Understanding and Measuring Patients’ Assessment of the Quality of Nursing Care

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**Background:** Traditionally, patients have been considered incapable of evaluating the quality of care they receive, leading to their minimal involvement.

**Objective:** To develop the Patient’s Assessment of Quality Scale—Acute Care Version (PAQS-ACV) to provide a mechanism through which patients can evaluate meaningfully the nursing care they receive.

**Methods:** Developed from qualitative interviews with patients, the original 90-item PAQS-ACV was tested with 1,470 medical surgical patients in 43 units across seven hospitals. The typical patient was a married, 50-year-old, high school-educated patient hospitalized for the fourth time. Every 10th patient was asked to complete the PAQS-ACV 2 weeks later.

**Results:** After exploratory factor analysis, 45 items remained in five factors, accounting for 54% of the variance. Internal consistency estimates were above .83 for four of the five factors, with the fifth factor being .68. Test–retest reliability ranged from .58 to .71. Content validity was established and construct validity has been explored preliminarily by examining the relationship between the PAQS-ACV scores and patients’ compliance.

**Discussion:** Although the PAQS-ACV is a relatively new measure of quality nursing care, it has met many criteria for an adequate measure of quality care. The instrument fills a void in the assessment of quality by including patients in the direct evaluation of the care received.

**Key Words:** healthcare quality • instrumentation • patient satisfaction • quality of care
general sense of having one’s needs as a patient met without regard to the specific aspects of the care delivered, or it involves precise determination of the extent to which one’s expectations and needs are met in the care exchange (Redman & Lynn, 2005; Ross, Frommelt, Hazelwood, & Chang, 1994). The first view of satisfaction has led to the severest criticism of measurement of patient satisfaction—it focuses on nothing more than “hotel services” (Louden, 1989). Only with the second view can patient satisfaction be conceptualized as an outcome of care and adequate measures of patient satisfaction developed for evaluating the quality of care.

The second question of what patients consider important in nursing care has been the focus of numerous discussions of patient satisfaction (e.g., Bond & Thomas, 1992; Oberst, 1984). Oberst (1984) posed the central question in regard to patient valuing of nursing care: “Is there a hierarchy of satisfaction that can be identified and are certain aspects of [care] more satisfying?” (p. 2367). This issue is clouded sometimes by the view that patients are satisfied with all the wrong things or patients are always satisfied, no matter what occurs. Nonetheless, the fact that we have not identified (or assisted patients to identify) patient priorities in evaluating care does not mean that these priorities do not exist.

Patients have articulated specific knowledge, attitudes, and behaviors that they expect from nurses in general (Larrabee & Bolden, 2001; Oermann, 1999), and more specifically, nurses in oncology settings (Radwin, 2000). When these expectations are used in evaluating nursing care, the evaluation will measure of just satisfaction to a genuine evaluation of the care that occurred. Oermann (1999) interviewed 239 healthcare consumers and found that nurses delivering quality care evidenced caring, competence, effective communication, a patient teaching orientation, and respect for their patients. Larrabee and Bolden (2001) interviewed 199 soon-to-be-discharged patients about good nursing care and found that the resulting 597 comments could be grouped into four conceptual themes within interpersonal aspects of care—“Providing for my needs,” “Treating me pleasantly,” “Caring about me,” and “Providing prompt care” and one theme within technical care (“Being competent”). When 22 oncology patients were interviewed, quality nursing care was determined to be composed of professional knowledge, continuity and coordination, attentiveness, individualization, and a partnership with patients (Radwin, 2000).

It is incumbent upon health professionals to learn what patients consider essential to quality care and what their priorities among these essentials are (Donabedian, 1980). Evaluations made by consumers of healthcare are as valid as providers’ evaluations of the care, except for the intricacies of the technical aspects of care, which may be undecipherable by patients (Donabedian, 1987; Prehn, Mayo, & Weisman, 1989).

**Measuring Patient Satisfaction With Nursing Care**

Numerous patient satisfaction measures related to nursing care have been developed over the past 50 years. However, these tools have been developed generally from the perspective of the provider (Chang, 2001), have idiosyncratic or symptom-specific uses (Leedy & Woollin, 2005; Radwin, Alster, & Rubin, 2003), or have had little or no psychometric testing.

