

EFFECTS OF RELAXATION RESPONSE TRAINING ON ATTENTIONAL DEFICITS IN SCHIZOPHRENICS¹

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Summary.—Four groups of six male patients each (12 = schizophrenic; 12 = antisocial personality) volunteered. One group from each diagnostic category were instructed in the Relaxation Response while the other two groups were instructed with a placebo exercise. After training, subjects were exposed to an attentional task involving manual responding to visual stimuli. Analyses of several dependent measures including mean correct responses yielded no significant group differences.

Several researchers during the past 15 years have reported the effects of meditation/relaxation on regulation of various kinds of behavior. There are indications that some forms of meditation/relaxation may be effective in developing attentional control in nonclinical populations (6). However, little evidence is available on the application of this form of intervention in schizophrenics who often present disorders of attention. The purpose of this study was to examine the effects of a simple relaxation technique (2) on attentional responses in schizophrenics (7).

Four groups of six males each (aged 18 to 35 yr.) were randomly selected from a pool of 28 inpatient volunteers residing in a 1,200-bed state hospital. All subjects were right-handed males between the ages of 18 and 45 yr., with good corrected or uncorrected vision. Also, all subjects were on standard neuroleptic medication. Of these, 12 were diagnosed as chronic undifferentiated schizophrenic while the remaining 12 were diagnosed as antisocial personality. Diagnosis was independently accomplished by a 1-hr. unstructured interview and a review of history from available chart information by a licensed psychologist and an attending psychiatrist according to DSM-III criteria (1). Antisocial personality disorders were included as these hospitalized patients did not exhibit cognitive deficits.

A total of four groups ($n = 6$) were formed (two schizophrenic and two antisocial). One schizophrenic and one antisocial group received training in Benson's Relaxation Response by a trained technician (2) over a period of one morning. The other two groups simply received a brief introduction to the idea of relaxation and stress by a trained technician lasting approximately one hour (5). Also, all four groups were then presented a standard explanation of both general meditation and relaxation techniques (6). Immediately after instruction, the relaxation group practiced the technique once more with another instructor to ensure effectiveness of the initial instruction. Both instructors were blind to histories and diagnoses.

Participants were escorted to a laboratory the day after instruction by an experimenter also blind to diagnoses and treatment. After orientation to the room and an initial 15-min. adjustment period, subjects instructed in Benson's relaxation were told to practice the relaxation response for an additional 15 min. The group receiving just

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a rationale for relaxation was instructed to relax as best as they could. After 15 min. of practicing some form of relaxation, subjects were then presented the experimental task. Three randomly timed (variable interval of 1 to 3 sec.) red flashing lights located approximately two feet in front of the subject were presented for 5 min. (a total of 20 continuous trials of 15 sec. each with a potential for 900 lights during the entire sitting). Each participant was to respond to the lights by pressing one of three corresponding red buttons on a metal box which was placed on the lap. Correct responding was scored when a subject pressed the button which matched the flashing light before the next flashing light. An initial practice period, which allowed the participants to become familiar with the apparatus and procedure, preceded actual assessment. The attention task was fashioned as suggested by Cromwell (3) using the protocol developed by Jerison (4).

Analysis of variance (group \times instruction \times trials) of total correct responses per set indicated that there was no significant difference in responses of the four groups to the attention task, either between the two disorders, between the types of instruction, or in the interaction of disorders by instructions. Table 1 provides the mean and standard deviation for the correct responses for each group collapsed across trials. Practice of

TABLE 1
MEAN CORRECT RESPONSES TO FLASHING LIGHTS FOR
TWO EXPERIMENTAL AND TWO CONTROL GROUPS ($n_s = 6$)

Clinical Groups	N	Instructions			
		Relaxation		Placebo	
		M	SD	M	SD
Schizophrenic	6	12.6	2.1	17.9	2.4
Antisocial	6	10.6	1.9	18.6	1.6

a simple relaxation procedure does not improve existing attention in either schizophrenic or antisocial personality inpatients as measured by the task used in this study. However, several issues should be considered in interpreting these findings. First, although random assignment to treatment groups was used, no pretreatment baseline measure was made which masked potential treatment effects. Second, more trials (of flashing lights) may have eventually yielded change in the attention of the treatment groups. Groups should be larger.

REFERENCES

1. AMERICAN PSYCHIATRIC ASSOCIATION. (1980) *Diagnostic and statistical manual*. (3rd ed.) Washington, DC: American Psychiatric Assn.
2. BENSON, H. (1975) *The relaxation response*. West Caldwell, NJ: Morrow.
3. CROMWELL, R. L. (1975) Assessment of schizophrenia. *Annual Review of Psychology*, 26, 593-619.
4. JERISON, H. J. (1956) Effect of combination of noise and fatigue on a complex counting task. Wright-Patterson Air Force Base, OH, Wright Air Development Center, US Air Force.
5. PUENTE, A. E., & BEIMAN, I. (1980) The effects of behavior therapy, self-relaxation, and Transcendental Meditation on cardiovascular stress response. *Journal of Clinical Psychology*, 36, 291-295.
6. SHAPIRO, D. H. (1980) *Meditation*. Hawthorne, NY: Aldine.
7. WYNEE, L. C., CROMWELL, R. L., & MATTHYSEE, S. (1978) *The nature of schizophrenia: new approaches to research and treatment*. New York: Wiley.

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