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Review Article

Social-Professional Networks in Long-Term Care Settings With People With Dementia: An Approach to Better Care? A Systematic Review

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ABSTRACT

Keywords:
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Background: Dementia is a syndrome associated with stigma and social isolation. Forty-two percent of people with dementia in the United States and almost 40% in the United Kingdom live in assisted living and residential care facilities. Up to 90% of residents with dementia experience behavioral and psychological symptoms of dementia (BPSD). Currently psychotropic drugs are often used to manage BPSD, despite the drugs' limited efficacy and adverse effects. Even though psychosocial approaches are as effective as medical ones without side effects, their uptake has been slow. Social networks that investigate the structure of relationships among residents and staff may represent an important resource to increase the uptake of psychosocial approaches and facilitate improvements in care.
Objectives: To conduct a systematic review of social network studies set in long-term care (LTC), including residents with dementia, and identify network factors influencing the care available to residents.
Method: Peer-reviewed articles across CINAHL, EMBASE, IBSS, Medline, PsychInfo, Scopus, and Web of Science were searched from January 1994 to December 2014 inclusive, using PRISMA guidelines. Studies included those examining social networks of residents or staff in LTC.
Results: Nine articles from studies in the United States, Europe, Asia, and Australia met search criteria. Resident networks had few social connections. One study proposed that residents with high centrality be encouraged to welcome new residents and disseminate information. The high density in 2 staff network studies was associated with the cooperation needed to provide care to residents with dementia. Staff's boundary-spanning led to higher-status nurses becoming more involved in decision-making and problem-solving in one study. In another, the outcome was staff treating residents with more respect and actively caring for them.
Conclusion: These studies suggest interventions using a network approach may improve care services in LTC.

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Dementia is a syndrome associated with stigma and social isolation. A total of 46.8 million people globally live with dementia and this number is forecast to almost double every 20 years to reach 131.5 million by 2050. Forty-two percent of people with dementia in the United States[1] and almost 40% in the United Kingdom[2] live in assisted living and residential care facilities. Cognitive impairment is the condition that most strongly predicts entry to a care home, leading researchers to conclude that current

and future costs of long-term care (LTC) will predominantly be determined by forecast numbers of those with dementia. Concerns about care regimens in LTC have been expressed by academic researchers,[3,4] the press,[4] and policy makers[4] due to reports of high rates of resident depression, physical and psychological abuse, and poor quality of life. A contributor to the latter is the incidence of neuropsychiatric symptoms (NPS) or behavioral and psychological symptoms of dementia (BPSD) that occur almost universally in people with dementia.[5–8] Current management of BPSD is heavily dependent on psychotropics such as antipsychotics, despite their limited efficacy and significant adverse effects including falls, hip fractures, stroke, somnolence, cognitive and functional decline, and death.[7,9,10] Different approaches to managing BPSD and improving the care given to residents are therefore of key interest in this sector.

The field of social network analysis (SNA) offers an approach to investigate the structure of relationships and to facilitate improvements in LTC. SNA studies focus on understanding a network's structure and how it relates to the way people can feel socially supported or isolated and to processes such as how information and influence flow. These affect, for example, the speed with which ideas, tools, and practices are disseminated.[11,12] Networks have gained prominence in public and private governing structures, over hierarchies and markets, as a preferred means to address complex problems and scarce resources, and achieve collective objectives. They are being used to tackle so-called "wicked problems": those that are intractable.[13,14] Caring for people with dementia in LTC rates as a wicked problem because cause and effect are often difficult to identify and model, there is not always consensus on the root problem and solutions, and issues are often associated with strong moral, political, and professional views. In considering an SNA approach, structural issues that negatively affect outcomes also need to be considered, such as cliques, overreliance on central agencies or individuals, and the tendency for professions to form introspective clusters or silos.[12]

