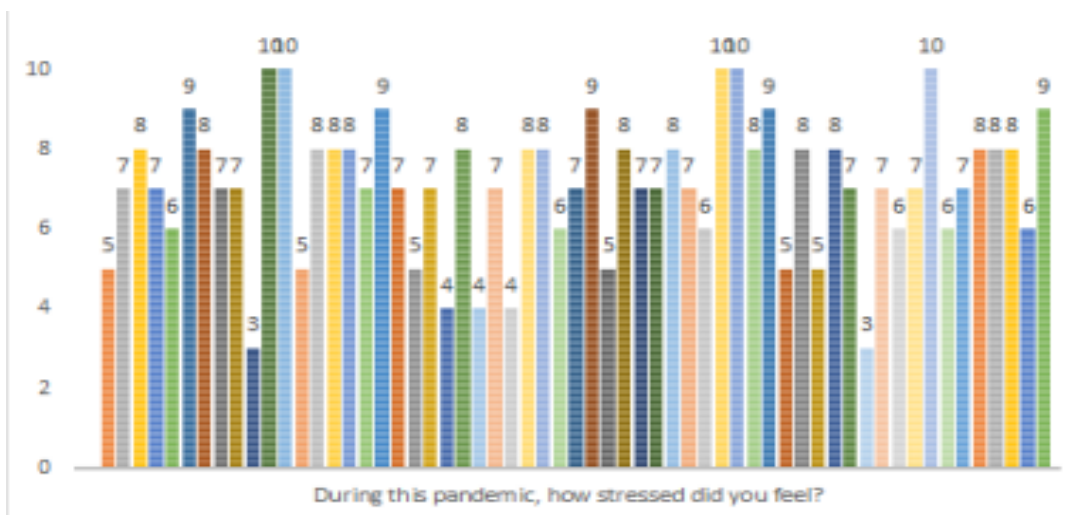


Figure 3: Stress scores in UAE.

Each bar represents an individual and the score stress levels (1 - 10) defined by an individual. A score of 7 is the most predominating score selected.

The questionnaire revealed that a preponderance of health personnel was anxious about getting infected by COVID-19 (**Figure 4**) which comprised 66.7% (N = 50). However, 21.3% (N = 16) were unsure about their anxiousness. Of these numbers, most of the doctors from Georgia feared getting COVID-19. In the UAE, out of 58 responses, only 5 of them did not fear getting COVID-19. The remaining 53 responded 'yes' and 'maybe.' When asked about their change in motivation to work, the responses were almost equal. About 52% (N = 39) had responded 'No' and 40% (N = 30) responded 'Yes' and the remaining 8% (N = 6) were unsure.

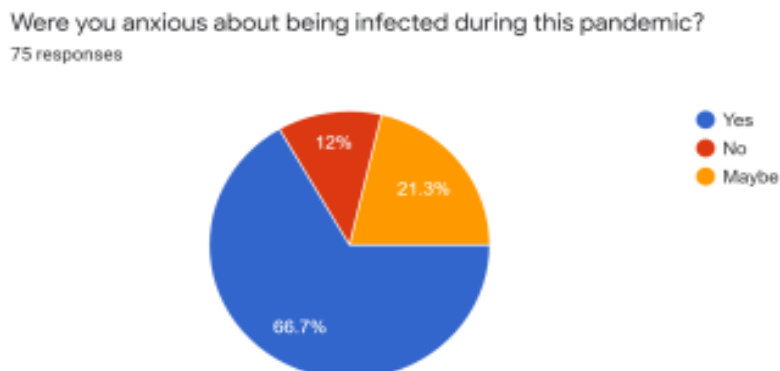


Figure 4: Anxiety about being infected by COVID-19.

Participants were asked to score how the change in workload affected them during COVID-19 from 1-5. Among the 75 participants, the median response rate from both countries was 31 (41.3%), with a score of 3 being the most chosen option. From Georgia and UAE most of the participants rated scores 3 (N = 6) and 4 (N = 7) and 3 (N = 25) and 4 (N = 21) respectively. It discloses that both countries have had mild to moderate increases in their workload due to COVID-19. When comparing results from the UAE & Georgia, the workload of the seven participants from the UAE (Figure 5) and only one participant from Georgia (Figure 6) were severely affected due to COVID-19.

