

Use of an Escape Room as a Disruptive Instructional Strategy to Enhance Pharmacy Students' Knowledge about Diabetes

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Introduction

- Pharmacists provide valuable diabetes disease management for patients to improve health outcomes and decrease healthcare-associated costs^{1,2}
- Hands-on diabetes training programs can increase student competence and self-confidence to provide diabetes care²
- Colleges and schools of pharmacy have developed instructional methods and simulations to enhance student learning of diabetes management topics^{3,4}
- A 2014 report issued by the American Association of Colleges of Pharmacy (AACP) Academic Affairs Committee recommended that faculty engage students in serious games for learning⁵
- Using this recommendation as a means to engage students in learning, faculty designed and evaluated an innovative serious game

Objectives

- Fully engage students in learning topics focused on diabetes disease management
- Immerse students in **hand-on applications of diabetes-related skills**
- Adapt a live gaming activity, Escape Room, to address the educational needs related to mastery of diabetes management knowledge and skills

Methods

- Faculty created an innovative educational game, the diabetes escape room
- An authentic escape room gaming environment was established through the use of a locked room, an escape time limit, and game rules within which student teams completed complex puzzles focused on diabetes disease management

Results

- Data from two iterations of the diabetes escape room (n = 169) focused on the gains from pre to post- treatment diabetes knowledge, overall attitude toward gaming activity as well as **students' reflective views of the impact of the diabetes escape room**
- Analysis of the 2016 and 2017 quantitative data indicated a statistically significant gain in diabetes knowledge from pre to posttest as well as a statistically significant perceived value when compared to an indifference level related to this activity
- Qualitative analysis of team-based interviews revealed four major themes: strong teamwork, effective team communication, distributed leadership, and hands-on knowledge gains

Implications

- The diabetes escape room proved to be a valuable educational game which engaged students in learning and which has adaptability and transferability potential to other universities, educational topics, and health professions

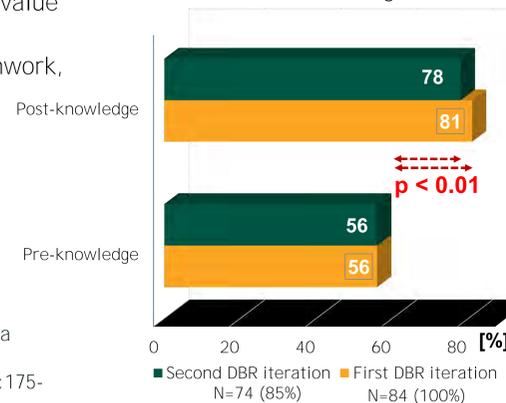
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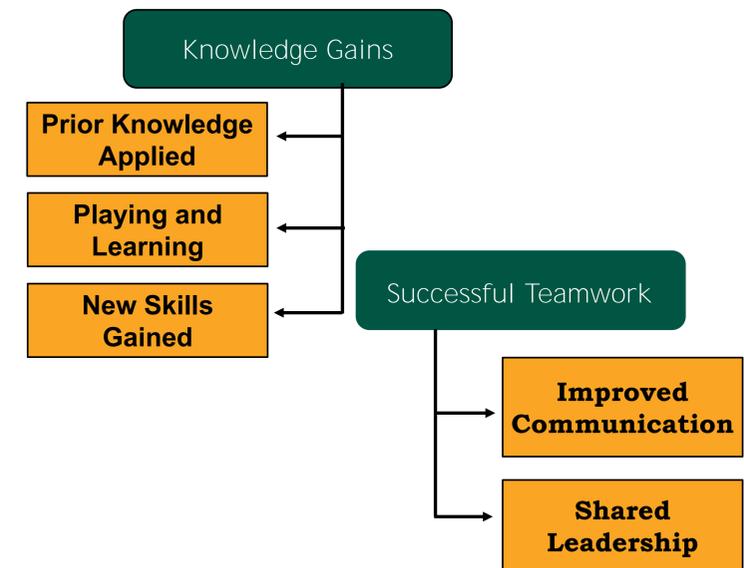
Escape Room Gaming Structure



Diabetes Knowledge Gain



Perceived Gaming Value



Student Perceptions
Major Themes from the Team Interviews