Regular Visitors Are Not Good Substitutes for Assessment of Elderly Patient Satisfaction With Nursing Home Care and Services

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Background. Due to physical and psychological impairments, elderly patients residing in homes are often unable to participate in studies on satisfaction with care services. While their regular visitors provide interesting information, patient–visitor response concordance requires study. Our objective was to measure patient–visitor agreement on quality of care and accommodation.

Methods. A survey was conducted on elderly people in 13 nursing homes and their visitors. The 125 patient–visitor pairs completed the same Nursing Home Satisfaction Questionnaire (NHSQ) independently, for which reliability and internal validity have previously been explored. Satisfaction scores for room comfort, meal provision, information, and medical/nursing care were calculated. To estimate patient–visitor concordance, intraclass coefficients, a bias index, and Pearson’s correlation coefficients were calculated.

Results. Patient satisfaction scores ranged from 57.8 (information) to 78.6 (room comfort), and visitor satisfaction from 67.9 (meal provision) to 85.9 (medical/nursing care). Mean visitor scores were higher for all scales, with a small-to-moderate index bias statistically significant for medical/nursing care (p < .001), information (p < .001), and meal provision (p < .006). Intraclass correlation coefficients were low for room comfort, information, and medical/nursing care scales (0.08 to 0.18), and nearly acceptable for the meal provision scale (0.46).

Conclusions. Visitors were not able to provide information on elderly patients’ satisfaction with nursing home. Their assessments were milder than patient assessments. The NHSQ is reliable for use in either population, but patient and visitor assessments should not be merged in satisfaction studies.

As previously stressed in the Journals, it is important that residents feel satisfied that their nursing home environment and care is not only “medicalized” but also seen as meeting the same standards as their home (1). Regard for patients’ needs and wishes is central to health care service (2). Patient satisfaction is considered a meaningful goal of care, and it can be enhanced by evaluating hospital care quality (3).

Assessment of patient satisfaction has drawn increasing attention in Europe and North America during recent decades. In France, evaluation of satisfaction with hospital care became mandatory in 1996, and validated questionnaires have been developed for patients hospitalized in medical, surgery, and psychiatry wards (4–7).

Elderly patients often cumulate characteristics that have limited their enrollment in satisfaction studies (i.e., psychiatric disorders, cognitive impairments, and physical disabilities) (8–11). Yet elderly people with a heavy burden of care have particular needs and expectations that are unlikely to be satisfied (12). This explains the relationship between dissatisfaction, poor health status, and disease severity (4,5,13–15) and may induce a bias in evaluation of satisfaction levels in elderly people. To avoid exclusion of populations unable to respond to satisfaction questionnaires, closely associated persons or proxies are often enrolled to answer on patients’ behalf, especially for pediatric (8), psychiatric (16), and geriatric (9,17) wards. In long-term care, most elderly patients are unable to answer questions, and involving outside parties familiar with the patient to answer questionnaires can provide information on consumer perception of care quality (8).

A regular visitor constituting a “care partner” can give valuable information on patient satisfaction (18,19). However, there is little satisfactory data on patient–proxy agreement on elderly patients’ satisfaction with nursing home services. In the few studies, either nonpaired elderly–proxy groups were compared (9), or elderly patients’ satisfaction was compared with proxies’ personal satisfaction (18–20). No article on patient–proxy concordance on patient satisfaction, using an appropriate agreement measure such as intraclass correlation coefficients, has been found. Therefore, it was not known whether evaluations of nursing home services by elderly patients and their visitors were interchangeable. Analysis of elderly–proxy concordance on quality of life evaluation has shown moderate correlation coefficients, especially for patients with low health-related quality of life (8).

Our goal was to evaluate the agreement between direct patient assessment of satisfaction with nursing home services and indirect assessment by a regular visitor answering on the patient’s behalf. Statistical analyses were computed on patient–visitor pairs, using the Nursing Home
Satisfaction Questionnaire (NHSQ) (see content of the NHSQ in Table 1). As validation is ongoing; the main psychometric characteristics of the satisfaction questionnaire were verified on these two populations.

