

CUE-CONTROLLED RELAXATION IN THE TREATMENT OF TEST ANXIETY

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Summary—A 21-yr-old student reacted with severe anxiety in test-taking situations. She was successfully treated by cue-controlled relaxation methods. The procedure involved (1) training in deep-muscle relaxation, and (2) pairing of breath exhalations while relaxed, with a self-produced cue word—"calm". After five weekly training sessions, follow-up results were reported on the Interpersonal Anxiety Scale and for midterm and final exams. The potential advantage, under certain conditions, of cue-controlled relaxation over systematic desensitization is discussed.

THE BEHAVIORAL treatment of anxiety in test-taking situations has generally involved the use of systematic desensitization procedures. The effectiveness of this technique in dealing with a variety of anxiety situations has been well documented elsewhere (Borkovec 1970; Paul, 1969). In spite of the success of systematic desensitization, it may be too time-consuming or difficult for specific problems in certain situations. These include situations in which clients have difficulty achieving or maintaining vivid imagery, and experience anxiety in a variety of circumstances which require the use of a great number of hierarchies. The treatment described in the present report makes use of a procedure which may circumvent these problems.

CASE HISTORY

B.J. was a 21-yr-old college junior in a secondary education curriculum majoring in history. Though she had been successful academically, she experienced great anxiety in test-taking situations and voluntarily sought treatment at

the Psychological and Counseling Center at the University of Illinois. She initially reported her symptoms to be "physiological tension" before and during test-taking, and insomnia before tests.

In an attempt to get a rough indication of specific physiological symptoms, we administered one of the Interpersonal Anxiety Scales ("Final Course Examination") from the S-R Inventory of Anxiousness (Endler, Hunt and Rosenstein, 1962). This scale has 14 items representing symptoms of anxiety which might be present in a final course examination. Before treatment B.J. was asked to indicate on a five point scale the degree to which each symptom would be present for her. She reported that six of the 14 items on the scale were present to a great or very great degree. These symptoms were: heart beats faster, gets an "uneasy feeling", emotions disrupt action, wants to avoid situation, mouth gets dry, gets full feeling in stomach.

Interview data suggested that the test anxiety was an isolated and specific phenomenon. The

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symptoms did not occur in other situations; all major life areas, career goals, and social relationships appeared to be in good order.

TREATMENT

Instead of selecting systematic desensitization for overcoming the problem behavior, we decided to employ cue-controlled (conditioned) relaxation. With this procedure, the goal of treatment is to enable the client to achieve relaxation in response to a self-produced cue. This is attained in two steps: (1) training in deep muscle relaxation, and (2) association of the relaxed state with a self-produced cue word such as "calm" or "control". Following relaxation training (see Bernstein and Borkovec, in press) and while the client is totally relaxed, he is instructed to focus all of his attention on his own breathing and say to himself the cue word—i.e. "calm"—each time he exhales. The therapist repeats the word five times in synchrony with the client's exhalation, and the client then continues for 15 more pairings. After this, the client is instructed to focus his attention on general sensations of relaxation for a 60-sec interval, followed by 20 more pairings of the subvocalized cue word with exhalation. This procedure is repeated on a weekly basis for 5 weeks, with the client giving 20 additional cue-word pairings on his own each night following relaxation practice. As a result of these pairings, the response of relaxation becomes associated with the cue word.

This treatment procedure was carried out during five consecutive weekly sessions. In each session B.J. went through the deep muscle relaxation procedure, and then, while relaxed, subvocalized two sets of 20 cue-word pairings. In addition, she reported practicing relaxation and cue-word association at home an average of five times per week.

Following the fourth treatment session, B.J. was instructed to implement the relaxation procedure in situations where minimal feelings of anxiety were likely to occur. This involved recognizing any slight, inappropriate increase in anxiety, and then reducing that anxiety by

closing her eyes (when possible), taking a deep breath, and subvocalizing the cue word, "calm". The next session B.J. reported using the relaxation procedure on several occasions, noting that in each instance the anxiety was greatly reduced or eliminated by subvocalizing the cue word. At this point relaxation training and cue-word pairing were done for the last time. The client was then instructed to use the relaxation procedure in exam situations, just as it had been employed in other situations during the previous week.

Follow-up reports were obtained at 1- and 10-week intervals after the final treatment session. At the 1-week follow-up session, B.J. reported taking two mid-term examinations during the previous week; on both occasions initial feelings of anxiety were eliminated by using the relaxation procedure, and she remained free of anxiety throughout the rest of the examination period. The 10-week follow-up session was held shortly after B.J. had finished her final examinations. At this time she reported completing all of her exams without becoming anxious or upset, adding that she no longer viewed the test-taking situation as a problem area. She further reported that insomnia before tests had not occurred. The Interpersonal Anxiety Scale of the S-R Inventory was filled out again, and the session terminated.

On a scale ranging from a high of 5 to a low of 1, the average rating for all 14 items of the Interpersonal Anxiety Scale dropped from 3.0 to 1.8 from pre- to post-assessment. More importantly, the average for the six items B.J. had rated as most often occurring dropped from 4.3 to 2.7, indicating a pronounced decrease in perceived physiological arousal. These data combined with other self-report information seemed to indicate that the treatment had been effective in overcoming anxiety associated with test-taking situations.

DISCUSSION

This report suggests that cue-controlled relaxation is an effective procedure, offering a great deal in terms of simplicity of technique and

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potential breadth of application. Although the results achieved by this technique may be similar to those produced by systematic desensitization, potential advantages of cue-controlled relaxation over systematic desensitization do exist as previously mentioned. These include the ability to deal with clients who have difficulty visualizing hierarchy scenes, and the ability to avoid numerous anxiety hierarchies with clients who report a number of specific fears.

As with systematic desensitization, one of the most important effects of the present procedure is that it allows the client to keep anxiety at a low enough level for more adaptive behavior to be learned in the previously anxiety-producing situation. As positive feedback for these new behaviors is received, the inappropriate anxiety once associated with the situation will diminish.

In addition to using this technique for test anxiety, we have also successfully employed it in the treatment of public speaking anxiety and

impotence. Given the number of potential advantages inherent in cue-controlled relaxation over other treatment procedures, a well-controlled investigation is needed to assess the effectiveness of this technique.

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