Improvement in self-efficacy among older adults aging-in-place during COVID-19

INTRODUCTION

Self-efficacy is defined as an individual’s belief in their capacity to execute behaviors necessary to produce specific performance attainments. It reflects confidence in the ability to exert control over one’s own motivation, behavior, and environment. Aging-in-place is a priority for many older adults and is defined as the ability to live in one’s own home safely, independently, and comfortably. During the COVID-19 pandemic, restrictions forced many older adults into having to rely on their own skills to age-in-place. With this research we sought to assess how older adult self-efficacy was affected by the COVID-19 pandemic.

METHODS

As part of a larger study, we are longitudinally following a cohort of older adults, who are aging-in-place, as they make decisions about accessing long-term-care services. Subjects are surveyed at baseline and then every 6 months, thereafter for 42 months. COVID-19 presented a unique challenge as baseline surveys began prior to the initial cases (January 2020) and continued during the initial 6 months of COVID-19 (ending November 2020). In these baseline surveys, self-efficacy was assessed using the validated PROMIS (Patient-Reported Outcomes Measurement Information System): (1) General Self-Efficacy which asks subjects to rate their level of confidence (e.g., I am not at all confident, I am a little confident, I am somewhat confident, I am quite confident, I am very confident) in managing situations (e.g., I am confident that I could deal efficiently with unexpected events; If I am in trouble, I can think of a solution, I can handle whatever comes my way). (2) Self-Efficacy for Managing Chronic Conditions—Managing Social Interactions which asks subjects to rate their level of confidence (as above) for situations (e.g., I can talk about my health problems with someone; If I need help, I can find someone to take me to the doctor’s office; I can get emotional support when I need it; I can ask for help when I do not understand something). We compared differences in self-efficacy among subjects in relation to the COVID-19 pandemic using T-tests to evaluate differences.

RESULTS

A total of 214 subjects (n = 66 pre-COVID-19 pandemic and n = 148 during the COVID-19 pandemic) completed the surveys (Table 1). PROMIS Self Efficacy for Managing Chronic Conditions—Managing Social Interactions was higher during the COVID pandemic (pre-COVID 45.0 (6.1) vs. post-COVID 48.7 (8.3), p = 0.02). Participants who completed their baseline during the COVID pandemic had significantly higher Self-Efficacy for Managing Social Interactions t-scores (β: 3.02; 95% CI: [0.15, 5.88]). PROMIS General Self Efficacy also trended higher among those assessed during the COVID-19 pandemic (pre-COVID 45.8 (7.7) vs. during COVID 43.7 (8.0), p = 0.07).

DISCUSSION

During the COVID-19 pandemic, older adults aging-in-place in their homes exhibited increased levels of self-efficacy. Our results show that older adults experienced increased confidence in managing their social interactions in the home (Figure 1). COVID-19 restrictions forced older adults to fend for themselves and live in isolation or risk facing a deadly virus. Prior to COVID-19, many older adults may have assumed they would be able to live independently but may have had reservations or self-doubt about being completely cut-off from loved ones. In experiencing the COVID-19 restrictions, older adults may have overcome any self-doubt, experiencing what being homebound entails and managing effectively. If they were able to endure COVID-19 isolation, older adults likely felt that they could manage anything—including future homebound scenarios. As self-efficacy is defined as an individual’s belief in their capacity to effectively execute behaviors, older adults during COVID-19 exhibited a stronger belief that they could manage aging-in-place effectively.