Use of patient satisfaction to assess effectiveness of nursing care was initiated by Abdellah and Levine (1957), who developed the Patient Satisfaction with Nursing Care Checklist (PSNCC) from an open-ended questionnaire in which patients were asked to list satisfying or unsatisfying events that occurred during their hospitalization. From the original list of 100 items, 50 most frequently occurring items were retained. However, although tested on over 8,000 patients in a series of studies, no reliability estimations or validity determinations were reported.

The Patient Satisfaction Instrument (PSI), a commonly used measure of patient satisfaction, was developed by Risser (1975) from patient interviews, literature review, expert judgment, and review of other patient satisfaction tools. The original tool included 58 items, which were decreased by eliminating items with similar content and items nurses felt were inappropriate to their setting. After administering the PSI to 130 patients, three scales were generated—technical—professional, trusting relationship, and education relationship. Reliability estimates for the scales exceeded .70 except for the technical—professional subscale (α = .64). Hinshaw and Atwood (1982) revised the PSI (modified a single item) and tested it in four studies, but they found inconsistent support for the factors and erratic interitem correlations.

La Monica, Oberst, Madea, and Wolfl (1986) used the PSI as the basis for developing the La Monica Oberst Patient Satisfaction Scale (LOPSS). Additional proposed items were submitted to panels of experts in psychometrics, nursing practice, and education, and those approved were added to the PSI in each of the dimensions. No criteria for the additional items were offered; however, nor were criteria articulated for deletion of inappropriate items from the PSI. After testing with three samples of patients (n = 75, 100, and 710, respectively), no increase in validity, reliability, or sensitivity was found.

The Press Ganey patient survey used in many hospitals in the United States was developed from patient focus groups conducted in 1983; the items selected for the tool were pretested in various parts of the country for both content relevance and item format (William Blum, personal communication, 1994). The Press Ganey tool is a set of items addressing admission, the patient room, diet and meals, nursing care, tests and treatments, other services (e.g., physical therapy, operating room), visitors and family accommodations, physicians, discharge, and overall ratings. Six items are used to address nursing care in terms of friendliness, promptness, attitudes of nurses toward being called, attention nurses pay to special needs, degree to which the patient is informed by nurses, and technical skills of the nurses. Although Press Ganey Associates report continued testing of the instrument for reliability, no published reports could be located.

The Patient Perception of Hospital Experience with Nursing (PPHEN) was based on Swanson-Kauffman’s (1988) theoretical framework of caring by nurses shown...
toward parents who have experienced miscarriage. Although the Swanson-Kauffman caring framework was based on interviews with patients, no additional patient interviews or focus groups were conducted for the development of the PPHEN to determine the applicability of the framework across a broader spectrum of hospitalized patients. Reduced from 125 to an eventual 15 items, the PPHEN was found to be unidimensional, reliable (α = .94, test-retest r = .79) and have evidence of construct validity (moderate correlations with the SERVQUAL and PSI and low correlations with measures of mood state). The lack of a patient basis for the generation of the items and the unidimensional nature of the PPHEN limit the use of this scale in evaluating the quality of nursing care in the hospital setting.

A number of patient satisfaction tools appear to have been used only in one study since only single citations for the tools could be located (e.g., Abramowitz, Cote, & Berry, 1987; Cleary, Keroy, Karapanow, & McMullen, 1989; Pettit & White, 1991). Most of these tools were not generated from the patient’s perspective and they have had minimal, if any, psychometric testing.

Moving Beyond Patient Satisfaction

Despite the difficulties in measuring patient satisfaction with care, patients’ evaluation of the care they receive is essential if we are to understand the patient’s perspective on the extent to which healthcare goals have been met (Shiber & Larson, 1991). The movement toward patient-centered care makes it essential that we know what patients think about the healthcare they receive (Institute of Medicine, 2001). Yet many of the questions in traditional tools ask the degree of patient satisfaction with items that may or may not reflect the patient’s experience (e.g., courtesy of the admissions department staff or warmth of food served).

