SYSTEMATIC DESENSITIZATION VS. STUDY METHODS IN THE TREATMENT OF STUDENTS WHO SEEK HELP FOR ACADEMIC DIFFICULTIES

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Systematic Desensitization vs. Study Methods in the Treatment of Students Who Seek Help for Academic Difficulties

by

James E. Crowder

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Investigators who have tried (mostly unsuccessfully) to help students who have academic problems have concluded that these students have a low self-concept, and that they choose to do badly in academic activities because doing badly reinforces their self-concept as an inadequate person.

The rationale for the present experiment was that students who seek help for academic problems have those problems because academic activities are anxiety-eliciting stimuli (perhaps for the above reason) for these particular students, and, therefore, the students either avoid the activities altogether, or they do them inefficiently. The task, therefore, was to reduce the anxiety to academic activities, and provide new learning in the form of effective study methods.

Ss were undergraduate student volunteers with cumulative GPAs of 2.2 or below. A desensitization group received (1) systematic desensitization to eliminate avoidance responses to academic activities, and (2) information about effective academic techniques. A study methods group (included to control for possible effects of teaching effective academic techniques per se) was taught effective scholastic

techniques in an authoritarian and persuasive manner. A no treatment group was included as the main control group. Hypothesis one stated that students receiving systematic desensitization would exhibit a significantly greater increase in GPA than Ss in the study methods and no treatment groups.

To test the possibility that systematic desensitization of anxiety to academic activities would result in less anxiety, the Taylor Manifest Anxiety Scale (TMAS) and the IPAT Anxiety Scale Questionnaire (Self Analysis Form) (IPAT) were administered before and after treatment. Hypothesis two stated that students in the desensitization group would report a significantly greater reduction in anxiety than Ss in the study methods and no treatment groups.

Although Gatley (1965) reported that help-seeking students seemed more anxious than students in general, he failed to find a difference when the measuring instrument was the TMAS. It was possible, however, that a different instrument, the IPAT, measuring covert anxiety, would show the help-seeking students more anxious than other students. Hypothesis three stated that students who seek help for academic difficulties report significantly more covert anxiety than other students.

Treatment was given in the Winter Term. GPAs of both treatment groups were higher in the Winter and Spring Term than in the preceding Fall Term, but the only significant increase was from Fall to Winter Term for the study methods group. The no treatment group's GPA significantly decreased

from Fall to Spring Term.

Anxiety of the desensitization group did not change significantly. Significant decreases were reported by the study methods group on the overt part of the IPAT, and by the no treatment group on the TMAS.

Hypothesis three was the only hypothesis confirmed; the IPAT scores were significantly higher for the students in the present study than for the IPAT college norm group.

The drop in anxiety by the study methods group may have occurred because many of the students took the anxiety tests the second time after taking one or more final examinations. The drop in anxiety by the no treatment group lacks cogent explanation.

There were fewer Ss in this study than was desirable. Methods of obtaining more Ss and ways of ensuring that they continue treatment were discussed. Also discussed was the possibility that a different anxiety hierarchy, one oriented toward reducing students' anxiety to success rather than to academic activities, might produce better results than were obtained in the desensitization group of this study.

Approved: Dozier W. Thornton, Chairman
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Introduction

Study methods classes are offered at many universities for students who seek help for academic problems. However, these classes are usually not evaluated in terms of their effectiveness. Results of experimental studies which have been evaluated have either turned out negative or inconclusive.

Some evidence exists which indicates that students who seek help for academic difficulties are a unique population. Study methods classes have offered opportunities to study this population, and investigators have found some differences on personality variables between students who seek help and other students. The investigators' objective was to discover differentiating personality variables and to suggest treatment appropriate to their findings.

The "Methods of Effective Study" course, Psychology 101, which was previously offered at Michigan State University, has provided subjects for studies on students who seek help for academic problems. Psychology 101 was described in the university catalog as follows:

> Methods of effective study. Fall, Winter, Spring. 1 credit. Not open to Juniors and Seniors except on recommendation from the counseling center and approval of department. Group and individual counseling for students with problems in academic achievement, including motivation, concentration, and attitudes toward study; methods and techniques of study; utilization of time; and student

> efficiency in the classroom (Michigan State University Catalog, 1963).

Psychology 101 was an elective course, and the decision to enroll in it rested with the individual student, although a student's counselor or academic advisor could recommend it. Students in Psychology 101 voluntarily sought help for academic problems which were manifested in low academic achievement.

DeBolt (1963) administered the Edwards Personal Preference Schedule (EPPS) to students enrolled in Psychology 101, and compared the mean on each of the 15 variables with the mean established by the EPPS college norm group. He found that the Methods-of-Study males scored significantly higher than their EPPS norm group on Abasement, but significantly lower than the norm group on both Achievement and Dominance. For females, the Methods-of-Study group was significantly higher in Abasement and Nurturance than the norm group, but were exceeded by the norm group in Dominance. (In all cases, the higher the score, the greater the need.)

The manifest needs associated with these differentiating variables are as follows:

> Abasement: To feel guilty when one does something wrong, to accept blame when things do not go right, to feel that personal pain and misery suffered does more good than harm, to feel the need for punishment for wrongdoing, to feel better when giving in and avoiding a fight than when having one's own way, to feel the need for

confession of errors, to feel depressed by inability to handle situations, to feel timid in the presence of superiors, to feel inferior to others in most respects.

Achievement: To do one's best, to be successful, to accomplish tasks requiring skill and effort, to be a recognized authority, to accomplish something of great significance, to do a difficult job well, to solve difficult problems and puzzles, to be able to do things better than others, to write a great novel or play.

Dominance: To argue for one's point of view, to be a leader in groups to which one belongs, to be regarded by others as a leader, to be elected or appointed chairman of committees, to make group decisions, to settle arguments and disputes between others, to persuade and influence others to do what one wants, to supervise and direct the actions of others, to tell others how to do their jobs.

Nurturance: To help friends when they are in trouble, to assist others less fortunate, to treat others with kindness and sympathy, to forgive others, to do small favors for others, to be generous with others, to sympathize with others who are hurt or sick, to show a great deal of affection toward others, to have others confide in one about personal problems.

These variables seem to indicate dominant personality characteristics rather than transient reactions to failure in college because the EPPS was given to students enrolled in Psychology 101 during their first term at Michigan State University, and, consequently, they had not yet experienced failure in college.

Both males and females in the Methods-of-Study course exhibited a significant excess of EPPS Abasement need, and a significant deficit of Dominance need. Dominance need is

approximately the opposite of Abasement need; therefore, a high score on one is associated with a low score on the other. DeBolt (1963) interpreted these scores to mean that the Methods-of-Study students have low self-value, i.e., a feeling of inadequacy and inferiority.

Methods-of-Study males, in addition, scored lower on the Achievement scale, which suggests that they lack the level of motivation generally found among male college students. DeBolt suggests that the Methods-of-Study males feel inferior and accept themselves as such.