METHODS
A cross-sectional study was conducted in 2000 in 6 teaching hospitals (Assistance Publique, Hôpitaux de Paris) in France. Data was collected from 13 long-term care geriatric units.

Population
Any patient hospitalized at least 2 weeks was considered eligible. Of the 1087 elderly patients identified, 337 (31%) were included. Reasons of noninclusion were cognitive impairment (76.5% of nonrespondents), refusal (8.9%), other medical reasons (fatigue, pain) (7.1%), nonunderstanding of French language (1.6%), deafness (1.3%), and other causes (4.6%). Nonrespondents were older and have a longer duration of stay than respondents, but did not differ for gender or educational level (Table 2).

The first proxy visiting the patient in a 2-week period and having previously visited him/her at least twice within a 30-day period was invited to participate. Two hundred twenty-nine visitors were included and 125 patient–visitor pairs were formed. There was no difference in gender, age, or educational level between patients with a respondent visitor and those without. Patients not visited during the survey had been hospitalized longer (Table 2).

Table 1. Content of the Nursing Home Satisfaction Questionnaire

<table>
<thead>
<tr>
<th>Abbreviated Item Content</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff availability in the daytime</td>
<td>Medical/nursing care</td>
</tr>
<tr>
<td>Staff availability at nighttime</td>
<td></td>
</tr>
<tr>
<td>Satisfactory relationship between patient and staff</td>
<td></td>
</tr>
<tr>
<td>Everything possible done to relieve patient’s pain</td>
<td></td>
</tr>
<tr>
<td>Everything possible done when patient is anxious, worried, or sad</td>
<td></td>
</tr>
<tr>
<td>Staff availability for washing patient</td>
<td></td>
</tr>
<tr>
<td>Respecting privacy during washing</td>
<td></td>
</tr>
<tr>
<td>Satisfactory explanations on disease</td>
<td>Information</td>
</tr>
<tr>
<td>Satisfactory explanations on treatment</td>
<td></td>
</tr>
<tr>
<td>Satisfactory explanations on purpose of tests</td>
<td></td>
</tr>
<tr>
<td>Patients agreement on information given to his or her visitors</td>
<td></td>
</tr>
<tr>
<td>Ease of identification of staff function</td>
<td></td>
</tr>
<tr>
<td>Satisfaction of patient in regard to being alone/sharing his or her room</td>
<td>Room comfort</td>
</tr>
<tr>
<td>Satisfactory toilets</td>
<td></td>
</tr>
<tr>
<td>Satisfactory maintenance of room</td>
<td></td>
</tr>
<tr>
<td>Overall satisfaction with room</td>
<td></td>
</tr>
<tr>
<td>Satisfaction with quality of meals</td>
<td>Meal provision</td>
</tr>
<tr>
<td>Satisfaction with diversity of dishes</td>
<td></td>
</tr>
<tr>
<td>Satisfaction with temperature of dishes</td>
<td></td>
</tr>
<tr>
<td>Satisfaction with appearance of dishes</td>
<td></td>
</tr>
<tr>
<td>Satisfaction with seasoning of dishes</td>
<td></td>
</tr>
<tr>
<td>Taking into account patient’s tastes</td>
<td></td>
</tr>
<tr>
<td>Overall satisfaction with meal provision</td>
<td></td>
</tr>
</tbody>
</table>

Data Collection
Patients and visitors independently completed an anonymous precoded satisfaction questionnaire with the same item content. Patient responses were obtained in a face-to-face interview with an independently trained research assistant. Before administration, respondents were given a card showing response choices in boldface type.

Visitors were recruited via an informative letter in the rooms of patients included in the study. They were asked to complete the questionnaire, responding as they thought the patient would, but without referring to him/her. The questionnaire was rephrased to refer to the patient. It was either returned to an assistant in a sealed envelope, or placed in a box.

NHSQ
This questionnaire has been previously validated for content validity (analysis of literature and patient interviews in nursing homes), construct validity, and reliability (pilot study to select items and define subscales) (not published). Reassessment of validity and reliability based on this study population confirmed the good psychometric properties of the NHSQ (Table 3).