Limitations existed in that it was difficult to distinguish if the COVID-19 isolation was the direct cause of the change in self-efficacy or if there were other socio-environmental factors.
| Variable                          | Total (N = 214) | Pre-COVID (n = 66) | During COVID (n = 148) | p-value |
|----------------------------------|-----------------|--------------------|------------------------|---------|
| Age, M (SD)                      | 71.04 (5.03)    | 71.3 (4.96)        | 70.91 (5.07)           | 0.57    |
| Sex, %                           |                 |                    |                        |         |
| Male                             | 28.5            | 31.82              | 27.03                  | 0.47    |
| Female                           | 71.5            | 68.18              | 72.97                  |         |
| Race %                           |                 |                    |                        |         |
| Black                            | 31.13           | 46.15              | 24.49                  | 0.007   |
| White                            | 58.02           | 44.62              | 63.95                  |         |
| Other                            | 10.85           | 9.23               | 11.56                  |         |
| Education, %                     |                 |                    |                        |         |
| HS or less                       | 15.09           | 27.69              | 9.52                   | 0.009   |
| Some college                     | 20.75           | 16.92              | 22.45                  |         |
| College graduate                 | 18.4            | 15.38              | 19.73                  |         |
| Graduate degree                  | 45.75           | 40.0               | 48.3                   |         |
| Income, %                        |                 |                    |                        |         |
| <$10,000                         | 5.42            | 8.06               | 4.26                   | <0.001  |
| $10,000–$24,999                  | 15.76           | 27.42              | 10.64                  |         |
| $25,000–$49,999                  | 26.6            | 35.48              | 22.7                   |         |
| ≥$50,000                         | 52.22           | 29.03              | 62.41                  |         |
| Employment status, %             |                 |                    |                        |         |
| Working for pay                  | 25.82           | 27.69              | 25.0                   | 0.68    |
| Retired/unemployed               | 74.18           | 72.31              | 75.0                   |         |
| Marital status, %                |                 |                    |                        |         |
| Married                          | 45.75           | 40.0               | 48.30                  | 0.26    |
| Unmarried/widowed                | 54.25           | 60.0               | 51.70                  |         |
| Total # comorbidities, M (SD)    | 2.33 (1.46)     | 2.62 (1.58)        | 2.2 (1.39)             | 0.049   |
| Power of attorney, %             |                 |                    |                        |         |
| Yes                              | 60.28           | 46.97              | 66.22                  | 0.018   |
| No                               | 38.32           | 50                 | 33.11                  |         |
| Relationship to POA, %           |                 |                    |                        |         |
| Spouse                           | 25.7            | 24.24              | 26.35                  | N/A     |
| Child                            | 25.23           | 19.70              | 27.70                  |         |
| Other family member              | 10.28           | 7.58               | 11.49                  |         |
| Friend                           | 5.61            | 6.06               | 5.41                   |         |
| Attorney/lawyer                  | 0.93            | 1.52               | 0.68                   |         |
| Other                            | 3.27            | 6.06               | 2.03                   |         |
| Living will, %                   |                 |                    |                        |         |
| Yes                              | 57.48           | 48.48              | 61.49                  | 0.11    |
| No                               | 41.12           | 48.48              | 37.84                  |         |
| Advanced directive, %            |                 |                    |                        |         |
| Yes                              | 51.87           | 46.97              | 54.05                  | 0.544   |
| No                               | 43.46           | 50                 | 40.54                  |         |
factors that led to this difference. Another limitation is that this is a cross-sectional sample and lacks additional longitudinal follow-up time points. Will self-efficacy continue to change as time progresses? Will older adults experience less or return to a lower level of self-efficacy as we move further down the road of COVID-19? Since we are following this cohort every 6 months, we will be able to observe how self-efficacy changes during future phases of the COVID-19 pandemic.

Self-doubt is a part of human nature. COVID-19 restrictions forced older adults to experience the loss of in-person human interactions and overcome their self-doubt in managing social interactions. Older adults adapted to the challenges of isolated aging-in-place and came ahead with higher self-efficacy. Future studies will help determine if the higher self-efficacy gained during the COVID-19 pandemic remains or extends the ability of older adults to age-in-place.

AUTHOR CONTRIBUTIONS
All authors met criteria for authorship by (1) Conception and design of the study: Lindquist, Ramirez-Zohfeld. (2) Data acquisition: Miller, Scherier, Murawski, Ramirez-Zohfeld. (3) Analysis and interpretation of data: Lindquist, Miller, Scherier, Curtis, Opsasnick, Kim, Ramirez-Zohfeld. (4) Manuscript drafting: Lindquist, Miller, Scherier, Opsasnick, Kim, Ramirez-Zohfeld. (5) Revising the manuscript critically for important intellectual content: All authors. (6) Approval of the version of the manuscript to be published: All authors.

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All authors declare no conflict of interest.

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Unplanned intensive care unit admission in hospitalized older patients: Association with a geriatric vulnerability score

INTRODUCTION

Older adults admitted to intensive care units (ICUs) have a high risk of adverse outcomes, including functional decline and death. When intensive care follows unforeseen complications, the risk is even higher. A previous study showed that clinical deterioration, rather than triage error, accounted for most unplanned ICU admissions and that age-related disabilities and multimorbidity, which are measures of geriatric vulnerability, were better predictors than illness severity. Despite a growing body of evidence, existing screening instruments have limited accuracy in predicting adverse outcomes and ICU admission following Emergency Department (ED) visits.

METHODS

We completed a longitudinal study comprising stable patients aged +70 years who visited a Geriatric ED (ProAGE) and were initially admitted to non-ICU beds between 2017 and 2020. ProAGE geriatricians systematically documented patients’ and visits’ characteristics using REDCap resources. Our standardized assessment includes delirium according to the Confusion Assessment Method (CAM), frailty according to the FRAIL scale, prognosis according to Identification of Seniors at Risk (ISAR) scores; risk of prolonged length of hospital stay according to PRO-AGE scores; and ED visit outcome. The PRO-AGE scoring system (Table S1) is a validated mnemonic method used to assess vulnerability and predict hospital admission, prolonged length of stay (LoS), and death in older adults at the ED. In its original derivation and validation study sample, those with long hospitalization scores ≥5 had a ≥25% risk of prolonged stays.

Our main outcome was unplanned ICU admission, defined as a transfer to ICU following clinical deterioration. Our main predictor of interest was geriatric vulnerability, measured by PRO-AGE prolonged LoS (0–8; higher = worse). As the PRO-AGE scoring system does not have validated cut-off values, we opted to define its categories using tertiles, a similar strategy to previous work. We used logistic regression models adjusted for sex and comorbidity (defined according to Charlson Comorbidity Index, CCI) to examine the association between geriatric vulnerability and unplanned ICU admission.