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## Coping strategies adopted by Hamad Medical Corporation Paramedics before and during the COVID-19 Pandemic

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### ABSTRACT

**Background:** Paramedics are subjected to high levels of stress, which increase their risk of depression, burnout, quitting the profession, or even committing suicide.<sup>1</sup> Some recent studies have focused on the coping strategies used by nurses in response to the COVID-19 pandemic<sup>2</sup>, but little is known regarding paramedics. This study explored the potential coping strategies used by Hamad Medical Corporation Ambulance Service (HMCAS) paramedics and critical care paramedics (referred to as “Paramedics”) in Qatar to manage the stress associated with their work before and during the COVID-19 pandemic.

**Methods:** An online survey combining a validated tool (an adapted tool from the COPE [Coping Orientation to Problems Experienced] Inventory<sup>3</sup>) with additional questions were sent to all HMCAS emergency Paramedics (n = 1,100) in early 2021 with text message reminders, with the aim of recruiting 285 participants based on a sample size calculation with a 95% Confidence Interval.

**Results:** Only the responses from staff who had started to work in Qatar before December 2019 were considered for inclusion in the study. As such, 274 valid responses were analyzed. The results show that the staff has used a variety of coping strategies that differed slightly before and during the pandemic (Figure 1). The percentage of paramedics using coping strategies due to work-related stress was 75.9% before COVID-19 and only 54.4% during the pandemic. This reduction is presented in Figure 2. Moreover, the results showed that the observed differences in coping strategies adopted before and during the pandemic were not always statistically significant.

**Conclusion:** The use of coping strategies among HMCAS Paramedics generally decreased during the COVID-19 pandemic, especially those related to going out, meeting up with friends and relatives, and practicing a sport. This can probably be explained by their increased working hours during the pandemic and the precautionary measures limiting group activities and interactions, but regrettably, this can only exacerbate their level of stress.

**Keywords:** Coping strategies, Paramedics, Work-related stress, Sociodemographic factors, COVID-19 pandemic

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Items with higher reported use*	Use meditation, spend time alone, reflect on the work situation bothering me, Talk with someone about the work situation bothering me		
Items with lower reported use*	Go out to the cinema, Watch movies/TV, Practice religious rituals, Go for a walk, Spending time with friends, Spending time with family, Practice a team sport, Practice a solitary sport		
Items without statistically different change	Use comfort food/eat more, Browse social media, Smoke cigarettes or Shisha, Use of alcohol or recreational drugs		
Items	(n=274) Mean ±SD		p-value
	Before pandemic	During pandemic	
Total/85 **	48.92±6.79	45.14±6.72	<0.05*

\* Significant at p<0.05. Likert Scale for each item with: Never=1, Rarely=2, Sometimes=3, Often=4, Always=5

\*\* Maximum score=85. See Table 2 for the coping strategies scoring ranges.

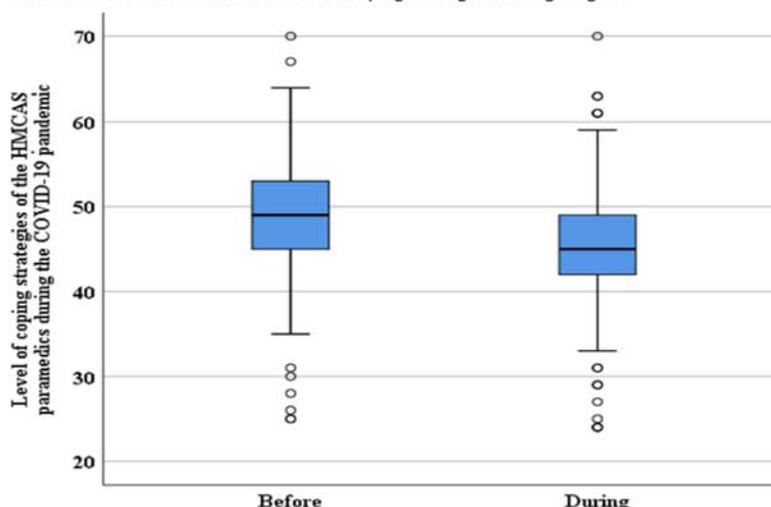


Figure 1. Coping strategies used by HMCAS paramedics before and during the COVID-19 pandemic and total score with box plots. The tool was adapted from Carver<sup>3</sup>.

	(n=274)		McNemar-Bowker test	p-value
	Before pandemic	During pandemic		
	n (%)	n (%)		
Never/Rarely using coping strategies (17-29)	4 (1.5)	7 (2.6)	55.566	<0.05*
Sometimes/Often using coping strategies (30-44)	62 (22.6)	118 (43.1)		
Always using coping strategies (45-85)	208 (75.9)	149 (54.4)		

\* Significant difference at p<0.05; n: number; and p-value calculated by McNemar-Bowker test.

Figure 2. Use of coping strategies reported by HMCAS paramedics in response to their work-related stress before and during the COVID-19 pandemic. The tool has been adapted from Carver.<sup>3</sup>

**Ethical approval/IRB statement:** This study has been approved by the ethics committee of the Doha Institute for Graduate studies: (DI-IRB-2020-S84) and Hamad Medical Corporation Medical Research Center (MRC-01-20-1156)

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