

## LETTER

# Mental health status of health care workers during the COVID-19 outbreak in Poland: One region, two different settings

Dear Editor,

During the COVID-19 pandemic health care workers (HCW) have been demonstrated to have higher level of anxiety and depression.<sup>1</sup> Lu et al<sup>2</sup> suggested that HCW of the departments with high-risk contact with Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) infected patients demonstrated higher mental health impact. Here, we present our data on mental health status of HCW of two various departments, including university department of dermatology, in Wroclaw, Poland, having different settings. Such analysis has not been reported so far.

Department of Dermatology, Venereology, and Allergology is located in a separate building which is exclusively dedicated for patients with cutaneous diseases. Department of Nephrology and Transplantation Medicine is a part of complex hospital with many departments; however, no infectious disease ward is located there. There were several HCW and patients infected with SARS-Cov-2 in this hospital (in the Department of Nephrology two HCW and six patients were infected). There were no SARS-CoV-2 infections among HCW and patients of the Department of Dermatology. Up till now (data on June 7, 2020) in the region of Wroclaw 2708 infected people and 117 deaths due to COVID-19 have been reported.

We invited 123 HCW of both departments (58 HCW from the Department of Dermatology and 65 HCW from the Department of Nephrology) to participate in the study. They were asked to fill in the following questionnaires: General Anxiety Disorder-7 (GAD-7),

Patient Health Questionnaire-9 (PHQ-9), and Hospital Anxiety and Depression Scale (HADS). The following cutoff points to suspect anxiety and depression were employed: GAD-7,  $\geq 5$  points; PHQ-9,  $\geq 10$  points; HADS,  $\geq 8$  points (for each subscale), respectively.<sup>3-5</sup> The obtained results were statistically analyzed with Chi<sup>2</sup> Pearson test and Mann-Witney *U* test were applicable (Statistica 13; Statsoft, Tulsa, Oklahoma). *P* value less than .05 was regarded significant.

Response rate was assessed as 97.6% (96% at the Department of Dermatology and 98.5% at the Department of Nephrology). The detailed characteristics of the study group are given in Table 1. There was no difference in terms of sex, physician/nurse, chronic comorbidities distribution, as well as the mean age and duration of professional activity between HCW of both evaluated departments.

Analyzing the whole studied group anxiety was suspected among 29.2% (HADS-A)—45% (GAD-7), while depression in 14.2% (HADS-D)—20% (PHQ-9). The only significant difference (*P* = .04) between sexes was found in the prevalence of anxiety assessed with GAD-7 (M/F ratio: 0.54). There were no significant differences in the frequency of both anxiety and depression with regard to the type of HCW (physician/nurse); however, more nurses achieved the cutoffs for both anxiety and depression (Table 2). Anxiety, assessed with HADS-A, and depression, evaluated with PHQ-9, was significantly more prevalent (*P* < 0.01 for both scales) among HCW reporting chronic comorbidities (Table 2). Despite of the higher frequency of depression, assessed with HADS-D in HCW of the Department of

**TABLE 1** Clinical characteristics of studied health care workers

	ALL (n = 120)	Department of Dermatology (n = 56)	Department of Nephrology (n = 64)	<i>P</i> value
Sex	M: 26 (21.7%) F: 94 (78.3%)	M: 8 (14.3%) F: 48 (85.7%)	M: 18 (28.1%) F: 46 (71.9%)	NS
Age (years)	44.4 ± 11.9	43.1 ± 13.2	45.6 ± 10.6	NS
HCW type	Physicians: 58 (48.3%) Nurses: 62 (51.7%)	Physicians: 33 (58.9%) Nurses: 23 (41.1%)	Physicians: 25 (39.1%) Nurses: 39 (60.9%)	NS
Duration of professional activity (years)	20.4 ± 13.5	18.1 ± 14.8	22.4 ± 12.1	NS
Comorbidities	Yes: 26 (21.7%) No: 94 (78.3%)	Yes: 13 (23.2%) No: 43 (76.8%)	Yes: 13 (20.3%) No: 51 (79.7%)	NS

Abbreviations: F, Females; HCW, Health care workers; M, Males.

**TABLE 2** Percentage (number) of health care workers fulfilling the criteria for suspected anxiety (GAD-7, HADS-A) and depression (PHQ-9, HADS-D)

	GAD-7	PHQ-9	HADS-A	HADS-D
<i>Sex</i>				
Males	27% (7)	11.5% (3)	23.1% (6)	11.5% (3)
Females	50% (47) ( <b>P = .04</b> )	22.3% (21)	30.9% (29)	14.9% (14)
<i>HCW type</i>				
Physicians	43.1% (25)	19% (11)	22.4% (13)	10.3% (6)
Nurses	46.8% (29)	21.0% (13)	35.5% (22)	17.7% (11)
<i>Comorbidities</i>				
Yes	53.9% (14)	38.5% (10)	50% (13)	23.1% (6)
No	42.6% (40)	14.9% (14) ( <b>P &lt; .01</b> )	23.4% (22) ( <b>P &lt; .01</b> )	11.7% (11)
<i>Department</i>				
Dermatology	50% (28)	19.6% (11)	28.6% (16)	7.1% (4)
Nephrology	40.6% (26)	20.3% (13)	29.7% (19)	20.3% (13) ( <b>P = .03</b> )

Note: Statistically significant if  $P < .05$  (BOLD).

Abbreviations: GAD-7, General Anxiety Disorder-7; HADS-A, Hospital Anxiety and Depression Scale—Anxiety; HADS-D, Hospital Anxiety of Depression Scale—Depression; HCW, Health care worker; PHQ-9, Patient Health Questionnaire-9.

Nephrology ( $P = .03$ ), we were unable to find any other significant differences in anxiety and depression occurrence in HCW between both departments of different settings (Table 2).

Our data are on the prevalence of depression and anxiety in HCW are in concordance to these recently reported in pooled analysis of depression and anxiety,<sup>1</sup> 29.2% to 45.0% vs 10.5% to 44.7% and 14.2% to 20.0% vs 10.6% to 50.4%, respectively. There were no marked distinctions in mental health of HCW between both analyzed departments. The difference between our study and Chinese colleagues might be due to higher number of infected patients in high-risk contact departments.<sup>2</sup> It seems that, at least in our country, neither setting nor its different specificity, but general COVID-19 pandemic situation may have crucial influence on the mental health status of HCW.

### CONFLICT OF INTEREST

The authors declare no potential conflict of interest.

### AUTHOR CONTRIBUTIONS

Jacek C. Szepietowski: concept of the study, analysis of the results, writing the manuscript, approval of the manuscript. Piotr Krajewski: collecting data, analysis of the results, commenting and approval of the manuscript. Rafał Biłynicki-Birula: collecting data, commenting and approval of the manuscript. Paweł Poznański: collecting data, commenting and approval of the manuscript. Magdalena Krajewska: collecting data, commenting and approval of the manuscript. Joanna Rymaszewska: concept of the study, commenting and approval of the manuscript. Łukasz Matusiak: analysis of the results, writing the manuscript, statistical analysis, approval of the manuscript.


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