Walker (1993) asked what hospitals could do to enhance the quality of basic care, and suggested that hospitals need to understand “what patients experience while they are in the hospital and how they perceive their basic care” (p. 133). Gerteis et al. (1993) said that the quality of any patient’s experience can only be assessed by the patient, and the hesitation of healthcare providers to elicit patients’ assessments seems to stem from the fact that the patients’ assessments may challenge providers’ legitimacy.

Reliable tools that can be used to identify differences in patients’ evaluations of care are needed (Lang & Marek, 1992; Verran & Mark, 1992). However, only a few studies have used the patient’s perspective on quality care as the basis for tool development (Pettit & White, 1991; Wilde, Larsson, Larsson, & Starrin, 1994). The tool used by Pettit and White was developed without input from patients or research into patients’ perceptions of quality care. Wilde et al. (1994) developed the Quality from the Patient’s Perspective (QPP) tool using interviews with patients, but all of these patients were hospitalized with infectious diseases, limiting the applicability of the QPP for wider use in patients’ evaluation of care received.

Further refinements of the QPP have been based also on patients with infectious diseases (Larsson, Larsson, & Munck, 1998).

Development of the PAQS-ACV

The Patient’s Assessment of Quality Scale—Acute Care Version (PAQS-ACV) reported here was developed based on interviews with patients from a wide variety of medical surgical nursing units. It was based on the view that determination of the quality of nursing care must include the patient’s perspective, and that patients can determine what they value in nursing care and judge the worth of care received.

Using a grounded theory approach, 24 patients were interviewed to provide the basis for the PAQS-ACV. The patients interviewed came from medical, surgical, and obstetric units in two urban hospitals—one was a university medical center and the other was a private, not-for-profit, church-affiliated hospital. The typical interviewed patient was a married, 49-year-old, Caucasian woman who had been hospitalized 5.3 days and had been admitted four times prior to the current admission. She was a high school graduate and was employed currently.

The question posed to all participants was, “How would you describe or define quality nursing care?” Further questioning depended on the responses and continued until there were no unexplored areas in the interview. It was not unusual for interviewees to have some difficulties in elaborating on their first few responses; when this occurred, the question was altered by asking them to describe or define a “bad nurse,” which provided content for further questions. Each interview continued until all areas identified had been explored fully and no additional information could be elicited. New patients were selected for interviewing until no new ideas or data bits emerged and data saturation was achieved (Lynn & Sidani, 1990). Data were also obtained from a published narrative of the experiences of an author-patient (Baier & Schomaker, 1989).

Interviews were transcribed and analyzed beginning with the first interview. Ninety distinct data bits representing attitudes (likes being a nurse), actions (responds to my calls promptly), characteristics (looks professional), and areas of the physical environment (my room is not noisy) were identified from the interview data. These data bits were translated into items (e.g., “looks professional” became “the nurse has a professional appearance”) and presented to a panel of six patients, not previously interviewed, to determine the extent to which these items matched their experience(s). The list was deemed accurate and comprehensive by the panel, supporting the content validity of the items.

Despite both technical and interpersonal aspects of nursing patient care being commented upon in the interviews, quality nursing care from the patient’s perspective was primarily process-oriented. One of the most important

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1Phrase in parentheses is one of the 90 distinct data bits obtained from the interviews.
aspects patients identified was “being with the patient”; other process aspects included being patient, instructive, responsive, and getting to know the patient. Quality care did not exist unless the nurse attended to the patient without having to be informed of the need to do so. This example of caring was identified as central. Additional discussion of the qualitative findings can be found in Lynn and Sidani (1993).

Initial content validity of the PAQS-ACV was assessed by presenting the list of 90 items to a sample of six patients, asking them to examine the list to determine if there were any items on the list with which they disagreed or that in their view required rephrasing, and asking if any areas they thought important in evaluating good nursing care were not present. The patients who reviewed the list did not change or add any items.

Over 400 patients \((n = 448)\) provided weights for the PAQS-ACV items by sorting them into one of six categories ranging from 0 \(= \text{no importance}\) to 5 \(= \text{the highest degree of importance}\). Medians were calculated for the rankings and sorting continued until the medians were stable (small semi-interquartile deviations). Median weights ranged from 2.88 (“I wish the view from my room was more interesting”) to 4.81 (“The nurse knew what she/he was doing”). More information on this procedure and the results can be found in Lynn and McMillen (2004).