For each scale of the NHSQ, there is a standardized score from 0 (lowest possible satisfaction) to 100 (highest possible). All items had the same 5-point response format (absolutely, quite, not quite, not at all, nonapplicable/unknown). The score was an unweighted average of composite items. Only patients who answered at least 50% of the questions were considered as respondents (“nonapplicable/unknown” was considered a nonresponse).

Statistical Analysis
To assess response comparability, intraclass correlation coefficients (ICC) were used as an agreement index. ICCs range from 0 to 1. Values correspond to levels of agreement as follows: $>0.60$, good agreement; $0.41–0.6$, moderate agreement; $≤0.40$, fair agreement. The cut-off point for determining unsatisfactory agreement was 0.4, as is commonly accepted (21).

To examine whether visitors systematically underrated or overrated elderly patients’ satisfaction, bias indexes were calculated as the mean difference between visitor and patient scores divided by the standard deviation of patient response. A positive bias indicated overestimation of patient satisfaction by visitors. The magnitude of bias of this index was classified as “absent” ($<0.02$); “small” ($≥0.2$ and $<0.5$); “moderate” ($≥0.5$ and $<0.8$); or “large” ($≥0.8$). Paired $t$ tests were used to assess the statistical significance of bias (22,23). Pearson’s correlation coefficients were computed to assess the strength of the linear relationship between elderly patients’ evaluation of satisfaction and their visitors’ evaluation. A systematic difference between these two data sources could lead to poor agreement but strong correlation. This, in turn, would lead to the conclusion that visitors are good informants for routine satisfaction studies comparing results between structures or over time.

Validity and reliability (i.e., internal scale consistency) of the NHSQ were reassessed. Descriptive items and scale statistics were computed, and discriminant validity and
internal scale consistency were verified (24). The internal scale consistency was estimated by Cronbach’s alpha coefficient. All statistical analyses were performed on SAS system, version 8.2 for Windows software (SAS Institute, Inc., Cary, NC).

RESULTS

Overview of the Sample
Patient characteristics are shown in Table 2. Visitors (84.5%) of respondent patients were family members, 10.4% were friends, and 4.8% were other proxies such as members of patient associations; 78.9% of them had visited the patient more than 10 times since admission.

Satisfaction Scores (Table 3)
Elderly patients expressed relatively poor satisfaction with quality of information and meal provision (57.8 and 60.0, respectively), and expressed more satisfaction for medical/nursing care and room comfort (74.7 and 78.6). Visitors’ ratings were higher than elderly patients’ evaluations for all 4 scales. They ranged from 67.9 for meal provision to 85.9 for medical/nursing care. However, like the elderly patients, visitors provided higher scores for medical/nursing care and room comfort (85.9 and 83.0, respectively) than for information and meal provision (73.0 and 67.8, respectively).

Concordance Between Visitors and Elderly Patients (Table 3)
The ICC of patient–visitor pair ratings reached a nearly acceptable level (0.4) for only 1 of the 4 scales (room comfort). However, this ICC was only 0.46, which is only a fair level of patient/visitor concordance. For the other 3 scales, the ICC was very low (0.08 to 0.18).

A moderate positive bias (visitors overestimated patients’ satisfaction) was observed for the 2 scales exploring health care, attitudes, and interpersonal manner of staff (medical/nursing care and information). Biases were statistically different for these 2 scales and were small for the other 2.
scales exploring physical surroundings and amenities (meal provision and room comfort). However, this bias was statistically significant for the meal provision scale only. Correlation between the two data sources was also low for all scales except meal provision, where a statistically significant coefficient was observed ($r = .49$, $p < .001$).

**Psychometric Reevaluation of NHSQ From Patient/Visitor Responses (Table 4)**

Among the 23 items of the questionnaire, 4 had a missing response rate $\geq 20\%$ (including “nonapplicable/unknown”) in patient questionnaires, and 12 in visitor questionnaires, including all 7 items of the meal provision scale. Missing data was very low for all scales in patient responses (0.05% to 2%) and for 3 scales in visitor responses (0.1% to 5.6%). For the meal provision score, missing data reached 13%.

