An international study of social engagement among nursing home residents

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Abstract

Method: data using the Resident Assessment Instrument (RAI) from nursing home populations in five countries (Denmark, Iceland, Italy, Japan, USA) were assembled from 396 277 residents. The distribution of a new quality of life measure, 'social engagement', embedded in the RAI and found to be reliable and valid in the USA, was examined and compared in the international samples.

Results: in all five countries' nursing home populations engagement was highest among residents with adequate functioning in activities of daily living (ADL) and cognition, but the level of social engagement differed considerably by country among residents with poor ADL functioning, who had adequate cognition. The lowest scores were in Italy and Japan. The amount of time residents spend in activities stratified by ADL and cognition reveal the same pattern cross-culturally—cognitively impaired residents are least actively involved.

Conclusions: the Minimum Data Set measure of social engagement is stable across types of residents and across nations and can serve as a marker of nursing home quality.

Keywords: *activities of daily living, nursing home residents, social engagement*

Introduction

The decision to move into a nursing home is precipitated by deterioration in health which causes impairment-related functional limitations that lead to dependency. Admission into a long-term care institution solves several problems for the elderly person, relatives and community service agency staff. But what is the quality of a person's life after taking up residence in a facility since the direct cause of their admission is unlikely to be reversed?

Institutions are often associated with a hospital-like routine which requires that residents comply with the schedules established by professionals and other caretakers. Residents often are obliged to accept the 'sick role' in return for their being relieved of their usual social obligations. More recently, however, the role of the nursing facility as a home has been emphasized along with a call for residents to remain involved in social life.

In constructing the Minimum Data Set (MDS) as the core of the Resident Assessment Instrument (RAI) particular attention was paid to developing measures that would evaluate positive aspects of residents' social functioning as well as their physical and mental functional abilities. The MDS items measuring psychosocial well-being move beyond a simple counting of social interactions and activity participation and instead focus on residents' engagement in the social world around them. Using these items, a new measure of social engagement for a nursing home population that is structurally distinct from measures of depression and anxiety, conflict in relationships or problematic behaviours has been introduced and tested for reliability and validity in a random sample of US nursing homes [1].

In order to determine the applicability of this measure to nursing home residents from different cultures and countries, we extend the work of the original developers by comparing residents in five countries stratified by physical and cognitive functioning.

Methods

This study was conducted as part of the inter*RAI* cross-national comparison of continuing care facility residents assessed by the RAI translated into the languages of participating countries. Five countries were selected on the basis of recent testing of the MDS in populations of nursing homes in defined areas [2]. The countries selected were Denmark (1992), Iceland (1994), Italy (1993), Japan (1993) and the USA (1993). The sample of 396 277 represents all residents in the homes surveyed in the selected countries. Registered nurses with experience in long-term care collected all resident data in each home, based on residents' records, conversations with staff and inter-actions with and observations of the residents. In all countries but the USA, the data were collected as part of special research and demonstration projects. In the USA the data are required by regulations implemented in 1991.

Social engagement

Assessments of social engagement over the last 7 days are made, based upon behaviour (verbal, body language or actions). The index of social engagement was developed from dichotomous items in the MDS that indicated the presence or absence of the behaviour in question. All items reflecting social engagement were included. The average inter-rater reliabilities of these items (κ values) for the six questions were satisfactory for the five countries: Denmark (0.56), Italy (0.68), Iceland (0.70), Japan (0.53) and the USA (0.58).

Activities of daily living (ADL)

The residents' ADL classification is based on six items on activities of daily self-performance from the MDS: transfer, locomotion, dressing, eating, toilet use, bathing and one bladder continence item. For each of the six ADL items residents were rated on a five-point scale regarding dependency. A six-category ADL self-performance index was created [1]. Dichotomizing the ADL index, those with ADL scores of 4 or greater (highly dependent or dependent) were classified as low in ADL functioning (totally dependent on two or more ADL items or totally dependent in one ADL items and also incontinent); those with scores lower than 4 were classified as having high ADL functioning.

Cognition

Residents' cognition was classified on five items from the MDS which have established validity in relation to the Mini-Mental State Exam and the Test for Severe Impairment [3]. The five items utilized in the index are: cognitive skills for daily decision making, residents' ability to make themselves understood, short-term memory, whether the resident is in coma and ADL performance in eating. A seven-category cognitive impairment index was constructed. We dichotomized the index by combining the three 'severe' groups into a 'low cognitive functioning group', including those who were moderately severely impaired, moderately impaired in their decision-making and understood only sometimes or never. All other residents were classified as having 'good' cognitive functioning.

