The Pain Assessment in Advanced Dementia Scale (PAINAD)

Description: The Pain Assessment in Advanced Dementia (PAINAD) Scale was developed in 2003 by Warden, Hurley, and Volicer to provide a clinically relevant and easy to use pain assessment tool for individuals with advanced dementia. The tool covers five behavioral categories: breathing, negative vocalization, facial expression, body language, and consolability. Each item is scored on a 3-point scale (0-2) for severity, resulting in a scoring range of 0-10.

Psychometric Testing: Several follow-up studies have been conducted on the PAINAD since it was developed, providing substantial psychometric data on the tool. Solid support for convergent and concurrent validity has been demonstrated with other pain scales and self-report, with similar findings in self-reports of both pain and discomfort, using a visual analog scale. Construct validity has also been supported, with a significant reduction in score following analgesic administration, though one study raised concern about the tool's ability to detect changes after intervention for people with severe dementia. In the Portuguese version, factor analysis explained the variance of 61.09% of PAINAD scores. Reliability measures are also strong, with good to very good inter-rater reliability (Pearson's r ranges: 0.5-0.97), and strong test-retest reliability (0.88-.90). The PAINAD has maintained sufficient, but lower internal consistency ratings across studies (range: 0.5-0.80) with the item 'breathing' generating lower ratings. The German version (PAINAD-G) has convergent validity with other non-verbal measures including the ALGOPLUS (ρ=.73), Checklist of Nonverbal Pain Indicator (CNPI) (ρ=.75), and Observational Instrument for Assessing Pain in the Elderly with Dementia (BISAD) (ρ=.81) in geriatric acute care hospitals.

Languages and Settings: The PAINAD has received considerable attention internationally providing additional psychometric data on this tool. The PAINAD has been translated and tested in Brazil, China, Spain, Singapore, Belgium, Italy, Netherlands, Turkey and Germany, as well as two studies in the US. The PAINAD has been translated into the following languages: German, Chinese, Spanish, Portuguese, Dutch, Turkish, and Italian. The majority of additional study has been conducted in NHs, however testing has also occurred in geriatric acute care hospitals and geriatric rehabilitation centers. Cultural variation has been addressed across multiple countries.

Feasibility/Clinical Utility: Reportedly, the PAINAD has strong feasibility, with general consensus that the tool is easy to use and has an administration time varying between 1 and 3 minutes. One study reported an average administration time of 63 ± 19 seconds, which was significantly faster than both the PACSLAC and PACSLAC-II. Observing during times of movement was associated with higher correlations between scores of observational tools. Between 15 minutes and 2 hours of training has been required, using author-provided instruction of definitions of terms and scoring instruction. Emergency department nurses qualitatively report that the PAINAD has more feasibility and clinical utility than the Abbey Pain Scale, Doloplus-2, and PACSLAC.

Scoring and Interpretation: There remains a lack of guidelines for interpreting scores for decision making. It has been suggested that scores greater than or equal to 2 indicate that pain is present. However, a cut-off score of 3.5 for the presence of pain vs. no pain was recently reported using ROC analysis.

Summary: The PAINAD was developed as a shorter, easier observation tool for assessing pain in nonverbal elders. Studies have provided data suggesting the tool

does detect pain and changing levels of behavior, but these changes should not be inferred to reflect pain intensity. Because of the small number of items that are used to detect pain, the ability of the PAINAD to detect pain in those with less obvious changes in behavior (e.g. mental status changes, aggressive behavior, changes in activities) may still be compromised. Completed studies suggest the tool could be used to show higher and lower levels of pain within individuals, but there is no data to attach level of pain severity/intensity to the number obtained with the tool. Additionally, it may not detect pain in patients that demonstrate pain with behaviors other than those included in the tool. Further study of tool sensitivity is warranted to address identification of false positives. Finally, although clinicians desire to have a tool that provides a 1-10 score similar to the 1-10 numeric rating scale commonly used as the gold standard in verbal patients, the soundness of establishing a rating scale with pain severity scoring of behaviors has not been substantiated in the literature.

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