

Citizen and open science in pandemic times!

Ciência cidadã e aberta em tempos de pandemia!

João Luís Alves Apóstolo¹

 <https://orcid.org/0000-0002-3050-4264>

Rosa Carla Gomes da Silva¹

 <https://orcid.org/0000-0002-3947-7098>

¹ Health Sciences Research Unit: Nursing (UICISA: E), Nursing School of Coimbra (ESENfC), Coimbra, Portugal

The SARS-CoV-2 pandemic challenged the world's scientific community in the production and dissemination of knowledge. Never in the history of humankind had such a rapid global response been provided to combat a disease. On 9 July 2021, a quick search on one of the largest and most relevant databases in the biomedical and life sciences areas – PubMed® – using the terms *covid 19* or *covid-19* or *sars-cov-2* retrieved 154,870 records (92,630 published in 2020 and the others in 2021). By combining this expression, using the Boolean operator AND, with the expression “Nursing” [MeSH Terms] OR “nurs*” [All Fields], the number of records remains astonishing: 8,480 records. These results are clear indicators of the importance and contribution of nursing science and nurses to the management of this pandemic phenomenon.

Moreover, researchers and publishers have sought to disseminate scientific knowledge in a format open to the academic and clinical communities and the general public. This pandemic has indeed caused a heated discussion in society (citizens, researchers, policymakers, health professionals) about the importance and impact of research on our daily lives and accelerated the dissemination of knowledge in a format open to everyone. There have been several initiatives of editors and researchers over the last year and a half. For example, several internationally renowned publishers (e.g., Oxford University Press, Taylor & Francis, Wiley, and Elsevier) have provided free access to all articles related to COVID-19.

Knowledge dissemination is a crucial aspect of the validation and development of science, specifically health sciences. Therefore, scientific evidence must be easily accessed and consumed by academics, clinicians, and citizens. The results from primary studies and processes of evidence synthesis can be summarized and condensed into different formats to inform the health professionals' daily practice and make scientific knowledge accessible to the population needing it.

To make science more open and citizen-oriented, the Health Sciences Research Unit: Nursing (UICISA: E), through its strategic development axis “Citizen Involvement and Extension to Society”, embraced new challenges during this pandemic. Together with citizens/experts, UICISA: E researchers have so far co-created 19 evidence summaries that have been published in simple, easy-to-read language, in an attractive and easily accessible format for the citizens/society. These summaries are made available once or twice a month in open access to the citizens through UICISA: E social networks, improving their health literacy. Twelve of these summaries were dedicated to empowering the citizens to make the best decisions on issues related to COVID-19. Among other aspects, they informed citizens about “Transmission of the COVID-19 disease”, “Cloth Face Masks”, “Use of face shields in the community”, “COVID-19 vs. FLU”, “Quarantine vs. Isolation”, “COVID-19 and pets”, “Mental Health in Pandemic Times”, and “Diabetes and COVID-19”. The remaining summaries are mostly related to emerging lifestyles resulting from the pandemic situation or themes suggested by the citizens/health professionals.

The involvement of citizens in preparing these evidence summaries, as active members of the research team, seems to be an excellent strategy to promote the quality of the product being developed and disseminated.

UICISA: E is working to increase citizen involvement in its ongoing projects and

Corresponding author

João Luís Alves Apóstolo

E-mail: apostolo@esenfc.pt



How to cite this article: Apóstolo, J. L., & Silva, R. C. (2021). Citizen and open science in pandemic times!. *Revista de Enfermagem Referência*, 5(Supl. 8), e21EDS8. <https://doi.org/10.12707/RV21EDS8>



continue producing research that is increasingly relevant for both health professionals/policymakers and citizens. To this end, the Unit is developing strategies to promote citizen involvement in the co-creation and co-production of research for a more citizen-oriented science while promoting the dissemination of the best knowledge available to the community in general and the citizen in particular.

The entrepreneurial and disruptive capacity of UICISA: E researchers in pandemic times has been recognized internationally, culminating in the prizes awarded in this field, which reflects the consistent and innovative work developed by this team. Moreover, it is contributing to the development of international projects involving several countries to study the COVID-19 disease or aspects related to education, such as digital health literacy for higher education students. An example of these projects is CoVaST that aims to study the prevalence of local and systemic adverse reactions to COVID-19 vaccines on the market and assess their long-term safety. This project, where UICISA: E researchers take on relevant tasks, involves a vast international team from countries in Europe, the Americas, Asia, and Africa and will certainly have a significant international impact due to its importance for the health of the world population.

The study on the impact of the pandemic on education, research, nursing practice, and nurses at a national level is another challenge of UICISA: E researchers because we believe that a better understanding of the present can change future actions!

Aware that all steps are decisive in this era of the COVID-19 disease, one of the missions of this Unit is to improve the efficiency of the knowledge produced and make it freely available for a more citizen-oriented science.