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Mental health impact of SARS-COV-2 pandemic on long-term care facility personnel in Poland

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Brief summary:

The paper assessed psychological response of LTCF personnel to the SARS-CoV-2 crisis. Results show that access to PPE, safety guidelines and psychological support at workplace may reduce psychological distress.

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Poland

Dear Editor,

1 The COVID-19 pandemic has a disproportionate impact on long-term care facilities
2 (LTCF) residents world-wide, with 19–72% rate of COVID-19 related deaths occurring in
3 care.¹ Facing this critical situation, LTCF personnel have to cope with overwhelming
4 workload, depletion of adequate personal protection equipment (PPE) and deaths caused by
5 SARS-CoV-2 infections.^{2,3} Up to date, there are still few scientific studies addressing
6 epidemiological data and intervention models focused on LCTF and COVID-19. Therefore,
7 the aim of this study was to assess psychological consequences (somatic symptoms, anxiety
8 and insomnia, social dysfunction, and depression) among LTCF employees exposed to the
9 SARS-CoV-2 coronavirus pandemic crisis. Moreover, we investigated if factors, such as PPE
10 availability, safety guidelines or access to psychiatric and psychological support at the
11 workplace, correlated with level of psychological distress experienced by personnel.
12 Data were collected through the anonymous survey distributed online between May 25 to
13 June 25, 2020 among personnel of Polish LTCF. The survey has been accessed 242 times, 12
14 surveys have been declined due to over 70% questions unanswered. The response rate was
15 73.5% (n=178 completed surveys), received from LTCF personnel, including managers,
16 administrative and maintenance staff, nurses, medical doctors, medical caregivers, social
17 workers, physiotherapists, occupational therapists, and psychologists.
18 The survey consisted of three sections: (1) the sociodemographic section, (2) the authors'
19 questionnaire with questions related to COVID-19 exposure, working conditions, access to
20 PPE and mental health services, and (3) the General Health Questionnaire (GHQ-28)⁴, that
21 consists of 28 questions scored on a 4-point Likert scale, illustrating the frequency of specific

22 psychopathological symptoms such as somatic symptoms, anxiety and insomnia, social
23 dysfunction, and depression experiences over preceding 4 weeks. Higher GHQ-28 scores
24 indicate higher levels of distress. The study obtained ethical clearance (KB-365/2020) and
25 was performed in accordance with the Declaration of Helsinki.

26 The statistical analysis was performed with the R for Windows package (version 4.0.2). The
27 normality of data was analyzed using the D'Agostino-Pearson test and visual assessment.
28 Comparisons of qualitative variables were performed using the Chi squared test. Qualitative
29 and quantitative variables were compared using Mann-Whitney or Kruskal-Wallis tests. The
30 level of statistical significance was set at .05.

31 The study findings demonstrate the importance of institutional factors of LTCF on mental
32 health of employees (Table 1). Firstly, LTCF staff that had PPE access at the workplace
33 received lower scores in the GHQ-28 social dysfunction subscale ($P = .018$); especially
34 important were disposable aprons ($P = .02$) and full-body protection suits ($P = .006$). These
35 findings are in accordance with recent studies by Zhang et al.⁵ and Maciaszek et al.⁶ in which
36 PPE access predicted better physical health and lower distress. Mandatory implementation of
37 face masks in Poland significantly reduced scores of all GHQ-28 subscales in the general
38 population⁷, indicating the significance of PPE for both: physical and mental health.

39 Secondly, the results suggest that the availability of workplace safety guidelines reduced
40 anxiety symptoms. Participants whose workplaces had developed guidelines scored lower in
41 the GHQ-28 anxiety and insomnia subscale ($P = .031$). It is also in line with the Medicare &
42 Medicaid Services perspective that sets quality and safety in healthcare system and defined
43 one of its goals as prevention of COVID-19 transmission through: issuing guidance and
44 recommendations; providing PPE and testing needs recommendations in LTC facilities and
45 increasing payment for COVID-19 testing.⁸

46 Thirdly, working conditions were crucial for the mental health of the respondents as LTCF
47 shift workers scored higher in the GHQ-28 somatic symptoms subscale ($P = .05$). The feeling
48 that there are too few people in the workplace during the pandemic was related to the greater
49 severity of psychopathological symptoms evaluated with the GHQ-28 total score ($P = .009$).
50 Finally, psychological support and care availability was also a crucial factor associated with
51 better coping with the pandemic situation. Our study gives evidence that people who knew
52 that they have the opportunity to talk to a psychologist at their workplace (not necessarily
53 used it) received significantly lower GHQ-28 total score than personnel who could not
54 receive such service ($P < 0.01$).

55 In summary, our study gives evidence that psychopathological manifestations may be
56 modifiable through workplace factors such as access to: PPE, safety guidelines and
57 psychological support. As far as we are aware, no specific guidelines have been developed
58 for managing personnel wellbeing in LTCF. Findings from this study create grounds for
59 effective interventions aiming to restore psychological health in this group. Therefore, to
60 avoid significant mental health crisis among LTCF personnel, availability of protective
61 measures and psychological support should become a recommended response to COVID-19
62 internationally.

63 There are no conflicts of interest.

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Table 1. Factors related to the GHQ-28 total score and its subscales

Variable	Answer	n (%)	GHQ-28 results mean (\pm SD)	P-value
Access to psychological support at workplace	yes	105 (59%)	20.09 (8.07)	<.001 ^a
	no	74 (41%)	26.16 (9.51)	
Too few employees compared to the workload due to COVID-19	strongly disagree	0	-	.009 ^b
	disagree	5 (2.8%)	24.00 (12.39)	
	neutral	61 (34.3%)	20.50 (7.83)	
	agree	68 (38.2%)	21.39 (7.59)	
	strongly agree	44 (24.7%)	27.14 (11.27)	
Access to PPE: disposable aprons	yes	149 (83.7%)	21.75 (8.36)	.02 ^a
	no	29 (16.3%)	26.86 (11.81)	
Access to PPE: protection suits	yes	110 (61.8%)	24.95 (9.97)	.006 ^a
	no	68 (38.2%)	21.11 (8.35)	
Variable			GHQ-28 SD mean (\pm SD)	P-value
Access to PPE in general	yes	173 (97.2%)	6.65 (2.26)	.018 ^a
	no	5 (2.8%)	9.75 (3.59)	
Variable			GHQ-28 SS mean (\pm SD)	P-value
Work in a shift system	yes	55 (30.9%)	6.85 (2.71)	.05 ^a
	no	123 (69.1%)	6.03 (2.40)	
Variable			GHQ-28 AI mean (\pm SD)	P-value
Availability of workplace safety guidelines during COVID-19	yes	173 (97.2%)	5.45 (2.15)	.031 ^a
	no	5 (2.8%)	6.70 (2.23)	

Data expressed as mean (SD) or n (%); GHQ-28 – General Health Questionnaire total score, GHQ-28 SD – General Health Questionnaire Social Dysfunction subscale, GHQ-28 SS – General Health Questionnaire Somatic Symptoms subscale, GHQ-28 AI – General Health Questionnaire Anxiety and Insomnia subscale. Univariate analysis: ^a Mann-Whitney *U* Test, ^b Kruskal-Wallis Test