

Certified Nursing Assistant Pain Assessment Tool (CPAT)

Description: CPAT is an informant based assessment tool for use by certified nursing assistants (CNA) for the assessment of pain in patients who have been diagnosed with severe dementia. Tool development was based on a thorough review of existing relevant medical literature and CNA input and feedback.

Psychometric testing: A series of three studies have been performed to examine the psychometric properties of the CPAT. Inter-rater reliability, test-retest reliability, internal consistency, construct validity, and criterion validity testing are reported below.

Tool development and evaluation occurred in two stages in New York State veterans homes. Sample size was insufficient. There was gender imbalance, but this is expected when working with veteran populations. Initially the tool used 12 statistically significant items and collapses them into 5 categories including 3 of the 6 categories of pain indicators consistent with American Geriatric Society pain guidelines: facial expressions, body movements, and verbalizations. Initial item reduction from 41 to 12 items was performed with inadequate sample size, but subsequent studies have larger sample sizes. More subtle pain behaviors in the American Geriatric Society guidelines are not addressed: changes in activity patterns or routines, mental status or interpersonal interactions. The approach used as gold standard (past medical history and pain diagnosis and pain medications) has not been validated by previous literature. Of concern in determining pain/no pain groupings based on this gold standard was the fact that patients with a painful diagnosis who did not have an order for analgesics would be considered in the no-pain group and would be misclassified for comparison purposes.

The final tool uses 10 items separated into 5 categories. Each category has two descriptors, one pain-related behavior and one non-pain behavior. The five categories and their descriptors are:

1. Facial Expression: relaxed and scared/fearful
2. Behavior: normal and calling out/moaning
3. Mood: Pleasant and whiny
4. Body Language: restful and tense/rigid
5. Activity Level: moves easily and hand wringing

The CPAT has moderately acceptable inter-rater reliability (ICC= 0.71) and test-retest reliability (ICC= 0.67). Internal consistency was measured with Cronbach's α ranging from 0.72-0.84. Criterion validity was determined by correlating the CPAT with the DS-DAT, and revealed statistically significant Spearman's rank coefficient ($r= 0.25$, $p= 0.048$). Construct (discriminant) validity was assessed by comparing CNA-administered CPAT before and after a known painful or uncomfortable activity and paired student's t -test was significant in demonstrating that pain was being measured ($p= 0.043$). Adjusted item-wise reliability was calculated by Cohen's Kappa for test-retest reliability (0.66-0.90) and inter-rater reliability (0.45-0.85).

Using the CPAT to identify pain in cognitively impaired residents is able to improve pain and medication-use outcomes. CPAT scores declined after treatment of pain and anti-psychotic use also declined significant. Falls and verbally aggressive behavior also improved, but not significantly.

Languages and Settings: CPAT has been tested and used in English language with nursing home residents with dementia and CNAs in the US.

Feasibility/Clinical Utility: CNAs were trained to use the CPAT in 30-minute sessions and were observed for two practice sessions. CNAs rated five items related to CPAT clinical utility on 10-point Likert scale (1=totally agree; 10=totally disagree). On average, CNAs found the tool easy to use (1.41), not time consuming (1.44), appropriate to assess pain in cognitively impaired residents (2.33), and able to differentiate the level of resident's pain (3.75) and help with decision-making with treatment (2.44).

Scoring and Interpretation: CNAs observe older resident for at least one minute, then score each category assigning either 1 (for corresponding pain behavior) or 0 (for corresponding non-pain behavior). Total score ranges from 0-5. No instructions on a cut-off score or how to interpret scores. CNAs are provided descriptions for each behavior in order to facilitate accurate scoring; it is important that CNAs understand what characteristics define each behavior. However, there was a lack of clarity regarding the actions CNAs were instructed to take based on the tool score.

Summary/Critique: The tool is conceptually supported, valid, and reliable. It can be a useful tool in assisting CNAs recognize pain and provide appropriate non-pharmacological and pharmacological (if within scope of practice) interventions. Testing has been limited to specific nursing homes in a confined region, and for more generalized use by CNAs, more testing is needed in a diverse CNA and resident populations.

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References:

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