Effectiveness of Structured Psychodrama and Systematic Desensitization in Reducing Test Anxiety

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Thirty-six students with examination anxiety volunteered to take part in a study of the effectiveness of two kinds of treatment, the structured psychodrama method and the systematic desensitization procedure, in reducing test anxiety. They were randomly assigned to one of three groups: structured psychodrama, systematic desensitization, and a no-treatment control. All the subjects were tested before and after the treatments on two tests, the Suinn Test Anxiety Behavior Scale (STABS), which measures test anxiety, and the Neuroticism scale of the Eysenck Personality Inventory (EPI-N scale), which measures level of neurotic behavior. The results showed that subjects in both treatment groups significantly reduced their test-anxiety scores compared with the controls. This was also congruent with gains as tested in vivo. A comparison between the two treatments, however, showed no significant differences. Also, there were no statistical differences among the three groups on the measure of neuroticism either before or after the treatments. It is concluded that the structured psychodrama method is as effective a mode of counseling as systematic desensization in treating test anxiety.

One of the outstanding observations of the literature on the modification of test anxiety is the plethora of interventions suggested for the treatment of this disorder. In the long list of the reported treatment modalities one finds procedures such as systematic desensitization (Anton, 1976), a combination of systematic desensitization and self-study instructions (Osterhouse, 1972), autogenic relaxation (Reed & Meyers. 1974), cue-controlled relaxation (Russell & Sipich, 1974), self-counseling with relaxation (Allen, 1973), covert positive reinforcement (Finger & Galassi, 1977, Guidry & Randolph, 1974), cognitive modification (Meichenbaum, 1972), rational-emotive treatment (Goldfried & Sobocinski, 1975), implosive therapy (Smith & Nye, 1973), and modeling (Sarason, 1975), to mention only a few. The implications of the existance of this long and diversified list are not entirely clear. One

possibility is that the diversity of the recommended treatments reflects a state of uncertainty marked by the lack of consensus regarding the most effective forms of treatment for test anxiety. On the other hand, it could also signify a positive trend of supplying a variety of treatment options to choose from in rendering services. This may have a substantial appeal to practicing counselors who recognize that no single treatment can be equally effective for every client and who are frequently confronted with the task of adjusting treatment procedures to suit the needs of the individual case. In that respect widening the range of effective treatment options might be regarded as a useful development.

Despite their diversity, however, the counseling approaches for test anxiety seem to have two interesting characteristics in common. One is that nearly all of them stem from learning principles and utilize psychological technologies associated with behavior therapy. For the proponents of the behavioristic approach this represents an asset, an added validation for their orientation. But for those psychologists who adhere to other approaches, widening the range

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The study was supported by Grant 01-3394 from Bar Ilan University. Thanks are extended to Zipora Fleishman for her valuable contribution.

of treatment options within the traditional behavioristic framework may have a rather limited appeal. Unfortunately for them the research with techniques other than those designated as behavior therapy has not been very helpful so far.

The second common characteristic is that many of the reported approaches for dealing with test anxiety seem to have followed one basic principle. This principle maintains that the most important factor governing the extinction of phobias is "arranging for the phobic client to successfully confront (imaginally or in vivo) the sources of his anxiety without experiencing the catastrophic consequences neurotics typically anticipated" (O'Leary & Wilson, 1975, p. 233). Thus, regardless of the different learning principles underlying the suggested treatments, in practice most of them employed technical procedures which, in fact, represent an implementation of this aforementioned basic principle.

But adherence to this principle is not exclusively contingent upon the adoption of those procedures traditionally associated with behavior therapy. It is quite possible to follow this principle using other interventions. One example of these is the techniques used in psychodrama.

The psychodrama method (Moreno, 1946) stems from theoretical concepts that differ from those underlying the behavior therapy In practice, however, it uses approach. procedures and techniques which can easily implement the components described in the above principle of the extinction of phobias. The psychodramatic treatment is based on the simulation of environmental and psychological realities. In these simulated constellations a client can explore, through acting, past, present, and if desired, even future behavior in a special learning condi-This special, simulated condition protects the client from being the victim of uncontrolled adversive consequences which may result from his or her actions. awareness of such a protection facilitates confrontations with hitherto fearful situations and thus provides an opportunity to go again through the motions experiencing new, nonthreatening emotions. In psychodramatic terminology, the participants in psy-

chodrama are required to use their spontaneity rather than their memories (Moreno & Kipper, 1968). Sponaneity, for all practical purposes, implies developing an appropriate response to a new situation or a new, as well as appropriate, response to an old situation (Moreno, 1946). To enhance this process numerous psychodramatic techniques have been devised. Among the better known ones are the empty chair, the double (sometimes known as the alter-ego), and the role reversal. It seems, therefore, that the method of psychodrama might be an ideal medium for implementing the principle of anxiety extinction and prove to be an effective method to deal with psychological disorders characterized by excessive anxiety reactions.

