“Freudian Slips”: Gamification in Resident Medical Education Improves Teamwork and Patient Care

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Introduction

Residency is a period when a resident must become clinically competent and maintain wellness without mandating the specifics for implementation.

ACGME requires milestone attainments in wellness, business and administration, teamwork, and communication.

Gamification, or applying the typical elements of game play such as point scoring and competition to other activities, may enable novel delivery of interactive programming for resident physicians.

Augmenting formal didactics with games can have multiple benefits, including to improve wellness, clinical knowledge, and teamwork skills.

Purpose

A quality improvement project was designed study the impact of gamification in resident education.

The targets included:

- Knowledge for in-residency-training exam
- Leadership
- Ability to provide feedback to a team
- Anticipate a teammate’s needs
- Adapt to changing situations
- Define a team’s goals & objectives
- Establish trust
- Improve communication & teamwork skills
- Sense of wellness
- Ability to care for patients
- Subjective comments on medical gaming

Methods

An email was distributed to program directors at University of Toledo requesting two 1-hour didactic sessions. Each session was led by Faculty or Residents from the Department of Psychiatry. The participants also completed a pre- and post- session 13 question Likert scale survey examining attitudes and beliefs about gamification in medical education for each session.

- In Session 1, the resident physicians were divided into multiple small teams and created Taboo-style gameplay index cards. The topics were pulled from their In-Training Exams.
- In Session 2, the participants were divided into 2 teams and played a Taboo-style game.

Results

Psychiatry and Family Medicine residencies participated. Findings were similar between both specialties.

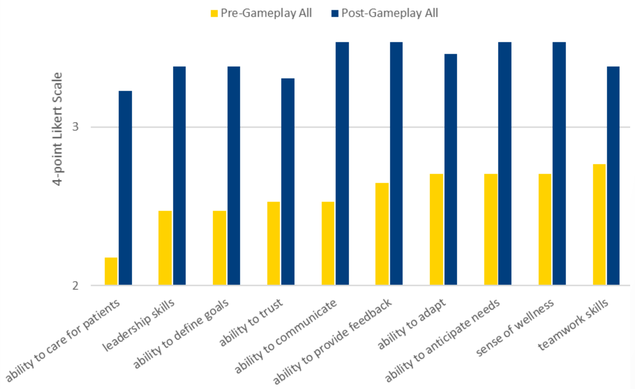
Session 1:

- 19 participants completed the pre-session survey, 11 completed the post- session survey.
- There were statistically significant improvements ($p < 0.05$) in the participants’ beliefs that using games in medical education improves ones’ ability to care for patients and anticipate a team member’s needs.

Session 2:

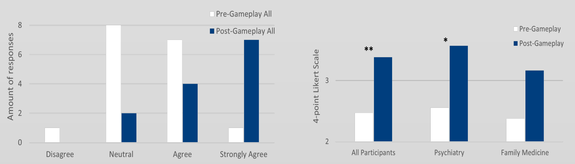
- 17 participants completed the pre-session survey, 13 completed the post- session survey.
- There were statistically significant improvements ($p < 0.05$) across all questions, most notably ($p < 0.01$) in the participants’ beliefs that using games in medical education improves ones’ ability to care for patients and ability to define a team’s goals and objectives.

Using Games in Medical Education Improves One’s…

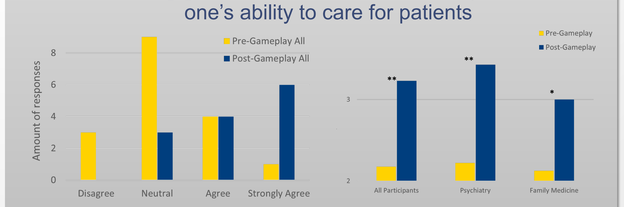


Most Statistically Significant Results

Using games in medical education improves one’s ability to define goals and objectives



Using games in medical education improves one’s ability to care for patients



Discussion

It is expected that playing a game as a didactic would be enjoyable and increase knowledge. However, the specific beliefs and attitudes that had the highest statistical significance were unexpected.

Free text answers on the survey indicated that the participants found the experience fun and helpful.

Limitations include lack of data collection on demographics, linkage on participant answers between Session 1 and 2 surveys, impact of cultural game play on those resident physicians who have English as a second language, and differing interpretations of the survey questions.

Conclusion

Healthcare requires teamwork and shared knowledge for success in patient care and to avoid burnout. Given the high level of burnout among resident physicians, creative interventions that can effectively address multiple issues (e.g. medical knowledge, communication, and teamwork) should be considered for resident education.

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