The high Nurturance need among Methods-of-Study females is difficult to understand. They seemingly have a strong need to help others, yet they feel inferior and in need of help themselves. DeBolt noted that the high Nurturance need did not fit into the general inadequacy syndrome as indicated by the other scales, and speculated as follows:

> Is it possible that this is actually a displaced need for Succorance, or dependency, whose displacement was motivated by ambivalence? Ambivalent feelings toward dependency are often observed in the Methods-of-Study groups. It should be remembered that the EPPS is designed to tap manifest needs and does not differentiate between manifest needs which are "real" and those which are reactive or displaced (1963, P. 31).

In the same study, DeBolt suggests, as does Kimball (1953), that a student may experience study problems, or even fail, in order to maintain his self-concept as an inadequate person. DeBolt states that students with study

problems are "involved in the process of maintaining an inadequate self-concept" and, therefore, it would be appropriate "to explore and develop methods for changing self-concept," because "the teaching of study techniques and mechanics will not provide a solution for problems which have their origin in personality dynamics" (1963, pp. 33-34).

Gatley (1965), using the Taylor Manifest Anxiety Scale (TMAS), (Taylor, 1953), found that there was no significant relationship between anxiety and scholastic aptitude scores of Psychology 101 students. These students score significantly lower than the average college student on their scholastic aptitude tests, but are no more anxious than other students. It seemed probable that students, after being told that they scored lower than most students on the aptitude tests, would experience greater anxiety than those students who were informed that they made higher scores. But administration of the TMAS during Orientation Week showed that those students who score lower on the aptitude tests and who later enroll in Psycholgoy 101, experience no greater anxiety after being told of their relative position on the aptitude tests than other students.

Gatley (1965) believes his findings are consistent with DeBolt's (1963) findings and conclusions. Gatley writes:

> ...the low scores which 101 students obtain on academic potential measures would be consistent

> with such a ...poor... self-concept. If 101 students are more comfortable with a view of themselves as poor students, it is logical that knowledge of low scholastic aptitude scores would not make them anxious. On the contrary, from the viewpoint of phenomenological personality theory, the 101 student would more likely experience anxiety if he were to anticipate doing well, not poorly, in school (1965, p. 30).

Likewise, Anderson (1952) states:

> To alter one's pattern of behavior is to court ...anxiety.... One might expect that a person who has structuralized the assumption that he is incompetent would be eager to change. This is not according to fact, for it is the familiar rather than the hypothetically desirable that is the comfortable role (pp. 235-236).

Further support for this view comes from Roth and Meyersburg's (1963) observations that help-seeking students experience academic problems out of a need for self-abasement. They believe that, because of "impulsive self-disparagement," students seeking help for achievement problems are motivated to do poorly. "Poor achievement," according to these authors, "is an expression of the student's choice" (1963, p. 535).

A student's choice to do poorly rather than well in school may be motivated by hostile feelings. Golburgh and Penney (1962) surveyed the literature and found a body of empirical data and informed speculation that seemed to show a relationship between hostility and underachievement. In counseling college students, these authors found that the major difficulty is verbalized by the students as an inabil-

ity to study. They write:

> Inability to study is frequently a result, at least in part, of the expression of unconscious or partly conscious aggressive feelings toward the student's parents. By not studying, the student almost assures academic failure, which serves as a highly aggressive attack against the parents (1962, p. 135).

If all of the above findings and speculations are correct, there must be some relationship between the failing student's hostility toward his parents and his low self-concept. Perhaps the relationship is as follows: the parents set their own achievements up as standards for their children, which creates hostility toward the parents. This hostility is expressed by nonachievement. The children are scolded for their nonachievement by the parents, who continue to hold themselves up to their children as standards. As a consequence of their being berated by their parents for doing so badly, the children begin to feel inferior, and their low self-concept develops.

Golburgh and Penney (1962) developed sector counseling for nonachieving students and claim that it is an effective treatment. In sector counseling, the therapist focuses upon the student's reporting symptom, the inability to study, and attempts to hold the counseling interviews to this topic. If a client indicates that he is expressing hostility toward his mother by failing to study, for example, then the therapist talks with the student about his relationship

with his mother and its effect on his studying, and discourages attempts by the student to talk about his dormitory life, sex problems, etc. Golburgh and Penney feel that this approach is an effective short-term treatment, but do not provide experimental support for their belief.

Spielberger, Weitz, and Denny (1962) used group counseling in an attempt to prevent pre-selected students from suffering academic hardships. On the basis of their scores (upper 30 per cent) on the TMAS, (upper 50 per cent) Welsh Factor A Scale, and (4th stanine or above) an ability test, male students in their first term were offered an opportunity to participate in the group counseling program. Half of the volunteers were given group counseling sessions once a week, during which they were encouraged to discuss methods of study, and individual academic and personal problems. The remaining half of the volunteers were told that they would have to wait until the following semester before they could get into the group meetings. Counseled students showed a significantly greater increase in GPA between their mid-semester and end of semester grades than the control students. However, it was not reported whether the treatment affected GPAs in following semesters. Also, the study did not include a second treatment group to control for possible placebo effects.

Baymur and Patterson (1960), and Broedel, Ohlsen,

Proff, and Southard (1960), failed to obtain significant improvement of group-counseled high school underachievers.

Related to the above studies insofar as it was designed to help students who seek help for academic difficulties, but different in that it was focused on problems in one course, was a study by Paul (1966). Subjects in his study were students who experienced intense performance anxiety in a required public-speaking course. Paul conceptualized the problem in terms of learning theory, i.e., intense performance anxiety is a learned, inappropriate emotional reaction that can be unlearned. He compared the effects of a counterconditioning technique with insight-oriented psychotherapy, attention-placebo therapy, and no treatment. The counterconditioning technique was consistently superior to the other treatments and no treatment on several measures.

Paul used the counterconditioning technique of systematic desensitization developed by Wolpe (1958). This method assumes the counterconditioning of anxiety by successively associating relaxation responses with fantasies of increasingly intense anxiety-arousing situations. While relaxed, a subject undergoing treatment imagines himself in situations which in real life produce anxiety. He begins by imagining himself in situations which elicit little anxiety, then moves to more intense anxiety-eliciting situations. Wolpe states the theory as follows:

> If a stimulus constellation made up of five equipotent elements $A_1A_2A_3A_4A_5$ evokes 50 units of anxiety response in an organism, proportionately less anxiety will be evoked by constellations made up of fewer elements. Relaxation that is insufficient to counter the 50 units of anxiety that $A_1A_2A_3A_4A_5$ evokes may be well able to inhibit the 10 units evoked by A_1 alone. Then if the anxiety evoked by A_1 is repeatedly inhibited through being opposed by relaxation, its magnitude will drop, eventually to zero. In consequence, a presentation of A_1A_2 will now evoke only 10 units of anxiety, instead of 20, and this will similarly undergo conditioned inhibition when opposed by relaxation. Through further steps along these lines the whole combination $A_1A_2A_3A_4A_5$ will lose its power to arouse any anxiety (1958, p. 179).

