Clinical Encounter: Obesity Treatment Challenge Simulation for Medical Students

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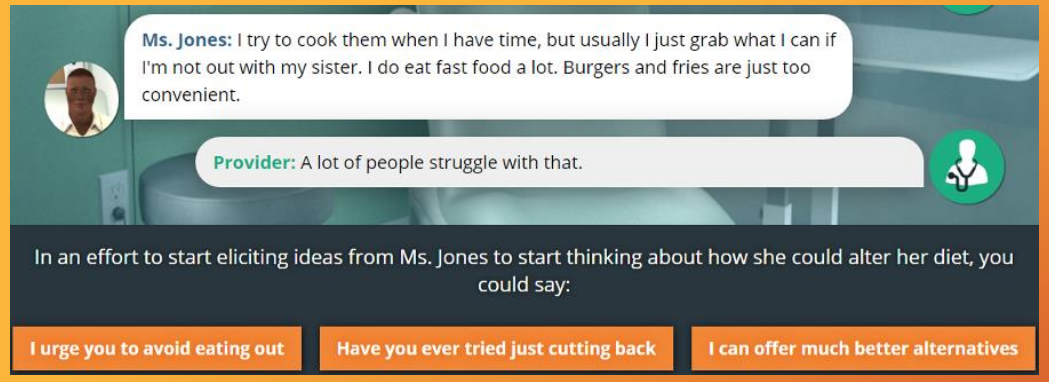
WIP-Research Abstract #25806

Introduction

Deficiencies among medical providers have been documented in patient interview, assessment, and intervention for obesity [1]. The skill deficit is alarming because one-third of U.S. adults meet criteria for a diagnosis of obesity [2].

The clinical skills for which obesity treatment training is needed are primarily non-physical. When training in non-physical skills is the goal of simulations, cognitive realism may be more important than physical realism [3]. Instead, a sufficient combination of actions, symbols, and digital enhancement to support learning and induce suspension of disbelief are more critical [4].

In response, we are developing and evaluating a branched-path clinical scenario game for web or tablet to train medical students in obesity-related clinical skills. Our studies aim to discover student preferences for this type of simulation and faculty opinions on need and integration.



Purpose/Hypothesis

Clinical simulations scenarios using branched learning can function as clinical skills learning tools for medical students and can be optimized by learning student preferences and faculty opinions.

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Materials & Methods

A needs analysis/preference survey with medical students (n=17) focused on the use of branched learning clinical scenarios about obesity. A survey of faculty (n=12) asked about the need for the training and how best to integrate it. Data from the needs analysis guided development of a prototype branched learning online patient encounter. Medical students (n=12) participated in an alpha/ usability test of the prototype. The simulation experience involved making clinical choices for evaluation and interventions. Usability participants were debriefed in a semi-structured interview via screen-sharing video chat (Skype) and surveys. Participants provided feedback regarding content clarity, usefulness, layout, organization, function, branched-paths, game type, addition of audio or animation, and satisfaction. Average 5-pt Likert ratings and SD were calculated for survey data. Content analysis of qualitative data was completed.

Results

Needs Analysis/Preference Testing: All students agreed/strongly agreed that they "valued the branched clinical scenarios as a learning method" and thought it "would help me learn" [mean=4 / 4].

Examples of data for student preferences:

70% of students answered "yes" to a survey question about whether they would like access to audio, but in the interview, 40% said it was not necessary.

Only 53% of students [mean=3.6 / 5, SD=1.1] agreed they want to be scored on their choices.

Usability: All students agreed/strongly agreed that there was enough information provided to make simulated clinical choices. [mean=4.8 / 5, SD=.4]

Most students (80%) wanted the option to go backwards in the experience, but rarely used it.

Faculty: All faculty participants agreed/strongly agreed that the planned training would enhance their curriculum and be a useful learning tool. [mean=4.1 out of 5, SD=0.9]

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Discussion

Data from faculty survey confirming the need for additional skills training for medical students in obesity medicine. In response, we collected and used student feedback regarding preferences related to a branched learning web/app-based clinical simulation to develop a prototype. Our preliminary data suggests that the prototype fidelity to reality was sufficient for students to experience clinical decision-making and thus for training to occur. Our findings to date are similar to previous studies in that simple virtual case simulations offer educational value, are easy to use, and are engaging.

Conclusion

Our current data supports the hypothesis that a case simulation presented as a branched path learning experience can provide a useful learning experience for medical student clinical skills training. Branched learning games are accepted by medical students who find them engaging.

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Funding Acknowledgement (14 pt. font)

Developed with support from NIDDK 2 R44 DK091144-01A1

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