EFFECTS OF THE TRANSCENDENTAL MEDITATION PROGRAM ON STATE-TRAIT ANXIETY

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The Transcendental Meditation programme was found to reduce both state and trait anxiety levels. No changes were found in two control groups, one of which took a course in the Science of Creative Intelligence without learning Transcendental Meditation, while the other took a course in psychological coping strategies.—EDITORS

State and trait anxiety were measured in a pretest/posttest design in three groups of undergraduate students. Thirteen students learned the Transcendental Meditation (TM) technique, nineteen students took a course in the Science of Creative Intelligence (SCI) without learning the TM technique, and ten students learned psychological coping strategies as part of an introductory level psychology course. Over a 2–3 month period the TM program group showed a significantly greater reduction in state anxiety than the SCI group (p<.025) and the coping strategies group (p<.025). In addition, the TM program group showed a significantly greater reduction in trait anxiety than the SCI group (p<.05) and the coping strategies group (p<.01). It is suggested that a technique is needed that influences the level of physiological functioning of the individual in order to promote significant changes on the level of personality.

INTRODUCTION

Research on the Transcendental Meditation (TM) program has shown marked changes in personality variables (e.g., Nidich, Seeman, and Dreskin, 1973; Shapiro, 1975), including the reduction of anxiety (e.g., Ferguson and Gowan, 1976; Dillbeck, 1977). Initial research on the TM program discussed these
results in terms of the psychophysiological research conducted during the practice, indicating the experience of a profound state of rest, e.g., significant reductions in oxygen consumption, breath rate and heart rate, and an increase in skin resistance (Wallace et al., 1971). Later research began to discover that the functioning of the brain became more coherent as a result of the practice of the TM technique (e.g., Levine, 1976; Dillbeck and Bronson, 1982). In addition, Orme-Johnson and Haynes (1981) and Farrow (1976) found significant positive correlations between reported subjective experiences of the clarity of unbounded awareness during the practice of the TM technique and EEG coherence.

Taken as a whole, these and other studies on the TM program (see Orme-Johnson and Farrow, 1976) indicate that the entire functioning of the physiology is becoming more coherent and adaptable as one continues the practice over time (Wallace, Jacobe, and Harrington, 1979) and that the psychological benefits of the TM program are based on this development of a healthier physiology.

Studies indicate that the practice of the TM program influences the physiology in a manner which is not found in other techniques of self-development (e.g., Daniels, 1976; Glueck and Stroebel, 1975). In a meta-analysis of psychological studies on treatment outcomes of meditation techniques, Ferguson (1976) found that the TM technique produces twice as large an effect as other techniques. In addition, Davies (1976) compared the TM technique to Progressive Relaxation (PR), using a measure of state-trait anxiety, and found significant reductions over a seven-week period for the TM group but not for the PR group.

The purpose of this study was to compare students who were practicing the TM technique to those who were learning psychological coping strategies in a psychology course using a measure of state-trait anxiety. In addition, a group of students who were not practicing the TM technique but who were taking a course on the Science of Creative Intelligence (SCI), the theoretical study of the science of consciousness and natural law, developed by Maharishi Mahesh Yogi and the faculty of Maharishi International University, was included in the study as a control for the TM program group. Based upon the above research, it was hypothesized that the TM program group would exhibit significant reductions in both state and trait anxiety when compared to both the coping strategies group and the SCI groups.

METHOD

SUBJECTS—Forty-two undergraduate students who were enrolled in a small New England liberal arts college were included in the study. Thirteen students, 9 males and 4 females, began the practice of the TM program, and meditated regularly over a 2–3 month period, in the context of taking an SCI course for academic credit at the college (TM program); 19 students, 12 males and 7 females, took the SCI course, without beginning the practice of the TM program (SCI); and 10 students, 7 males and 3 females, learned psychological coping strategies as part of an introductory level psychology course (CS). The psychological coping strategies included strategies presented in Carkuff’s Art of Helping and Dyer’s Your Erroneous Zones. In addition, Progressive Relaxation was taught to all students in the coping strategies group.

PROCEDURE—All of the students were tested over the same semester in a pretest/posttest design, using the State-Trait Anxiety Inventory (Spielberger, Gorsuch, and Lushene, 1970). Students practicing the TM program were initially tested prior to starting the practice of the TM technique. All students were tested in a group situation at the beginning and towards the end of their academic courses.

The Mann-Whitney U-Test was used to compare change scores among the three groups. Significance was set at the .05 level, one-tailed.

RESULTS

Results of the study confirmed the hypothesis that the TM program group would exhibit significant reductions in both state and trait anxiety when compared to both the SCI and coping strategies groups. The TM program group showed a median reduction of 9 points on the state scale, as compared to a reduction of 3 points for the SCI and coping strategies groups. The TM program group showed a median reduction of 8 points on the trait scale, as compared to a reduction of 3 points for the SCI group (U = 72; p < .025), and a reduction of 3 points for the coping strategies group (U = 32.5; p < .025). In addition, the TM program group showed a median reduction of 8 points on the trait scale, as compared to a reduction of 3 points for the SCI group (U = 74.5; p < .05), and a reduction of 3 points for the CS group (U = 25.5; p < .01). The SCI and CS groups did not differ on either of the scales. In addition, the TM program group did not differ from the SCI or CS groups on pretest scores for either the state or trait scales.
DISCUSSION

The results of the study indicate that the TM program was effective in reducing both state and trait anxiety. Neither the SCI nor the psychological coping strategies groups were successful in significantly reducing anxiety levels over the course of a college semester. These results suggest that a technique is needed that influences the level of physiological functioning of the individual in order to promote significant changes on the level of personality.

This study indicates that the theoretical understanding of the nature of transcending and the development of higher states of consciousness, alone, is not sufficient to enhance the psychological functioning of the individual. Rather knowledge of SCI may provide a reinforcement to the daily practice of the TM technique and may be responsible for inspiring the student to begin the practice in the first place.

Future studies should attempt to correlate physiological variables, e.g. EEG coherence and GSR, with changes in personality variables. It is expected that correlations will be found between measures that reflect physiological coherence and psychological coherence, e.g. reduction in anxiety.

REFERENCES