Paul and Shannon (1966) used systematic desensitization successfully in a group setting. The method was used with students who sought help for interpersonal performance anxiety. After nine group sessions, students reported decreased anxiety in interpersonal situations, and increased their GPAs significantly from the semester preceding treatment to the semester following treatment. GPAs of a no contact group decreased. But GPAs of both groups were above 3.0 before selection for the study; therefore, it is not known how effective this treatment would be with students who seek help because of low GPAs.

At present, there is no cogent experimental evidence of an effective treatment for students who seek help for academic problems, manifested by low GPAs. A somewhat different conceptualization of the problem may be fruitful in developing an effective treatment for these students.

Golburgh and Penny (1962), as discussed above, believed the main problem of these students was an inability to study. It is possible to view this inability as a consequence of unfortunate learning in which anxiety became conditioned to studying. Studying would then be avoided even though the student expressed a desire to be able to study. Counterconditioning by systematic desensitization should reduce or eliminate the anxiety associated with studying, resulting in improved performance by the students who seek help for academic problems.

This conceptualization of the problem is not necessarily antagonistic to the combination inadequate self-concept and expression of hostility theory described above. Studying (acting as a good student) would threaten his self-concept and create anxiety in the poor student.

If anxiety has prevented these students from studying, it is possible that they lack effective study techniques, so that it would be necessary not only to countercondition

them, but also to teach them effective study methods. Including instruction in study techniques, however, with systematic desensitization treatment indicates that a second group is needed, to receive instruction in study methods, in order to determine whether any effects obtained in the study are due to systematic desensitization and instruction in study techniques, or instruction in study techniques only.

The problem, then, is to determine whether a combination of study-methods instruction and systematic desensitization may be more effective in facilitating studying (reflected in higher GPAs) than instruction on study methods alone.

Although Gatley (1965) found no difference in anxiety scores on the TMAS between students who seek help and other students, there is some specualtion that students who seek help are more anxious. It is possible that a covert measure of anxiety may detect greater anxiety in students who seek help, and it may show a significant reduction of anxiety in students who receive systematic desensitization for reduction of anxiety to studying.

Hypotheses

The hypotheses tested by this study are stated explicitly as follows:

Hypothesis one: Students receiving systematic

desensitization will exhibit a significantly greater increase in GPA than students in a study methods group and a no treatment group.

Hypothesis two: Students receiving systematic desensitization will report a significantly greater reduction in anxiety than students in a study methods group and a no treatment group.

Hypothesis three: Students who seek help for academic difficulties will report significantly more covert anxiety than students in the general population.

Method

Subjects

Subjects were volunteers from freshman and sophomore level psychology courses who had cumulative GPAs of 2.2 or below. They were assigned to groups according to the time they had free to attend sessions. The Ss in the no treatment group were those who could not attend sessions at times convenient for the other Ss and the Es. There were six Ss in the desensitization group, five in the study methods group, and four in the no treatment group. (Descriptive data on the Ss are included in Appendix A.)

Treatment Setting

This experiment was conducted at Michigan State University in the Winter Term of 1966-1967. Treatment began during the week of mid-term examinations, and ended in the week before final examinations. Treatment sessions were held in a 10 x 18 ft. room in the Clinic Annex of Olds Hall. The room was painted green, and illuminated by four 40-watt fluorescent light fixtures. At one end of the room was a small window. At the opposite end was a large portable blackboard used by the study methods group instructor for illustrative purposes. (In order to avoid possible experimenter bias on the part of the principal experimenter [E1],

a second experimenter [E2] served as the study methods instructor.) A large rectangular table was in the center of the room, surrounded by straight-backed office chairs.

Anxiety Tests

To test hypotheses two and three, the TMAS and the Cattell and Scheier (1963) IPAT Anxiety Scale Questionnaire, Self Analysis Form (IPAT) were used (copies are included in Appendix B). They were selected partly because of their brevity and simplicity in administration and scoring. Both are easy for the student to understand, and require only 25 minutes or so for administration.

The TMAS contains 50 items drawn from the Minnesota Multiphasic Personality Inventory, which the subjects answer as true or false as applied to themselves. Examples of these statements, and answers which indicate anxiety, are: "I sweat very easily even on cool days." (True) "I am usually calm and not easily upset." (False)

The IPAT was selected mainly for a measure of covert anxiety. It consists of 40 items, divided equally into covert and overt items. The overt half consists of conscious, symptomatic items from which anxiety is easily inferred. Examples of overt items are: "I tend to get over-excited and 'rattled' in upsetting situations." "I am brought almost to tears by having things go wrong." The covert half consists of items that are designed to get at indirect,

hidden manifestations of anxiety: "I sometimes doubt whether people I am talking to are really interested in what I am saying." "I doubt the honesty of people who are more friendly than I would naturally expect them to be." There are three alternatives to each item, one of which the subject must check as his answer. Examples of alternatives are: "True," "In Between," "False," and "Rarely," "Sometimes," "Often."

Study Methods Book

A search of the literature revealed that a study methods book by Robinson (1946) was the best available for purposes of this experiment. Although relatively old, this book contains about the same information as newer books on study techniques. In addition, it gives experimental evidence for the study methods proposed in it, plus information on classroom skills, examination skills, and preparing reports. E2 used this book intensively in teaching the study methods group, whereas E1 taught the desensitization group only the main points expressed in the book.

Procedure

Course of Treatment of the Desensitization Group

The desensitization group was divided into two subgroups. Each subgroup met twice each week, 50 minutes per

session for eight sessions. One subgroup met at 6:00 p.m., and the other at 7:00 p.m., on Monday and Wednesday. The desensitization group was divided for two reasons. First, fewer Ss would allow more time for E1 to focus on individual problems in relaxation, and secondly, the anxiety hierarchy would be constructed by fewer individuals which would result in less variation in the hierarchy. Therefore, most items in the hierarchy would be appropriate for a larger percentage of the Ss. Treatment in these two subgroups was identical, except for variations in the hierarchy, and speed of movement up the hierarchy, which is somewhat dependent on idiosyncrasies of the Ss.

A model anxiety hierarchy was constructed by E1 after the first three sessions, during which he obtained information from the Ss as to what they thought were their academic difficulties. The model anxiety hierarchy was used in both subgroups. Other items were added in each subgroup based on additional information gathered through interaction with the Ss. The model anxiety hierarchy follows:

1. You receive your grades through the mail, open the envelope and find that you have received all "A"s and "B"s.
2. You have finished your final examination, and you are handing it in.
3. You have finished your final examination, and you are rechecking it for errors.
4. You are sitting in the classroom, and you have been working on your final examination for one hour.
5. You are sitting in the classroom, and you have been working on your final examination for 45

minutes.
6. You are sitting in your classroom, and you have been working on your final examination for 30 minutes.
7. You are sitting in your classroom, and you have been working on your final examination for 15 minutes.
8. You are sitting in your classroom, and the final examination is being handed out.
9. You are on your way to take the final examination.
10. You are studying for your final examination, which will be given in one day.
11. You are studying for your final examination, which will be given in one week.
12. You are studying for your final examination, which will be given in two weeks.
13. You are sitting in your classroom, taking notes from the lecture.
14. You are sitting at your desk studying; you have been studying for 50 minutes.
15. You are sitting at your desk studying; you have been studying for 30 minutes.
16. You are sitting at your desk studying; you have been studying for 15 minutes.
17. You have your textbook in front of you, and you are ready to begin studying your assignment.
18. You are sitting in your classroom, and your instructor gives the class a reading assignment.