The 90 items, maintained in the words of the interviewed patients, were transformed into a Likert scale, with half of the items worded positively and half worded negatively; a 5-point balanced scale \(= \text{strongly disagree to strongly agree}\). The median weight was applied to the items worded negatively; a 5-point balanced scale \(= \text{strongly disagree to strongly agree}\). The items were transformed into a Likert scale, with half of the items worded positively and half worded negatively; a 5-point balanced scale \(= \text{strongly disagree to strongly agree}\). The median weight was applied to the items worded negatively; a 5-point balanced scale \(= \text{strongly disagree to strongly agree}\). The PAQS-ACV was pilot-tested with 10 patients and field-tested with 150 patients from the two hospitals. Using the SMOG formula, the readability of the PAQS-ACV is Grade 6 (Lynn, 1989).

Testing of the PAQS-ACV

Psychometric testing of the PAQS-ACV was approved by the University Institutional Review Board. The sample for the testing came from 43 medical surgical units in two rural community hospitals, three urban community hospitals, a university medical center, and a Federal hospital. On-site research assistants at each hospital continuously recruited patients over a period of 3 years \(= 1996–1999\). Eligible patients, identified by the charge nurse, were 18 years of age or older, hospitalized for at least 48 hours, predicted to be discharged within 24 hours, able to read and speak English, and without an overt psychiatric disorder. Questionnaires were completed and returned to the research assistant within 1 hour of distribution. Completion of the questionnaire took 20-25 minutes in most cases.

Ten percent of the study participants were readministered the PAQS-ACV 2 weeks after discharge via a mailed questionnaire with stamped, self-addressed envelope for return delivery to assess test–retest reliability. Also included in that mailing were five additional items. The first two items asked about the comments made to friends and relatives about the nursing care received and the hospital, each having four response options ranging from mostly negative to mostly positive. The other items asked to what extent they agreed they would prefer to be cared for by the same nurses or at the same hospital if rehospitalized. Each of these items had five response options ranging from strongly disagree to strongly agree. The final item asked the patients to compare their health status to the time just before admission to the hospital on a 4-point scale ranging from much worse to much better.

The same participants were also called 1 week after mailing of the readministration of the PAQS-ACV and additional questions to ascertain the extent to which they were following their discharge orders, which were copied from their charts at the time of discharge. Compliance with discharge orders was measured globally by interviewing each participant about self-care since discharge. Probes included exploring the medications they were taking (name of medication or, if not known, the purpose of the medication), the medication frequency and reason for being taken, any routines they were following, and a detail of any contacts that had occurred with the healthcare system. Each participant was given a score ranging from 1 to 4 indicating the percentage of the discharge orders being followed—less than 25%, 26–50%, 51–75%, and over 75%.

The final sample consisted of 1,470 patients. They were almost evenly split between men and women, with Caucasian patients in the majority (71%) and African American patients the largest minority (25%). The typical patient was a high school graduate, 50 years old \(SD = 16.5\), range 18–93\), married, and hospitalized for the fourth time. The mean length of stay was 6 days \(SD = 8.4\) when regional burn center and bone marrow transplant unit were included and 5.5 days \(SD = 6.2\) without those units. Participants had been hospitalized for a wide variety of conditions and illnesses. Details on participants’ demographics are given in Table 1.

A principal axis factor analysis with oblique rotation was used to identify the factor structure of the instrument. An oblique rotation was employed because the data from the pilot test indicated the likelihood of intercorrelated factors, as did the qualitative. Items were eliminated from the instrument if they had a loading of less than .40 or had loadings on two factors with less than .20 difference between loadings. The scree plot indicated that five factors represented the optimum solution and, after rotating four, five, and six factors, this was determined to be the best solution.