The purpose of the present study was to test the hypothesis that the structured psychodrama method—a variant of psychodrama—is as effective a mode of treatment for test anxiety as the systematic desensitization procedure.

Method

Subjects

Thirty-six students (27 women, 9 men) from Bar Ilan University participated in the study. They were volunteers who responded to a public announcement soliciting applicants for an experimental program for treating test anxiety. The announcement described the exploratory nature of the program, its requirement, and duration. The original 40 students who applied were randomly assigned to one of three groups, but subsequently 4 students withdrew, leaving only 36 subjects in the program. The three groups to which the subjects were assigned included two experimental treatment groups and one waiting-list control group. Of the two treatment groups, one received structured psychodrama treatment. It consisted of 14 subjects with a mean age of 28.3 years (SD = 9.3). The second treatment group received systematic desensitization treatment. This group consisted of 10 subjects with a mean age of 28.1 years (SD = 11.1). The control group consisted of 12 subjects with a mean age of 26.3 years (SD = 6.1).

The subjects were 20 undergraduate and 16 graduate students from the social sciences and the liberal arts. Twenty-one of them had been, in the past, in some form of counseling or psychotherapy directly or indirectly related to their coping difficulties in testing situations.

Treatments

Two kinds of psychological treatments were included in the study, one for each experimental group. These were a systematic desensitization method and a structured psychodrama method. A detailed description of these modes of treatment is provided in the following.

Systematic desensitization. This treatment procedure followed the desensitization method advocated by Wolpe (1969) with the exception that it was rendered in small groups of three or four participants each rather than on an individual basis. It began with an introductory session to familiarize the participants with each other, share and discuss their test-anxiety experiences, and receive information about the nature of the procedure. The next two sessions were devoted to the practice of a muscular-relaxation technique (see Rimm & Masters, 1974). In each of these sessions the subjects were directly relaxed by their counselor. During the 2 weeks between the sessions they were asked to practice at home, once a day, using a preprepared cassette recording of the relaxation instructions. They were also instructed to record their progress on a chart which was discussed in the sessions. The ensuing 10 sessions comprised the desensitization proper. This was based on a preprepared 20-item (situations) hierarchy related to test anxiety. These items were arranged in a progressive order from the least to the most anxiety-evoking situations.

The subjects were asked to imagine each item as it was read to them by their counselor. They were relaxed before and after each item exposure. An item was considered desensitized when it was visualized by all the group members three successive times, for 30 seconds each, without evoking anxiety. Typically, a desensitization session covered three items. It began with a rehearsal of the last one or two items desensitized in the previous session and then proceeded with the new items. The last part of each session, about 15 minutes, was devoted to a discussion of the subjects' experiences during the desensitization procedure. The final session included a summary and evaluation of the entire treatment.

Structured psychodrama. This mode of therapy was based on the psychodrama method originated by Moreno (1946). It varied slightly, however, from the classic psychodrama procedure in that it was rendered in a structured format which was repeated for each subject rather than the highly spontaneous manner which characterizes Moreno's original method. To denote this difference the presently employed procedure was termed structured psychodrama.

As a rule, the structured psychodrama method followed the general procedural structure used in the systematic desensitization. It was also rendered in small groups of three or four participants each, had an introductory session, two practice sessions, and 10 treatment meetings followed by a summary session. The first session allowed the participants to introduce themselves to each other, share their test-anxiety experiences, and receive information about the procedure. The next two sessions were devoted to the practice of the following three psychodramatic techniques, which were to be used extensively during the treatment

proper. One was the *empty chair*, a psychodramatic technique that was elaborated and widely used in Gestalt therapy. In the present application it involved talking to an imaginary person or even an imaginary behavioral quality as represented by an empty chair. Examples of such qualities are fear, anxiety, ambition, and so on. The second technique was role reversal, which requires the subjects to change their identity with that of another significant person as portrayed by a fellow subject acting as a helper. The helper could be representing a real person, for example, the examiner, a personified aspect of the actor's personality, for example, the lazy part, or even a personified inanimate object, for example, a notebook, an examination questionnaire, a watch, and the like. The third was the double technique, which involved a fellow subject in the role of an extension of the actor's own self. This double usually portrayed the unexpressed part of the actor, the inner voice. Acting alongside the actor, the double strived to facilitate a fuller expression of the feelings and thoughts embedded in the portrayed situation. The practice of these three techniques used non-test-anxiety related situations such as arguing with a friend about which movie to attend.

