

# Northumbria Research Link

Citation: Jameel Al Barbari, Mohammed, Gangaram, Padarath, Kenward, Gary, Alolimat, Hmoud, Laughton, James and Alinier, Guillaume (2022) Impact of ethnicity on Paramedic perceived work-related stress and coping strategies adopted before and during the COVID-19 pandemic. *Journal of Emergency Medicine, Trauma and Acute Care*, 2022 (1). ISSN 1999-7086

Published by: Hamad bin Khalifa University Press

URL: <https://doi.org/10.5339/jemtac.2022.qhc.12>  
<<https://doi.org/10.5339/jemtac.2022.qhc.12>>

This version was downloaded from Northumbria Research Link:  
<http://nrl.northumbria.ac.uk/id/eprint/48290/>

Northumbria University has developed Northumbria Research Link (NRL) to enable users to access the University's research output. Copyright © and moral rights for items on NRL are retained by the individual author(s) and/or other copyright owners. Single copies of full items can be reproduced, displayed or performed, and given to third parties in any format or medium for personal research or study, educational, or not-for-profit purposes without prior permission or charge, provided the authors, title and full bibliographic details are given, as well as a hyperlink and/or URL to the original metadata page. The content must not be changed in any way. Full items must not be sold commercially in any format or medium without formal permission of the copyright holder. The full policy is available online: <http://nrl.northumbria.ac.uk/policies.html>

This document may differ from the final, published version of the research and has been made available online in accordance with publisher policies. To read and/or cite from the published version of the research, please visit the publisher's website (a subscription may be required.)



## Impact of ethnicity on Paramedic perceived work-related stress and coping strategies adopted before and during the COVID-19 pandemic

Mohammed Jameel Al Barbari<sup>1</sup>, Padarath Gangaram<sup>2,3</sup>, Gary Kenward<sup>2</sup>, Hmoud Alolimat<sup>1</sup>, James Laughton<sup>2</sup>, Guillaume Alinier<sup>2,4,5,6,\*</sup>

### ABSTRACT

**Background:** People respond to stressful situations differently based on their ethnicity.<sup>1</sup> This study explored the impact of ethnicity on coping strategies used to deal with work-related stress among Hamad Medical Corporation Ambulance Service (HMCAS) paramedics in Qatar before and during the COVID-19 pandemic. It is based on the associated work conducted by the same team.<sup>2,3</sup>

**Methods:** An online survey combining validated tools with additional demographic questions was sent to all HMCAS paramedics (n = 1,100) between January and May 2021. The survey collected demographic information and data regarding the coping strategies they used before and during the COVID-19 pandemic.

**Results:** 274 valid responses were received and categorized into 5 ethnic groups. For statistical analysis purposes, only the three main groups with a sufficient number of participants could be considered; Arabian (n = 151), South Asian (n = 45), and Southeast Asian (n = 60) (Total n = 256). The other ethnic groups were represented by too few participants. Overall, stress levels were higher for all ethnicities during the pandemic compared to before (Table 1). However, stress levels were lower in the Southeast Asian subgroup before and during the pandemic as compared to South Asian and Arabian counterparts (Table 1). The usual coping strategies such as visiting the cinema, spending time with friends, and playing team sports decreased for all study subgroups during the pandemic (Table 2); likely due to restrictions imposed to control the pandemic. The practice of religious rituals as a coping strategy showed a significant decrease in the South Asian and Southeast Asian subgroups during the pandemic. Although not statistically significant, subgroup Arabian staff have reported smoking more cigarettes or shisha as a coping strategy during the pandemic and consumed more alcohol or recreational drugs than the other two groups.

**Conclusion:** This study demonstrated that ethnicity has impacted the perceived work-related stress. Further, the coping strategies among the various ethnic groups also differed. Additional studies with larger sample sizes and in different settings are important to inform policy design related to work stress potentially considering staff ethnicity.

