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The use of Progressive relaxation and hypnosis to increase tennis skill learning: A pilot study

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Paper presented: Annual Meeting of the American Alliance for Health, Physical Education, Recreation, and Dance (AAHPERD), Atlanta, GA, April, 1985.

Abstract:

The purpose of this study was to investigate the effectiveness of autogenic training (progressive relaxation) and hypnosis on beginning tennis students' ability to learn basic tennis skills. Beginning tennis students in the two experimental were guided through progressive relaxation or hypnosis techniques. They were then read a set of tennis practice procedures and asked to imagine volleying the ball across the net. The control group was read the tennis practice procedure only. Both a pre-and a post-test of rallying a tennis ball for as many times possible in 3 minutes was measured for all three groups. No significant difference in tennis skills between students who were randomly assigned to a progressive relaxation, hypnosis, or a control group.

Background:

Some studies have suggested that performance can be improved through the systematic practice of self-hypnosis or relaxation training combined with visual imagery. However, the results have been mixed and the techniques have not fully been explored.

Purpose:

The purpose of this study was to investigate the effectiveness of autogenic training (progressive relaxation) and hypnosis on beginning tennis students' ability to learn basic tennis skills.

Methods:

At a large Midwestern University, during both semesters of the 1984-85 academic year, students in beginning tennis classes were randomly assigned to a progressive relaxation (N = 27), hypnosis (N = 35) or a control (N = 28) group. The classes were considered elective and students enrolled in them for the specific reason of learning how to play tennis in addition to credit hours. On the first day of class, students in all groups were asked to rally the ball as many times as possible in 3 minute pre-test. In the next class, and subsequent classes, the progressive relaxation and the hypnosis groups were led in the technique by the instructor. After the

technique was employed, a set of tennis practice procedures were read to each group. Then individuals in the two experimental groups were asked to visualize practicing tennis techniques mentally and volleying the ball. They were asked to visualize the forehand and backhand drives used in the rally test. This activity took about ten minutes. The control group was given the same material concerning the ground strokes delivered to them as part of their lecture.

Each group was then given the opportunity through tennis drills to practice the ground strokes for the remainder of the class period. This procedure was repeated every other class period for 4 weeks. At the end of four weeks, students again were asked to rally the ball for as many times possible in 3 minutes for a post-test score.

Results.

The results of an analysis of covariates, using the SPSS MANOVA program, showed no significant difference ($p < .05$) between any groups at either time period. However, there was a significant difference within all groups between the pre-and post-time period that revealed an increase in the number of volleys in three minutes.

The mean for all groups on the pre-test measure was 51.6 ($SD = 17.7$). The post-test mean for all groups was 60.3 ($SD = 19.5$). This difference between the pre- and post-test scores for combined groups was significant ($F_{1,86} = 62.98, p < .05$). The differences among conditions were also analyzed by analysis of covariance. The group means and standard deviations were: for Relaxation/Pre-test 51.1 and 17.2, for Relaxation/Post-test 59.5 and 20.5, for Hypnosis/Pre-test 51.6 and 17.9, for Hypnosis/Post-test 62.0 and 19.5, for Control/Pre-test 51.6 and 18.6 for Control/Post-test 59.1 and 18.9. The differences among groups were non-significant.

Conclusions and recommendations:

It was concluded that progressive relaxation and hypnosis along with instructions for "mentally practicing" tennis strokes were no more effective than instruction without autogenic training among this sample of university students. The use of these mental training techniques did not detract from the learning process, however, as scores for all groups improved over four weeks. The use of autogenic techniques for improving athletic performance has become common. However, before these techniques are introduced wholesale into athletic or physical education programs, it is recommended that they be tested as to their effectiveness.

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