

# **Impact of COVID-19 pandemic on healthy elders' cognitive functioning and the role of cognitive training as a possible protective factor.**

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During the COVID-19 pandemic, the preventive lockdown measures were the only way to manage the health emergency effectively. The elderly population was the most vulnerable in this situation; it was deprived of socialization, living alone for the entire period and modifying their daily activities. In studies before and after the first wave of COVID-19, social isolation has been linked to a worsening of cognitive functioning in healthy people. The protective role of cognitive training, positive and negative effects of behavioural variables (e.g., well-being, anxiety, coping strategies, lifestyle changes), and cognitive reserve were examined to determine their impact on cognitive functioning. Participants (age range between 60 and 80 years), who took part in cognitive training before pandemic, were assessed by a neuropsychological battery in four different periods (i.e., pre-training, post-training, follow-up/pre-lockdown, and post-lockdown). Results show an improvement in participants' cognitive performance after the cognitive training, which persisted after the lock-down, suggesting a long-term, protective role of the cognitive training. Furthermore, an increased interest in taking care of one's own health and in thinking about continuous cognitive improvement promotes good cognitive functioning and amplifies and maintains the benefits of cognitive stimulation.

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