The ensuing 10 sessions comprised the structured psychodrama method proper. It was based on the enactment of the same 20-item (situations) hierarchy used in the desensitization method. The procedure of the enactment was as follows: The 20 items were classified into psychodramatic units. Such units were comprised of one item, sometimes two or three pooled together, which constituted an interrelated behavioral sequence. An example of a one-item unit was "sitting at your desk the evening before the examination." An example of a multi-item unit was "sitting in the examination room, and watching the examiner enter the room with a pile of questionnaires under his or her arm." Each unit was enacted in three successive parts. The first part was exposing the actor to the situation as simulated in the therapy room. There he or she was asked to soliloquize, loudly, the feelings and thoughts, and to confront an empty chair. In the second part, still the same situation, helpers were introduced as doubles, and any other pertinent role depending on the situation. In this part the actor typically reversed roles with the helpers, again according to the content of the situation and the information elicited by the double. The third part was a complete reenactment of the entire unit, only this time the way the actor would have liked it to happen. To aid the actor a double was typically introduced as a reinforcer of the desired behavior. The time required for the enactment of one unit in its entirety ranged from 10 to 20 minutes depending on the number of items comprising the unit.

Each unit was role played, repeatedly, by each participant with the other group members taking turns as helpers. A treatment session covered the enactment of one or two units by every participant. The last 15 minutes of every structured psychodrama session was devoted to a brief discussion of the subjects' experiences. The final session included a summary and evaluation of the entire treatment.

Procedure

Upon signing up for the program the subjects were given two psychological tests: the Suinn Test Anxiety Behavior Scale (STABS; Suinn, 1969) and a general neuroticism test, the Neuroticism scale of the Eysenck Personality Inventory (EPI-N scale; Eysenck, 1947). In addition, a background information form was administered. This included questions regarding familial history, study habits, subjects of studies, and treatment history. The testing situations were conducted individually. On the basis of the obtained information, a 20-item (situations) hierarchy was established to serve both treatment modalities used.

The subjects were randomly assigned to one of two experimental treatment groups and a waiting-list group. The treatments were offered in small groups, once a week, for a period of 14 weeks. Each treatment was rendered by a trained counselor. One counselor had studied psychodrama in a graduate program under the supervision of the senior author and had 1 year of experience; the other counselor had 1 year of experience in behavior therapy. Subjects assigned to the control group were informed that there are no more openings in the treatment groups and that they would have to wait for their turn about 3 months. At the end of the 14-week period all the subjects were retested on the STABS and the EPI-N scale. Again, the testing was conducted individually. The participants in the two treatment groups were also asked for their subjective evaluation of their gains. The program was designed so that the last treatment session fell during the examination period. At that point, the subjects had already had the opportunity to test their gains in vivo and provide realistic feedback.

Results

Table 1 presents the means and standard deviations of the STABS and the EPI-N scale scores obtained by the structured psychodrama, desensitization, and control groups. These are shown separately for the pretreatment and the posttreatment testing conditions under the headings before and after.

The scores obtained by the three groups on the STABS in the before testing condition were equivalent to the 85th–95th percentiles of the American samples (Suinn, 1969). In the after testing condition they fell to the 65th–70th percentile except for the controls, whose scores remained in the 95th percentile. The scores on the EPI-N scale for the three groups in both testing conditions were within the normal range for Israeli subjects.