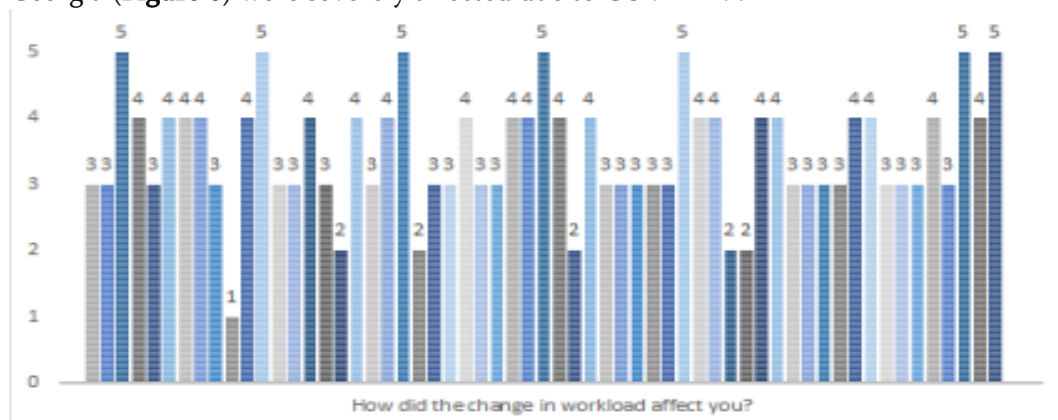


Figure 5: Change in workload for UAE.

Each bar represents an individual and the score their workload affected them (1 - 5) - defined by an individual. Scores 3 and 4 are most commonly chosen.

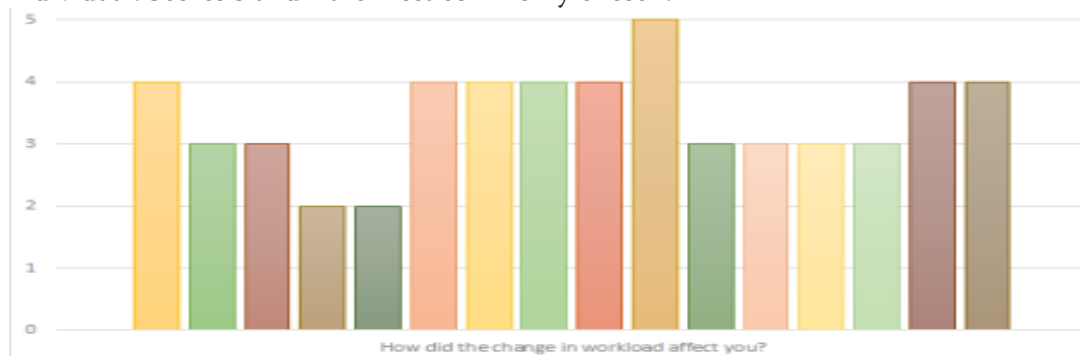


Figure 6: Change in workload for Georgia.

Each bar represents an individual and the score they chose for how their workload affected them (1-5) - defined by an individual. The most common score chosen was 4.

The questionnaire revealed that most participants (47.3%, N=35) did not feel hopeless and pessimistic (Figure 7), 31.1% (N=23) were uncertain of their feelings, and 21.6% (N=16) had hopelessness and pessimism during this period. Of these analyses, 7 HCPs from Georgia stated no, and six chose maybe. From the UAE, most participants chose that they did not feel hopeless/pessimistic during COVID-19. So, to compare, the feeling of hopelessness was more profound in Georgia than in UAE.

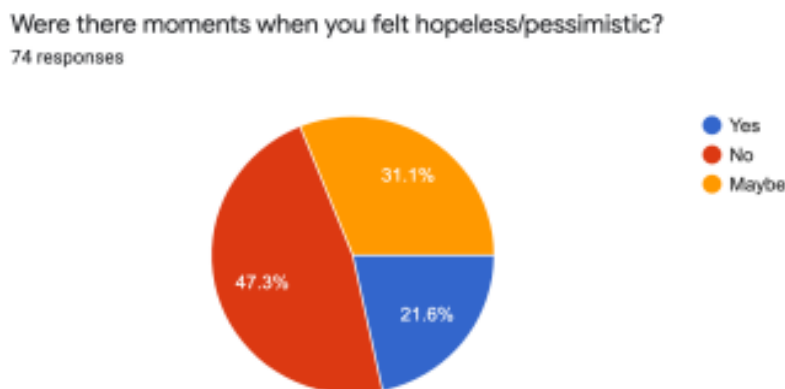


Figure 7: Moments of hopelessness/pessimism.

Concerning COVID-19, HCPs were asked if their country of practice handled the situation

adequately (**Figure 8**), and most of them, i.e., 76%, responded positively (N=57) and 6.7% (N=5) responded negatively, while the other 17.3% (N=13) were unsure. While comparing this data between the two countries, the majority from Georgia voted for maybe (N=7) and that the situation was not handled aptly (N=5). From the UAE majority of participants agreed that the problem was addressed correctly (N= 54).

We asked our participants to choose what helped them relieve their stress during this period. Most of the participants, 49.3% (N=37) (**Figure 9**), selected 'acceptance that you can't control everything. The other popular options were 'friends and family,' with 40% (N=30) of the votes, and 'eating right,' with 6.7% (N=5) votes. Overall, while comparing this data between Georgia and UAE, they had an almost equally divided result.