Each scene was presented twice, and each presentation lasted 10 seconds, unless anxiety to the scene was indicated. Approximately 50 seconds elapsed between presentations, during which Ss were to simply relax. Timing was done by means of a stopwatch. The number of presentations of each scene, duration of visualization, and the interval between presentations varied due to indication of anxiety to a scene (Ss were instructed to raise their right index finger if they began to feel anxious while imagining a scene). If this occurred, they were allowed more time between presentations in order for them to relax more completely, and

the anxiety-eliciting scene was presented five times for 5, 10, and then 20 seconds to ensure complete desensitization to the scene. At the beginning of each successive session, the last scene presented at the preceding session was presented again.

When Ss missed a meeting, E1 made individual appointments with them to keep them up with the rest of the group. The individual sessions were conducted exactly like the group sessions. Scenes presented in the individual session were those that had been presented in the missed group session.

After the first session, the last five minutes of each session was devoted to subject matter being taught in the study methods group.

During the first session, the anxiety scales were administered, and rationale for the treatment was explained. Jacobson's (1939) technique was used, in the second and third sessions, to teach the Ss to relax their arms, legs, stomach, back, chest, neck, eyes, and face muscles. Five minutes were then allowed for discussion of any difficulties the Ss encountered in relaxing. Ss were instructed to practice relaxing twice each day between sessions for 15-minute periods.

In the fourth through the seventh session, the first five minutes were used to establish rapport, after which 10 minutes were allowed for the Ss to relax. Ss imagined

scenes for the next 25 minutes. Five minutes were then devoted to discuss special problems with the preceding images. In the eighth session, the anxiety tests were again administered.

Course of Treatment of the Study Methods Group

The study methods group met at 6:30 p.m. on Tuesday and Thursday. At the first meeting, the anxiety tests were administered and rationale for the treatment was presented. E2 lectured during the second and third session and instructed the Ss to use the study methods in the courses in which they were enrolled. In the fourth session E2 went through a chapter of a textbook using the study methods he had taught. Passing around photostatic copies of a chapter of another textbook, he had a subject practice using the study methods. Only one subject showed up at the fifth session, and it was decided to discontinue meetings for this group.

During final examination week of the Winter Term, Ss of the study methods group were contacted by E1, and individual appointments were scheduled for the second administration of the anxiety tests.

Administration of Anxiety Tests to the No Treatment Group

Ss in the no treatment group were told that, although the meetings were being held at times which they could not attend, in the future there may be other classes held which

they might be able to attend. They were told that, for perhaps future use in their own treatment, and for comparative purposes at this time, it would be helpful if they would come in and take some short paper and pencil tests that other students who were participating in the program were taking. Essentially the same approach was taken when they were called for the other administrations of the tests. Individual appointments were set up by E1, in which the tests were administered.

Third Administration of the Anxiety Tests to All Groups

Since the desensitization group had taken the anxiety tests the second time during the week before final examinations, whereas most Ss in the other two groups had taken the second test in the week of final examinations, differences in anxiety level could conceivably be interpreted to reflect time of the second administration and not the type of treatment. Therefore, Ss were recalled during the first week of Spring Term to take the anxiety tests a third time. Unfortunately, some of the Ss could not be reached, and this resulted in the loss of four Ss for the third administration.

When the second tests were given, Ss in all groups signed authorization slips so that E1 could obtain their GPAs and College Qualification Test scores for evaluation of the study. The GPAs were obtained from the Registrar's

Office, and College Qualification Test scores from the Office of Evaluation Services.

Results

Table 1 lists the means of each group on Fall Term GPA, College Qualification Test (CQT), TMAS, and IPAT (covert, overt, and total scores). Table 2 shows the results of analyses of variance on these variables between the three groups. The data indicate that before treatment, no differences existed between groups on these variables.

Table 1. Mean scores of the three groups on Fall Term GPA, College Qualification, and initial anxiety tests.

Group	Mean Scores					
	CQT	Fall GPA	TMAS	IPAT Covert	IPAT Overt	IPAT Total
Desensitization	122.7	1.66	24.0	17.3	20.3	37.6
Study Methods	123.4	1.77	18.6	18.8	18.8	37.6
No Treatment	119.3	1.99	18.0	16.5	10.5	27.0

Term GPAs are plotted in Figure 1 for Fall, Winter, and Spring, school year 1966-1967. Figure 1 shows that Winter and Spring GPAs of the desensitization and study methods groups are above Fall GPAs, with the study methods group showing the greatest increase. The no treatment group, however, suffered a decrease in GPA in the Winter and Spring, with the greatest decrease occurring from Winter to Spring Term. These same data are plotted in terms of

Table 2. Analysis of variance between groups on Fall Term GPAs, College Qualification, and initial anxiety tests.

Source of Variation	Sum of Squares	df	MS	F
CQT				
Between Groups	43	2	21.5	.06
Within Groups	4557	12	379.8	
Total	4600			
Fall GPA				
Between Groups	2611	2	1305.5	.97
Within Groups	16180	12	1348	
Total	18791			
TMAS				
Between Groups	117	2	58.5	2.67
Within Groups	263	12	21.9	
Total	380			
IPAT Covert				
Between Groups	13	2	6.5	.32
Within Groups	247	12	20.6	
Total	260			
IPAT Overt				
Between Groups	251	2	126	3.46
Within Groups	437	12	36.4	
Total	688			
IPAT Total				
Between Groups	332	2	166	1.69
Within Groups	1170	12	98	
Total	1502			

cumulative GPA in Figure 2.

Table 3 lists the GPA of each group for the Fall, Winter, and Spring Terms. Additionally, Table 3 provides the t values (two-tailed t test) computed from the

