Letters to the Editor

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New Research

A Trial of Virtual Hypnosis to Reduce Stress and Test Anxiety in Family Medicine Residents

To the Editor:

By the time physicians enter a residency program they have taken many examinations, and it would be expected that they would be comfortable with the process. In fact, for many, the anxiety of test taking continues to increase as the stakes get higher. Test-taking anxiety may affect performance, and some family medicine residents in our training program expressed high levels of anxiety prior to taking the Family Medicine In-service Training Exam (ITE). Hypnosis has been used to alleviate test-taking anxiety, but sessions with a therapist can be expensive and interfere with clinical schedules. We tested and revised an innovative Web-based stress reduction program to see whether it would be acceptable to residents and whether it would decrease measured levels of anxiety. The objective of this study was to evaluate the acceptance and effectiveness of an open-source virtual hypnosis program to relieve test anxiety in residents preparing for the Family Medicine ITE. Hypnosis has also been used to alleviate test-taking anxiety, but sessions with a therapist can be expensive and interfere with clinical schedules. We tested and revised an innovative Web-based stress reduction program to see whether it would be acceptable to residents and whether it would decrease measured levels of anxiety. The objective of this study was to evaluate the acceptance and effectiveness of an open-source virtual hypnosis program to relieve test anxiety in residents preparing for the Family Medicine ITE. Hypnosis has been used to alleviate test-taking anxiety, but sessions with a therapist can be expensive and interfere with clinical schedules. We tested and revised an innovative Web-based stress reduction program to see whether it would be acceptable to residents and whether it would decrease measured levels of anxiety. The objective of this study was to evaluate the acceptance and effectiveness of an open-source virtual hypnosis program to relieve test anxiety in residents preparing for the Family Medicine ITE. Hypnosis has been used to alleviate test-taking anxiety, but sessions with a therapist can be expensive and interfere with clinical schedules. We tested and revised an innovative Web-based stress reduction program to see whether it would be acceptable to residents and whether it would decrease measured levels of anxiety.

Methods

This was a randomized controlled clinical trial involving 16 family medicine residents. Eight were randomly selected for virtual hypnosis and eight for usual preparation. The primary outcome measure was the change in scores on the Test Anxiety Inventory (TIA) and State-Trait Anxiety Inventory (STAI) before and after the allotted time for the intervention. We compared the change in scores between groups using a two-sample Wilcoxon Rank Sum exact test. We also reported the results of a post-participation survey. All the residents were given two pretests, the State-Trait Anxiety Inventory for Adults (STAI) and the Test Anxiety Inventory (TAI). The standard preparation for the ITE for the previous 2 years was a sequence of three didactic lectures on study skills. This series of lectures was presented to all residents as the control intervention. Both groups received this preparation.

The Virtual Hypnotist (Virtual Hypnotist: Version 5.41, Boston, Follow the Watch Software, 2005) is an open-source program designed to simulate hypnosis sessions. It was intended as a general self-help or experimental program. This program allowed for a self-write application, which we wrote to specify both positive self-regard and confidence in test taking. Each test subject was scheduled to sit in a quiet, softly lit room with a computer and view and listen to the hypnosis program. They were then given a computerized disk (CD) with the audio of the program for reinforcement.

Results

There was no statistical difference in any TIA subscale or STAI. Six out of the eight residents who completed the program reported that it reduced stress, was relaxing, and they enjoyed participating in the program. Five reported a reduction in test-taking anxiety, and only three felt it improved test scores. On average, participants in the intervention group used the reinforcement CD on 76% of the scheduled days.
This is a small study so the power to show a difference in anxiety level is quite small. Despite randomization, there were group differences, and we were unable to statistically correct for potential biases because of the small sample size. This study showed the feasibility of doing virtual hypnosis as a means to allay test anxiety, but we were unable to demonstrate efficacy in this study. The residents did report a high level of satisfaction and enjoyed using the program.

In conclusion, test-taking anxiety is a great problem for some residents, and it may be beneficial to identify those with the greatest burden and evaluate a program for stress reduction for those persons. A multi-center trial would be needed to achieve a high power to show improvement in both anxiety levels and ITE or other test scores.

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