The significance of the differences among the three groups in the first (before) testing conditions was determined by two separate

Table 1 Means and Standard Deviations of STABS and EPI-N Scale Scores Obtained by the Three Groups Before and After the Treatments

		STABS		EPI-N	
Group	n	Before	After	Before	After
Psychodrama	14		•		
M		168.42	149.92	10.92	10.57
SD		26.92	23.52	2.97	2.62
Desensitization	10				
M		154.30	142.00	10.80	10.20
SD		33.55	36.30	2.93	2.93
Control	12				
M		169.75	169.16	13.58	12.66
SD		37.50	33.36	3.42	2.34

Note. STABS = Suinn Test Anxiety Behavior Scale; EPI-N = Neuroticism scale of the Eysenck Personality Inventory.

analyses of variance, one for the STABS and one for the EPI-N scale. For the STABS scores the results were nonsignificant, F(2,35) = .7. For the EPI-N scale scores, however, the results were close to but not quite significant, F(2, 35) = 3.0, p = .06. In terms of the difference between the first (before) and the second (after) testing results, Table 1 shows that on the measure of test anxiety (the STABS) there was a decrease in the mean scores obtained by both the structured psychodrama and the systematic desensitization groups. The scores of the controls on the same test remained almost identical in the two testing conditions. By contrast, the results on the measure of neuroticism, the EPI-N scale were remarkably similar in both testing conditions for all three groups.

To determine the significance of the differences among the scores obtained by the three groups in the second testing condition, two separate analyses of covariance were conducted, one for the STABS and one for the EPI-N scale. In these analyses the scores obtained in the pretreatment testing condition were held as covariates. The results showed significant differences among the three groups only on the measure of test anxiety (the STABS), F(2, 35) = 8.3, p < .001, but not on the measure of neuroticism (the EPI-N scale). For the scores obtained on the latter measure the main effect was nonsignificant, F(2, 35) = .3.

Following these findings an additional analysis of covariance with the STABS

scores was conducted. This analysis aimed at determining the usefulness of receiving treatment, regardless of kind, in reducing test anxiety. The STABS scores of the two treatment groups on the second testing condition were pooled together and compared with those of the control group with the scores obtained on the first testing condition held as covariates. The results showed a significant main effect for the factor of treatment, F(2, 35) = 15.8, p < .001. It appears, therefore, that both treatment groups reduced their test anxiety as measured by the STABS significantly more than the controls who received no treatment at all.

The next question was which of the two treatments was the more effective modality. The answer to this question was sought through yet another analysis of covariance comparing the STABS scores obtained on the second testing by the structured psychodrama group with those of the systematic desensitization group. Again, the STABS scores obtained in the first testing served as covariates. The results showed a nonsignificant main effect, F(1, 23) = .9, indicating that both modes of counseling were equally effective.

The scores of all the subjects in the first administration of the STABS and the EPI-N scale were also analyzed according to seven background factors. A series of separate one-way analyses of variance and t tests showed no significant differences on either test for six of these factors, namely, age, marital status, length of stay in Israel, years of study, major subject, and past involvement in psychotherapy. On the factor of the sex of the participants, however, females scored on the STABS significantly higher than males but only in the pretreatment testing (M = 172.07, SD = 31.1 vs. M =143.55, SD = 27.1), t(35) = 2.44, p < .01. The issue of sex differences was not pursued beyond this analysis due to the small number of male participants (two in each treatment group).

The relationship between the measure of test anxiety (the STABS) and that of neuroticism (the EPI-N scale) remained the same throughout the entire study in spite of the reduction of test anxiety by the treated groups. The product-moment correlation

between these two measures was .44 in the pretreatment testing condition and .41 in the second testing condition.

Finally, upon the completion of the treatments the subjects were asked for their subjective evaluation of the outcomes. It should be recalled that at that time they had already had opportunities to test their gains in vivo. Nearly all the responses were positive, indicating a considerable reduction of test anxiety.

Discussion

The fact that both modalities, the structured pyschodrama method and the systematic desensitization procedure, proved to be equally successful gives credence to the value of the former mode of treatment. It demonstrated that the structured psychodrama method can reduce test anxiety as effectively as the systematic desensitization procedure, which has been one of the most recommended methods to deal with test anxiety (e.g., Richardson & Suinn, 1974; Scissons & Njaa, 1973). The practical advantages of having structured psychodrama as a competitive form of treatment are first, that it provides counselors with a wider range of treatments to choose from and second, that this choice may also accommodate practitioners of a wider range of counseling orientations.