Health system reform in many countries has looked to network governance because of the advantages identified.[15] For example, the English National Health Service funded a networks program of research on clinical networks starting in 2004. A review of 8 of these noted the "utility of network forms in tackling wicked problems."[16] Introduction of a managed clinical network in Scotland, set up to improve care for people with diabetes, was effective in addressing collaboration and communication challenges across professional and organizational boundaries. The evaluation identified that the network had resulted in changes in professional practice that delivered a dramatic fall in the rates of hospital referrals and a major shift to primary care for people diagnosed with type 2 diabetes. The network also improved simpler processes faster and facilitated continuous improvement for complex processes.[17] Meltzer et al[18] showed how SNA could be feasibly implemented to design effective quality improvement teams in the United States.

Clinical networks have been used as a key health policy approach to engage clinicians in improving patient care in Australia. A study of 2 of these undertook a qualitative analysis of stakeholder views of the factors relating to the measurement of the effectiveness of the networks.[15] Findings included network effectiveness in working with multidisciplinary teams, identifying areas of need, and developing best practice through evidence-based models of care. The network engaged clinicians enabling them to plan for and address complex problems and contribute to policy.

This review examines the utility of social network studies in LTC and the extent of the evidence that network structures are being exploited to achieve better care for residents.[12,19] It aims to build on extant SNA conducted in health and health care settings.[20,21]

Table 1
Search Terms

Model Criteria	Search Terms
Location	Resident* OR "nurs* home" OR "nurs* care" OR long-term OR "residential aged care facility"
Roles or agents	Team OR professional OR multiprofessional OR interprofessional OR multidiscplin* OR interdisciplin* OR nurse OR General Practitioner OR GP OR "primary care practitioner" OR PCP OR doctor OR Geriatrician OR carer OR staff OR specialist OR worker OR psycho* OR therap* OR servic*
Intervention	"social network*" OR "network analys*s" OR "network structure*"

Methods

Search Strategy

A comprehensive literature search was conducted in the second half of 2014, over the period of January 1994 to December 2014, following Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines.[22] The year 1994 was when *Social Network Analysis: Methods and Applications*,[23] a seminal publication in this area, was published. A large number of databases were accessed for peer-reviewed articles due to the difficulty in finding a representative number of articles. Databases accessed were CINAHL, EMBASE, International Bibliography of Social Sciences (IBSS), Medline, PsycINFO, Scopus, and Web of Science. One article was selected from a hand search of reference lists. Search terms were selected after analysis of MeSH terms, advice from experts, and review of keywords in the literature. Original terms for the systematic review were "dementia" and "social network analysis." When no articles were produced using these terms, additional terms were tried, which led to the final set of terms, namely words associated with residential care facility, nursing home, long-term; with the professions of those likely to be part of the network; for instance, nurse, primary care practitioner, doctor, service, carer, professional, worker, as well as words associated with social network, network analysis, and network structure. Search terms were applied only to abstracts and titles and not to keywords. The wild card character, "*" was used, as relevant. Each term reflected criteria in a model of location, roles or agents, and intervention, as depicted in Table 1.

Study Selection

Search limits applied are summarized in Table 2. Based on these and search terms in Table 1, citations, abstracts, and references for 153 articles were downloaded into the bibliographic software

Table 2
Limits Applied to Each Database Search

Database	Inclusion Limits
CINAHL	English; abstract; human; 1994–2014; Medline records excluded; related words applied; linked to full text
EMBASE	English; human; 1994−current; title only; full text; map term to subject heading
IBSS	English; after Jan 1, 1994; abstract; peer-reviewed journals; discipline: anthropology and sociology
Medline	English; humans; 1994−current; abstract; full text
PsychInfo	English; humans; 1994−current; titles only; peer-reviewed journal
Scopus	English; subject limit: medicine; social sciences; biochemistry, genetics and molecular biology; neuroscience; psychology; nursing; decision sciences; multidisciplinary; health professionals; 1994−current; title, abstract, keywords
Web of Science	English; 1994–2014; title only