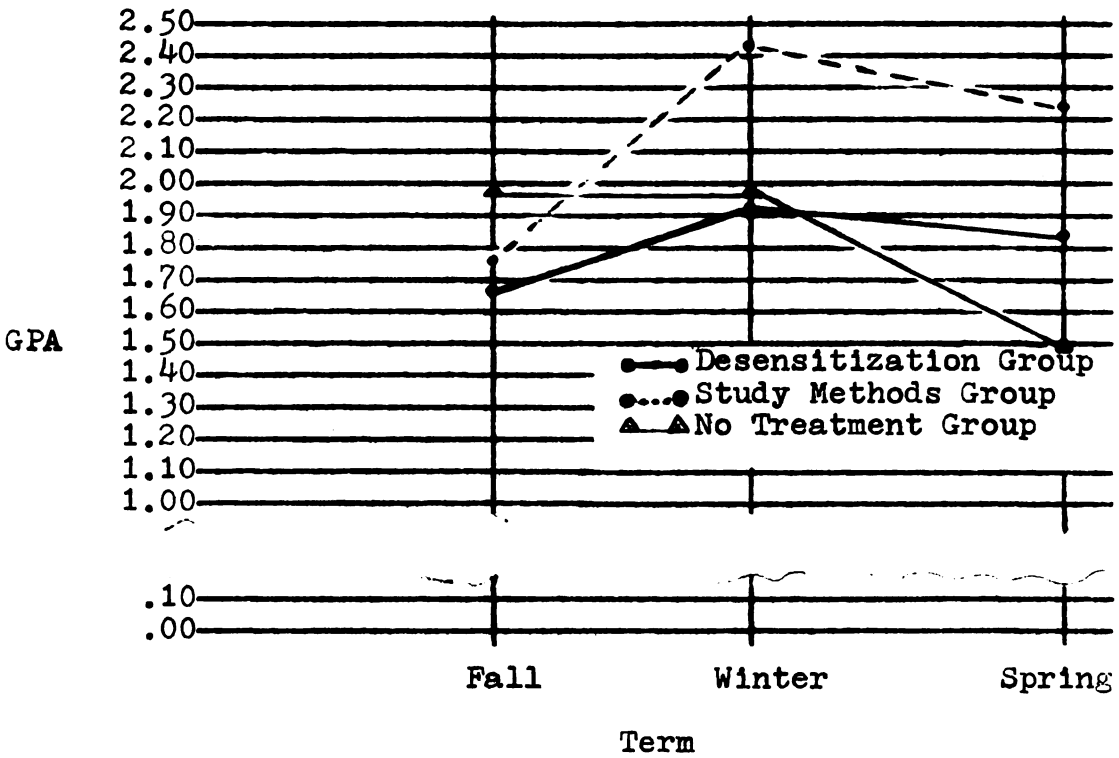

Figure 1. GPA of the desensitization, study methods, and no treatment groups for Fall, Winter, and Spring Terms.

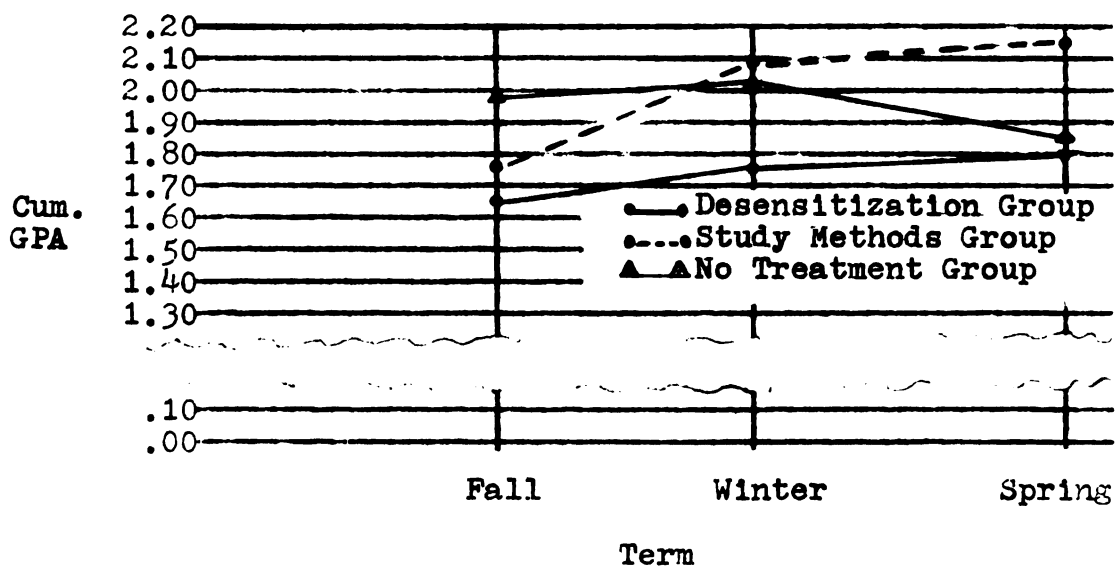

Figure 2. Cumulative GPA of the three groups for Fall, Winter, and Spring Terms.

difference scores (Winter GPA-Fall GPA, Spring GPA-Fall GPA, and Spring GPA-Winter GPA) for each group. As indicated in Table 3, the increase in GPA evidenced by the study methods group in the Winter Term is significant at the .05 level. The decrease in GPA of the no treatment group from the Spring to the Winter Term is also significant at the .05 level. The desensitization group showed an increase in GPA from Fall to Spring Term, but it was not significant. Therefore, hypothesis one is not confirmed.

Table 3. GPA and t values of the differences in GPA, Winter-Fall, Spring-Fall, and Spring-Winter Term for each group.

Group	GPA			t Value		
	Fall	Winter	Spring	W-F	S-F	S-W
Desensitization	1.66	1.91	1.84	1.04	.58	- .40
Study Methods	1.77	2.42	2.24	3.30*	1.68	- .77
No Treatment	1.99	1.97	1.49	-.05	-1.39	-3.69*

* Significant at the .05 level

Table 4 lists the means of the first, second, and third administration of the TMAS to the three groups. It also lists the t values obtained from the difference scores between first and second, and first and third testing. As can be seen in the table, only the no treatment group had a significant decrease on this anxiety test between the first and second testing, although each of the other groups showed a

nonsignificant decreasing trend.

Table 4. TMAS means for each group, and t values of the differences between first and second, and first and third administrations.

Group	Means			t Values	
	1st	2nd	3rd	1st-2nd	1st-3rd
Desensitization	24.0	22.8	23.0[a]	.73	1.90
Study Methods	18.6	17.6	17.0[b]	.32	.89
No Treatment	18.0	13.5	11.5[c]	3.77*	3.00

a N=5
b N=4
c N=2
* Significant at the .05 level

The means for all groups on the IPAT total, covert, and overt scores for each administration are listed in Table 5. The t values of the IPAT data in Table 6, reveal only one significant decrease—the first-second score on the overt measure for the study methods group. This group showed no decrease at all on the covert measure at the second administration. The desensitization group showed a decrease in anxiety on both the covert and overt indices, whereas the no treatment group's covert anxiety decreased and their overt anxiety increased. Hypothesis two is not confirmed.

Table 7 lists the means of the Ss used in this study and the college student norm group (Cattell & Scheier, 1963, p. 11). Table 7 also gives the t score comparison of these

Table 5. Means of IPAT total (T), covert (C), and overt (O) scores of first, second, and third administration.

Group	First			Second			Third[a]		
	T	C	O	T	C	O	T	C	O
Desensitization	37.6	17.3	20.3	35.3	16.6	18.6	35.8	17.4	18.4
Study Methods	37.6	18.8	18.8	32.4	18.8	13.6	33.5	18.0	15.5
No Treatment	27.0	16.5	10.5	27.0	16.0	11.0	25.5	15.0	10.5

a For third administration, N=5 in desensitization group, N=4 in study methods group, and N=2 in no treatment group.