Results

Sample description

The characteristics of the five countries are also described by Fries *et al.* [2]. In Denmark, all nursing home residents in Copenhagen were invited to participate in a survey in 1993; 3451 (78%) partici-pated with a mean age of 83.6. Of these, 76% were women, belonging mainly to the RUG-III [3] case-mix groups with reduced physical functions, impaired cognition or clinically complex. Only 2% of residents were in the groups characterized by rehabilitation, extensive care and special care; 49% were dependent or highly dependent in ADL and 31% had severe cognitive impairment.

In Iceland all residents in skilled nursing homes in Reykjavik were invited to participate in a survey in 1994. Over 50% were 85 and over and 71% were women. The distribution of RUG-III case-mix groups is comparable to Denmark, but with as many as 68% ADL-dependent and 42% cognitively impaired.

All 806 residents in nursing homes in Genoa in Italy were surveyed in 1993. Almost 40% were 85 years of age or older and 86% were women and the case-mix and functional distribution were similar to those in the northern countries.

In Japan, 1255 residents from facilities in two areas were assessed in 1993. Only 35% were 85 or older and 72% were female. Fourteen percent were ADL-dependent and 24% severely cognitively impaired.

In the USA the use of RAI is mandated by Congress, so this sample of MDS data comes from one assessment of all nursing residents (389 987) carried out in 1992–93 in seven states (Maine, Mississippi, South Dakota, Kansas, Nebraska, Ohio and Washington). Nearly half (47.2%) were 85 and over and 71% were female. The case-mix distribution was similar to the European countries, 60% were ADL-dependent and 23% were cognitively impaired.

Table 1 displays the response to each of the social engagement items as well as the variable measuring activities participation by country. Between 44 and 58% of residents were at ease interacting with others, while between 18 and 53% did not spend any time in any activity. Table 1 also reveals that the percentage of residents involved in activities most of the time (defined as of waking hours) differed dramatically by

Table 1. Responses to questions about social engagement items made by subjects in long-term care institutions in five countries

Social engagement item	Percentage, by country				
	Denmark ($n = 3436$)	Iceland ($n = 1231$)	Italy ($n = 789$)	Japan ($n = 1240$)	USA ($n = 376\,602$)
At ease interacting with others	55	58	46	46	58
At ease doing structured activities	53	37	24	40	33
At ease with self-initiated activities	30	24	21	30	38
Establishes own goals	-[a]	25	35	19	30
Pursues facility involvement	26	28	17	14	19
Accepts invitations to most group activities	55	41	17	21	24
Activity participation					
Most of the time	28	18	6	19	8
Some of the time	24	26	14	24	42
Little time spent	31	28	27	40	44
None	18	28	53	17	7

[a]Item not completed because residents did not understand it.

country: 28% in Denmark, 18% in Iceland, 6% in Italy, 19% in Japan and 8% in the USA

The Spearman-R correlation between the six social engagement items was of the order of 0.40 (0.3-0.5) depending on the type of question. The correlation between social engagement items and time spent in activities was high in the Nordic countries (0.4), but low in the other countries (0.2).

Table 2 presents the percentage of residents with the highest (5-6) social engagement scores within each of our four groups of residents stratified by country. It also shows the number of residents in each functional group. As can be seen, the proportion of residents with the highest social engagement scores among severely

cognitive impaired residents was low in all countries (range 0-4%). In the high ADL, high cognitive function group, the proportion of those with high social engagement ranged from 19% in Japan to 31% in Iceland.

Residents with good cognitive function but poor ADL functioning deserve special attention since high levels of social engagement in this group depends on the willingness of staff to get residents to activities. In Japan and Italy the few residents in the group were less likely (6%, 7%) to be optimally engaged than similarly impaired residents in Denmark (18%), Iceland (22%) and the USA (18%).

