Pain Assessment in Noncommunicative Elderly Persons (PAINE) Brief

PAINE is an informant-based assessment tool that was developed to assess pain in noncommunicative elders due to the limitations of self-report and observational tools for detecting pain in this population. It was developed in collaboration with bedside nurses based on the assumption that in nursing home patients, changes in behavior and activity level are potential indicators of pain and that with proper education, caregivers are able to detect these changes.

Along with 4 of the 6 AGS pain behavior categories (facial expressions, verbalizations, body movements, and changes in activity patterns or routines) the 22-item PAINE also includes nurse-identified repetitive physical and vocal behaviors, visible cues of pain, such as swollen joints or blood in diaper, and changes in behavior. There is a 6-point rating scale to measure the frequency of occurrence of pain behaviors ranging from 1 (never) to 7 (several times an hour). There is no further information regarding scoring or interpretation of scores provided.

In addition to literature review, the author of the tool claims face validity by the verification of this list of signs and behaviors in nurse focus groups. Study 1 describes tool development in three stages, with ethnically diverse nursing care personnel from various educational backgrounds in three nursing homes. Pain behaviors identified by nursing staff therefore represent one institution and convenience samples and may not be generalizable to other settings.

No evidence is provided how the sample nursing staff, made up of mostly NAs and LPNs with few RNs in supervisory roles are experts at recognition of pain in dementia patients. Sample sizes in 2 subsequent validation studies are inadequate to evaluate the 22-item tool.

The tool has only been administered through research assistants and has not been studied for feasibility in the clinical setting. There is no discussion about time or skill level needed for administration.

Reliability

PAINE has preliminary good internal consistency (Cronbach’s $\alpha = .78$ and $.75$). Reliability testing shows good interrater reliability even between staff members of variable familiarity with the patient ($r = .999$ between research assistants, and $r = .711$ between nursing assistants, $p<.001$). This is important in employment conditions with high staff turnover rates. Assuming stable pain-states among subjects, there was sufficient test-retest reliability ($r = .783$, $p<.001$).

Validity

PAINE validity was tested against reports of pain from physicians, nurses, relatives, and the residents themselves, and against other pain assessment tools. There was good correlation between PAINE and another informant based rating tool. However, PAINE was weakly correlated with observational and self-report assessment tools. When compared with self-report and observational measures, PADE, PAINE, and VDS were found to be the most sensitive to treatment effects and most useful in detecting pain.
Summary

The PAINE is conceptually supported and the method for item generation while limited in scope is appropriate. Studies testing psychometrics employ sound and creative methodology and yield promising reliability and validity but are under-powered. More testing in larger and more diverse samples of patients is recommended. The low correlation between the PAINE and self-report instruments raises concern. Additional data for interrater reliability when PAINE is actually by nursing assistants themselves is desirable.

Sources of evidence


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