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Malmgreen, Christine, Graham, Paula, [Shorridge-Baggett, Lillie M.](#), [Courtney, Mary D.](#), & [Walsh, Anne M.](#) (2009) Establishing content validity of a survey research instrument : the older patients in acute care survey - United States. *Journal for Nurses in Staff Development*, 25(6), E14-E18.

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<http://dx.doi.org/10.1097/NND.0b013e3181a689b4>

**Establishing content validity of a survey research instrument:
The Older Patients in Acute Care Survey-United States (OPACS-US)**

Abstract

Geriatric nursing competency in the acute care setting is a social mandate for the 21st century. This article reports on the content validation of an Australian research instrument, the Older Patients in Acute Care Survey (OPACS) that examines the attitudes, knowledge and practices of nurses working with acute care patients. The OPACS tool was developed primarily to assist nurse educators to assess attitudes, knowledge and practices of nursing staff in caring for older patients in the acute care setting, to evaluate the implementation of institution-specific educational interventions, and to improve quality of care given to older patients. An overall Content Validity Index (CVI) for the OPACS was calculated (CVI = 0.918) revealing high content validity. Opinions (CVI = 0.92) and practices (CVI = 0.97) sub- constructs revealed high content validity as well. Therefore, results indicate the OPACS has high content validity in the United States acute care setting and could assist nurse educators in establishing and enhancing nurse competency in the care for geriatric patients in the future.

Key words: Older patients; acute care; validity; research instrument; nurses' attitudes; nurses practices; nursing knowledge.

The rapid aging of the US population

As the population worldwide ages, meeting health care needs challenges health care systems and health care providers. In 2000, the population aged 65 years and over in the United States accounted for 12.4% of the total population (US Census, 2000). By 2030, about 20% of the US population is expected to be over 65 (National Institute of Nursing Research, 2003). The elderly, representing less than 13% of the population, consume almost 40% of health care expenditures (US Census: An aging world, 2001).

Older adults are the “core business” of hospitals

Hospitals in communities with a greater percentage of elderly have higher lengths of stay (LOS). In 2001, 38% of hospital discharges were comprised of patients aged 65 and older, and these patients used 46% of all hospital days (Hall & DeFrances, 2001). The LOS was 5.8 days. The frail elderly in acute care settings are also sicker. In 2002, more than half of older adults reported at least one disability; by age 80, three out of four reported a disabling condition (Stotts & Deitrich, 2004).

Older adults, reported Mathy Mezey (2004, p. 73), “are the core business of hospitals. This nursing leader in care to older adults also noted that “nursing interventions that influence health care policy and **nursing education and practice** (emphasis added) may improve care for this population” . Capezuti & Harrington (2004) in the same column, reported that the Emergency Nurses Association (ENA) was part of an alliance that included the Hartford Foundation that received a grant to develop a Geriatric Emergency Nursing Education (GENE) program. Designed to cover a range of issues pertaining to the assessment and care of older ED patients, societal attitudes toward the aged was incorporated. It did not, however, address attitudes of caregivers. This

important dimension of an educational intervention requires assessment, and if need be, targeted intervention to ensure the highest quality care to the elderly.

The impact of the elderly in acute care is particularly seen in small community hospitals. An example from one typical community hospital provides evidence that the average age of inpatients is 79 years of age, and the over 65 population accounts for 62% of in-patient income annually. Geriatric patients are a large percentage of the in-patient population. Therefore, it is important to identify the nursing needs of these patients in order to provide quality care. Examples of care concerns particularly critical to quality care for the elderly include: fall prevention strategies, maintenance of hydration, prevention of skin tears and pressure ulcers, and comprehensive discharge planning. These will increasingly have cost implications as the 21st century progresses. Identifying the nursing needs of geriatric patients can provide a basis for educating nurses to care for this vulnerable population (Chang, Chenoweth & Hancock, 2003). The task at hand is to identify knowledge deficits **and** attitudinal obstacles in order that best educational strategies can be developed and implemented to promote best practice, particularly when best practice for older adults varies from conventional care for younger populations.