After the factor analysis, the 90-item PAQS-ACV was reduced to 45 items on five factors, accounting for 54% of the variance in the items before rotation (see Table 2 for the factors and sample items for each factor). Factor loadings in the final solution ranged from .42 to .78, and reliability estimates (coefficient alpha) for the factors ranged from .83 to .94 for four of the five factors, with the environment factor having a reliability estimate of .68. Although this factor had less than the .70 recommended for new scales \(= \text{Nunnally, 1978}\), the value is not unusual for a factor with only two items. Test–retest reliability estimates for the factors ranged from \(r = .58\) to \(.71\) over a 2-week interval, at or above acceptable levels for this form of reliability \(n = 300\). When the elderly participants (those over 65 years) were eliminated, test–retest estimates...
The correlations between the five factors ranged from .26 to .70 (the mean between factor-to-factor correlation was .47), satisfying the criteria for the uniqueness of each factor (Pedhazur & Schmelkin, 1991). A summary of the factor analysis can be seen in Table 3.

The individualization factor included items addressing the nurse’s behavior toward the patient as an individual, such as using touch to reassure the patient, showing the patient that she or he was important, spending time with the patient, and doing little things without being asked.

Nurse characteristics included items related to the nurse’s attitude and presentation. For example, the nurse was sensitive, patient, and efficient. The caring factor included caring and trust along with courtesy of the nurse and knowing what she or he was doing. The two items composing the environment factor addressed noise, in the halls or in the patient’s room. The final factor, responsiveness, captured the extent to which the nurse knew what the patient needed and encouraged the patient’s participation in self-care. Responsiveness also addressed the extent to which the nurse was perceived as being prompt and was there when the patient needed her or him.

Content validity of the PAQS-ACV was established in the development of the items. Determining construct validity of an instrument measuring patients’ perspectives on the quality of nursing care should include examining the relationship between the evaluation of care and patient’s compliance with their prescribed regimen, as well as their intention to return to the same facility for future care. That is, if patients perceive that they received good care, they can be expected to be more compliant with the prescribed care regimens (Donabedian, 1980; Ellencweig, 1992) and return to the same provider or institution for healthcare if the need arises (Abramowitz, Cote, & Berry, 1987; Al-Mailam, 2005; Garman, Garcia, & Hargreaves, 2004).

Patients who rated their hospitalization as an overall positive experience and rated their nurses positively (by the comments they made to friends or relatives on a

<p>| TABLE 1. Selected Demographic Characteristics of Participants (N = 1,470) |
|-----------------|-----------------|------------------|</p>
<table>
<thead>
<tr>
<th>Demographic Variable</th>
<th>Frequency</th>
<th>Percent of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>713</td>
<td>48.8</td>
</tr>
<tr>
<td>Male</td>
<td>748</td>
<td>51.2</td>
</tr>
<tr>
<td>No response</td>
<td>9</td>
<td>—</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>373</td>
<td>25.8</td>
</tr>
<tr>
<td>Caucasian</td>
<td>1,030</td>
<td>71.3</td>
</tr>
<tr>
<td>Other</td>
<td>42</td>
<td>2.9</td>
</tr>
<tr>
<td>No response</td>
<td>25</td>
<td>—</td>
</tr>
<tr>
<td>Highest grade</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than high school</td>
<td>273</td>
<td>19.7</td>
</tr>
<tr>
<td>High school</td>
<td>492</td>
<td>35.5</td>
</tr>
<tr>
<td>Some college</td>
<td>246</td>
<td>17.8</td>
</tr>
<tr>
<td>College graduate</td>
<td>250</td>
<td>18.1</td>
</tr>
<tr>
<td>Graduate school</td>
<td>123</td>
<td>8.9</td>
</tr>
<tr>
<td>No response</td>
<td>86</td>
<td>—</td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;$11,000</td>
<td>254</td>
<td>20.3</td>
</tr>
<tr>
<td>$11,000–20,999</td>
<td>224</td>
<td>17.9</td>
</tr>
<tr>
<td>$21,000–30,999</td>
<td>191</td>
<td>15.2</td>
</tr>
<tr>
<td>$31,000–40,999</td>
<td>169</td>
<td>13.5</td>
</tr>
<tr>
<td>$41,000–50,999</td>
<td>126</td>
<td>10.1</td>
</tr>
<tr>
<td>$51,000–60,999</td>
<td>81</td>
<td>6.5</td>
</tr>
<tr>
<td>$61,000–70,999</td>
<td>47</td>
<td>3.8</td>
</tr>
<tr>
<td>$71,000–80,999</td>
<td>39</td>
<td>3.1</td>
</tr>
<tr>
<td>&gt;$81,000</td>
<td>122</td>
<td>9.7</td>
</tr>
<tr>
<td>No response</td>
<td>217</td>
<td>—</td>
</tr>
<tr>
<td>Prior hospitalizations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>155</td>
<td>11.4</td>
</tr>
<tr>
<td>1</td>
<td>209</td>
<td>15.4</td>
</tr>
<tr>
<td>2</td>
<td>204</td>
<td>15.0</td>
</tr>
<tr>
<td>3</td>
<td>180</td>
<td>13.2</td>
</tr>
<tr>
<td>More than 3</td>
<td>613</td>
<td>45.0</td>
</tr>
<tr>
<td>No response</td>
<td>109</td>
<td>—</td>
</tr>
</tbody>
</table>

