

A COMPARISON OF BEHAVIORAL PAIN SCALES TO THE NUMERIC RATING SCALE IN A POST ANESTHESIA CARE SETTING

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Introduction – Patients recovering from anesthesia are not always able to self-report pain. PACU nurses report using patient’s behavior to enhance assessment. In the absence of a standardized approach to behavioral assessment, both the application and interpretation of behavioral cues have been inconsistently applied.

Original research on the PACU Behavioral Pain Rating Scale (PACU-BPRS), the Pain in Advanced Dementia Scale (PAINAD), and the Critical Care Pain Observation Scale (CPOT) have demonstrated reliability and significant correlations with self-report in postoperative patients. Clinical utility and feasibility of the CPOT has been evaluated formally in only a limited number of studies reporting stronger evidence for feasibility than utility.

Identification of the Problem – Behavioral pain rating scales are recommended for use in patients unable to self-report. To be valid in practice, these scales must predict self-reported pain levels, respond to changes in pain following analgesia, and be practical to use. In addition, the results must inform clinical decisions.

Purpose of the Study – This study compared the PACU BPRS, the PAINAD, and the CPOT to the patient’s perception of pain using the Numeric Rating Scale (NRS) in a mixed surgical population.

Methodology – Pearson’s correlation coefficient (r) was used to determine the association between behavioral pain assessment and the NRS score. Multiple regression analyses were used to determine if confounding variables significantly explained differences in pain scores between each of the behavioral pain assessment methods and the NRS pain score.

Results – There was a positive and significant relationship between the NRS and all three behavioral pain assessment scales. Correlations were lowest at discharge and highest immediately after analgesic administration. Each behavioral scale consistently underestimated the patient’s self-reporting of pain. Gender was found to be a small but significant contributor to differences between the NRS and the behavioral pain assessment scores with difference scores twice as great for women compared to men at all four time points. Clinical utility and feasibility were rated similarly for all three scales.

Discussion – The behavioral pain scales did not adequately capture pain intensity, but were helpful in identifying the presence and/or absence of pain and in evaluating the effectiveness of analgesic interventions. Inter rater reliability was adequate but required more training than generally allotted for staff education.

Conclusions – Study findings supported prior research that found only modest correlations between behavioral pain scale scores and self-reported pain intensity ratings, with behavioral pain scale scores consistently lower than self-reported pain. All three behavioral pain assessment tools were rated as simple to understand and easy to complete. Clinical utility was negatively impacted by the brevity of observation periods in our hectic PACU setting.

Implications – Analgesic trials should be initiated when pain is suspected to prevent the undertreatment of pain when using behavioral assessment. Further research is needed to improve scale specificity and to evaluate utility for bedside practice.