Do you think the country you practice in handled the COVID-19 situation aptly?
75 responses

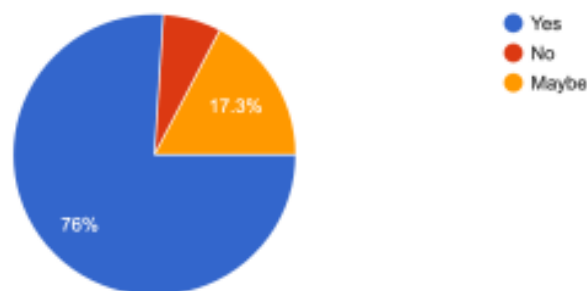


Figure 8: Country of practice handled the COVID-19 situation aptly?

What helped you during this period?
75 responses

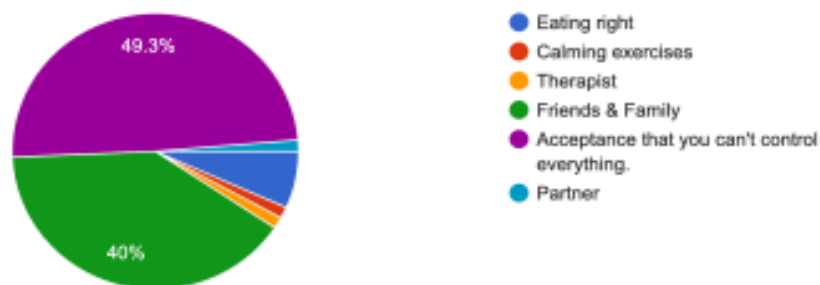


Figure 9: What helped you during this period?

In this questionnaire, we asked the HCPs if any suggestions could help colleagues cope with this situation. The most common recommendations received were "to stay calm and to maintain proper safety precautions such as wearing masks, PPEs, social distancing, and sanitization." Some participants also advised maintaining a healthy lifestyle by having a balanced diet, avoiding carbonated drinks, taking daily multivitamins, getting sufficient sleep, and exercising.

Overall, responders from the UAE believe that their country handled the pandemic adequately, although the responders from Georgia thought the government could have dealt with the situation better. In addition, the HCP's of UAE had a more significant increase in workload than the HCP's of Georgia. In general, both countries displayed similar stress levels among HCP's.

Discussion

The COVID-19 pandemic took the world by storm, and its most significant effect was seen on the frontline health workers, who dedicated all their time and effort to help control this critical situation. So, it goes without saying, it takes a toll on one's mental health. In this study, 75 FHWCs from the countries of Georgia and UAE participated, with most responses being from the UAE. Increased stress levels with a mean of 7 (scale 1-10) were observed in both countries, and most who responded were in the age group of 30-39. Doctors and nurses were affected almost equally, and the most common symptom was anxiety, followed by irritability and insomnia. Increased levels of stress were attributed to change in the workload and the fear of contracting the infection. A stress model questionnaire demonstrated the factors that

contributed and assessed disparities between the countries of the UAE and Georgia in managing the situation.

Since the COVID pandemic, several studies have been performed to assess the increased psychological impact on the frontliners. Countries like the US [9] and India [5] have conducted studies showing mental health concerns due to burnout and stress. The US emphasized increased stress levels seen in women, especially those of color, and attributed the cause to increased workload and feeling less valued. In Kashmir, India, it was observed that feelings of pessimism, change in the workload, and anxiety of being exposed to the pathogen all contributed to the stress levels. Our conceptual model of the study also shows similar findings as those seen in the US and India. However, the differences observed were that the stress levels were identical in both doctors and nurses compared to the other countries.

An essential variable of 'feeling hopeless/pessimistic' during this pandemic helped us better assess the mental status of the FHWs. Although the majority responded with no changes, the frontliners in Georgia felt more hopeless when compared to those in the UAE. Comparisons made between Georgia and the UAE showed differences in the way the country handled the situation. The majority of FHWs from Georgia mentioned the government did not address the problem aptly. It can be considered a variable that resulted in the increased pessimism and hopelessness felt by healthcare workers in Georgia.

The study's main limitation was the lack of responses and an unequal number of participants from Georgia and the UAE, which affected the quality of the results.

Our study, which assessed COVID-19 related stress in healthcare workers, is essential. It identified anxiety, increased workload, and pessimism as attributable to the pressure overburdened healthcare workers face. Furthermore, the lack of resources provided by organizations lessens the efforts put in by these frontliners. So, interventions can be implemented, including better staffing, peer support groups [9], proper protocol implementation, and encouragement from colleagues and their organizations, with several studies owing to these strategies [11].

Conclusion

Although the world sees the FHWs as the warriors in this war against COVID-19, it is vital to emphasize the psychological impact it has had on them. Our study identified change in workload, increased fear of being infected with the disease, anxiety, and pessimism as significant contributors to increased stress levels. The lack of resources and management of the situation by Georgia and the UAE respectively played a prominent role. Further studies should be conducted better to help our frontline workers in this situation of crisis.

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