Self-assessment of health condition among patients in long-term nursing home care

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ABSTRACT

Purpose: To determine the health condition self-assessment and the possibility to improve physical functioning of patients in long-term nursing-home care.

Materials and Methods: InterRAI-HC (Residential Assessment Instrument – Home Care) questionnaire was used to assess health condition and healthcare needs of a patient's in home care. A total of 100 consecutive patients who were newly admitted to long-term nursing-home care within NFZ (National Health Fund) contract in 2009-2010 took part in the study.

Results: Patients most frequently assessed their health condition as *poor* (73.5%), only 3% ranked their health as *good* or *fair*, and self-assessment of health condition changed significantly in the range of age (p=0.017). Comparative analysis seems to indicate that the respondent more frequently assessed their health condition as *good* or *fair* in the periodic examination (6.0%) as compared to the initial examination (2.4%). Significant changes ($p<0.001$) were observed among the initial and the periodic examination the respondents more frequently assessed their health condition as *good* or *fairer* than as *poor*. In the periodic examination, more patients positively assessed the possibility of the improvement than in the initial examination (18.1% vs. 15.7%; $p<0.001$).

Conclusions: Most patients under the long-term nursing-home care negatively ranked their own health condition. Long-term nursing-home care may have a beneficial effect on the emotional sphere of patients – more positive self-assessment tendency was observed after 90 days of care. It seems that qualifying patients with less advanced dependence in physical daily life activities to long-term nursing-home care could improve subjective assessment of health condition and increase the possibility to ameliorate physical functioning.

Key words: self-assessment, home-health care, long-term care, Poland

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Received: 4.01.2012
Accepted: 30.03.2012
Progress in Health Sciences
Vol. 2(1) · 2012 · pp 76-80.

INTRODUCTION

The subjective assessment of health condition complements the objective one and determines the overall psychophysical state according to the WHO definition of health, stating that "health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." [1]. Self-assessment of health condition has a multidimensional significance and reflects subjective and objective aspects of health in patient's perception (…). Negative self-assessment of health condition shows a prognostic relationship with life shortening in a higher degree than it could be determined based on typical epidemiological indices" [2].

The health status of patients with reduced health potential is defined as "the ability to function in the best possible way in their own settings" [1]. Disability in basic life activities leads to a loss of independence in the home environment and need for constant care either at home or in a nursing care institution [3]. The level of functional efficiency is measured with ADL tests and determines the degree of difficulty or a complete disability in elemental life activities. In Poland, disability in performing life activities is assessed using the 100-point Barthel scale, where the score from 0 to 40 is a nation-wide criterion qualifying patients to long-term nursing-home care [4]. It is a non-stationary form of care provided at the patient's home in perpetuity, i.e. until the patient's ability to execute basic daily activities measured with the Barthel scale remains within the range of 0-40 points, which means the high degree of difficulty or total disability in daily life activities. The National Health Fund (NFZ) has been settling contracts for long-term nursing-home care since 2004. This new form of care is addressed only to chronically ill and disabled patients and provided by professional nurses within patients' own home. One nurse can take care of maximum six patients in their homes and should visit each of them at least four times a week. Patients are admitted to this type of care irrespective of age, kind of chronic disease or medical procedures. The study objective was to determine the self-assessment of health condition and the possibility to improve physical functioning of long-term nursing-home care patients.

MATERIALS AND METHODS

Participants

A total of 100 consecutive patients who were newly admitted to long-term nursing home care with NFZ (National Health Fund) contract in 2009-2010 took part in the study. Criteria employed in recruiting participants were: 1) official admission to long-term nursing-home care in a given time range as well as 2) patients' consent to take part in the study. Currently, ranks from 0 to 40 in the Barthel scale are regarded as a nation-wide, single criterion qualifying patients to this form of care and indicates self-care deficits concerning basic daily activities. Patients admitted to long-term nursing-home care is directed to patients who do not qualify for stationary care, who are not in acute phase of psychotic disease, and who do not qualify for hospice admission. The study was conducted in two nonpublic healthcare institutions in Bialystok and Siemiatycze, which provided the majority of contracted care services in a form of long-term nursing-home care.

