



# STRESS, PERFORMANCE AND VIDEO-ASSISTED DEBRIEFING

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## ◆ Research Questions

Does video recording during simulation performances raise the level of anxiety?

Does the video-assisted debriefing (VAD) group have lower stress responses and higher performance scores on repeat exposure as compared to the standard oral debriefing (OD) group?

## ◆ What Experts Say About Video Playback

- Video review helps to align perception of performance with actual performance (Scherer, Chang, Meredith, Battistella, 2003);
- “Helps reduce hindsight bias,” (Fanning & Gaba, 2007);
- Illustrates a critical event during a scenario (Motola, et al., 2013);
- Lets learners observe and reflect on their performances;
- Provides examples of good practice (Krogh, Med, Bearman & Nestel, 2015).

## ◆ Barriers to Video Playback

- Costly equipment;
- Additional time for review of video;
- Privacy and confidentiality issues;
- Potentially distracts from discussion;
- Concerns about high anxiety among participants when confronted with the situation of being judged.

(Fanning & Gaba, 2007; Krogh et al., 2015; Seropian, Brown, Gavilanes & Driggers, 2004)

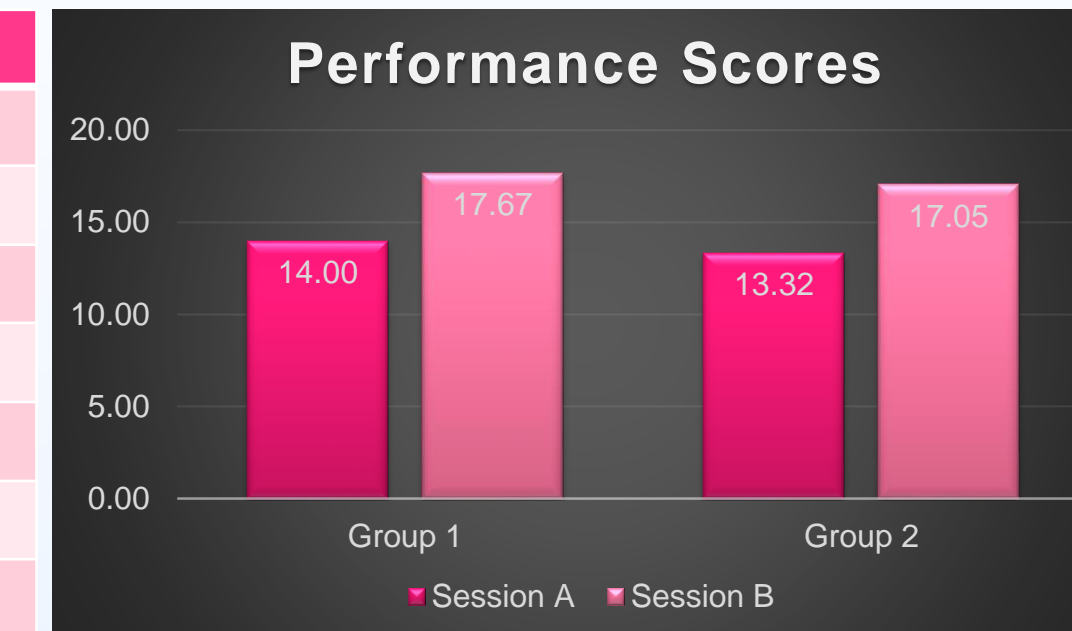
## ◆ Results

34 participants: 15 in VAD group, 19 in OD group

Select Means in GLM ANOVAs

Factors*		Anxiety	HR
Group	VAD	36.00	80.77
	OD	36.25	85.43
Session	A	<b>*38.74</b>	82.85
	B	<b>*33.54</b>	83.90
Time	Pre	<b>*38.50</b>	<b>*80.99</b>
	Test		91.12
	Post	<b>*33.78</b>	<b>*78.02</b>

Note. \* =  $p < 0.01$ .



## ◆ Methods & Materials

A prospective, randomized-controlled repeated measures design conducted over 3 years. General linear model ANOVA procedures were run for each dependent variable.

### Dependent Variables

1. Psychological stress- state anxiety scores of the State-Trait Anxiety Inventory Form for Adults
2. Physiological stress- SBP, DBP, MAP, and HR
3. Performance scores- research-made tool

### Independent Variables

Oral debriefing versus Video-Assisted Debriefings

### Study Protocol

#### Session A

- Background questionnaire, self-reported global rating, state anxiety scale;
- Baseline BP and HR readings;
- Camera turned on for VAD group, Scenario begins;
- Scenario ends, performance ratings completed;
- Oral Debriefing or Video-Assisted Debriefing provided;
- State anxiety scale and final BP and HR readings.

#### Session B

- Same protocol repeated about 2 weeks later.

## ◆ Results

□ Stress responses and performance scores were similar between debriefing groups.

□ State anxiety lessened from Session A to Session B,  $F(1,32) 22.19, p < 0.001$  as well as decreased from pre-scenario to post-scenario  $F(1,32) 13.28, p < 0.0009$ .

□ Performance Scores significantly improved from Session A to Session B,  $F(1,32) 78.62, p < .0001$ .

## ◆ Take Away

- ❖ Sim laboratory provides a convincing setting to set up motivated performances;
- ❖ Builds skill acquisition and psychological resilience;
- ❖ Simulation performances paired with reflection and deep thinking about performance can improve future performance;
- ❖ Key features that deepen understanding include repeated practice, task engagement, and debriefings- with or without video.



## ◆ Discussion

➤ Video recording did not raise the level of anxiety in the participants.

➤ Participants in both groups demonstrated less anxiety and better performance in the repeat scenario.

➤ Because educational benefits were similar between debriefing groups, this suggests video is not a necessary component of debriefing.

## ◆ Conclusion

Well designed simulation experiences that build on prior knowledge with facilitator-led debriefings, with or without video can shape future performance.

## ◆ References

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