The influence of an activating attitude in the facility

Table 2. Percentage of people with highest social engagement scores (scores of 5 or 6)[a] in each activities of daily living (ADL) and cognitive function (CF) category in each country

ADL and cognitive status	No. and % with highest social engagement, by country									
	Denmark		Iceland		Italy		Japan		USA	
	n	%	n	%	n	%	n	%	n	%
High ADL/high CF	269	24	185	31	51	22	108	19	31 882	30
(no. in group)	(1106)		(591)		(237)		(580)		(105 968)	
High ADL/low CF	38	6	4	2	4	4	13	10	6050	13
(no. in group)	(642)		(168)		(102)		(129)		(47 462)	
Low ADL/high CF	118	18	25	22	9	7	8	6	13 092	18
(no. in group)	(658)		(114)		(135)		(130)		(72 858)	
Low ADL/low CF	13	1	3	1	13	4	0	0	4777	3
(no. in group)	(1030)		(358)		(315)		(4001)		(150 314)	
Total	438	13	217	18	77	10	129	10	55 801	15
(no. in group)	(3436)		(1231)		(789)		(1240)		(376 602)	

[a]For Denmark, the social engagement scale is collapsed to combine levels 5 and 6 as the question regarding establishment of goals was omitted since residents did not understand it. The five-item scale was then proportionalized as if there were really six items with a proportional inflation.

is exemplified by one of the scale items—involvement in structured group activities arranged by staff. Among the best functioning residents, participation ranged from 41 to 62% cross-nationally. In Denmark, similar proportions of residents with good cognition who did and did not have poor ADL were engaged in structured activities. This proportion (the ratio low ADL/high cognitive function) was therefore 59/62 (= 0.95) in Denmark, 42/59 (= 0.71) in Iceland, 25/41 (= 0.61) in Italy, 33/58 (= 0.57) in Japan and 40/51(= 0.78) in the USA.

Discussion

The purpose of including questions regarding psychosocial well-being in the MDS was to determine whether residents are engaged and involved in the life of the institution. It is an effort to highlight the positive features of a nursing home resident's social behaviour and to emphasize a broader dimension of quality of life than physical functioning.

The distribution of positive answers to questions regarding social engagement was rather similar cross-nationally. In all countries about half (44-58%) of the residents were at ease interacting with others and one-third (19-55%) were at ease doing planned or structured activities, doing self-initiated activities or accepting invitations to most group activities. Fewer (14-26%) established their own goals or were able to pursue involvement in the life of the facility. In the USA data were collected routinely, so 98% of the data presented originate from here. The distributions were, however, comparable in studies with very many participants (USA) or few residents (Iceland).

While there are gross similarities, obvious differences emerged. The observed differences may depend on the case-mix of the populations of people served by continuing care facilities from country to country. However, after controlling for ADL and cognitive functioning, differences in engagement levels persist. While between one-fifth and one third of physically and cognitively competent residents were optimally engaged in the facility, real differences were observed when residents with poor ADL, but good cognitive functioning were compared, with such residents in Danish and Icelandic homes faring the best.

While one should not expect that nursing home residents will be more socially engaged than the population at large, functional impairment clearly limits residents' opportunities to pursue involvement in the activities. One aim of nursing home care should be to target social and recreational programmes for residents that are appropriate to their level of function and which offer them meaningful involvement in their environment [5-9]. This can be done by altering a facility's focus from nursing needs and conditions to life style and living conditions. The organizational origins of these types of facilities may influence the focus they have. For example, in Japan and the USA continuing care facilities are regulated by health departments, whereas in Denmark the facilities belong to the social sector.

It may be the case that the higher level of social participation in Denmark among the most physically impaired people is a reflection of this added emphasis given to social features of the home.

The reduction in activity participation as a function of poor ADL function described here means that bed-bound cognitively intact residents in countries other than Denmark and to some degree the USA and Iceland are not helped to participate in group activities.

Differences between long-term care facilities in residents' involvement may be indicators of differences in quality of life in the nursing home setting. The social engagement score presented here has the potential to be an instrument for internal quality control and improvement. Staff can gain new insight into the ways in which their own work affects residents and their perception of residents not just as handicapped people, but as people with resources and human assets.

The social engagement scale has been validated and found stable across types of residents in the USA [1]. Its potential utility as a marker of nursing home quality is strengthened by the results from this cross-national comparison. Similarities and differences in group and self-initiated initiatives as well as time spent in activities in the homes have been described. These comparisons make it possible to contrast the level of social engagement and the nature of the environmental and service characteristics of long-term care facilities in different countries, providing a basis for making clinical and policy changes.

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