

Immersive virtual reality beneficial for children undergoing venipuncture

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Among children undergoing needle-related procedures, providing

procedural information and distraction using immersive virtual reality (IVR) significantly reduces pain and anxiety, according to a study published online Feb. 16 in *JAMA Network Open*.

Cho Lee Wong, R.N., Ph.D., and Kai Chow Choi, Ph.D., from the Chinese University of Hong Kong, conducted a randomized trial to examine the effects of IVR on reducing the pain, anxiety, and stress experienced by [pediatric patients](#) (aged 4 to 12 years) undergoing venipuncture. A total of 149 pediatric patients were recruited and randomly assigned to the intervention (age-appropriate IVR intervention offering distraction and procedural information) or control (standard care only; 75 and 74 patients, respectively). Outcomes were measured 10 minutes before, during, immediately after, and 30 minutes after needle-related procedures.

The researchers found that patients in the IVR group reported significantly less pain ($\beta = -0.78$) and anxiety ($\beta = -0.41$) immediately after the intervention compared with those in the control group. Significantly higher health care professional satisfaction was also reported in the IVR group versus control group (mean score, 34.5 versus 32.9 on a 40-point scale). The length of venipuncture was significantly shorter in the IVR group versus [control group](#) (mean duration, 4.43 versus 6.56 minutes).

"Given that IVR is becoming more affordable and accessible, it could be used to improve children's experiences of needle-related or pain- and anxiety-inducing [medical procedures](#)," the authors write.

More information: Cho Lee Wong et al, Effects of an Immersive Virtual Reality Intervention on Pain and Anxiety Among Pediatric Patients Undergoing Venipuncture, *JAMA Network Open* (2023). [DOI: 10.1001/jamanetworkopen.2023.0001](https://doi.org/10.1001/jamanetworkopen.2023.0001)

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