Table 6. t tests on differences between first and second, and first and third IPAT total (T), covert (C), and overt (O).

Group	First-Second			First-Third[b]		
	T	C	O	T	C	O
Desensitization	.77	.51	.76	1.79	.38	2.20
Study Methods	2.17	a	4.00**	1.02	1.20	.80
No Treatment	a	.42	-.57	.08	a	.20

a No difference between the means
b N=5 in desensitization group, N=4 in study methods group, and N=2 in no treatment group
** Significant at the .01 level

two groups. The difference between the means is significant at the .05 level. The mean of the students in this experiment exceeds that of the college norm group; therefore, hypothesis three is confirmed—students in this sample who seek help for academic problems are more anxious than the general student population, at least when the measuring

instrument is the IPAT.

Table 7. Comparison of IPAT total score means of all subjects in this study and the college norm group.

Group	Means	*t* Value
Experimental *Ss*	34.8[a]	2.26*
College Norm *Ss*	28.7[b]	

a N=15
b N=1395
* Significant at the .05 level

There is only one significant correlation in Table 8; the TMAS and the IPAT total score correlation coefficient just reaches significance (a correlation coefficient of +.44 is required for significance at the .05 level). The correlation coefficient of +.47 between these tests indicate that they measure, in part, the same phenomena. Neither the overt nor the covert part of the IPAT alone is significantly correlated with the TMAS. It is interesting that the CQT and Fall and Winter GPA are not significantly related with the particular students in this study, but are significantly related with students in the general population.

Table 9 illustrates the correlation between increase in GPA, Fall to Winter Term, and decrease in anxiety test scores. Note that they are all in a positive direction, but none are significant. An increase in GPA tends to be

Table 8. Spearman Rank Order Correlation Coefficients between GPAs, CQT, and anxiety tests, for all Ss.

	Fall GPA	Winter GPA	First TMAS
CQT	+.12	+.10	
TMAS			
First	-.07		
Second		-.13	
IPAT (First)			
Total	-.30		+.47*
Covert	-.07		+.36
Overt	-.43		+.39
IPAT (Second)			
Total		+.14	
Covert		+.31	
Overt		+.07	

* Significant at the .05 level

Table 9. Spearman Rank Order Correlation Coefficients between increase in GPA and decrease in anxiety for all Ss.

Anxiety Test (First-Second Administration)	Winter-Fall GPA
TMAS	+.38
IPAT	
Total	+.30
Covert	+.40
Overt	+.22

associated with a decrease in anxiety. The change in IPAT covert and TMAS approaches a significant correlation with increase in GPA, but does not reach significance.

Discussion

Hypothesis one, that the desensitization group would evidence a significantly greater increase in GPA between Fall and Spring Term than the other groups was not confirmed. The GPA of the desensitization and the study methods groups increased, but not significantly. The no treatment group showed a significant decrease in GPA during this period.

The initial large increase in GPA between the Fall and Winter Term for both treatment groups suggests that Ss are helped most while receiving the treatment, but that neither treatment is effective in maintaining a significant increase in GPA.

The decreased performance of the no treatment group in the present study parallels that of the no treatment group in Paul and Shannon's (1966) study. The decrease in GPA of the no treatment group in the present study was significant. The drop in GPA of the no treatment group in Paul and Shannon's study was greater, but they did not report whether the drop was statistically significant. It is not clear whether the fact that these students sought help but were turned away was detrimental to them, or whether any students who need help but do not get it perform less well each succeeding term. To answer this question, a group who is not offered help, but who need it, should be included in future studies investigating methods of treatment for students who

seek help for academic problems.

Hypothesis two was not confirmed. Students who received systematic desensitization did not report significant decreases in anxiety on either of the anxiety tests. This finding is not surprising since the desensitization treatment, as applied in this study, was found not to be effective treatment for students who have academic problems.

The significant decrease in anxiety as measured by the overt half of the IPAT for the study methods group is probably best accounted for by the fact that many of these students had taken one or all of their final examinations prior to taking the anxiety tests the second time. This decrease in anxiety, however, was not evident on the TMAS. A possible explanation is that the TMAS and the overt IPAT measure different phenomena, as suggested by the lack of a significant correlation between the two measures in this study (p. 30). Spielberger (1966a) differentiates between state and trait anxiety, and reports that the TMAS measures trait anxiety (relatively stable personality attribute), which is subject to little variability over time. Trait anxiety would not be expected to vary significantly before and after examinations. The overt IPAT may measure state anxiety (transitory feelings of apprehension and tension in a stressful situation). State anxiety would be expected to increase before, and decrease after, final examinations.

The no treatment group evidenced a significant decrease in anxiety as measured by the TMAS between first and second administrations. Since they received no treatment, there should have been no change in this group, especially in trait anxiety. The number of Ss in this group was small, and, therefore, not much confidence can be placed in this finding.

Hypothesis three, that students who seek help report more covert anxiety than students in the general population, has been confirmed. This finding supports the observation of Psychology 101 instructors (Gatley, 1965) that these students appeared more anxious than other students. Since the possibility exists that the IPAT measures state anxiety also, it is likely that students who seek help for academic problems are more anxious in the testing situation than other students.

Systematic desensitization may not be as effective in reducing avoidance responses to academic activities as a persuasive authoritarian approach, as was applied in the study methods group sessions. Since similar study methods were taught in both groups, it seems that learning effective study methods per se may not account for the increase in GPA of the study methods group in the Winter Term. Although the study methods group spent more time on the study techniques than the desensitization group, the additional time was spent going over experiments through which the techniques

were developed. The difference resided in the way in which E2 taught his group. He gave them experimental evidence to back up his claim that the study methods which he taught were effective. He also tried to persuade Ss in his group to work hard and apply the techniques. He told them that knowing the best study methods but never using them would not result in any improvement in their academic performance. When E1 discussed study methods with the desensitization Ss, however, he suggested that they try the techniques and use them if they found them helpful. Thus, it may be that authoritative persuasion is a more effective method of overcoming academic problems.

That only four sessions were required to raise the GPA of the study methods group is striking in itself. If this treatment were the one of choice for students who seek help for academic problems, it would be economical to administer.

It should be stressed, however, that the study methods group did not maintain the significant increase in GPA during the Spring Term. The kind of treatment the study methods Ss received seems to lack lasting effectiveness.

The reason for the failure of the desensitization group to achieve a significant increase in GPA is not apparent. Paul's (1966) method of treatment seems to have been followed in all significant respects. It is possible that his Ss were more relaxed, because he used padded leather chairs, and minimum illumination in the room in which he applied the

treatment. Yet it seemed to E1 that the Ss in the desensitization group in the present experiment were able to relax quite deeply. Their posture appeared relaxed, respiration seemed reduced, they reported that their hands and arms felt numb, and they sometimes stretched after relaxing as one does when one has been asleep.

