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Letter to the Editor

Anxiety and depressive symptoms among healthcare professionals during the Covid-19 pandemic in Kosovo: A cross sectional study

Covid-19 is the 21st century's the third outbreak coronavirus, after SARS-CoV and MERS-CoV [1]. Healthcare workers are exposed to extreme psychological distress [2–4]. In addition to an increased risk of infection, medical staff working directly with patients diagnosed with Covid-19 face multiple challenges and stresses which can also increase the risk of developing mental health symptoms.

Despite initial evidence of the impact of the Covid-19 pandemic on the mental health of healthcare workers, there is insufficient data on how healthcare workers are being affected in Europe, and specifically in limited resource settings such as Kosovo. Furthermore, healthcare workers are the key building block of any health system, and vital to effective management of any public health emergency.

The pandemic caught Kosovo off guard, at a time when its health system was still dealing with the legacy of its almost total collapse during the 1998-9 war, including significant gaps in healthcare provision and chronic underfunding of institutions. Kosovo health institutions have taken measures to reduce contact and risk of disease transmission among health professionals in health facilities and, in turn, to reduce expenditure on personal protective equipment, given shortages of PPE during March and early April.

In Kosovo, the first Covid-19 cases were confirmed on 13 March 2020, making Kosovo (along with Montenegro) one of the last countries in the region, and Europe as a whole, to be affected by the pandemic. By 8 May 2020, in Kosovo there were 862 confirmed cases of Covid-19, 28 deaths, 622 recovered patients, and 9557 people had been tested for the disease [5].

We designed a rapid online survey to examine the impact of the Covid-19 pandemic on the mental health status of healthcare professionals in public health facilities in Kosovo, using 14-item Hospital Anxiety and Depression Scale (HADS) questionnaire [6]. Data were collected from 4 April 2020 (when there were 140 Covid-19 cases reported by NIPH) to 15 April 2020 (when there were 423 Covid-19 cases reported by NIPH). The study protocol was approved by the ethical commission of Heimerer College.

Five hundred and ninety-two (592) healthcare workers completed the questionnaire, 363 (61.3%) were female whereas 229 (38.7%) male. Majority of respondents were nurses (51.4%), median age was 39 (IQR, 32–46) years, and median clinical working experience was 12

(IQR, 5–20) years. Significant percentage of healthcare professionals scored an abnormal range (11–21 points) of anxiety symptoms (264 or 44.6%) and depressive symptoms (229 or 38.7%). The rate of abnormal anxiety (31.9%) and depressive symptoms (25.8%) among female health professionals were higher than their male counterparts (12.7% and 12.8% respectively) (Table 1.). Differences between physicians, nurses and other healthcare workers, and between primary level of care, secondary level of care and the third level of care regarding anxiety and depressive symptoms are shown in Table 1.

Regression analysis shows that females were more likely to experience depressive symptoms (OR 1.96, 95%CI, 1.34–2.88; $p = 0.001$) and anxiety symptoms (OR 2.57, 95%CI, 1.77–3.75; $p < 0.001$). Physicians had lower odds for depressive (OR 0.31, 95%CI, 0.24–0.58; $p < 0.001$) and for anxiety symptoms (OR 0.66, 95%CI, 0.45–0.96; $p = 0.03$) compared to other professionals. Secondary care healthcare workers were 0.65 less likely to have depressive symptoms (95%CI, 0.45–0.95; $p = 0.03$) than colleagues in primary or tertiary care.

Mental health issues have been confirmed in other studies examining mental health among healthcare workers during Covid-19 pandemics [7–9] including inadequate addressing of them [10].

Our study shows that frequency of anxiety and depression symptoms among health professionals in Kosovo during the Covid-19 pandemics is at concerning levels, although a pre-Covid-19 comparison is lacking. Psychological support tailored to the needs of healthcare professionals is a necessity in order to help them effectively cope with stress and pressure and address/treat symptoms during pandemics, and afterwards. Psychological support for Kosovar health professionals during Covid-19 pandemics should be immediately considered.

Data availability statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Declaration of Competing Interest

The authors declare that they have no known conflicting financial interests or personal relationships which may have affected the research

Table 1

HADS[a] subscales levels and scores according to gender, profession and level of care.