Assessing nurses' perceptions, attitudes and knowledge in care for geriatric patients

Courtney, Tong, and Walsh (2000b) developed an instrument, the *Older Patients in the Acute Care Survey* (OPACS), to identify the knowledge of, attitudes towards and practices of acute care nurses toward older patients in the acute care setting. Using this instrument they compared the attitudes, knowledge and practices of two cohorts of Australian nurses working with older patients (N = 320); one cohort were from metropolitan areas (54.4%), the other from rural areas (45.6%). This instrument offers

the promise of serving as an assessment tool to evaluate learning needs and outcomes of geriatric educational programs for nurses from the United States. While designed as a research instrument and originally used in a comparative study between rural and metropolitan (city dwelling) nurses, its use to assess educational needs of nurses in acute settings has been recognized (Malmgreen, C. 2005)

Aim of study

The aim of this study was to establish the validity of the *Older Patients in Acute Care Survey* (OPACS) in a population of US staff nurses in an acute care setting.

Research Plan

The following steps were undertaken in the conduct of this study (Malmgreen, 2006).

- 1) The original researchers were contacted to obtain permission for use of the Older Patients in Acute Care Survey (OPACS).
- 2) The literature review on caring for older patients by acute care nurses was updated (Malmgreen, 2005).
- 3) Focus groups with a population of staff nurses from the United States were conducted to evaluate and reword several questions in the OPACS instrument.
- 4) Content experts were selected to review the relevance, clarity and validity of the re-worded OPACS in preparation for future reliability testing.
- 5) A Content Validity Index (CVI) for the instrument was calculated from the assessment of the content experts (Lynn, 1986; Waltz, Strickland & Lenz, 1991; Polit & Beck, 2008).

Background literature

Needs of geriatric patients and nurses perceptions of care

Caring in an evidence-based environment should be guided by a strong knowledge in age-specific care, current research findings and patient preferences (Courtney, 2005). Hospitalization can be confusing, disabling and disempowering for the older adult. Knowing patient preferences aids nurses in easing the ordeal of hospitalization, thus improving patient satisfaction. Attitudes of professional colleagues, patients, families and the nurses themselves have been found to have an impact on all professional care decisions and actions (Blomqvist, 2003; Costello, 2002; Hancock, 2003; Jacelon, 2002).

When Courtney and colleagues (2000a) reviewed the literature on nurses' attitudes toward older patients in acute-care settings, they found "nurses working in acute-care settings generally hold slightly to moderately positive attitudes towards older patients" (p. 61). Attitudes are strong predictors of behaviour, or, in this case practice (Ajzen 1991) and have been demonstrated to influence nursing practice, for example, post-operative opioid pain management (Edwards et al. 2001) and childhood fever management (Walsh et al. 2005) Nurses' attitudes toward older patients have been found to influence specific care practices, such as restraint use (Helmuth, 1995). Subsequently, Blomqvist (2003), Cohen, O'Connor and Blakmore (2002) and Meyers, Nikoletti and Hill (2001) all called for education directed toward the affective domain to bring about behavior change. Concluding that there is a "dearth of literature investigating the attitudes of acute care nurses toward older patients", Courtney and colleagues (2000a, p. 67) called for more research in this area.

The Caregiving Activities Scale (CAS) has been used in two studies to uncover differences in perception between staff and elders (Hudson & Sexton, 1996; Hancock, 2003). Disparity exists between what nurses' think is important and what elders think is important, in both community-dwelling and hospitalized older patients. Many studies confirmed these findings, implicating poor communication as a barrier to optimal nursing care (Cortes et al, 2004; Costello, 2001, 2002; Hancock, 2003; Hannum Rose, Bowman & Kresevic, 2000; Jacelon, 2002). Assessing attitudes and self-efficacy of nurses about their ability to communicate with the elderly would provide direction for educational interventions. One problem may come from a lack of clarity about the role of the RN in acute care (Hancock, 2003) or even who is the RN (Jacelon, 2002). Older patients reported that information about illness, recovery, medications and life rules on discharge was lacking from nurses (Courtney et al 2000a).

These findings have implications for discharge planning. Almost universally, patients report low satisfaction with information received in the acute care setting (Costello, 2002; Courtney et al, 2000a; DeSouza, 2002; Hannum Rose, Bowman & Kresevic, 2000). Transition to nursing home is also complicated by breakdowns in communication (Cortes, 2004). This disconnection between perceptions of nurses and patients and their family caregivers extends into palliative care (Cohen, O'Connor, & Blakmore, 2002; Costello, 2001).

Pain, the most common reason patients seek acute care, is also problematic with Blomqvist (2003) and Hovi and Lauri (1999) noting attitudinal barriers of hospital staff when assessing pain in older adults. Do not resuscitate (DNR) decision-making is primarily affected by paternalistic attitudes of physicians, and not by knowledgeable

nursing judgment and attitudes. These physician attitudes overshadow the ability and willingness of nurses to be honest and forthright with patients in the DNR decision-making process. This invokes ethical concerns about quality of care received by the frail elderly (Costello, 2002).

