

# Effects of COVID-19 on cognition of older African Americans

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## Abstract

**Background:** The Covid-19 pandemic, with its diverse effects (e.g., on quality of life, health and illness, physical and psychological well-being, social and economic life), has also been suggested to effect cognitive functioning. To better understand the possible effect of the COVID-19 pandemic, we examined cognitive functioning of older African Americans.

**Method:** Study included 164 community-dwelling older African Americans (mean age= 75.6, range=64-94) recruited from the Wayne State Institute of Gerontology Healthier Black Elders Center and general Detroit area. Responses were gathered over the phone between 7/28/2020 to 1/14/2021. Change in cognitive functioning was evaluated with the newly developed Cognitive Change Questionnaire (CCQ) in which participants self-evaluated their cognition related to daily activities (e.g., memorizing, paying attention, task switching) on a 5-point scale (1–Much easier, 3–No difference, to 5–Much harder), comparing it to the pre-pandemic time. In addition, all participants received the TICSm phone-based cognitive screen. Responses to COVID-19 were measured on these scales: positive emotions (e.g., gratitude, happiness), negative emotion (e.g., anger, fear), unmet needs (e.g., food, medical care), and personal issues (e.g., economic problems, reduced privacy).

**Result:** Findings showed that 106 (65%) participants did not report any COVID-19 related cognitive changes, 7 (4%) indicated improved cognitive functioning, and 50 (31%) indicated that their cognitive functioning was worse as compared to pre-COVID-19 times. Average CCQ scale score (range 8-40) was 26.86. CCQ scale showed good psychometric properties (Cronbach alpha=.84). Significant correlations were obtained between CCQ and TICSm subscales:  $r=-.16$  ( $p=.05$ ) with total score,  $r=-.19$  ( $p=.01$ ) with immediate recall, and  $r=-.24$  ( $p=.002$ ) with delayed recall. Stepwise regression analysis showed that COVID-19 related responses explained 24% of variability on CCQ: participants reported greater cognitive decline if they expressed greater level of negative emotions (21% explained variance) and higher anxiety (3% explained variance).

**Conclusion:** These results demonstrate that a sizeable percentage of older community-dwelling African Americans do self-report cognitive decline following COVID-19, associated with increased presence of negative emotions and anxiety. The possibility of altered cognitive function should be considered not only for quality-of-care issues, but also when recruiting for research trials during and after the pandemic.