Research Questions

Does video recording during simulations 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;

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

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

Select Means in GLM ANOVAs

<table>
<thead>
<tr>
<th>Group</th>
<th>VAD</th>
<th>OD</th>
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<tbody>
<tr>
<td>SBP</td>
<td>136.0</td>
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<td>DBP</td>
<td>83.77</td>
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<tr>
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<td>73.78</td>
<td>73.32</td>
</tr>
<tr>
<td>Test</td>
<td>91.12</td>
<td>91.12</td>
</tr>
</tbody>
</table>

Performance Scores

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