

The risk of suicide in healthcare workers in nursing home: An exploratory analysis during COVID-19 epidemic

In March 2020, the World Health Organization declared the coronavirus disease 19 (COVID-19) outbreak as global pandemic.^{1,2} Nursing homes were particularly struck by the COVID-19 outbreak, with some authors considering the COVID-19 pandemic as the "ground zero" for these structures.^{3–5}

Healthcare workers operating in nursing homes of Italy faced numerous problems. Within these professionals, different triggers of psychological distress have been described, such as uncertainty about effectiveness of therapies and progression of the pandemic, lack of personal protective equipment, overwhelming workload, physical exhaustion, concerns about direct exposure to COVID-19 at work, and—more recently—concerns regarding safety of COVID-19 vaccination.⁶

All the above factors could be associated with an increased risk of suicide ideation and suicide in healthcare workers. In a case series of six nurses working in hospital authors found that mental stress was a strong contributor to suicide in those professionals.⁷ However, data regarding the risk of suicide in healthcare workers of nursing homes are still limited, even if in residents of nursing homes risk of suicide constitutes an important problem.⁸ With this in mind, the aim of the present work was to explore the risk of suicide in healthcare workers of two nursing homes of the Venice province, northern Italy.

The investigation, approved by the local ethical Committee, was made in two nursing homes (Villa Althea and Villa Fiorita) located in Spinea. The employed questionnaire contained items regarding: (1)

demographics; (2) working conditions during the COVID-19 epidemic; (3) presence of medical conditions possibly associated/concomitant with suicide risk (e.g., depression, anxiety, insomnia); (4) history of COVID-19. The risk of suicide was explored using the Suicide Behaviors Questionnaire-Revised (SBQ-R)⁹ which has 4 items exploring different aspects of suicide behaviours, with a from 3 to 18, higher scores indicating higher risk of suicide. [10] The data are reported by the median value of SBQ-R (i.e., 3) as means with the correspondent standard deviations and as total frequency/percentages. The Student T-test for independent sample and the chi-square test were used for continuous and categorical variables, respectively. A $p < 0.05$ was deemed statistically significant. Analyses were performed using STATA® software version 14.1.

Forty out of the 141 healthcare workers operating in the two nursing homes (=28.6%) answered to the questionnaire. Ten workers reported an SBQ-R score over 3, indicating a possible high risk of suicide. A tendency to a statistical difference between people at lower and higher propensity of suicide was found in considering as adequate for residents' needs the personnel operating in the nursing homes during the COVID-19 epidemic ($p = 0.14$) (Table 1). Previous positivity to COVID-19 was significantly different between the two groups, being higher in workers with higher SBQ-R score (70% vs. 23.3%, $p = 0.02$).

In this exploratory research, we found that, among the 40 healthcare workers participating to the study, 10 participants had a score of SBQ-R indicating high risk of suicide. Those people had more

TABLE 1 Descriptive table by Suicide Behaviors Questionnaire-Revised (SBQ-R) median value

Item	SBQ-R ≤ 3 (n = 30)	SBQ-R > 4 (n = 10)	p-value
Mean age (SD)	36.5 (8.9)	39.3 (11.3)	0.44
Female gender (n, %)	21 (70)	8 (80)	0.70
Degree (n, %)	4 (13.3)	4 (40.0)	0.19
During your work shifts, do you feel that the staff is adequate for the needs of the guests? Yes	19 (63.3)	3 (30.0)	0.14
Have you been asked to increase your hours at work due to the coronavirus? Yes	19 (63.3)	7 (70.0)	1.00
Depression (n, %)	1 (3.3)	0 (0.0)	1.00
Anxiety (n, %)	0 (0.0)	1 (10)	0.25
Insomnia (n, %)	1 (3.3)	0 (0.0)	1.00
Previous positivity to COVID-19 (n, %)	7 (23.3)	7 (70)	0.02

frequently been affected by COVID-19 and had a tendency of feeling that personnel were not adequate during the epidemic. Although exploratory, we believe that these findings can have some important clinical implications. To the best of our knowledge, this is the first report detecting the risk of suicide during COVID-19 epidemic in healthcare workers of nursing homes, a setting in which the risk of suicide in both workers and residents has been signalled as high.¹⁰ During the COVID-19 pandemic, healthcare workers dealing with patients' physical pain, psychological suffering, and death were more likely to develop traumatic stress⁶ which is a strong predictor of suicide.¹¹ Several factors seems to be important in explaining the higher risk of suicide observed during the COVID-19 epidemic (estimated between 1% and 145%¹²), including stay-at-home restrictions,¹³ deterioration in population mental health,¹⁴ a higher prevalence of reported thoughts and behaviours of self-harm among people with COVID-19,¹⁵ and problems accessing mental health services [15].

In conclusion, in our exploratory work, we found that healthcare workers could have a certain propensity for suicide, particularly if already affected by COVID-19 indicating the necessity to frequently screen this population for suicide risk and to further explore this topic during future COVID-19 waves, a topic often neglected by managers taking care of nursing homes.

CONFLICT OF INTEREST

None.

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