Systematic desensitization has been shown to be an effective method of reducing or eliminating certain classes of avoidance responses, and the method seems to have been applied correctly. What, then, might account for the failure of the desensitization Ss to significantly increase their GPAs? The two most obvious alternatives are (1) that students who seek help for academic problems do not have the ability to make higher grades even after being desensitized to anxiety regarding studying, or (2) the items on the anxiety heirarchy used by the desensitization group were not the best for this particular problem.

It might be argued that students who seek help for academic problems suffer from low ability, and that attempts to help them will fail because the treatments will not raise their ability. Gatley (1965) found that 101 students have significantly lower scores than other students on college ability tests. Spielberger (1966b) found an interaction of ability and anxiety on GPA, such that high anxiety students with high ability earn high GPAs, high anxiety students with

moderate ability make low GPAs, and high or low anxiety has no effect on the GPA of the low ability student, i.e., low ability students make low GPAs regardless of their anxiety level.

The following evidence, however, does not support this view: (1) Some students with low scores on the ability tests do earn degrees, (2) students who seek help are able to raise their GPAs, as evidenced by the study methods group in the present study, (3) in the present study, there was no significant correlation between ability scores and GPAs, (4) there are some personality differences between students who seek help and other students, which suggest that factors other than ability could account for low GPAs of these students, and (5) if the findings and speculations that help-seeking students experience failure for support of their inadequate self-concepts are correct, making low scores on ability tests may also be an expression of choice, and, consequently, not a trustworthy measurement of their ability.

It is possible that the anxiety hierarchy used in this study was not the best for these Ss. E1 observed that the item at the top of the hierarchy which stated that the Ss received all "A"s and "B"s for the term was more disturbing to the desensitization group than any other single item, i.e., a greater number of Ss indicated anxiety to this

scene than to any other. This observation lends support to the inadequate self-concept hypothesis. Receiving good grades would be incongruent with the low self-concept of the help-seeking student, and, therefore, elicit anxiety. Likewise, Gatley (1965) reports:

> It is quite characteristic...to observe considerable embarrassment and uneasiness among 101 students when they report something they are able to do well, be it school work, sports, or knitting; whereas, they are able to describe a variety of inadequate or inferior performances with equanimity, and even zest (pp. 31-32).

Therefore, the task seems to be to change the self-concept of students who seek help for academic problems. An anxiety hierarchy appropriate for this task would be oriented toward achieving success in academic and other activities. If they are desensitized to a more positive self-concept, the fantasied achievement of good grades may no longer elicit anxiety in these students, and their self-perceptions should undergo change, and result in improved academic performance.

Greater confidence could have been placed in the findings of this study if each group had contained more Ss. The experimenter had originally planned on having 10 Ss in each group, but only 25 volunteers were forthcoming for the project. Of these 25, some did not report for the first meeting, and others dropped-out after attending the first session.

If the study were replicated, it is suggested that more Ss may be obtained by personally contacting students who are on probation because of low GPAs, and sending announcements of the program to low-level undergraduate classes in many departments.

Other serious problems, which are related, that developed in this study were (1) lack of attendance and (2) administration of the anxiety tests to the three groups at different times after treatment was completed. Missed sessions for the desensitization group were not a serious problem, but for the study methods group it was critical enough to end treatment for that group. The second anxiety tests would have been administered at the same time for all groups if the Ss in the study methods group had attended the meetings through the last session. Because the second prolem occurred, the experimenter attempted to get all Ss back for a third administration of the anxiety tests during the same week. However, some of the Ss could not be contacted for the third administration; one had entered another university, a second was reported to be in jail in Florida, one had moved leaving no forwarding address, and another was never at home when the experimenter telephoned, and did not respond to messages left with her roommate. Had all Ss been tested the second time during the last week of treatment, this problem would not have occurred.

It is suggested that better attendance could be gained by paying the Ss for each session attended, withholding payment until the last session, and deducting from the amount earned a penalty for each session missed. Ss not attending the last session would forfeit the total amount of money they had earned.

At least some of the problems arising in a study of this kind may be a function of the personality attributes of the Ss. As might be expected of students who make low grades, promptness and conformity are not their major assets. Also, an obligation to make an agreed-to appointment seemed not important to most of the Ss in this study. An experimenter working with a sample out of this particular student population should expect problems of this sort, and develop methods of handling them before the experiment begins.

REFERENCES

Anderson, C. M. The self-image; a theory of the dynamics of behavior. Ment. Hyg., 1952, 36, 227-244.

Baymur, F. B., & Patterson, C. H. A comparison of three methods of assisting underachieving high school students. J. counsel. Psychol., 1960, 7, 83-89.

Broedel, J., Ohlsen, M., Proff, F., & Southard, C. The effects of group counseling on gifted underachieving adolescents. J. counsel. Psychol., 1960, 7, 163-170.

Cattell, R. B., & Scheier, I. H. Handbook for the IPAT Anxiety Scale Questionnaire (Self Analysis Form). Champaign: Institute for Personality and Ability Testing, 1963.

DeBolt, D. L. A dynamic approach to the investigation of some personality factors related to study problems. Unpublished master's thesis, Michigan State University, 1963.

Gatley, R. H. Manifest anxiety and academic potential of students who seek help for achievement problems. Unpublished master's thesis, Michigan State University, 1965.

Golburgh, S. J., & Penney, J. F. A note on counseling underachieving college students. J. consult. Psychol., 1962, 9, 133-138.

Jacobson, E. Progressive relaxation. Chicago: U. Chicago Press, 1939.

Kimball, B. Case studies in educational failure during adolescence. Amer. J. Orthopsychiat., 1953, 23, 406-415.

Michigan State University Catalog. East Lansing: MSU Publications, 1963.

Paul, G. Insight vs. desensitization in psychotherapy. Stanford: Stanford U. Press, 1966.

Paul, G., & Shannon, D. Treatment of anxiety through systematic desensitization in therapy groups. J. abnorm. soc. Psychol., 1966, 71, 124-135.

Robinson, F. P. Effective study. New York: Harper & Brothers Publishers, 1946.

Roth, R. M., & Meyersburg, H. A. The non-achievement syndrome. Personnel guid. J., 1963, 41, 535-540.

Spielberger, C. D. Theory and research on anxiety. In C. D. Spielberger (Ed.), Anxiety and behavior. New York: Academic Press Inc., 1966, Pp. 3-20. (a)

Spielberger, C. D. The effects of anxiety on complex learning and academic achievement. In C. D. Spielberger (Ed.), Anxiety and behavior. New York: Academic Press Inc., 1966, Pp. 361-398. (b)

Spielberger, C. D., & Katzenmeyer, W. G. Manifest anxiety intelligence, and college grades. J. consult. Psychol., 1959, 23, 278.

Spielberger, C. D., Weitz, H., & Denny, J. P. Group counseling and the academic performance of anxious college freshmen. J. counsel. Psychol., 1962, 9, 195-204.

Taylor, J. A. A personality scale of manifest anxiety. J. abnorm. soc. Psychol., 1953, 48, 285-290.

Wolpe, J. Psychotherapy by reciprocal inhibition. Stanford: Stanford U. Press, 1958.

