Assessing COVID-19-related depression, anxiety and stress among European public health residents

Giovanna Failla

G Failla[1,2], D Peyre-Costa[3], R Croci[4], G Lo Moro[5], J Chen-Xu[6], MC Ferreira[7], A Jaquete[8], F Malcata[9], A Vasiliu[10], ERG EuroNet-MRPH Research Group
[1]Department of Public Health, University of Verona, Verona, Italy
[2]Training Service, Italian National Institute of Health, Rome, Italy
[3]Department of Public Health, University Hospital of Montpellier, Montpellier, France
[4]Scientific Communication Service, Italian National Institute of Health, Rome, Italy
[5]Department of Public Health Sciences, University of Turin, Turin, Italy
[6]Public Health Unit, Primary Health Care Cluster Baixo Mondego, Coimbra, Portugal
[7]Public Health Unit, Primary Health Care Cluster Pinhal Litoral, Leiria, Portugal
[8]Preventive Medicine and Public Health Teaching Unit, Unit of Cantabria, Cantabria, Spain
[9]Public Health Unit, Primary Health Care Cluster Porto Ocidental, Porto, Portugal
[10]Department of Public Health, University of Montpellier, IRD, INSERM, TRANSVIHMI, Montpellier, France
Contact: giovannafailla29@gmail.com

Background:
In Europe, Public Health Residents (PHR) have participated in the response against COVID-19.The pandemic has had a profound mental health (MH) impact on healthcare workers, but little evidence has been accrued about the Public Health (PH) workforce.The current study aims at assessing prevalence and risk factors for pandemic-related depression (D), anxiety (A) and stress (S).

Methods:
Between March 22 and April 11, 2021 we administered an online survey to PHR from France, Italy, Portugal and Spain, recruited through the national associations of PHR.We collected socio-demographic data and assessed changes in the working conditions due to COVID-19.We used the Depression Anxiety Stress Scales-21.Cut-off scores for D, A and S were: 9, 7, and 14.Multivariable logistic regression models were applied to determine risk factors for pandemic-related MH outcomes.Data analysis was performed with SPSS version 27.

Results:
443 out of approximately 2000 PHR completed the survey, response rate: 22.15%. Most responders (n = 226; 51%) were from Italy, 87 (19.6%) from Portugal, 74 (16.47%) from Spain and 56 (12.6%) from France. Median age: 29 years (IQR 25 - 33). Female/male ratio: 1.6. PHR above the cut-offs for D, A and S were: 60.5%, 43.1%, 61.2%.DASS-21 scores were 13.3 ($\pm$ 10.27), 8.13 ($\pm$ 7.79), 19.06 ($\pm$ 9.71), respectively.Across the multivariable logistic regression models, the main identified predictors were: for D - the COVID-19 impact on PH training (OR 1.78, 95% CI [1.12-2.80], p = 0.014); for A - the loss of research opportunities (OR 1.94, 95% CI [1.28-2.93], p = 0.002) and for psychological S - the year of residency (last year vs other years of residency: OR 2.3, 95% CI [1.20-4.38], p = 0.012).

Conclusions:
Our sample featured mild-to-moderate levels of prevalent D, A and moderate levels of psychological stress.Overall, the main risk factors associated with negative psychometric outcomes

were training challenges, loss of research opportunities and residency seniority.

Key messages:

- During the pandemic it is vital to increase knowledge and awareness about the impact of the health emergency on mental health in the Public Health workforce.
- It is important to deploy concrete efforts into building healthy work environments, guarantee adequate training and research opportunities for Public Health Residents.