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Motivational Enhancement Therapy to Increase Resident Physician Engagement in Substance Abuse Education

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Abstract

Rates of screening, brief intervention, and referral to treatment (SBIRT) for alcohol and drug use by physicians remain low, despite evidence of efficacy. Motivational enhancement therapy (MET) may be a promising means to help physicians resolve ambivalence about intervening with alcohol and drug users and take advantage of educational opportunities. In the present study, nine internal medicine residents received brief MET prior to standard education in SBIRT. Residents' self-reported SBIRT attitudes and behaviors were measured before the intervention and at a five week follow-up point. Changes in SBIRT attitudes and behaviors all occurred in the expected direction, although, due to the small sample size, none reached statistical significance. Results suggest that MET may enhance educational opportunities and lead to changes in SBIRT behavior.

Keywords

medical education; screening; brief intervention; alcohol; drug

Screening, brief intervention, and referral to treatment (SBIRT) for alcohol and substance use problems within primary care can be beneficial to at-risk users (1). Such interventions typically involve screening patients using standardized questioning or formal instruments, providing some brief intervention, such as feedback, information giving, or advice, or referring to treatment. Despite strong evidence in support of SBIRT, adoption and routine application of these practices remains low (2).

Education is currently the primary means by which physicians are exposed to practice standards. Unfortunately, there is little empirical information available regarding effective educational strategies for teaching providers about SBIRT. While some studies have demonstrated that interactive practicum experiences can impact physician attitudes and behavior, others suggest that even physicians who receive large amounts of training are unlikely to adopt recommended practices (3). This gap between knowledge and practice may be caused by high levels of physician ambivalence regarding the treatment of alcohol and substance abuse issues (4). For example, although most physicians acknowledge that advice on alcohol/

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substance use is an important part of their work, they also report low confidence in their skills and poor satisfaction in treating these disorders (3,5).

Motivational enhancement therapy (MET) is a therapeutic approach that may help physicians resolve ambivalence about SBIRT and engage more effectively in educational opportunities. This intervention has a wide evidence base and has been demonstrated to impact the behavior of health care providers (6–8). The present study tested the effectiveness of MET among 2nd and 3rd year primary care internal medicine residents receiving standard SBIRT education. Estimates of the impact of the intervention on attitudes, confidence, knowledge, skills, and utilization of SBIRT are provided.

Methods

Participants

Participants included nine 2nd and 3rd year internal medicine residents from a primary care residency program at an urban, publicly-funded hospital. The residents were scheduled to receive two group training sessions in SBIRT practices as part of their ongoing, regularly held didactic training seminars.

Overview of Procedures

The study used a within subjects, pre-post design to test the effectiveness of MET at increasing self-reported adoption of SBIRT practices following standard educational opportunities. Participants who consented to participate were individually scheduled to complete a baseline assessment and the MET intervention. During the two weeks following the baseline assessment and intervention, participants attended two, three hour educational seminars in SBIRT practices as part of their regularly scheduled didactic seminars. Three weeks following the last educational seminar, a follow-up assessment was conducted measuring the same SBIRT items that were assessed at baseline. The University of California San Francisco Committee on Human Research approved all study procedures

Instruments

The Boston Medical Center Primary Care Survey was administered to participants at baseline and three week follow-up to measure barriers to engaging in SBIRT (e.g. to what extent are time constraints a barrier for you when screening or treating patients with alcohol or drug problems?), SBIRT behaviors (e.g. how often do you ask patients if they drink?), professional satisfaction with engaging in SBIRT (e.g. how much professional satisfaction do you experience when caring for patients with alcohol problems), perceived responsibility for engaging in SBIRT (e.g. how responsible do you feel for screening for alcohol and drug problems?), confidence in SBIRT abilities (e.g. how confident are you in your skills at counseling patients about drug use?), and negative attitudes towards alcohol and substance abusing patients (e.g. how much do you agree or disagree with the statement that it is a waste of time trying to help intravenous drug users?). The instrument uses a five-point Likert response system, and scores for each of the categories described above were calculated by averaging the scores for questions within the category for each individual. High scores indicate desirable responses with the exception of perceived barriers and negative attitudes. Principal components analysis and reliability estimates for the instrument are good, with Cronbach's alpha ranging from .56 to .97 (5).

