



The aim of this study was to investigate the feasibility of using augmented reality (AR) glasses in central line simulation by novice operators and compare its efficacy to standard central line simulation/teaching” Huang et al (2018).

Abstract:

OBJECTIVE: The aim of this study was to investigate the feasibility of using augmented reality (AR) glasses in central line simulation by novice operators and compare its efficacy to standard central line simulation/teaching.

DESIGN: This was a prospective randomized controlled study enrolling 32 novice operators. Subjects were randomized on a 1:1 basis to either simulation using the augmented virtual reality glasses or simulation using conventional instruction.

SETTING: The study was conducted in tertiary-care urban teaching hospital.

SUBJECTS: A total of 32 adult novice central line operators with no visual or auditory impairments were enrolled. Medical doctors, respiratory therapists, and sleep technicians were recruited from the medical field.

MEASUREMENTS AND MAIN RESULTS: The mean time for AR placement in the AR group was 71 ± 43 s, and the time to internal jugular (IJ) cannulation was 316 ± 112 s. There was no

significant difference in median (minimum, maximum) time (seconds) to IJ cannulation for those who were in the AR group and those who were not (339 [130, 550] vs 287 [35, 475], $p=0.09$), respectively. There was also no significant difference between the two groups in median total procedure time (524 [329, 792] vs 469 [198, 781], $p=0.29$), respectively. There was a significant difference in the adherence level between the two groups favoring the AR group ($p=0.003$).

CONCLUSION: AR simulation of central venous catheters in manikins is feasible and efficacious in novice operators as an educational tool. Future studies are recommended in this area as it is a promising area of medical education.

Full Text

Reference:

Huang, C.Y., Thomas, J.B., Alismail, A., Cohen, A., Almutairi, W., Daher, N.S., Terry, M.H. and Tan, L.D. (2018) The use of augmented reality glasses in central line simulation: “see one, simulate many, do one competently, and teach everyone”. *Advances in Medical Education and Practice*. May 10th. eCollection 2018.

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