

How Is Your Pain...Management? Going Beyond the Fifth Vital Sign

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Author's disclosures of potential conflict of interest are found at the end of this article.

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Review of "Initial psychometric properties of the Pain Care Quality survey (PainCQ)" by Beck et al. (2010), Journal of Pain, 11(12), 1311-1319. For a discussion of reliability and validity—what these terms mean and why they're important—please see the related article by Terri S. Armstrong and Ibrahima Gning on page 338.

In an effort to foster assessment of pain in addition to the traditional vital signs of blood pressure, temperature, respirations, and pulse, the American Pain Society trademarked the phrase "The Fifth Vital Sign" to describe pain (Lanser & Gesell, 2001; Merboth & Barnason, 2000). However, recognition of the need to assess pain has not been reported to be associated with improved management of pain (Idvall, 2002; Mularski et al., 2006; Whelan, Jin, & Meltzer, 2004). It is recognized that pain continues to be a significant issue for hospitalized patients, and for hospitalized cancer patients specifically (Desbiens et al., 1996; McGuire, 2004).

The paper published by Beck and colleagues that is reviewed here summarizes the psychometric properties and development of a new tool

designed to assess the quality of care related to pain management from the patients' perspective (Beck et al., 2010). The Pain Care Quality (PainCQ) Survey is a questionnaire designed to evaluate two dimensions: the quality of interdisciplinary care (PainCQ–Interdisciplinary) and accountable nursing care related to pain management (PainCQ–Nursing).

Study Design

This study used a cross-sectional survey design in which 109 patients with a variety of cancers were recruited from inpatient medical or surgical oncology units from three geographically separate settings. Patients completed the PainCQ as well as the Brief Pain Inventory Short Form (BPI-SF). In addition, demographic data and clinical information were collected. The sample consisted of adult (≥ 18 years of age) patients, with either a known or suspected cancer diagnosis or a hematologic disorder, who reported pain on screening and had an expected hospital stay of at least 24 hours. Instruments were primarily completed within a 2-hour window of the last nursing care shift. Data were then analyzed for internal consistency and selected measures of validity.

Findings

A total of 129 patients were screened; 109 were eligible and consented to the study. Participants included a wide range of ages (20–84 yr; mean = 53.09, standard deviation = 15.49), with 58.7% females and 88% non-Hispanic whites. The most common cancers were leukemia/lymphoma (16%), uterine/cervical/ovarian (11.9%), or prostate/genitourinary (11.9%). The majority of patients had at least one comorbidity and stated that pain was caused by surgery or the tumor. Nearly half the sample (49.1%) reported pain and 22% reported being in severe pain frequently to constantly during the nursing care shift surveyed.

The instruments were evaluated in a five-step process: **Step 1** consisted of individual item examination (distribution, means, standard deviations); **step 2** examined the relationships between items and the total scale by examining inter-item and item total correlations to determine if they should be retained or deleted; **step 3** consisted of the evaluation of sample adequacy for factor analysis; **step 4** used principal axis factoring to evaluate structural validity; and **step 5** evaluated the internal consistency reliability of each factor and of the final instrument by calculation of Cronbach's alpha (see page 339 for further discussion of Cronbach's alpha).

Items included in the instrument had a broad range of reporting, and the highest rate of missing responses was 5 (4.6%). The PainCQ-I (Interdisciplinary) tool initially consisted of 14 items but 3 were deleted because of inter-item correlations and cross-loading on factor analysis; the result was an 11-item tool. This tool was originally proposed as one factor, but was found to have two latent variables: partnership and comprehensive-interdisciplinary pain care. The PainCQ-N (Nursing) consisted of 30 items, with 8 being deleted for similar reasons, resulting in a final item number of 22. The PainCQ-N was originally conceptualized as three constructs. Results supported

the validity of two of the original constructs or concepts and a new factor—comprehensive nursing pain care—emerged. The instruments were found to have adequate sampling adequacy for factor analysis. When this was performed, eigenvalues of > 1 were used to determine the number of factors.

Results included a two-factor solution for the PainCQ-I that explained 47.1% of the variance and included a “partnership with the health-care team” factor and a “comprehensive interdisciplinary pain care” factor. The PainCQ-N had a three-factor solution (a “being treated right” factor, a “comprehensive nursing pain care” factor, and an “efficacy of pain management” factor) and explained 60.8% of the variance. These results indicate adequate factor loading and support construct validity of the instrument. Reliability of the two PainCQ scales was reported to be adequate at 0.76 to 0.95.

Conclusions

This study reports on initial psychometric properties, including internal consistency and structural validity, of instruments meant to evaluate the quality of pain management from the perspective of cancer patients in the hospital. These tools are unique in that they take into account the perspective of the patient and evaluate the overall pain management approach as well as nursing care by shift. Assessing pain management is an integral step toward improving pain management, and moving beyond assessment.

DISCLOSURE

The author has no conflicts of interest to disclose.

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