Patients were examined twice: during admission to long-term home care and after 90 days of care. Descriptive analysis involved all patients recruited to the study (N=100). Comparative analysis concerned 83 participants (83%) from both stages of the study out of 100 participants examined in the initial evaluation. The remaining 17 patients did not participate in the periodic examination after 90 days of care for external reasons: one of the patients was transferred to a stationary hospice; one was transferred to the intensive care unit; the other 15 died.

Instrument

InterRAI-HC (Residential Assessment Instrument – Home Care) questionnaire was used as a tool to assess health condition and healthcare needs of patients living in their own home settings. We've got approval from the interRAI Corporation to use Polish version 3/2008 of this instrument. Part G of the questionnaire referred to physical functioning and evaluation of the possibility of physical functioning improvement from the patient's perspective. Part J concerned health condition self-assessment.

Procedure

In order to determine the subjective assessment of health condition, the respondents were asked the following question:"How do you generally assess your health?" The patients were to choose one out of five options: 1. perfect, 2. good, 3. fair, 4. poor, 5. patient could not / refused to respond.

The potential possibility to improve physical functioning from the patient's point of view was evaluated by the statement included in the research questionnaire:"Patient believes in his ability to improve physical functioning," and positive (yes) and negative (no) responses.

Interviewers

Interviewers were chosen among the nurses taking care of patients in long-term nursing-home care. Before commencing the study, they took part in training where aims of the study, questioning system, descriptors and ways of registering answers were discussed. The interviewers evaluated patients twice: during admission to long-term nursing-home care and after 90 days of care.

Statistical description

The study results were presented in the form of frequency of patients' responses defining subjective assessment of health condition. The distribution of values was analyzed according to age and gender as well as with regard to the possibility of physical functioning improvement. Statistical analysis performed by the Fisher-Freeman-Halton test and McNemar-Bowker test. All statistical hypotheses were verified at the level of significance α=0.05. Most calculations were carried out with Statistica 8.0 program (StatSoft, USA).

RESULTS

The patients differed with regard to age. More than half of the patients were at the age of 80 or older (57%) and women (66%). The structure of age and gender is presented in Table 1.

Table1. The structure of age and gender of the study patients (N=100).

	Study patients	
	N	(%)
Age structure (in years)		
<65	15	15.0
65-79	28	28.0
≥80	57	57.0
Gender structure		
Men	34	34.0
Women	66	66.0

Self-assessment of health condition changed significantly in the range of age (p=0.017). Most frequently (73.5%) the respondents assessed their health condition as *poor*-the most of them aged 65 or older (Table 2). Only 3% of patients chose the answer *good* or *fair*, and nearly every fourth study participant (23.5%) refused or was unable to respond (40% of those aged under 65). Less distinct were the responses referring to gender (p=0.754). Similar numbers of men (78.1%) and women (71.2%) complained of *poor* health, and no assessment was provided by 18.8% of men and 25.8% of women. None of the study patients considered their health condition to be *perfect*. The study participants ranked their health condition as *good* or *fair* more frequently in the periodic examination (6.0%) as compared to the initial one (2.4%). Significant changes (p<0.001) were observed among the initial and the periodic examination-the respondents more frequently assessed their health condition as *good* or *fairer* than as *poor* (Table 3). The patients evaluated the potential improvement of physical functioning. In the periodic examination, more patients positively assessed the possibility of the improvement than in the initial examination (18.1% vs. 15.7%; p<0.001) (Table 4).

DISCUSSION

Health condition determined by a questionnaire study is based on a subjective assessment of respondents and is not always supported by an objective evaluation. However, subjectivity is implicated in the official WHO definition of health (…) as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" [1]. This definition allows us to distinguish disability from limitations in fulfilling social roles – a subjective feature provided by self-assessment of the disabled as compared to the objectified medical evaluation. The self-assessment of health condition has a multi-dimensional significance - involving physical and mental health, fulfilling social roles, health perception and symptoms. It is based on subjective experience associated with disease, feeling of pain and fatigue, importance of the patient's role, although perception of one's health is also strongly related to the objective doctor's evaluation [5]. In the current study, 73.5% of the respondents assessed their health condition as *poor*, which meant the worst possible variation in response descriptors. Literature reports have presented differentiated opinions of patients concerning their health condition. A similar frequency of negative opinions of a health conditions among people in need of care in daily living activities (62%) was found by other authors [6]. On the other hand, InterRAI study in Canada showed that lower percentage of patients using home care had a negative opinion of their health condition (30.8%) [7], the percentage was even lower in China (17.7%) [8] and Spain (13.9%) [9]. According to some authors, worsening of functional efficiency in ADL is an essential risk factor of negative self-assessment [6]. In Poland, long-term nursing-home care can be offered to patients who are functionally disabled in ADL at 0-40 points in the Barthel scale. The required range of points allows only patients with a considerable degree of difficulty or complete disability in basic life activities to benefit from this form of home care.

