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REVIEW

An Ecological Framework to Support Small-Scale Shared Housing for Persons with Neurocognitive Disorders of the Alzheimer's and Related Types: A Literature Review

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KEYWORDS
Alzheimer's Disease;
shared housing;
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Summary *Background:* Small scale shared housing arrangements (SHAs) is a deinstitutionalized model of care designed to resemble a typical home of <10 people and are increasingly available for persons with neurocognitive disorders of the Alzheimer's and related types (NCD). However, there is little aggregate evidence of their effect on persons with NCD thus, a literature review was performed.
Methods: Database searches were conducted across CINAHL Complete, OTseeker, PubMed, Ovid, Academic One File, ProQuest Nursing and Allied Health, the World Wide Web and Google Scholar using the several key words that included neurocognitive disorders, Alzheimer's, dementia, quality of life, well-being, occupational performance, activities of daily living, small scale shared housing, sheltered housing and group homes. Bibliographic references from final articles were also examined. Selection criteria involved three steps: screening perspective articles by title and abstract, assessing full text for eligibility and finally, reviewing full-texts.
Results: 16 studies were selected for final review where most found the association of SHAs with various occupational performance indicators unique to the NCD population better than or equal to controls (traditional models of long term care). A small minority of studies had mixed or inconclusive results. No study found SHAs necessarily worse than controls.
Conclusion: The SHA model has many benefits for person's with NCD and may be especially advantageous for those in the early stages of the disease process. The occupational therapy

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profession should continue to raise awareness of SHAs and consider ecological theory as a valid basis for their expansion.

Introduction

Background

Numerous issues are confronting the provision of long-term rehabilitative care (LTC) and its effect on quality of life (QoL) for those with neurocognitive disorders of the Alzheimer's and related types (NCDs); given that physical health and function are its intended outcomes, LTC (a parasol term for nursing homes, assisted living, skilled nursing, and similar facilities) has come to be associated with isolation from the community, loss of autonomy, poor occupational performance, and reduced QoL (Teleniusm, Engedal, & Bergland, 2013). Ideally designed to be a living environment first and a workplace second, much criticism has been directed towards the authoritarian, technological, and hierarchical manner in which institutional care is delivered in these settings as most are cold, impersonal, and designed according to a hospital blueprint focused on its efficiency as a workplace rather than the "livability" or occupational performance of its residents (Cutler, Kane, Degenholtz, Miller, & Grant, 2006; Lundgren, 2000; Samus et al., 2005). Many have also found that the supportive nature of LTC, which is meant to be an intervention to enhance participation, in fact, does not suit them and residents often fail to thrive, representing a major paradox for many choosing to live there when they are no longer able to meet the occupational demands of their home environment. To provide more effective occupational therapy services to this underserved and challenged population, awareness about the present limitations of LTC and possible solutions should be discussed as new and promising models of service delivery are now available such as small-scale shared housing arrangements (SHAs), which is a deinstitutionalized model of living that resembles a typical home that accommodates $<$10 people. Classified as "nursing homes" with highly trained staff, a growing body of research emphasizes the benefits of these unique living arrangements over traditional LTC models, which may have $\geq$100 residents, as several studies have noted improved QoL, better activity of daily living (ADL) performance, and healthier cognitive outcomes (de Rooij et al., 2012; Funaki, Kaneko, & Okamura, 2005; Nakanishi, Nakashimi, & Sawamura, 2012; Smit, de Lange, Willemse, & Pot, 2012; Suzuki, Kanamori, Yasuda, & Oshiro, 2008). The occupational therapy profession has a critical role to play and should be an active partner in the debate concerning the challenges that face LTC and possible solutions such as the implementation of SHAs. This can be achieved through a concerted effort by occupational therapy professionals to raise the awareness of SHAs as they engage in the several forms of service delivery unique to the profession such as *direct service provision* (i.e., working directly with clients, family, and caregivers), *educational*, which includes informing various constituents of the nature of issues facing the profession, as well as *policy development*, which consists of working with management, the public, and government in shaping opinion (Dorrestein & Hocking, 2010).

SHAs are not necessarily new and made their debut in the early 1980s in Scandinavian countries, Japan, and Germany. Representing a novel concept in NCD care at that time, they now account for $>$25% of all nursing home care in the Netherlands and as of 2008 represented 18% of the total 6,000 special care nursing homes in Japan (Nakanishi et al., 2012; Verbeek et al., 2010). In Germany, there are also $>$1,400 SHAs, with 460 of them situated in Berlin (Gräske, Meyer, Worch, & Wolf-Ostermann, 2015). Governed as nursing homes, there are many adjectives used to describe these settings, such as shared housing, sheltered housing, or group homes, as well as several trademarked descriptors, of which the most notable may be the "Green House Project" in the United States, which has 185 facilities in 28 states (Pomeroy et al., 2011; Scher-Mclean, 2015). The architectural prototype of this style of care includes multiple small houses clustered in residential-styled neighbourhoods or designed as apartments, which are additions to continuing care retirement communities, or may be incorporated into redesigned segments of assisted living facilities and nursing homes to resemble a typical home (Rabig, 2012). Their core domains embrace the establishment of a family-like environment, the inclusion of relatives, a community orientation, the safeguarding of care provision, along with core principles of well-being as well as self-determination and autonomy and most importantly a "homelike" feel (Gräske, Fischer, Kuhlmey, & Wolf-Ostermann, 2012). Key design components of newly built and proposed units include an emphasis on normal daily routines and environmental details that support occupational performance and QoL. This is achieved by having a floor plan of a characteristic dwelling, private rooms, and bathrooms, a "great room" or large living room, access to outdoors/nature, and in some communities, a fireplace. There is also the integration of pets as well as community meals, with staff who act as central figures that assume the role of universal worker, attending to food preparation, laundry, personal care, habilitation, and general promotion of occupation (Loe & Moore, 2012). In addition, in SHAs day-to-day decisions are typically made by residents themselves or in conjunction with staff, which has shown to have the potential to empower both.

Occupational therapy is at a unique crossroad with those who suffer from NCD as the number of cases in the United