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LETTERS TO THE EDITORS

COVID-19, neurocognitive disorders, and civil capacity

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The coronavirus disease 2019 (COVID-19) pandemic has caused great concern and posed a real challenge to the Brazilian health system. COVID-19 is a systemic disease with neuropsychiatric manifestations, which include encephalopathy, delirium, mild cognitive impairment, and cerebrovascular disease.[1]

SARS-CoV-2 infection is associated with a severe immune response and a sustained increase in systemic cytokine levels. Because systemic inflammation can promote cognitive decline and neurodegenerative disease, COVID-19 survivors may have some degree of neurodegeneration and be at increased risk of developing Alzheimer's dementia in subsequent years.[2]

In an observational series of 58 patients with COVID-19, 33% had dysexecutive syndrome, characterized by inattention and disorientation, with findings of frontotemporal hypoperfusion on magnetic resonance imaging of the brain.[3] COVID-19 is a neuroinvasive disease, triggering inflammatory and neurodegenerative processes.[4] The long-term consequences of this neuroinfection remain unknown, but they may be associated with impairment in cognitive, affective, and behavioral domains.[5] Each of these domains can influence an individual's quality of life and the exercise of autonomy and citizenship.

Civil capacity is legally defined as an individual's ability, capability, or fitness to fully perform any civil act. This includes the ability to comprehend the consequences of one's acts in this spectrum of social life, such as signing a document, making purchases or sales, getting married, and settling an agreement.

Individuals with mental or cognitive disorders should not lose their rights to their own bodies, privacy, education, health, work, consent to treatment, and voting. Trusteeship is an extraordinary measure, and a court ruling must contain the reasons and motivations for its establishment, preserving the interests of the person under trusteeship. It should be noted that even partial trusteeship (e.g., of assets and businesses) is a measure that limits individual rights, as the ability to own and manage assets is an important aspect of individual citizenship.

Studies have demonstrated psychiatric problems such as stress, anxiety, depression, impaired memory, psychosis, PTSD, and sleep disorder in individuals with COVID-19.[6] Older adults may experience even greater difficulties in dealing with the crisis brought by the pandemic. The issues of neurocognition and civil capacity in the elderly need to be addressed together with other psychiatric disorders throughout the lifespan.

The repercussions of the COVID-19 pandemic go far beyond measures to prevent disease transmission and reduce its direct impact on the world population.[7] The provision of clinical and psychiatric services for patients with cognitive disorders or early-stage dementia is essential for the preservation and prevention of further deterioration of intellectual function.

We might witness an increase in requests for adult guardianship due to neuropsychiatric complications of COVID-19, such as dementia and other neurocognitive disorders. However, it is important that psychiatrists and other health professionals be aware of the fact that the course, prognosis, and treatment responsiveness of these complications are not well established, and they may even be reversible.

Proper clinical and psychiatric evaluations and neuropsychological and neuroimaging studies are required to correctly measure an individual's capacity, such as the ability to consent to treatment, to administer assets and legal affairs, and to exercise other civil rights. The psychiatric report will influence the judicial decision in these cases. It is of utmost importance to preserve individuals' autonomy to exercise their own rights within their universe of competencies.

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Cognitive abilities and probabilities of adherence to containment measures against the COVID-19 pandemic

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The emergence of COVID-19 has created the need for new policies based on social distancing and hygiene measures. An early study[1] found that working memory (WM) capacity could predict individual differences in individuals' social distancing, although other psychological factors (e.g., depressed mood, anxious feelings, consciousness) and socioeconomic indicators were not relevant contributors in the investigation. The authors advocated that WM capacity was a good predictor of cognitive abilities, directly impacting the process of decision-making involved in adherence to containment measures.

Cognitive abilities can also be predicted by an individual's educational level, in congruence with the WM of an individual. Educational attainment is typically employed as a surrogate measure cognitive ability, and earlier studies have shown its association with a higher level of intelligence.[1] Other research[2] has shown that a range of demographic factors, such as income, age, educational level, and personality traits from the Five-Factor Model, could be linked to coping strategies regarding COVID-19 protective measures, and that the higher one's level of Conscientiousness, the more one is likely to adhere to protective measures.[3]

Due to the non-convergence of these findings, we propose investigating the impact of cognitive abilities on adherence to social distancing and hygiene measures prescribed to mitigate the impact COVID-19 and how personality traits could be used to understand this impact further. Previous studies used statistical techniques based on linear models.[1-3] Therefore, direct relations were investigated, but latent probabilities of adherence were not.

Our study performed a latent profile analysis (LPA) with educational level as a covariate to pursue patterns of explanation of the heterogeneity in individual response to COVID-19 containment measures. A questionnaire was designed, with items divided into two domains: self-care during the pandemic and importance of containment measures, including items focusing on oneself and other people. Because educational level presented an impact on the profile, we then used latent transition analysis (LTA) to determine whether respondents' subgroups based on education level could be implicated in different probabilities of endorsing a given behavior related to protective measures.[4,5]

A two-profile model suggested a better explanation of the transition probabilities in respondents' heterogeneity. Table 1 presents the item-response probabilities.

By taking a closer look at the items, the profile class division seems to occur according to the level of Conscientiousness trait observed in each group, which would be in line with previous studies.[1-3] Under those circumstances, a two-profile model is better explained according to the level of Conscientiousness when education is a covariate. Based on these findings, government and health leaders should take the educational level of population subgroups into account when proposing containment measures, considering not only which actions should be proposed but how they should be proposed so they could be more efficient. Finally, future studies should consider investigating the associations among COVID-19 protective measures and direct measures of cognitive abilities and personality traits (both normal and pathological) in a multilevel perspective.

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