

Associations between misinformation around COVID-19 pandemic, severity of social isolation, and cognitive impairment

Anna Marin¹ | Ana Vives-Rodriguez² | Renee DeCaro³ | Kylie A Schiloski¹ | Gabor P Hajos¹ | Adolfo Di Crosta⁴ | Irene Ceccato⁴ | Pasquale La Malva⁴ | Naheer C Lahdo¹ | Kaleigh Donnelly⁵ | Jiali Dong⁶ | Sabrina Kasha⁶ | Colleen E Rooney⁶ | Judith Nicole Tejada Dayaw⁶ | Gabrielle Marton⁶ | Audrey Wack⁵ | Vanessa A Hanger⁵ | Alberto Di Domenico⁴ | Katherine W Turk^{1,7} | Rocco Palumbo⁴ | Andrew Budson^{1,7}

¹ VA Boston Healthcare System, Jamaica Plain, MA, USA

² VA Medical Center, Jamaica Plain, MA, USA

³ Boston University, Jamaica Plain, MA, USA

⁴ G. d'Annunzio University of Chieti-Pescara, Chieti, Italy

⁵ Boston University, Boston, MA, USA

⁶ William James College, Newton, MA, USA

⁷ Boston University School of Medicine, Boston, MA, USA

Correspondence

Ana Vives-Rodriguez, VA Medical Center, Jamaica Plain, MA, USA.

Email: alvivesr@bu.edu

Abstract

Background: In the past year, new research has focused on the degree of misinformation regarding the COVID-19 pandemic in younger and older adults. However, no study has assessed how social isolation and cognitive status influence misinformation regarding the COVID-19 pandemic. For this reason, we sought to investigate the differences in misinformation on the current pandemic in older individuals with and without cognitive impairment and social isolation in Boston, MA (United States) and Chieti (Italy).

Method: Data has been obtained from 49 subjects from the Boston cohort and 138 from the Italian cohort. Both healthy older adults and individuals diagnosed with Mild Cognitive Impairment (MCI) or Alzheimer's Disease (AD) Dementia were included. Cognitive status was assessed with a telephone administered neuropsychological battery and blind MoCA. Social isolation was evaluated with the Lubben social isolation scale and misinformation with a COVID-19 Misinformation Questionnaire. Associations between these variables were assessed using Pearson correlation and binary logistic regression.

Result: 35 participants in our sample (26%) met the cutoff for social isolation. 95 subjects (70%) were cognitively impaired. Subjects that were at a higher risk of being socially isolated were more cognitively impaired ($r=0.43$, $N=181$, $p<.001$). Also, they were less likely to know the correct age group that is most affected by the pandemic ($b =0.06$; $p <0.05$) and were less likely to feel informed about protective measures that should be taken to avoid contracting COVID-19 ($r=0.24$, $N=181$, $p<.001$). Subjects that were more cognitively impaired were more likely to think that the COVID-19 was a bioweapon developed by a government or terrorist organization ($b =0.15$; $p <.001$) and were more likely to incorrectly think that a person could not be COVID-19 positive and be asymptomatic ($b =0.17$; $p <.01$). More analysis will be completed once recruitment is completed.

Conclusion: Social isolation and cognitive impairment were associated with a higher degree of misinformation about COVID-19 and less information about protective measures against infection, making patients with these characteristics a vulnerable population during the current pandemic.