EVIDENCE-BASED PRACTICE

Use of the ARN-CAT in an Evidence-Based Practice Project

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The emphasis on evidence-based practice (EBP) in nursing is increasing, and rehabilitation nurses can take advantage of numerous resources available to promote EBP in clinical practice. One such resource is the Association of Rehabilitation Nurses Competency Assessment Tool (ARN-CAT). This article describes how the ARN-CAT was used as an instrument to measure outcomes from an EBP project focused on educating new rehabilitation nurses about the basic competencies of rehabilitation.

Significance of the EBP Project

This author’s EBP project proposed to address the lack of rehabilitation education among nursing staff working on an inpatient rehabilitation unit in a Midwestern town. Rehabilitation is a specialty area with defined competencies and discrete nursing knowledge. Although rehabilitation concepts should be taught in basic nursing curricula, the reality is few programs include dedicated content or clinical experiences in rehabilitation (Booth, Hillier, Waters, & Davidson, 2005).

A critical appraisal of the literature conducted to determine best practice showed that education increased knowledge in a specialty area and that obtaining certification, in particular, had positive benefits for nurses, organizations, and patients. Staff education has been shown in the literature to have a positive effect on nurses in several areas including job satisfaction, retention, perceived competency, and increased quality of patient care. Advanced practice nurses (APNs) have demonstrated success in educating other nurses to promote positive change and increase the quality of patient care provided in a variety of specialty areas (Bourbonniere & Evans, 2002; Carroll, Rankin, & Cooper, 2007; Holtrop, Baumann, Arnold, & Torres, 2008; Lewandowski & Adamie, 2009; Ong, Miller, Appleby, Allegretto, & Gawlinski, 2009), although little data exist that are specific to the rehabilitation setting. The EBP project described here used an APN to design, provide, and evaluate an educational intervention to increase staff nurse knowledge on the inpatient rehabilitation unit. The ARN-CAT was used to measure pretest and posttest knowledge on basic rehabilitation competencies.

Description of the ARN-CAT

The ARN-CAT does not guarantee competency; it was designed to be a useful tool for employers. This set of competency tests was developed, reviewed, and tested by ARN using expert rehabilitation nurses, so content validity may be assumed to be strong. There are no published reliability or validity statistics for the ARN-CAT, although content validity was established during the tool’s development. A Cronbach’s alpha was run on the 15 pretests taken by the project sample, with a result of .883 (N = 15), suggesting the ARN-CAT competency pretests that were used were reliable for this project.

No other available instrument tests rehabilitation nurse competency. The lack of instruments for outcome measurement is supported by a 2007 state-of-the-science report on postacute care.
rehabilitation that indicated “measurement of rehabilitation interventions was regarded as a major topic and was acknowledged to be the ‘weakest leg of the stool,’ whether the focus is specific treatment content or measures of organizational structure, process, or communication” (Heinemann, p. 1539). Experts called for an “urgent need to develop validated measures that would allow rehabilitation to be judged” (Heinemann, p. 1539). It consequently is not surprising there is no valid measure for rehabilitation nursing competency. The ARN-CAT was chosen as the best existing and most readily available tool to assess knowledge in key competency areas.

EBP Project Description

This author worked with the rehabilitation unit to develop and implement a tailored educational intervention consisting of self-study modules on 15 basic rehabilitation nursing competency areas tested by the ARN-CAT. Sixteen nurses (without previous rehabilitation experience), who are working on a newly opened 11-bed inpatient rehabilitation unit, participated. Nursing staff on the inpatient rehabilitation unit of the participating facility took a pretest using the ARN-CAT, engaged in self-study using the information in the module, and then took a posttest. Each module included instructions for using the ARN-CAT, learning objectives, PowerPoint slides with notes, research articles, and best practice materials.

During a period of about 22 weeks, nursing staff members were asked to take an online pretest on one of the assigned topics from the basic competencies using the ARN-CAT accessed through the ARN website. The ARN-CAT tests were brief (ranging from 10–15 questions per competency area) and consisted of multiple-choice items. The ARN-CAT has 16 competencies, but the module on pediatrics was excluded from this project because the educational intervention was provided to an adult unit. The online ARN-CAT provided participants with immediate feedback with results, correct answers, and rationales with a reference citation for each correct answer. The pretest helped nurses identify their areas of strength and weakness. After reviewing the module content, the nurses took the ARN-CAT online posttest (which was the same as the pretest) in hopes of capturing the impact of the educational intervention. The ARN-CAT allowed for numerous visits to the same tests and provided scores for each attempt at taking the competency tests, so it was used for both pretesting and posttesting for this project. Paired t-tests demonstrated a significant difference between pretest and posttest scores on 14 of the 15 competencies measured. Findings suggested that education of inpatient rehabilitation nursing staff resulted in increased knowledge about basic rehabilitation nursing competencies.

This EBP project demonstrated the benefits of using the ARN-CAT as a tool to measure rehabilitation nursing knowledge. This instrument is readily available, cost effective (because it is free), easy to access, easy to use, and has good validity and reliability for projects such as the one described here. A compelling question for further research arose during this project. Could nurses have improved their scores as significantly solely from taking and retaking the ARN-CAT without the educational intervention in between? Additional investigation is needed to explore the possibilities of using the ARN-CAT in EBP and research.

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References


