
Abstract:

The aim of this study was to evaluate the efficacy of the subjective Wong-Baker faces pain rating scale (WBFS) and of the objective skin conductance fluctuation (SCF) test in assessing pain in children undergoing venipuncture. One-hundred and fifty children (aged 5-16 years) entered the study. All underwent venipuncture at the antecubital fossa to collect blood specimens for routine testing in the same environmental conditions. After venipuncture, the children indicated their pain intensity using the WBFS, whereas the number of SCFs was recorded before, during and after venipuncture. So, pain level was measured in each child with WBFS and SCF. We found that the level of WBFS-assessed pain was lower in all children, particularly those above 8 years of age, than SCF-assessed pain ($p < 0.0001$). Moreover, the number of SCFs was significantly higher during venipuncture than before or after venipuncture ($p < 0.0001$). At multivariate regression analysis, age and previous experience of venipuncture influenced the WBFS ($\beta = -1.81$, $p < 0.001$, and $\beta = -0.86$, $p < 0.001$, respectively) but not SCFs. In conclusion, although both procedures can be useful for research and clinical practice, our findings show that WBFS was affected by age and previous venipuncture, whereas SCF produced uniform data. If verified in other studies, our results should be taken into account when using these tools to evaluate pain in children.
Research compares pain assessment in children undergoing venipuncture.