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LETTER

The Effectiveness and Benefits of Disaster Simulation Training for Undergraduate Medical Students in Saudi Arabia [Letter]

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Dear editor

We read with great interest the article titled "The Effectiveness and Benefits of Disaster Simulation Training for Undergraduate Medical Students in Saudi Arabia".¹ The authors emphasize the importance of disaster preparedness in medical education, particularly in Saudi Arabia. However, while the study provides valuable insights, it leaves several critical aspects unexplored that could enhance the understanding and application of disaster simulation training in various contexts.

The study primarily focuses on immediate outcomes, such as increased self-confidence among participants. However, it does not address the longevity of these effects: How enduring is the self-confidence gained? Do these competencies translate into sustained, practical skills, or do they diminish without reinforcement? The lack of longitudinal follow-up leaves a significant gap in understanding the true impact of such training over time.

Another area for further exploration is the differentiation of roles among participants—whether as performers, observers, or actresses. The study touches on this but does not delve into how these roles might affect learning depth, knowledge retention, and practical readiness. For example, are passive observers as well-prepared as active performers in real disaster scenarios? Understanding these nuances could lead to more effective simulation designs that optimize learning outcomes based on participant roles.

The integration of disaster simulation training into the broader medical curriculum is another critical issue not addressed in depth. While the immediate benefits are clear, there is a need to explore how such training can be systematically embedded within medical education. This raises an important question: What strategies are most effective for incorporating disaster simulation training into the core curriculum to ensure all medical students are adequately prepared?

Lastly, while the study offers valuable insights within the Saudi Arabian context, its applicability to other cultural and environmental settings is limited. Disaster preparedness is a global concern, and it would be beneficial to discuss how these findings might be adapted to different contexts. How do cultural differences influence the effectiveness of such training, and what modifications are necessary to ensure global relevance?

Research shows that well-structured simulation programs enhance immediate response skills and contribute to longterm healthcare resilience during emergencies.^{2,3} Studies indicate that integrating disaster management into medical curricula significantly improves both theoretical knowledge and practical capabilities.^{4,5} These findings highlight the global relevance of disaster simulation training and underscore the need for continuous evaluation and adaptation of training methods.

In light of these observations, we suggest several avenues for future research. Longitudinal studies are needed to assess the durability of skills gained from disaster simulation training. Additionally, analyzing the impact of different participant roles on learning outcomes could enhance training methodologies. It is also crucial to explore how disaster

simulation can be integrated into core medical curricula with adaptable, scalable models. Comparative studies across various cultural contexts would provide insights into tailoring these trainings for diverse populations.

Addressing these dimensions will help build on this study's foundation, contributing to a more comprehensive and globally relevant framework for disaster preparedness in medical education.

Disclosure

All authors report no other conflict of interest in this communication.

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