An important implication of the results of this study concerns the use of desensitization as a target by the structured psychodrama method. The extinction of anxiety reaction(s) with the desensitization procedure is an innovation introduced by the behavioristic approach and not by psychodrama. In fact, a comparison of the theoretical principles underlying these two treatment modalities shows some incompatible differences. For example, psychodrama theory adheres to dynamic concepts such as catharsis and spontaneity which are rejected by behavioristic theories. Despite the theoretical differences, in practice some similarities are also evident. These can be illustrated in the case of the procedures used for desensitizing test anxiety. Thus, desensitization can be broadly defined as a procedure that exposes the phobic person to

the sources of the anxiety but without experiencing the catastrophic consequences he or she typically anticipates. In the systematic desensitization procedure the exposure is done by visual imagination, whereas in the structured psychodrama method it is achieved by simulating the anxiety-evoking situations. In systematic desensitization the catastrophic consequences are prevented by pairing the exposure with relaxation. On the other hand, in structured psychodrama they are prevented by introducing the following two interventions: One is the use of the double technique, which offers instantaneous support, and the role-reversal technique, which provides temporary detachment from the emotional state. The other intervention is providing the client with the opportunity to experience an alternative, desired situation. Also, in both forms of treatment the client is given a substantial degree of control over the performance. Thus, the structured psychodrama, although traditionally considered a dynamic form of treatment, in the present case can be regarded as a variant of in vivo desensitization, or rather a simulated in vivo desensitization.

The notion of a simulated in vivo desensitization procedure raises an additional possibility. It suggests that perhaps the structured psychodrama method may be used as a substitute for in vivo desensitization where access to the original anxiety-evoking situation is either difficult or impractical.

The results also showed that the two forms of treatment reduced the level of test anxiety of the treated subjects but did not change significantly their level of general neuroticism. In fact, the EPI-N scale scores of all three participating groups hardly changed from the first to the second testing condi-The effect of the treatments was. therefore, restricted to their intended target, the reduction of test anxiety. Similar restricted effect was also noted in other studies (e.g., Anton, 1976; Bedell, 1976). It is possible, however, that the lack of decrease in the general neuroticism level could be attributed to the groups' baseline, that is, their pretreatment EPI-N scale scores. baseline showed scores within the normal range. With the absence of abnormally high EPI-N scale scores there is no reason to expect any significant effect of the intervention on neuroticism.

An issue that requires a further comment concerns the meaning of the changes in the STABS scores following the two treatments. Although these changes proved to be statistically significant, the posttest scores of the two treated groups were equivalent to the 65th-70th percentile of the American norms. Such results raise the question of whether or not the treatments could be considered clinically successful. The subjective, overall evaluation of the outcomes given by the treated subjects tends to support the effectiveness of the interventions. As to the relatively high percentile level of the posttest STABS scores, two possible explanations might be advanced. First, the final testing on the STABS was conducted immediately at the termination of the treatments and during the school's examination period. At this point the subjects had already taken one or two exams but did not have their results. It is quite conceivable that the absence of these results left a residual higher anxiety level which was also reflected in their performance on the STABS. Thus, from the point of view of research strategy, terminating the counseling shortly before the school's examination period has both advantages and disadvantages. The advantage is that it allows the subjects to test their gains in vivo. The disadvantage is that self-reports regarding the attained anxiety level may be contaminated by the tension characterizing this period. Second, a comparison between the present STABS scores and the American norms must be interpreted with caution. One should bear in mind the possibility of norm variations due to cultural differences between American and Israeli samples and the fact that the average age of the present subjects was undoubtedly much higher than that of the students in the American sample (Suinn, 1969).

Interpreting the present results as a confirmation of the effectiveness of the employed treatments could be challenged on the ground of demand characteristics. It could be argued that the obtained difference

between the treated groups and the control group was due to the counselors' expectation for the treated subjects to get well. Or it could be that the treated groups received special attention, irrespective of content or procedure, while the controls did not. According to this a firmer conclusion regarding the effectiveness of the treatments employed could have been reached had the study included a placebo treatment control group. Obviously, the lack of a placebo control group is a limitation of studies such as the present one. Unfortunately, however, there are practical as well as ethical problems which make the inclusion of this kind of control difficult, as already pointed out by Finger and Galassi (1977). Furthermore, it might be recalled that about 60% of the participants had been, prior to the onset of the present study, in psychological treatments regrading their difficulties, including test anxiety. If the counselors' expectations, attention getting, or being involved in some supervised activities by themselves could have reduced test anxiety in the present study, why did they not have similar effect in the previous treatments?

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Received September 16, 1977