	Anxiety symptoms			Depressive symptoms			Anxiety symptoms	Depression symptoms
	Normal n(%)	Borderline n(%)	Abnormal n(%)	Normal n(%)	Borderline n(%)	Abnormal n(%)	Mean score mean ± SD	Mean score mean ± SD
Total	49 (8.3)	279 (47.1)	264 (44.6)	53 (9.0)	310 (52.4)	229 (38.7)	10.3 ± 2.1	10.0 ± 1.9
	$\chi2 = 191.5$, df = 2, $p < 0.001$			$\chi2 = 213.9$, df = 2, $p < 0.001$				
Gender								
Female	28 (4.7)	146 (24.7)	189 (31.9)	38 (6.4)	172 (29.1)	153 (25.8)	10.5 ± 2.1	9.9 ± 2.0
Male	21 (3.5)	133 (22.5)	75 (12.7)	15 (2.5)	138 (23.3)	76 (12.8)	9.8 ± 2.0	9.9 ± 1.6
	$\chi2 = 21.6$, df = 2, $p < 0.001$			$\chi2 = 9.8$, df = 2, $p = 0.008$			$t = 3.9$, $p < 0.001$	$t = -0.1$, $p = 0.99$
Profession								
Physician	18 (3.0)	123 (20.8)	112 (18.9)	19 (3.2)	121 (20.4)	113 (49.3)	10.2 ± 2.0	10.1 ± 1.7
Nurse	29 (4.9)	138 (23.3)	137 (23.1)	32 (5.4)	166 (28.0)	106 (17.9)	10.3 ± 2.2	9.8 ± 1.9
Others	2 (0.3)	18 (3.0)	15 (2.5)	2 (0.3)	23 (3.9)	10 (1.7)	10.4 ± 2.2	10.0 ± 2.0
	$\chi2 = 1.8$, df = 4, $p = 0.78$			$\chi2 = 8.7$, df = 4, $p = 0.07$			$F = 0.3$, $p = 0.76$	$F = 3.6$, $p = 0.03$[b]
Levels of care								
Primary	25 (4.2)	141 (23.8)	116 (19.6)	27 (4.6)	153 (25.8)	102 (17.2)	10.1 ± 1.9	9.8 ± 1.9
Secondary	14 (2.4)	86 (14.5)	100 (16.9)	17 (2.9)	99 (16.7)	84 (14.2)	10.6 ± 2.2	10.1 ± 1.9
Tertiary	10 (1.7)	52 (8.8)	48 (8.1)	9 (1.5)	58 (9.8)	43 (7.3)	10.1 ± 2.1	9.8 ± 1.8
	$\chi2 = 3.9$, df = 4, $p = 0.42$			$\chi2 = 1.8$, df = 4, $p = 0.78$			$F = 3.1$, $p = 0.046$	$F = 0.7$, $p = 0.48$
I have received sufficient education regarding Covid-19								
Completely agree	15 (2.2)	66 (9.7)	38 (5.6)	18 (2.6)	66 (9.7)	35 (5.1)	9.7 ± 2.2	9.6 ± 2.1
Agree	28 (4.1)	185 (27.2)	164 (24.1)	26 (3.8)	201 (29.6)	150 (22.1)	10.3 ± 2.1	10.0 ± 1.8
Undecided	9 (1.3)	24 (3.5)	33 (4.9)	5 (0.7)	34 (5.0)	27 (4.0)	10.3 ± 2.2	10.3 ± 2.0
Disagree	4 (0.6)	38 (5.6)	49 (7.2)	5 (0.7)	42 (6.2)	44 (6.5)	10.6 ± 1.8	10.5 ± 1.7
	$\chi2 = 21.5$, df = 8, $p = 0.006$			$\chi2 = 16.7$, df = 8, $p = 0.034$			$F = 3.6$, $p = 0.006$	$F = 3.5$, $p = 0.007$

[a] The Hospital Anxiety and Depression Scale. Thresholds for HADS anxiety and depressive symptoms scored: Normal 0–7, Borderline 8–10, Abnormal 11–21 points.

[b] In *post hoc* Tukey test, nurses were shown to have lower depressive scores compared to physicians ($p = 0.02$).

stated in this paper.

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