Neither floor nor ceiling effects were observed whether for patient or visitor ratings, suggesting good ability of the questionnaire to detect responsiveness to change. Whatever the category of respondent, the NHSQ showed excellent discriminant and convergent validities.

Internal consistency of the 4 scales was also reasonably good, with Cronbach’s alpha coefficients higher than 0.7 for 3 scales for both patient and visitor responses. The fourth scale (room comfort) reached acceptable Cronbach’s alpha coefficients.

**DISCUSSION**

This multisite study aimed to examine in what capacity regular visitors could provide a measure of elderly patient satisfaction with long-term care services. The aim was also to reexplore psychometric characteristics of a new questionnaire on satisfaction with nursing home care in a patient-proxy context.

While considerable attention has been given to developing patient satisfaction questionnaires in acute and mental health care, few validated tools are available for measuring satisfaction with long-term care services (25), and none appear to have been tested for psychometric properties in both elderly and proxy populations (9,25). Questionnaires evaluating satisfaction with long-term care services are very different from those measuring satisfaction with short-stay hospitalization used in any age group (15,26), and different from questionnaires measuring satisfaction with health care among noninstitutionalized elderly individuals (27). Similar to other questionnaires designed to evaluate quality of long-term care, the NHSQ puts emphasis on quality of nonmedical services such as mealtime experiences and amenities (9,25).

Findings on patient–visitor agreement in assessing patient perception of quality of nursing home care and services indicate poor concordance and no correlation between scores for quality of care, information, and accommodation. Thus, as visitors systematically overestimated patients’ satisfaction for these domains, they do not provide reliable information on patient satisfaction. Visitor and patient responses cannot be used interchangeably to measure consumer satisfaction with long-term care services.

Patient–visitor concordance was better (but still only fair) for mealtime service. However, response rates were low for all items in this scale when visitors gave the information. Comparing these data with other studies, low patient-proxy concordance was confirmed for perception of quality of care (8). This could be explained by discrepancies between patients and their proxies in perceptions of need, which strongly influences assessment of care quality (28).

The level of concordance between patient and proxy ratings of patients’ subjective quality of life depends on each patient’s personal characteristics. In this study, the elderly

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**Table 4. Psychometric Properties of the Nursing Home Satisfaction Questionnaire for Elderly Patients’ ($n = 125$) and Their Visitors’ Responses ($n = 125$)**

<table>
<thead>
<tr>
<th>Number of items</th>
<th>Medical and Nursing Care</th>
<th>Information</th>
<th>Room Comfort</th>
<th>Meal Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of respondent</td>
<td>Patient</td>
<td>Visitor</td>
<td>Patient</td>
<td>Visitor</td>
</tr>
<tr>
<td>Number of items with missing data $\geq 20%$</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Floor effect*</td>
<td>1.8</td>
<td>0.3</td>
<td>1.8</td>
<td>1.5</td>
</tr>
<tr>
<td>Ceiling effect†</td>
<td>9.1</td>
<td>31.2</td>
<td>9.1</td>
<td>22.7</td>
</tr>
<tr>
<td>Percentiles</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25th</td>
<td>44.4</td>
<td>72.2</td>
<td>44.4</td>
<td>53.3</td>
</tr>
<tr>
<td>50th</td>
<td>58.3</td>
<td>88.9</td>
<td>58.3</td>
<td>73.3</td>
</tr>
<tr>
<td>75th</td>
<td>75.0</td>
<td>100.0</td>
<td>75.0</td>
<td>93.3</td>
</tr>
<tr>
<td>Convergent validity‡</td>
<td>7/7</td>
<td>7/7</td>
<td>4/5</td>
<td>5/5</td>
</tr>
<tr>
<td>Discriminant validity§</td>
<td>7/7</td>
<td>7/7</td>
<td>5/5</td>
<td>5/5</td>
</tr>
<tr>
<td>Reliability∥</td>
<td>0.84</td>
<td>0.86</td>
<td>0.76</td>
<td>0.85</td>
</tr>
</tbody>
</table>

**Notes:** A subject was not taken into account for calculating a score when at least half of the items (half–1 for odd number item scales) were not answered or scored “nonapplicable/unknown.”

