



# Cognitive Function, Aging, and the Community Dwelling Elderly Living Alone: Implications for Nursing Practice

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## Abstract

The growth in the aging population in the coming years represents a significant public health policy issue as more and more older adults wish to age in place. Additionally, as more older adults live longer, more older adults are living at home alone. Cognitive function and cognitive decline in later life represent additional challenges to the vulnerable elderly. As the health care system grapples to meet the needs of a growing aging population, the nursing profession can play an important role in health promotion and prevention efforts in cognition and aging. Given the need to advance more routine screening and assessment of cognition in later life, nurses are well poised to advance science and research and support recommendations for assessing cognitive function and cognitive decline in order to support safe and autonomous living in advanced age.

**Key Words:** Aging, Cognition, Cognitive Function, Nursing

## Introduction

Assessment of cognitive capacity to determine incapacitation or dependence represents a complex process that is not easily measured or defined [1]. A myriad of contributing factors (including modifiable and non-modifiable factors), influence cognitive capacity and the ability to manage care [2]. Given the complexity of cognitive functioning, this article serves to raise awareness concerning the need to establish more robust guidelines and standards for providing more accurate assessments in determining and predicting older adults' capacity, particularly for those living alone in the community setting. Further, this article intends to leverage the findings from research to advocate for the use of screening tools and best practice approaches to enhance the assessment of cognitive capacity for older adults to provide better measures of cognitive function for the health care system to use when determining capacity to self-direct. Lastly, this article provides implications for nursing practice and their role in assessing cognitive capacity in older adults living alone in the community setting.

## Background

The change in the demographic landscape signals an important shift concerning the characteristics of the older adult population and its implications for cognitive function in advanced age. The older adult population already represents a significant segment of the overall US population as growth in the aging population nationally is expected

to increase drastically over the next several years. Adults 65 and older are expected to double in the next thirty years and comprise approximately 25% of the US population [3]. Additionally, older adults with advanced age are also living longer as advances in medicine and technology impact mortality and morbidity rates for persons living with acute and chronic diseases. Further, life expectancy has increased over time, with people living on average 78.7 years in 2018 [4]. The number of people aged 85 and older is expected to triple over the next thirty years and account for almost 20 million of the overall population [5].

Older adults living in rural America live longer; living alone poses additional challenges to the most vulnerable elderly. This phenomenon is particularly prevalent in the United States, where over a quarter of the older adult population, ages 60 and older, live alone [6]. The vulnerable community-dwelling older adult living alone poses additional risk related to the lack of support and social isolation for physical and cognitive decline impacting decision-making capacity [7]. An elder orphan is defined as "aged community-dwelling individuals who are socially and/or physically isolated, without an available known family member or designated surrogate or caregiver [8]. A recent study by the National Academies of Science, Engineering, and Medicine (NASEM) found that social isolation and loneliness, as a consequence of living alone, significantly increased the risk of chronic diseases, including dementia [9].

## Cognition and Aging

Cognitive decline and cognitive capacity in advancing age are important considerations for older adults living alone. Adults ages 45 years or older living alone in the US, reporting a subjective cognitive decline (SCD), ranged from 19.7-52.2% nationally [10]. The presence of cognitive decline/cognitive impairment in older adults living alone resulted in additional concerns regarding their ability to live independently related to awareness of cognitive impairment, self-care management challenges, and a lack of available resources and supports [11]. Given these findings, as the older adult population grows and life expectancy increases, cognitive decline in advanced age in community-dwelling adults poses significant risks for the health and safety of those individuals living alone.

The assessment of cognitive function represents a complex multi-dimensional process influenced by many factors [12]. Cognition is characterized by several interdependent "domains of cognitive

performance” that determine the overall capacity to perform various functions and skills necessary to manage care [13]. These domains encompass several functions, including sensation, perception, motor skills and construction, attention and concentration, memory, executive functioning, processing speeds, and language/verbal skills [13].

In particular, older adults are more prone to be exposed to factors influencing cognitive function attributable to age-related considerations and the presence of chronic disease. Given these increased risks, it is important to understand age-related changes in cognition and factors that positively and negatively affect cognitive function [14]. The National Institute on Aging stresses the importance of assessing cognitive function in older adults given the myriad of modifiable and non-modifiable factors that result in cognitive impairment, including the effects of medications, metabolic and endocrine disorders, acute and chronic disease, and the presence of depression and dementia [14]. In light of the vast array of factors that can influence cognitive function in advanced age, assessment of cognitive capacity should include tools and approaches to identify such factors.

Despite the growth in the aging population and the increased concerns surrounding cognitive decline, there continues to be a lack of consensus surrounding the benefits of cognitive screening for community-dwelling older adults [15]. While several assessment tools exist, these tools are not routinely used in clinical practice, particularly in patients presenting with conditions affecting cognition [16]. Further, health care professionals cite several barriers in practice that impact their ability to routinely conduct effective cognitive evaluations [17].

#### Assessing Cognitive Capacity and Cognitive Decline

The community-dwelling older adult living alone presents unique challenges and concerns regarding the assessment of cognitive capacity and their ability to live safely at home. Given the complexity of cognitive capacity, the need to assess and evaluate multiple domains of cognitive and executive functioning is necessary to self-direct and manage care in the solo community-dwelling elder [24]. The nursing profession can play a critical role in assessing cognitive capacity in the community dwelling solo elder. Drawing from the profession’s early roots, “public health nurses have been critical to the functioning of our health care system by improving the health of vulnerable populations and entire communities” [25]. Efforts to strengthen the public health infrastructure and help address the unique needs and challenges of a growing aging population are paramount.

Additionally, given the wide array of institutional, outpatient and community-based setting that nurses are employed, the profession is well poised to play a lead role in assessing cognitive capacity to advance health promotion/prevention efforts in older adults [26]. Specifically, drawing from current research, nurses educated in the field of aging can utilize standardized assessment tools and other recommendations to provide ongoing assessment of cognitive capacity in older adults in support of key recommendations from the NIH and others within the field [14, 21, 22]. As an integral member of the interdisciplinary health care team, a patient-centered approach to nursing care provides meaningful opportunities to enhance quality of life and associated outcomes in the older adult population [25].

#### Conclusion

The shift in the demographic landscape in response to the growth in the aging population and the number of older adults living at home alone constitutes a pressing policy issue. The need to address cognitive decline in advanced age already exceeds the current systems capacities to adequately assess and evaluate cognitive capacity. Further, gaps in practice fail to adequately assess and predict cognitive function to direct and manage care. Given the unique needs of the older adult living alone and the complexity of cognitive

function, health care systems must be better equipped to ensure the accuracy, validity, and reliability of cognitive assessments and the ability to live as safely and autonomously at home. The nursing profession is well poised to fill that gap and leverage findings from research and other recommendations to assess cognitive capacity and enhance health promotion and prevention efforts for older adults living at home alone.

**Conflict of interests:** The author declares no conflict of interest.

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