

Universidade de São Paulo
Faculdade de Saúde Pública

RSP Revista de Saúde Pública

Volume 48
Special Number
May 2014



IPLeiria International Health Congress

09^{and} 10, MAY 2014

CHALLENGES & INNOVATION
IN HEALTH

Abstracts

www.rsp.fsp.usp.br

ISSN 0034-8910
ISSN online 1518-8787

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**AUGMENTED REALITY FOR IMPROVING
CLINICAL DECISION SKILLS**Nelson Jorge^{1,a}, Pedro Gaspar^{1,b}, Lina Morgado^{2,c}¹*Unidade de Ensino à Distância. Instituto Politécnico de Leiria. Leiria, Portugal*²*Escola Superior de Saúde. Instituto Politécnico de Leiria. Leiria, Portugal*³*Universidade Aberta. Portugal*

Introduction: Augmented reality (AR) is a technology that allows a computerized virtual object to be overlaid directly or indirectly in a real environment and in real-time (Azuma, 1997; Zhou, Duh, & Billingham, 2008) and differs from virtual reality (VR) since it combines the real world with virtual objects, supplementing the reality instead of substituting it, making the bridge between real and virtual worlds in a perfect way (Chang, Morreale, & Medicherla, 2010). AR allows the creation of environments and virtual patients to simulate practices that can help health students develop skills and knowledge (Hogan et al, 2007; Lewis et al, 2005).

Objective: To study the effects of AR on decision-making skills, concerning to clinical diagnosis and treatment of chronic wounds.

Methods: Quasi-experimental study (nonequivalent control group design) with a sample of 54 nursing students. Comparative analysis of the performance of the experimental group (which first used the traditional virtual learning environment e-fer, and later with AR) and control group (which used only the traditional e-fer), based on the extracted data from the e-fer virtual simulator (Gaspar, 2010).

Results and Conclusions: The results indicate that the virtual learning environment with AR increases decision-making skills in the clinical diagnosis and treatment of chronic wounds, when compared with the virtual learning environment without AR, particularly on items related to wound characterization, with statistically significant differences ($p < 0,001$) in Mann-Whitney U and Wilcoxon tests.

Descriptors: evaluation; competencies; virtual simulator; augmented reality; clinical decision.

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