

## **The effect of briefing videos in medical simulation-based education: a randomised controlled trial.**

Van Tetering AAC, Truijens SEM, van der Hout-van der Jagt MB, Wijsman JLP, Oei SG  
Department of Obstetrics and Gynaecology, Máxima Medical Centre, Veldhoven, The Netherlands.  
Department of Electrical Engineering, Eindhoven University of Technology, Eindhoven, The Netherlands.  
Biomedical Signals and Systems group, University of Twente, Enschede, The Netherlands  
Body Area Networks group, Holst Centre/imec, Eindhoven, The Netherlands

### **BACKGROUND**

Dieckmann et al.<sup>1</sup> deepened the theoretical foundations about realism and engagement to improve the main goal of learning in medical simulation. Yadav<sup>2</sup> and Koehler<sup>3</sup> showed that video versions of stories led to higher levels of engagement, affection, and recall of particular information compared with textual versions. This is the first time these methods are used for briefing in medical simulation.

### **OBJECTIVE**

The aim of this study is to compare the effects of an affective briefing video with a textual briefing on cognitive appraisal (threat or challenge response). It is hypothesized that briefing videos will cause a threat response, which is associated with increase in cortisol and memory consolidation<sup>4</sup>.

### **METHODS**

Randomised controlled trial in which 18 years old students were asked to participate in a simulation experiment. The students were randomly assigned to an experimental group (video) or a control group (text), both followed by performing surgery on LapSim® (Surgical Science Ltd., Gothenburg, Sweden). Cognitive appraisal was measured by the method of Tomaka<sup>5,6,7</sup>. Secondary outcomes are engagement (game engagement questionnaire<sup>8</sup>), performance (mean percentage of two levels), anxiety (State-Trait Anxiety Inventory<sup>9</sup>), physiological stress (heart rate (HR), saliva cortisol in males), and motivation (Intrinsic Motivation Inventory).

### **RESULTS**

Cognitive appraisal was M(SD) 1.21(0.30) in the experimental group (N=17) and 0.95(0.24) in the control group (N=22),  $p < 0.05$ . No difference was found between the groups in engagement, performance, anxiety, HR, cortisol change, and motivation.

### **CONCLUSIONS**

Briefing videos in medical simulation cause a threat response, while textual briefing results in a challenge response. No difference has been found in performance, but theoretically the threat response may result in increased memory consolidation<sup>4</sup>. This will be the topic of future research.

### **References**

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