These incongruities in perceptions of roles of care-receiver and professional caregiver have profound implications for practice. Nurses who hold significantly negative attitudes about older patients demonstrate a reluctance to work with this population (Courtney et al., 2000a, p. 67). Improving educational strategies that focus on the affective domain may help to improve care practice provided to the elderly.

While influential, attitudes are not the sole predictors of behavior. Higher professional educational levels have been linked to better patient outcomes (Aiken, 2003) and more positive attitudes toward older people in general. Both knowledge of and attitudes about the patients for whom they care influence the nurses' professional practice and quality of care provided. New models of nursing care and nursing education programs to meet the needs of older patients are required (Hancock, 2003).

Systematic assessment of nurse's perceptions, attitudes and knowledge of caring for older adults

Courtney and colleagues (2000b) developed the Older Patients in Acute Care Survey (OPACS) and implemented a pilot study to trial this self-report questionnaire to identify nurses' knowledge of and attitudes and practices toward older patients and compare these dimensions in two nursing populations. The instrument consisted of two scales, one to measure practices and another to measure "opinions". The second "opinions" scale targets attitudes toward older patients in acute care and knowledge of

older patients needs in the acute care setting. Test-retest of the OPACS on five nurses experienced with caring for older patients in both acute and long term settings was undertaken and it was determined that the instrument was easy to read, instructions were clear and the overall instrument had good reliability, Kappa statistical analysis 0.756 (Courtney et al., 2000b). They found statistically significant practice differences in intent to use restraints (greater in the metropolitan nursing group, 70.4% vs 54.0%) and in inquiry about level of pain (greater among rural nurses, 79.6% vs 71.0%). Noting their study limitations, Courtney and colleagues (2000b) concluded that a more comprehensive understanding of nurses' attitudes as related to practice would be enabled by research instrument refinement.

Strategies to enhance care practices must focus on knowledge and behavior change mediated by addressing beliefs and attitudes (Cohen, O'Connor & Blakmore, 2002). The importance of continuing education to enhance both practice and the quality of care delivered to older patients is clear. Research to validate the OPACS instrument by retooling it for and testing it with a population of nurses from the United States is reported here. Future work with the OPACS-US scale to assess knowledge/attitude/practice base prior to educational interventions is anticipated as a future project.

Results

Feedback from the focus group discussions resulted in minor changes in a few questions and complete re-wording of two questions (Q. 9 and Q 10) in Section 1: Practice Experience and two questions (Q13 and 27) in Section 2: General Opinion. Examples of changes in wording can be found in Table 1.

INSERT TABLE 1 HERE

To establish content validity of the OPACS-US, four experts were asked to evaluate the instrument. Based on the feedback from the expert United States panel (two masters prepared clinicians working with older patients in acute care and two doctoral prepared educators with a specialty in older adults), revision of the OPACS-US was not indicated. Using the process outline by Waltz and colleagues (1991, p. 173), the Content Validity Index (CVI), which quantifies the extent of agreement between experts, was calculated (See Table 2). The CVI for the tool as a whole was 0.918. CVIs for the two individual scales were computed as well. The “Practice Experience” scale, with 36 items, was the higher of the two (0.97) with 35 items found to be at the upper end of the scale (“very relevant and succinct” or “relevant, needs revision”). The “General Opinion” section contains 50 items, 46 of which were agreed upon by the experts, giving a CVI of 0.92. Polit & Beck (2008) state that a CVI of .80 or better indicates good content validity. All but seven items had a CVI of 1.00. No new items were identified.

Discussion and Conclusion

Competent geriatric nursing care providers in acute care are urgently needed. Competency extends beyond technical aspects of care and must include a focus on the attitude or intention of the caregiver. Increasing emphasis on interpersonal competence in serving both elderly patients and their families is required. Marked differences in perception exist between staff nurses, elders and their family caregivers. Studies on perceptions, attitudes and practices of nurses working with the elderly in acute care

settings have not resulted in a plethora of adequate assessment instruments to evaluate the cognitive and affective domains and to enable targeted educational strategies.

The systematic, quantitative approach for validating an assessment/research tool from another country is a step in a research plan designed to help fill this gap. The imperative to develop evidence-based practice strategies in nursing demands use of instruments that are both reliable and valid by researchers and educators alike. Further study to refine the tool and assess its reliability in a US context is in progress.