Table 2. Self-assessment of health condition versus age and gender of study patients (N=100).

Self-assessment	Age			Gender		Total
	<65	65-79	≥80	M	W	
	N=15	N=28	N=57	N=34	N=66	N=100
	(%)					
0, 1, 2	6.7	3.8	-	3.1	3.0	3.0
3	53.3	88.5	74.5	78.1	71.2	73.5
4	40.0	7.7	25.5	18.8	25.8	23.5
P<0.05		P=0.017			P=0.754	

0 - perfect; 1 - good; 2 - fair; 3 - poor; 4 - patient could not / refused to respond; some data in 2 questionnaires were not completely fill in (involved 2 men aged 65-79 – column 5 and 3)

Table 3. Self-assessment of health condition in the initial and periodic examination (N=83)

Self-assessment	Initial examination		Periodic examination	
	N	%	N	%
0, 1, 2	2	2.4	5	6.0
3	63	75.9	59	71.1
4	18	21.7	19	22.9
P<0.05			P<0.001	

Where: 0 - perfect; 1 - good; 2 - fair; 3 - poor; 4 - patient could not / refused to respond

Table 4. Possibility of physical functioning improvement as viewed by patients – positive opinions in the initial and periodic examination (N=83).

Positive opinions	Initial examination		Periodic examination	
	N	%	N	%
Patients	13	15.7	15	18.1
	P<0.05		P<0.001	

In our study, patients aged 65-79 more frequently assessed their health as *poorer* than those under 65 and even more frequently than patients aged 80 or older. Some reports seem to confirm that patients of advanced age can have better opinion concerning their health condition than younger individuals [9]. In the current study, only a small percentage of respondents admitted being in *good* or *fair* health (3%) as compared to the findings obtained in the USA (55.9%) [6], Canada (69.2%) [7], Spain (78.5%) [9] and China (82.3%) [8]. Some authors emphasize that not only the impaired physical efficiency but also symptoms related to intensity of visits to the doctors coexisting with numerous chronic ailments can be predictors of negative self-assessment of health [2].

Human behaviors that need strong motivation and overcoming many obstacles on the way to rational and health promoting functioning require special properties, which help overcome the difficulties. Patients' conviction of the possibility of influencing their own fate strengthens the belief that they are capable of personal control over their own health. In our study, the respondents assessed potential improvement of physical functioning. Comparison of the responses indicates that patients more frequently had a positive opinion concerning the possibility of improvement in the periodic examination (18.1%) than in the initial one (15.7%). This may indicate a positive effect of emotional support offered to patients by medical staff during home visits. Emotional support is of

particular importance in the state of disease when patients have to cope with emotions accompanying physical symptoms. However, the very awareness of receiving emotional support is not always sufficient and gains significance only when it meets patient's expectations. The emotional support is expected to ensure the feeling of attachment and usefulness of others' help. The study findings determining the factors of patients' satisfaction with nursing services indicates that the level of satisfaction depends on the fact of having the same nurse and on the frequency of home visits [10]. Furthermore, other authors noted a positive effect of home visits on the elderly who had negatively assessed their health condition [11]. Some researchers claim that best self-assessment of functional efficiency depends on best self-evaluation of health condition and is an essential predictor of life efficiency maintenance [12].

CONCLUSIONS

Most long-term nursing-home care patients negatively assessed their health condition. Long-term nursing-home care may have a beneficial effect on the emotional sphere of patients – a tendency to better self-assessment was observed after 90 days of care. It seems that qualifying patients with less advanced dependence in physical daily life activities to such care could improve subjective assessment of heath condition and increase the possibility to ameliorate physical functioning.

ACKNOWLEDGEMENTS

Many thanks to nurses, who interviewed the patients and their family members and assisted in this research with the great competence.

Conflicts of interest

We declare that we have no conflicts of interest.

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