

Review of: "How Effective are Tabletop Role-Playing (Serious) Games in Understanding and Validating the Predictive Capabilities of Disaster Response Agent-based Models?"

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Potential competing interests: No potential competing interests to declare.

The study explores the use of tabletop role-playing games (TRPGs) for disaster response management, focusing on their effectiveness in training emergency responders and validating agent-based models (ABMs). By transforming ABM components into a Disaster Response Tabletop Role-Playing Game (DRTRPG), the researchers engaged medical doctors and master's students in simulated disaster scenarios. Pre- and post-assessment tests showed modest improvements in participants' knowledge of disaster and healthcare decision-making. Data analysis revealed partial validation of the ABM through visual comparison, though statistical analysis highlighted significant variations. The "alternate" policy strategy yielded better disaster response outcomes. While the DRTRPG facilitated collaborative understanding of the ABM, the study underscores the challenges in using RPGs for accurate model validation, pointing to promising yet inconclusive results.

In summary, this study offers a comparison between ABM and a role-playing game. The manuscript is well-crafted and holds significant value for training individuals in disaster management. It is engaging and practical, and can be published once the following comments are addressed.

- 1- Multiple uses of the abbreviation (tabletop role-playing games (DRTRPGs)) in the introduction section!!! Try to use it once.
- 2- The "literature review" section will be attractive if you add arguments about the studies cited in this section.
- 3- Correct the figure numbering (Figure 4 and Figure 5).
- 4- Explain how the evaluation of participants' soft skills is conducted by the observers.
- 5- Instead of a global validation of the ABM, validating each role corresponding to an agent in the ABM would be valuable.
- 6- Try to explain which roles in the RPG are assigned to the students, given that they are not emergency professionals, and what impact these roles have on the validation of the ABM.
- 7- Correct: Figure 5 invocation in the discussion section should be Figure 4.

8- Since there is a significant difference between the results of the ABMS model and the DRTRPG, I propose to compare the DRTRPG with real data to examine the discrepancy between the two simulation results.