Note. Percentages may not add up to 100% due to rounding error.
Quality of Nursing Care

and .05). Additionally, patients with lower perceived health status (single item with four response options ranging between much worse and much better) had significantly lower PAQS-ACV scores on all five factors (p < .05). Finally, patients who complied with 50% or more of their discharge orders had significantly higher PAQS-ACV scores (all factors) than did patients with less than 50% compliance or no compliance with their prescribed orders (p < .05).

Discussion

Rubin (1990) delineated the following criteria for an adequate measure of quality of care: (a) the tool should have comprehensive content; (b) the tool should be composed of multi-item subscales; (c) a uniform response scale is needed for all responses (it is not uncommon to find a variety of response formats within a single tool); (d) each item should have at least four response options; (e) validation of the tool is needed so that the tool can be determined to accurately measure quality of care by any criterion; and, (f) the tool should be interpretable using norms or other criteria (p. 308).

Although the PAQS-ACV is a relatively new measure of the quality of nursing care, it has met the first four criteria already, and initial testing has been conducted for the fifth. The items on the tool were validated by a panel of six patients as accurate and complete descriptions of their experience as patients; support for all 90 original items was found also in the nursing literature. The PAQS-ACV has five multi-item factors that are sufficiently reliable and are composed of items with the same five-step balanced response scale, meeting Rubin’s second and third criteria. Content validity of the scale was assessed both by the panel of six patients and by over 400 additional patients who were asked to determine the relative importance of each item on a scale of 0 (not important) to 5 (highest degree of importance); none rated any of the PAQS-ACV items as 0 (not important; Lynn & McMillen, 1999). Although fundamental testing of the validity of the PAQS-ACV has been completed, further testing is needed before it can be determined definitively to accurately measure the quality of nursing care, the fifth of Rubin’s criteria. Once the validity of the scale is documented more fully, Rubin’s final criterion can be investigated. Although data from this study could be analyzed to see whether there are norms for particular groups of patients (rural vs. urban, older vs. younger, males vs. females, and patients within global diagnostic categories such as abdominal surgery), the patients in this study were not sampled to represent norming populations. Therefore, the development of norms will need to be explored in further research using the PAQS-ACV.

With the exception of the environment factor, the factors found in the analysis of the PAQS-ACV are consistent with the work of a number of researchers who conducted qualitative research in this area, particularly Larrabee and Bolden (2001) and Thomas et al. (1995). Larrabee and Bolden did not proceed to instrument development, whereas Thomas et al. did so, developing the Newcastle Satisfaction with Nursing Scale (Thomas, McColl, Priest, Bond, & Boys, 1996), which appears to be a unidimensional measure of this multidimensional concept.

Patients participating in the 2-week follow-up were asked questions about comments they had made to their friends and relatives about the nurses and the hospital rather than overall satisfaction with the hospital and nurses to avoid global happiness items. If a more global item corresponded with the PAQS-ACV scores, it might do so spuriously or substantively, the distinction being difficult to untangle. Although those patients who had higher PAQS-ACV scores also made more positive comments about the hospital and the nurses that care for them, it cannot be determined currently if those who evaluated their care more positively made more positive comments due to acquiescence or because they made a deliberate positive rating in both cases. This is something that will be pursued in a future study with the PAQS-ACV.

