

## Validation of the Niño Jesús Hospital procedural analgesia scale under deep analgesia and sedation

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### Abstract

**Background:** The Niño Jesús Hospital procedural analgesia scale (Madrid) (NJHPAS) has not been validated.

**Objectives:** to validate the NJHPAS.

**Patients and Methods:** A prospective analytical study was conducted in 2 hospitals on patients  $\geq 6$  months undergoing invasive procedures using analgesia-sedation with fentanyl and propofol. All were monitored with the analgesia nociception index (ANI) and the bispectral index (BIS). Videos were made of each procedure, which were edited and randomized. A total of 150 videos were rated by four observers with the NJHPAS, the visual analog scale of the observer (VASobs) and the FLACC scale. These observers were blinded to the ANI, the BIS and at the time of drug administration. To assess test-retest reliability, 50 of the initial 150 randomly selected videos were re-assessed.

**Results:** The study included a total of 18 patients. Construct validity was demonstrated by changes in scores after administering fentanyl ( $p < .0001$ ). The NJHPAS had a high correlation with the VASobs ( $r = -0.7$ ), and moderate with the FLACC scale ( $r = -0.43$ ). There was no correlation with the ANI. The NJHPAS have a good interobserver reliability when compared to the VASobs (ICC=0.75), moderated with the FLACC scale (ICC=0.66), and poor with the ANI (ICC=0.34). The intraobserver concordance was low ( $\rho = 0.38$ ). Internal consistency was excellent ( $\alpha = 0.9$ ). As regards the applicability, this scale has been used in two hospitals in three different areas by four professionals of different categories.

**Conclusions:** The NJHPAS is valid, reliable and applicable for analgesia monitoring in invasive procedures under deep pediatric analgesia and sedation, although intraobserver reliability has been low. The NJHPAS has better properties than the VASobs and the FLACC scale.

### Biography:

Dalamagka Maria is a plastic and hand surgery postgraduate resident doctor at Anesthesia Department, General Hospital of Larisa, Greece.

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