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Mental health of frontline help-seeking healthcare workers during the COVID-19 outbreak in the first affected hospital in Lombardy, Italy

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Italy was the first European Country to raise the alarm on the threat of the COVID-19 pandemic and everything started with the first case being referred on February 20th, in the Emergency Unit of Codogno (Lodi) in northern Italy, leading to an unbearable psychological burden on the Healthcare Workers (HCWs) who first faced the emergency (Carmassi et al., 2020a).

In the last decades, increasing literature has demonstrated the susceptibility of HCWs to develop mental disorders due to the repeated exposure to work-related traumatic events, along with the need to work under highly stressful circumstances (Carmassi et al., 2020b; Mealer et al., 2009). The current pandemic has led medical staff under both physical and psychological pressure increasing the risk of mental health sequelae (Krishnamoorthy et al., 2020). HCWs facing the acute phases of the early COVID-19 pandemic in China reported high rates of anxiety (7 to 57%) depression (9 to 51%) and Post-Traumatic Stress Disorder (PTSD) (3% to 16%) (Luo et al., 2020).

During the initial phase of the pandemic, researchers of the Psychiatric Clinic of the University of Pisa started collaboration with the Psychiatric Unit of the Codogno Hospital (Lodi), while delineating the first supportive measures to HCWs facing the first COVID-19 outbreak declared in Europe. A first group of 45 HCWs [22 (48.9%) medical doctors, 13 (28.9%) nurses and 10 (22.2%) administrative staff] employed at the Azienda Socio Sanitaria Territoriale (ASST) of Lodi (Lombardy, Italy) were assessed during the COVID-19 pandemic. Subjects were evaluated while seeking for treatment at the psychiatric outpatients' service dedicated to HCWs of the Hospital of Codogno and of the Hospital of Lodi, promptly predisposed between 1stMarch 2020 and 6thApril 2020 to face the emergency. In the total sample 14 (31.1%) were males and 31 females (68.9%);

mean age was 39.6±10.6 years; 21 (46.7%) were single/divorced; 18 (40%) had children. The death of a relative or a close one due to the COVID-19 infection, was reported by 9 (20%) HCWs. The mean time occurred on hospital duty was 11.7±10.1 (min 1, max 37) years. Assessments include: Impact of Event Scale-Revised (IES-R) to investigate post-traumatic stress symptoms; Generalized Anxiety Disorder 7-Item (GAD-7), to explore anxiety symptoms; Patient Health Questionnaire-9 (PHQ-9), to examine depressive symptoms; Resilience Scale (RS), to investigate resilience level; Work and Social Adjustment Scale (WSAS), to assess impairment in work and social functioning. Socio-demographical data were also gathered through a specific datasheet. Fourteen (31.1%) HCWs satisfied the threshold for moderate/severe anxiety symptoms (GAD-7 score≥10) and 11 HCWs (24.4%) for moderate/severe depressive symptoms (PHQ-9 score≥10). Moreover, 28 HCWs (62.2%) screened positive for PTSD (IES-R >32). In the total sample WSAS mean score was 19.8±9.6. No significant differences emerged in the GAD-7, PHQ-9, IES-r, RS and WSAS scores between the different groups. In a linear regression model, only the IES-R total score presented a significant positive association with the WSAS score [b=0.3 (SE=0.08), CI95%=0.137-0.463 p=.001].

To the best of our knowledge, this is the first report on mental health burden in HCWs who faced the acute phases of the first COVID-19 pandemic in the Italian epicentres of Codogno and Lodi showing the most frequently reported symptoms being post-traumatic stress ones. Interestingly, PTSD symptoms resulted to be the most strongly impacting on functioning levels. Our results also showed higher symptoms of anxiety and depression than those reported in most of the previous studies on the COVID-19 pandemic (Luo et al., 2020). A possible interpretation may be due to the different enrolment methods as we recruited subjects who spontaneously asked for psychiatric support. Furthermore, our results showed higher rates of PTSD not only than those in pre-COVID studies but also than those in the first studies on HCWs facing the COVID-19 outbreak (Carmassi et al., 2020b; Krishnamoorthy et al., 2020). These high levels of post-traumatic stress symptoms are not surprising in our opinion. The COVID-19 infection, in fact, embodies and emphasizes many potentially traumatic characteristics. Great attention should be devoted to the relationship emerged between the IES-R score and the impairment of functioning levels. Our results corroborated previous studies, particularly Mealer et al. (Mealer et al., 2009) who showed PTSD had a dramatic effect on work and no work activities perceptions in HCWs, suggesting the importance of careful assessment and treatment of PTSD in such population, to improve HCWs quality of life and to better assist subjects affected by the COVID-19 (Carmassi et al., 2020a). Specific management models for the mental health problems of the HCWs during the second wave of the pandemic need to be developed, in order to avoid negative outcomes for healthcare personnel and to improve their patients' assistance.

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