Staff development educators are in the forefront in assisting nursing staff to provide the highest quality of care possible. One important part of achieving this is to design programs that assist in the learning of essential knowledge and skills. In addition, the educators must assist nurses to provide holistic care and to understand the patients for whom they care, including the hospitalized older person. To ensure that this is achieved the educators need to design effective programs. Having valid and reliable ways to evaluate the outcomes of the programs is essential. The two-scaled instrument validated as part of this project will be available for use by staff development educators. This tool can be used by staff development specialists to assess cognitive and attitudinal issues for development of targeted teaching programs. It can also be employed in a pre- and post-test format to assess the effectiveness of the program as a whole or parts of a geriatric care education program.

References

- Aiken, L. H. (2003). Educational levels of hospital nurses and surgical patient mortality. *Journal of the American Medical Association*, 290 (12),1617-23.
- Ajzen I. (1991).The Theory of Planned Behavior. *Organizational Behavior and Human Design Processes*. **50**, 179-211.
- Blomqvist, K. (2003). Older people in persistent pain: nursing and paramedical staff perceptions and pain management. *Journal of Advanced Nursing*, 41(6), 309-2402.
- Capezuti, E., & Harrington, C. (2004). Nursing Counts: Older Adults in the ED (Column coordinators). *American Journal of Nursing*, 104(5), 73.
- Chang, E., Chenoweth, L., & Hancock, K. (2003). Nursing Needs of Hospitalized Older Adults-Consumer and nurse perceptions. *Journal of Gerontological Nursing*, 29(9), 32-41, 55-6.
- Cohen, L., O'Connor, M., & Blakmore, A. (2002). Nurses attitudes to palliative care in nursing homes in Western Australia. *International Journal of Palliative Nursing*, 8(2), 88-98.
- Cortes, T, Wexler, S, & Fitzpatrick, J. (2004). The transition of elderly patients between hospitals and nursing homes: improving nurse-to-nurse communication. *Journal of Gerontological Nursing*, 30 (6), 10-15, 52-3.
- Costello, J (2001). Nursing older dying patients: findings from an ethnographic study of death and dying in elderly care wards. *Journal of Advanced Nursing*, 35(1), 59-68.
- Costello, J. (2002). Do not resuscitate orders and older patients: findings from an

- ethnographic study of hospital wards for older people. *Journal of Advanced Nursing*, 39(5), 491-9.
- Courtney, M., Tog, S. & Walsh, A. (2000a). Acute-care nurses attitudes toward older patients: a literature review. *International Journal of Nursing Practice*, 6:62-69.
- Courtney, M., Tong, S., & Walsh, A. (2000b). Older Patients in the acute care setting: Rural and metropolitan nurses knowledge, attitudes and practices. *Australian Journal of Rural Health*, 8, 94-102.
- Courtney, M. (Ed) (2005). *Evidence Based Practice in Nursing*, Australia:Elsevier.
- DeSouza, M. (2002). Effectiveness of nursing interventions in alleviating perceived problems among orthopedic patients. *Journal of Orthopaedic Nursing*, 6(4), 211-219.
- Edwards H, Nash R, Najman J, Yates P, Fentiman B, Dewar A, et al. (2001). Determinations of nurses' intention to administer opioids for pain relief. *Nursing and Health Sciences*. 3, 149-59.
- Hancock, K. (2003). Nursing needs of acutely ill older people. *Journal of Advanced Nursing*. 44(5), 507-516.
- Hall, M. J., & DeFrances, C. J. (2001). National Hospital Discharge Survey. Advance data from vital and health statistics; no. 332. [quoted in Nursing Counts, column coordinators, Capezuti, E & Harrington, C.(2004). *American Journal of Nursing*, 104(5), 74.
- Hannum Rose, H., Bowman, J., & Kresevic, D. (2000). Nurses versus family caregiver perspectives on hospitalized older patients: an exploratory study of agreement at admission and discharge. *Health Communication*, 12(1),1041-1053

- Helmuth, A. M. (1995). Nurses' attitudes toward older persons on their use of physical restraints. *Orthopaedic Nursing*, 14, 43-51.
- Hovi, S., & Lauri, S. (1999). Patients and nurses' assessment of cancer pain. *European Journal of Cancer Care*, 8, 213-219.
- Hudson, K. A., & Sexton, D. L. (1996). Perceptions about nursing care: comparing elders' and nurses' priorities. *Journal of Gerontological Nursing*, 22(12), 41-6.
- Institute for Health & Aging University of California, San Francisco. (1996.) *Chronic Care in America: A 21st Century Challenge*, Princeton, NJ: The Robert Wood Johnson Foundation.
- Jacelon, C. (2002). Attitudes and behaviors of hospital staff toward elders in an acute care setting. *Applied Nursing Research*, 15(4), 227-234.
- Jacelon, C. (2004). Older Adults and Autonomy in Acute Care. *Journal of Gerontological Nursing*, 30(11), 29-36.
- Knapp, T. R., (1985). Validity, reliability and neither. *Nursing Research*, 34(3), 189-192
- Lynn, M. R. (1986). Determination and quantification of content validity. *Nursing Research*, 35(6), 382-385.

