Symptom Selection: A Dermatology Education Game

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Skin complaints are among the most common reasons for visits to primary care physicians yet most medical schools require fewer than 10 hours of dermatology education leaving medical students feeling unprepared to identify pathology, especially in skin of color[1,2]. Game based learning has become increasingly common as a learning modality in medicine. The purpose of this study is to determine if a videogame, *Symptom Selection,* can improve medical student confidence in identifying dermatologic conditions and to assess the utility of a dermatology education game.

Development began with a paper prototype of a matching game and was then expanded to a videogame format allowing the player to practice identifying visual signs of disease and symptomatology in vignettes. This structure is based in the pedagogical strategies of behaviorism and cognitivism which prioritize knowledge transmission through quizzes and simulations focused on memory and skill development through repetition[3]. Based on AAFP competency guidelines in dermatology, six diseases were selected: tinea infections, atopic dermatitis, rosacea, pityriasis rosea, acne vulgaris, and actinic keratosis. Illness scripts for each disease were composed alongside curated sets of images depicting each condition across the spectrum of skin tone and in varying presentations.

Symptom Selection was distributed to medical students with a post-play survey. 86% of players (n=43) perceived an increase in confidence in their ability to identify dermatologic disease in a clinical environment. 84% of players found playing the game preferable to other study methods (e.g. flashcards, lectures, etc). In conclusion, medical students exhibited significant interest in using *Symptom Selection* as a study tool and the game demonstrated the ability to increase medical student confidence in clinical skills after a single round of play. The next step is to expand the content to cover the scope of medical student dermatology curriculum and assess its efficacy in teaching dermatology skills.

References:

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