**Keywords:** Coping strategies, Paramedics, work-related stress, sociodemographic factors, COVID-19 Pandemic

<sup>1</sup>Department of Social Work, Doha Institute for graduate studies, Doha, Qatar

<sup>2</sup>Hamad Medical Corporation Ambulance Service, Doha, Qatar

<sup>3</sup>Faculty of Health Sciences, Durban University of Technology, Durban, South Africa

<sup>4</sup>Weill Cornell Medicine-Qatar, Doha, Qatar

<sup>5</sup>School of Health and Social Work, University of Hertfordshire, Hatfield, HERTS, UK

<sup>6</sup>Faculty of Health and Life Sciences, Northumbria University, Newcastle upon Tyne, UK

\*Email: galinier@hamad.qa

<http://dx.doi.org/10.5339/jemtac.2022.qhc.12>

Submitted: 27 July 2021

Accepted: 9 November 2021

Publication date: 15 January 2022

© 2022 Al Barbari, Gangaram, Kenward, Alolimat, Laughton, Alinier, licensee HBKU Press. This is an open access article distributed under the terms of the Creative Commons Attribution license CC BY-4.0, which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

**Table 1.** Relation between ethnicity and the stress levels by HMCAS paramedics before and during COVID 19 Pandemic.

Level of stress experienced by the HMCAS paramedics before and during the current pandemic		Arabian (West Asia and North Africa) (n=151)		South Asian (India, Sri Lanka ...) (n=45)		Southeast Asia (Vietnam, Philippines...) (n=60)		F	P-value
		Mean±SD & p-value		Mean±SD & p-value		Mean±SD & p-value			
Were your conditions at work unpleasant or sometimes even unsafe?	Before	3.05±1.11	<0.001*	2.82±1.07	<0.001*	3.18±0.85	<0.001*	1.533	0.218
	During	3.46±1.15		3.42±1.12		3.60±1.06		0.430	0.651
Did you feel that your work is negatively affecting your physical wellbeing?	Before	3.37±1.14	<0.001*	3.13±1.24	*0.002	2.93±1.10	<0.001*	3.291	0.039 *
	During	3.70±1.08		3.62±1.21		3.53±1.13		0.463	0.630
Did you feel that your work is negatively affecting your emotional wellbeing?	Before	3.32±1.17	<0.001*	3.04±1.19	0.001*	2.90±1.12	<0.001*	3.119	0.046 *
	During	3.67±1.13		3.53±1.27		3.38±1.19		1.317	0.270
Did you have too much work to do and/or too many unreasonable deadlines?	Before	3.26±1.14	<0.001*	3.29±1.22	<0.001*	2.93±1.06	<0.001*	2.031	0.133
	During	3.60±1.09		3.73±1.21		3.28±1.08		2.477	0.086
Did you find it difficult to express your opinions or feelings about your work conditions to your superiors?	Before	3.12±1.32	0.011*	3.07±1.29	0.006 *	3.27±1.22	0.023 *	0.381	0.684
	During	3.26±1.34		3.44±1.36		3.37±1.19		0.376	0.687
Did you feel that work pressures interfere with your family or personal life?	Before	3.52±1.17	0.000*	3.31±1.41	0.004 *	2.93±1.07	<0.001*	5.260	0.006 *
	During	3.85±1.16		3.76±1.33		3.35±1.18		3.754	0.025 *
Did you have adequate control or input over your work duties?	Before	3.28±1.16	0.504	3.33±1.22	0.719	3.08±1.14	0.621	0.769	0.465
	During	3.32±1.20		3.38±1.25		3.05±1.17		1.309	0.272
Did you receive appropriate recognition or rewards for good performance at work?	Before	2.49±1.30	0.164	1.96±1.00	0.244	2.23±1.00	0.045 *	3.830	0.023 *
	During	2.58±1.27		1.82±0.98		2.37±0.97		7.325	0.001 *
Were you able to fully utilize your skills and talents at work?	Before	3.58±1.05	0.588	3.51±1.16	0.400	3.83±0.94	0.999	1.570	0.210
	During	3.56±1.11		3.42±1.12		3.83±0.96		2.137	0.120

Scale: Never=1, Rarely=2, Sometimes=3, Often = 4, Always =5

\* Indicates it is statistically significant

**Ethical approval:** 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)

**Disclosures and acknowledgments:** The authors are grateful to the participating staff who worked tirelessly during the COVID-19 pandemic.

**Table 2.** Relation between ethnicity and the coping strategies items used by HMCAS paramedics before and during COVID 19 Pandemic.

