

## ABSTRAK

### PENGEMBANGAN SPALK PEDIATRIC ARM WITH RHYTHM AND KINDNESS (SPARK) PADA ANAK PRA SEKOLAH SELAMA PEMASANGAN INTRAVENA (IV)

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**Latar Belakang:** Anak usia pra sekolah sering mengalami rasa takut, menangis, dan kecemasan selama pemasangan intravena saat hospitalisasi. Atraumatic care, seperti teknik distraksi berbasis musik, dapat membantu mengurangi ketidaknyamanan ini. Penelitian ini mengembangkan SPARK (Spalk Pediatric Arm with Rhythm and Kindness), spalk inovatif berbasis musik untuk mendukung prosedur pemasangan intravena pada anak pra sekolah.

**Metodologi:** Penelitian menggunakan desain Research and Development (R&D) dengan model ADDIE (Analysis, Design, Development, Implementation, Evaluation). Validasi prototipe dilakukan oleh ahli menggunakan I-CVI dan ICC. Uji laboratorium dilakukan dengan simulasi oleh mahasiswa dan anak pra sekolah, sementara uji kelompok kecil dilakukan oleh perawat anak menggunakan kuesioner USE (usefulness, ease of use, ease of learning, satisfaction).

**Hasil:** Prototipe SPARK divalidasi dengan I-CVI sebesar 1,0 (sangat valid) dan reliabilitas ICC sebesar 0,64 (sedang). Catatan dari uji expert meliputi kejelasan suara, keamanan pasien, sterilisasi, dan biaya tinggi. Uji laboratorium menunjukkan performa sesuai simulasi. Uji kelompok kecil menghasilkan usefulness 93%, ease of use 89%, ease of learning 89%, dan satisfaction 89%, dengan rata-rata 90%, sehingga dikategorikan sangat layak.

**Kesimpulan:** SPARK efektif dan layak digunakan sebagai inovasi spalk untuk anak pra sekolah. Penelitian lebih lanjut diperlukan untuk pengujian klinis dan penyempurnaan prototipe.

**Kata Kunci:** SPARK, anak pra sekolah, kecemasan, spalk infus, atraumatic care.

## ABSTRACT

### **DEVELOPMENT SPALK PEDIATRIC ARM WITH RHYTHM AND KINDNESS (SPARK) ON PRESCHOOL DURING INFUSION AT HOSPITAL**

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**Background:** Preschool-aged children often experience fear, crying, and anxiety during intravenous (IV) insertions in hospitals. Atraumatic care, such as music-based distraction techniques, was proven to reduce these discomforts. This study developed SPARK (Spalk Pediatric Arm with Rhythm and Kindness), an innovative music-based splint to support IV insertion procedures in preschool children.

**Methodology:** The study employed a Research and Development (R&D) design using the ADDIE model (Analysis, Design, Development, Implementation, Evaluation). The prototype was validated by experts using I-CVI and ICC. Laboratory testing was conducted through simulations by students and preschool children, while small group testing involved pediatric nurses using the USE questionnaire (usefulness, ease of use, ease of learning, satisfaction).

**Results:** The SPARK prototype was validated with an I-CVI of 1.0 (highly valid) and an ICC reliability of 0.64 (moderate). Expert reviews highlighted issues with sound clarity, patient safety, sterilization, and high production costs. Laboratory testing showed the prototype performed as designed in simulations. Small group testing yielded scores of 93% for usefulness, 89% for ease of use, 89% for ease of learning, and 89% for satisfaction, with an overall average of 90%, categorizing it as highly feasible.

**Conclusion:** SPARK was effective and feasible as an innovative splint for preschool children. Further research is needed for clinical testing and prototype refinement.

**Keywords:** SPARK, preschool children, anxiety, IV spalk, atraumatic care.