MET Intervention

The MET intervention was designed to aid in physicians in the exploration and resolution of ambivalence regarding SBIRT for alcohol/substance use. It took approximately 15 minutes to

complete and was administered one-on-one by the first author, a clinical psychologist with extensive background and training in MET. General intervention characteristics included providing non-judgmental, objective feedback regarding current use of screening and intervention for alcohol/substance by comparing responses given during the baseline assessment with a normative comparison sample that was administered the Primary Care Survey (9). MI skills including open-ended questions, affirmations, reflections, and summaries were used to elicit resident reactions to feedback reports. Special emphasis was placed on eliciting and responding to change talk, which included statements about importance, confidence, and readiness to learn about and apply SBIRT practices.

Data Analysis

Paired sample t-tests were used to evaluate main effect changes from baseline to follow-up. Bonferroni adjustments were used to control for inflated alpha, yielding a $p \leq .007$ significance level. In addition, within-group effect sizes were calculated using Hedge's g statistics for each outcome variable.

Results

Retention and Attrition

All nine residents who were approached to participate consented, received a baseline assessment, participated in the MET intervention, and attended the first educational seminar. Two residents were unable to attend the second educational seminar since they were attending a conference out of state. All nine residents were reached for the 3-week follow-up assessment.

Participant Characteristics

Participants were in their 2nd (N=4) or 3rd (N=5) year of residency training and 55.6% female. The average age of participants was 30.8 (SD=1.6) and a range of ethnicities were represented (Asian, Black, Native American, and White).

Baseline SBIRT Characteristics

Participants reported baseline SBIRT characteristics that were very similar to the normative data gathered in previous administrations of the Boston Medical Center Primary Care Survey (9). At baseline, participants reported experiencing minor to moderate barriers to their administration of SBIRT (M=2.69, SD=.62). Time constraints and inadequate referral sources were the most highly reported barriers. At baseline, participants reported asking about alcohol and drug use sometimes to usually (M=3.69, SD=.36), but reported giving advice, treatment, or referral rarely to sometimes (M=2.79, SD=.39). Participants reported experiencing some to moderate satisfaction when caring for alcohol and drug patients (M=3.61, SD=.89) and had a very high sense of personal responsibility for engaging in SBIRT (M=4.81, SD=.39). Lastly, residents at baseline reported experiencing moderate confidence in their SBIRT abilities at baseline (M=3.26, SD=.57) and held few negative attitudes towards alcohol or substance abusing patients (M=1.31, SD=.24).

Changes in SBIRT

Three week follow-up scores for all occurred in the expected direction, but none of the changes reached statistical significance when controlling for inflated alpha with Bonferroni adjustments. T-scores and effect sizes (g) for changes across time were as follows: barriers (t=2.09, p=.07; g=.44), asking about alcohol/drug use (t=−1.16, p=.28; g=.37), advising, treating or referring (t=−1.25, p=.25; g=.27), professional satisfaction (t=−2.40, p=.04; g=.35), perceived responsibility (t=−1.00, p=.35; g=.04), confidence (t=−2.97, p=.02; g=1.09), and negative attitudes (t=.125, p=.90; g=.06). These results are not surprising, given the small

sample size. However, the effects of the intervention and educational seminar do look promising, with barriers to SBIRT, asking about drug, providing advice, referral and treatment, and professional satisfaction all showing small to moderate effect sizes. Perceived responsibility for engaging in S&BI and negative attitudes did not change significantly, which may be a byproduct of ceiling effects. Lastly, confidence in engaging in SBIRT changed the most significantly and had an associated large effect size.

Discussion

Within this study, a MET intervention was designed for use with physicians to increase engagement in educational opportunities and ultimately increase SBIRT behavior. Preliminary pilot data suggest there may be some promise that MET can enhance standard educational opportunities and lead to changes in SBIRT behavior.

There are numerous limitations to this study, which can be explored in future research. For one, the present study has a very small sample size, thus limiting the utility of tests of statistical significance and generalizability of findings. However, effect sizes for most outcome variables were promising. In addition, the study used a within groups design, so the changes in behavior from baseline to follow-up cannot be definitively attributed to the intervention. Other limitations include the short follow-up window (3-weeks), which does not allow for a test of the sustainability of effects across time and reliance on self-report for outcome data.

Despite these limitations, the intervention shows promise and merits future investigation with methodological improvements. Future studies based on this pilot data should use a larger sample size and random assignment to the MET intervention and some comparison or control condition to further delineate the nature of the effects. In addition, it may be interesting to administer the MET condition alone and in combination with standard educational opportunities to determine whether potential changes are a byproduct of the MET intervention alone, or mediated by increased engagement in education. Lastly, future studies may wish to modify the intervention to a group or other format so that implementation could be disseminated in educational training programs in a more cost and time-effective manner.

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