The coping strategies that paramedics used in response to stressful life events		Arabian (West Asia and North Africa) (n=151)		South Asian (India, Sri Lanka ...) (n=45)		Southeast Asian (Vietnam, Philippines...) (n=60)		F	p-value
		Mean±SD & p-value		Mean±SD & p-value		Mean±SD & p-value			
Use meditation	Before	2.19±1.16	0.001 *	1.8±0.94	0.037 *	1.85±1.07	0.117	3.269	0.040 *
	During	2.34±1.25		2±1.11		1.98±1.17		2.551	0.080
Use comfort food/eat more	Before	2.71±1.12	0.887	2.8±1.04	0.070 *	2.87±1.11	0.013 *	0.471	0.625
	During	2.72±1.16		2.56±1.16		3.07±1.23		2.823	0.061
Go out to the cinema	Before	1.92±0.97	0.000 *	2.82±1.19	<0.001 *	2.25±1.17	<0.001 *	12.822	0.000 *
	During	1.34±0.72		1.6±1.1		1.35±0.71		1.887	0.154
Watch movies/TV	Before	2.78±1.08	0.002 *	3.4±1.01	0.147	3.73±0.92	0.347	20.306	0.000 *
	During	2.57±1.13		3.16±1.21		3.63±1.13		19.718	0.000 *
Browse social media	Before	3.51±1.03	0.342	3.76±0.8	0.342	4±0.88	0.999	5.850	0.003 *
	During	3.45±1.08		3.87±0.92		4±1.01		7.185	0.001 *
Practice religious rituals	Before	3.77±1.12	0.134	3.49±1.08	0.031 *	3.38±1.08	0.062	3.170	0.044 *
	During	3.7±1.16		3.27±1.19		3.2±1.19		4.942	0.008 *
Go for a walk	Before	3.1±1	<0.001 *	3.73±0.96	<0.001 *	3.45±0.93	<0.001 *	8.323	0.000 *
	During	2.67±1.09		3.02±1.12		2.8±1.07		1.873	0.156
Spend time alone	Before	2.75±0.94	0.001 *	2.51±1.08	0.118	2.85±1.09	0.109	1.533	0.218
	During	2.97±1.06		2.71±1.14		2.97±1.21		0.983	0.376
Spending time with friends	Before	3±0.99	<0.001 *	3.42±1.03	<0.001 *	3.3±0.79	<0.001 *	4.449	0.013 *
	During	2.3±0.88		2.42±0.97		2.6±0.92		2.427	0.090
Spending time with family	Before	3.86±0.89	0.028 *	4.09±1.1	0.002 *	3.65±1.35	0.007 *	2.257	0.107
	During	3.43±1.07		3.69±1.26		3.35±1.41		1.134	0.323
Reflect on the work situation bothering me	Before	2.87±1.04	0.175	2.56±1.16	0.002 *	2.78±1.06	0.006 *	1.492	0.227
	During	2.99±1.09		2.93±1.25		3±1.15		0.056	0.945
Talk with someone about the work situation bothering me	Before	2.91±1.15	<0.001 *	2.2±0.94	<0.001 *	2.87±1	0.301	7.733	0.001 *
	During	2.99±1.16		2.31±1.1		2.95±1.17		6.192	0.002 *
Practice a team sport	Before	2.54±1.23	<0.001 *	2.73±1.25	0.001 *	2.73±1.4	<0.001 *	0.737	0.479
	During	1.87±1.09		1.76±0.93		1.93±1.1		0.364	0.695
Practice a solitary sport Practice a solitary sport	Before	3.25±1.16	0.063	3.38±1.03	0.634	3.47±1.29	<0.001 *	0.783	0.458
	During	2.31±1.27		2.42±1.12		2.53±1.4		0.679	0.508
Smoke cigarettes or Shisha	Before	1.82±1.28	0.810	1.71±0.99	0.448	1.7±1.06	0.718	0.299	0.741
	During	1.94±1.48		1.76±1.13		1.73±1.13		0.667	0.514
Use of alcohol or recreational drugs	Before	2.64±1.5	0.484	1.76±1.26	0.051	1.7±1.05	0.443	13.829	0.000 *
	During	2.7±1.64		1.91±1.41		1.75±1.22		10.741	0.000 *

Scale: Never=1, Rarely=2, Sometimes=3, Often = 4, Always =5

\* Indicates it is statistically significant

**REFERENCES**

- [1] Brantley PJ, O'hea EL, Jones G, Mehan DJ. The influence of income level and ethnicity on coping strategies. *Journal of Psychopathology and Behavioral Assessment*. 2002 Mar;24 (1):39–45.
- [2] Albarbari MG, Alinier G, Alolimat H, Laughton J, Gangaram A, Kenward G. Coping strategies of Hamad Medical Corporation pre-hospital care clinicians with work-related stress during the COVID-19 pandemic. JEMTAC Qatar Health Conference 2022. (In press).
- [3] Albarbari MG, Alinier G, Alolimat H, Laughton J, Gangaram A, Kenward G. Level of stress experienced by the Hamad Medical Corporation pre-hospital care clinicians before and during the COVID-19 pandemic. JEMTAC Qatar Health Conference 2022. (In press).