Despite the caveats noted above, patients’ perceptions of quality nursing care in the acute care setting are addressed both conceptually and operationally by the PAQS-ACV. The instrument fills a void in the assessment of quality nursing care by including patients in the direct evaluation of the care received using an instrument based on criteria they consider to be important. Issues yet to be tackled include determining how a patient can evaluate meaningfully all of the nurses (as a whole) providing care without sacrificing information, exploring the relationship

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TABLE 3. Factors, Number of Items, Loadings, Mean Interitem Correlations, and Reliability Estimates for the PAQS-ACV

<table>
<thead>
<tr>
<th>Factor Name</th>
<th>Number of Items</th>
<th>Loadings</th>
<th>Mean Interitem Correlations</th>
<th>Reliability Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individualization</td>
<td>17</td>
<td>.42-.75</td>
<td>.50</td>
<td>.94</td>
</tr>
<tr>
<td>Nurse characteristics</td>
<td>12</td>
<td>.43-.71</td>
<td>.55</td>
<td>.94</td>
</tr>
<tr>
<td>Caring</td>
<td>7</td>
<td>.50-.78</td>
<td>.54</td>
<td>.89</td>
</tr>
<tr>
<td>Environment</td>
<td>2</td>
<td>.68-.70</td>
<td>.52</td>
<td>.88</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>6</td>
<td>.48-.78</td>
<td>.45</td>
<td>.83</td>
</tr>
</tbody>
</table>

*Calculated using Cronbach’s alpha.

4-point scale) had significantly higher PAQS-ACV scores on all of the five factors (p < .05). Additionally, patients with lower perceived health status (single item with four response options ranging between much worse and much better) had significantly lower PAQS-ACV scores on all five factors (p < .05).
between patients’ evaluations of nursing care and the adequacy of the care as evaluated by more objective means, and examining the relationship between patients’ evaluation of care received and nurses’ evaluation of care delivered.

The PAQS-ACV focuses on nursing care in the acute care setting. Although there are many experiences and exposures to a variety of healthcare providers that influence patients’ evaluations of hospitalization, according to the patients interviewed here, it is the nurses who most often help them cope with less than positive experiences. It is the nurses who understand patients’ responses to their environment, whether they perceive it to be cold, hot, noisy, crowded, or in some other way, aversive. Although the environment factor of the PAQS-ACV is probably the most controversial factor, as nurses may be chagrined to have their care evaluated by the patient’s perceptions of the environment, nurses need to know that patients think nurses have some control over the environment’s effects on them. Press (2006) notes that it is often the smallest thing (e.g., a dirty floor) that affects a patient’s evaluation of a caregiver.

Clearly, if patients are dependent on nurses to help them cope with their illness, their treatment, and their hospitalization in general, their evaluation of being hospitalized should focus primarily on nursing care. This does not mean that other aspects of hospitalization cannot be evaluated, but it does mean that the results from a traditional hospital patient satisfaction tool should not be used to make statements one way or the other about nursing care in a nursing unit.

The commonly used patient satisfaction tools include a preponderance of items that patients never mentioned in the interviews conducted for the development of the PAQS-ACV, including the length of time spent in the admitting office and the warmth of the food served. The patients in the studies reported here were focused on process aspects of care, with little mention of the nurses’ skills or techniques beyond a few items such as, “The nurse examined me to help find out what was wrong with me or how I was progressing” or “The nurse knew what she/he was doing.” Specific technical skills of the nurses were never mentioned because patients assumed that institutions would not employ nurses who were less than technically competent. We explored this with almost all of the patients interviewed and all patients perceived the technical competence of the nurses as a given. This is consistent with other studies of patient satisfaction where patients have valued interpersonal care over technical aspects of care (Bikker & Thompson, 2006).

Because institutions do not know what patients value in quality nursing care, the PAQS-ACV or a similarly developed measure is the appropriate method by which patients should evaluate nursing care in the acute care setting.

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References

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