*Percentage of respondents at the lowest possible scale score (0).
†Percentage of respondents at the highest possible scale score (100).
‡Item correlations with own scale $\geq 0.4$.
§Item correlations with own scale greater than other scales.
∥Cronbach’s $\alpha$ coefficient.
participants and visitors cumulated two predictors of low agreement: visitors were not living with the elderly people, and the patients were frail and particularly elderly (22,29–32). Previous studies have suggested several explanations for differences in patient and proxy opinions. Epstein and colleagues (8) speculated that differences depended on how far factors were apparent to external observers. Patients are in touch with both external and internal factors, and hence are influenced by both. Proxies’ judgement is influenced by the most obvious external factors. This could explain why good correlation was observed between patient and visitor assessment of mealtime experiences.

This phenomenon has been regularly observed when comparing patient-proxy evaluation of a patient’s health-related quality of life: concordance is high when evaluating “objective” aspects of health (functional aspect of physical health, instrumental activities of daily living) unlike less-visible aspects of health (bodily pain, emotional status) (29,33,34). Proctor and colleagues (35) postulated that proxies are more influenced by processes and organizational aspects, while patients are mainly influenced in their judgement by interpersonal manner and personal contacts. Patients in this study expressed significantly lower satisfaction than visitors only in aspects influenced by interpersonal manner and technical competence of staff (information and nursing/medical care). Comparison of patient and proxy levels of satisfaction with acute hospital care found either lower levels of proxy satisfaction (8,19,20,36) or no differences (37).

In quality of life studies, authors have often found that proxy evaluation of subjective health status was less favorable than patient ratings (21–23,38). This study, however, found that visitors’ estimation of elderly people’s satisfaction with their nursing home was higher, especially for care, information, and amenities.

Visitors are mainly relatives who could have participated in choosing the nursing home. Perhaps their overoptimistic representation of their relatives’ satisfaction can be explained by guilt at having left their relatives in an institution and their need for reassurance. It could also be assumed that proxies dissatisfied with the nursing home services would remove their relatives.

Interpretation of the results has two main limitations. Visitors and patients completed the questionnaire differently (self-administration versus face-to-face interview) and this could induce differences in ratings. However, satisfaction studies have shown that interviews induce higher levels of satisfaction than self-completion, because of interviewer bias and lesser assurance of response confidentiality (36). Therefore elderly dissatisfaction may have been underestimated and real differences between the two evaluations minimized.

The exclusion of elderly participants unable to answer may have induced a selection bias because the caregiver burden (e.g., care procedures, pain management, quality of treatment) could be performed to check this selection bias.

If proxies do not provide correct information on patient satisfaction, one alternative source of information could be to use nonlay proxies, such as professional caregivers. Caregivers seem to be good sources for evaluating elderly patients’ health-related quality of life (21,23), but this is not true for evaluating satisfaction with care, probably because it is very difficult for caregivers to evaluate their own technical and interpersonal competence from the patient’s viewpoint. Caregivers tend to evaluate patients’ satisfaction according to their own understanding of quality of care or their job satisfaction (39,40).

Because their evaluation of hospital care does not match elderly patients’ viewpoints, visitors to nursing homes must themselves be considered as consumers, and their opinion on quality of care and their relatives’ satisfaction with care must be measured. Visitors must be considered as partners in the care process, and need to be involved in the decisions regarding elderly patients (19).

Hospitals interested in improving the overall experience of their consumers may find it worthwhile to collect feedback from patients’ visitors, who seem to have significantly different needs and preferences regarding care and related services from those of the elderly patients themselves (12,19,28,41). However, besides directly asking about quality of care, quality assessment must also include careful observation of the quality of care (42–44) and outcomes (45).

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