- Malmgreen, C. (2005). Evaluating nurses attitudes toward older patients-instrument validation. Unpublished Masters manuscript prepared for independent study, Pace University.
- Malmgreen, C. (2006). A systematic process for initiating nursing research: validating a tool to examine attitudes knowledge and practices of acute care nurses working with older patients in the US. Unpublished Masters manuscript submitted for independent study. Pace University
- Mason, D. (2004). Demeaned, disparaged and dismissed. *American Journal of Nursing*, 104(8), 11.
- Mezey, M. (2004). Care of older adults in hospitals. In E. Capezuti, & C. Harrington, (Ed.), "Nursing Counts". *American Journal of Nursing*, 104(5), 73.
- Meyers, H., Nikoletti, S., & Hill, A. (2001). Nurses' use of restraints and their attitudes toward restraint use and the elderly in an acute care setting. *Nursing and Health Sciences*, 3, 29-34.
- National Institute of Nursing Research, National Institutes of Health, Mission Statement, 2003 J:\HPHN\Nursing Research\NINR\Research Themes for the Future.doc, retrieved from the Internet, April 28, 2004.
- Polit, D. F., & Beck, C. T. (2008). *Nursing Research: Generating and Assessing for Nursing Practice* (8th ed.). Philadelphia: Lippincott, Williams & Wilkins.
- Stotts, N. A., & Deitrich, C. E. (2004). The Challenge to come: the care of older adults. *American Journal of Nursing*, 104(8), 40-47.
- Sheffler, S. J. (1998). Clinical placement and correlates affecting student attitudes toward the elderly. *Journal of Nursing Education*, 37(5), 216-8.

- Tierney, A.J., Lewis, S.J., & Vallis, J. (1998). Nurses' knowledge and attitudes towards older patients admitted to acute orthopaedic wards. *Journal of Orthopaedic Nursing*, 2(2), 67-75
- US Census 2000 PHC-T-13 (2000). Population and Ranking Tables of Older Population for the US, States Puerto Rico-table 1 [retrieved from the Internet, July 15, 2004, <http://www.census.gov/population/cen2000/phc-t13/tab01.pdf>]
- US Census: An aging world. (2001). Retrieved from the Internet, August 10, 2004.
- Walsh, A.M., Edwards, H.E., Courtney, M.D., Wilson, J.E., Monaghan, S.J. (2005). Fever management: paediatric nurses' knowledge, attitudes and influencing factors. *Journal of Advanced Nursing*. 49, 453-64.
- Waltz, C. F., Strickland, O. A., & Lenz, E. R. (1991). *Measurement in Nursing Research*. Second edition. Philadelphia: Davis.

Table 1. Examples of word changes from the Australian to the American

Version of the OPACS

SECTION 1. The following items ask about your **PRACTICE EXPERIENCE** when caring for older patients (those 65 and older) in the acute care setting. There are no right or wrong answers. We are interested in learning what you have *experienced* when caring for older patients in the acute care setting

Australian Version

9. I call older female patients “love” or “dear” more frequently than younger female patients
10. I call older male patients “mate” more frequently than younger male patients

American Revision

9. I am more likely to use terms of endearment (i.e. sweetie, honey”) with older female patients than with younger female patients
10. I am more likely to use terms of endearment (“pops”, “gramps”) with older male patients than with vounder male patients

SECTION 2. The following items ask for your **GENERAL OPINION** about caring for older patients (those aged 65 years and older) in acute care setting. There are no right or wrong answers. We are interested in your *general opinion* about the following:

Australian Version

13. Incontinent patients are a bother
27. Older patients are “bed blockers”

American Revision

13. Incontinent patients are bothersome
27. Older patients have extensive lengths of stay and take up beds that could be used for sicker patients

Table 2. Results of Content Validity Analysis

Content Validity Index (CVI) for the Older Patients in Acute Care Survey=0.918.

- Content Validity Indices for each scale
 - Practice Experience”= 0.97
 - “General Opinion” =0.92