Appendix A. Descriptive Data on All Subjects

Subject Descriptive Data

Desensitization Group Subject	Age	Sex	Class Level
1	18	F	Freshman
2	24	M	Sophomore
3	18	F	Freshman
4	19	F	Sophomore
5	19	F	Sophomore
6	18	F	Freshman
Study Methods Group			
Subject			
1	20	F	Sophomore
2	18	F	Freshman
3	20	M	Junior
4	18	M	Freshman
5	21	M	Sophomore
No Treatment Group			
Subject			
1	20	F	Junior
2	21	F	Freshman
3	18	F	Freshman
4	19	F	Sophomore

Appendix B. Anxiety Tests

Taylor Manifest Anxiety Scale

Name _____ Date _____

True	False		
☐	☐	1.	I do not tire quickly.
☐	☐	2.	I am troubled by attacks of nausea.
☐	☐	3.	I believe I am no more nervous than most others.
☐	☐	4.	I have very few headaches.
☐	☐	5.	I work under a great deal of tension.
☐	☐	6.	I cannot keep my mind on one thing.
☐	☐	7.	I worry over money and business.
☐	☐	8.	I frequently notice my hand shakes when I try to do something.
☐	☐	9.	I blush no more often than others.
☐	☐	10.	I have diarrhea once a month or more.
☐	☐	11.	I worry quite a bit over possible misfortunes.
☐	☐	12.	I practically never blush.
☐	☐	13.	I am often afraid that I am going to blush.
☐	☐	14.	I have nightmares every few nights.
☐	☐	15.	My hands and feet are usually warm enough.
☐	☐	16.	I sweat very easily even on cool days.
☐	☐	17.	Sometimes when embarrassed, I break out in a sweat which annoys me greatly.
☐	☐	18.	I hardly ever notice my heart pounding and I am seldom short of breath.
☐	☐	19.	I feel hungry almost all the time.

True	False		
☐	☐	20.	I am very seldom troubled by constipation.
☐	☐	21.	I have a great deal of stomach trouble.
☐	☐	22.	I have had periods in which I lost sleep over worry.
☐	☐	23.	My sleep is fitful and disturbed.
☐	☐	24.	I dream frequently about things that are best kept to myself.
☐	☐	25.	I am easily embarrassed.
☐	☐	26.	I am more sensitive than most other people.
☐	☐	27.	I frequently find myself worrying about something.
☐	☐	28.	I wish I could be as happy as others seem to be.
☐	☐	29.	I am usually calm and not easily upset.
☐	☐	30.	I cry easily.
☐	☐	31.	I feel anxiety about something or someone almost all the time.
☐	☐	32.	I am happy most of the time.
☐	☐	33.	It makes me nervous to have to wait.
☐	☐	34.	I have periods of such great restlessness that I cannot sit long in a chair.
☐	☐	35.	Sometimes I become so excited that I find it hard to get to sleep.
☐	☐	36.	I have sometimes felt that difficulties were piling up so high that I could not overcome them.
☐	☐	37.	I must admit that I have at times been worried beyond reason over something that really did not matter.
☐	☐	38.	I have very few fears compared to my friends.

True	False		
☐	☐	39.	I have been afraid of things or people that I know could not hurt me.
☐	☐	40.	I certainly feel useless at times.
☐	☐	41.	I find it hard to keep my mind on a task or job.
☐	☐	42.	I am unusually self-conscious.
☐	☐	43.	I am inclined to take things hard.
☐	☐	44.	I am a high-strung person.
☐	☐	45.	Life is a strain for me much of the time.
☐	☐	46.	At times I think I am no good at all.
☐	☐	47.	I am certainly lacking in self-confidence.
☐	☐	48.	I sometimes feel that I am about to go to pieces.
☐	☐	49.	I shrink from facing a crisis or difficulty.
☐	☐	50.	I am entirely self-confident.

IPAT SELF ANALYSIS FORM

NAME _____ TODAY'S DATE _____
First Middle Last

SEX _____ AGE _____ OTHER FACTS _____
(Write M or F) (Nearest Year) (Address, Occupation, etc., as instructed)

CONFIDENTIAL

Inside this booklet you will find forty questions, dealing with difficulties that most people experience at one time or another. It will help a lot in self-understanding if you check Yes, No, etc., to each, frankly and truthfully, to describe any problems you may have.

Start with the two simple examples just below, for practice. As you see, each inquiry is actually put in the form of a sentence. By putting a cross, X, in *one* of the three boxes on the right you show how it applies to you. Make your marks now.

1. I enjoy walking ☐ Yes ☐ Occasionally ☐ No

A middle box is provided for when you cannot definitely say Yes or No. But use it as little as possible.

2. I would rather spend an evening:
(A) talking to people, (B) at a movie ☐ A ☐ In between ☐ B

About half the items inside end in A and B choices like this. B is always on the right. Remember, use the "In between" or "Uncertain" box only if you cannot possibly decide on A or B.

Now:

1. Make sure you have put your name, and whatever else the examiner asks, in the place at the top of this page.
2. Never pass over an item but give some answer to every single one. Your answers will be entirely confidential.
3. Do not spend time pondering. Answer each immediately, the way you want to at this moment (not last week, or usually). You may have answered questions like this before; but answer them as you feel *now*.

   Most people finish in five minutes; some, in ten. Hand in this form as soon as you are through with it, unless told to do otherwise. As soon as the examiner signals or tells you to, turn the page and begin.

STOP HERE—WAIT FOR SIGNAL

1957-63 EDITION

A

1. I find that my interests, in people and amusements, tend to change fairly rapidly	True ☐	In between ☐	False ☐
2. If people think poorly of me I can still go on quite serenely in my own mind	True ☐	In between ☐	False ☐
3. I like to wait till I am sure that what I am saying is correct, before I put forward an argument	Yes ☐	In between ☐	No ☐
4. I am inclined to let my actions get swayed by feelings of jealousy	Sometimes ☐	Seldom ☐	Never ☐
5. If I had my life to live over again I would: (A) plan very differently, (B) want it the same	A ☐	In between ☐	B ☐
6. I admire my parents in all important matters	Yes ☐	In between ☐	No ☐
7. I find it hard to "take 'no' for an answer", even when I know what I ask is impossible	True ☐	In between ☐	False ☐
8. I doubt the honesty of people who are more friendly than I would naturally expect them to be	True ☐	In between ☐	False ☐
9. In demanding and enforcing obedience my parents (or guardians) were: (A) always very reasonable, (B) often unreasonable	A ☐	In between ☐	B ☐
10. I need my friends more than they seem to need me	Rarely ☐	Sometimes ☐	Often ☐
11. I feel sure that I could "pull myself together" to deal with an emergency	Always ☐	Often ☐	Seldom ☐
12. As a child I was afraid of the dark	Often ☐	Sometimes ☐	Never ☐
13. People sometimes tell me that I show my excitement in voice and manner too obviously	Yes ☐	Uncertain ☐	No ☐
14. If people take advantage of my friendliness I: (A) soon forget and forgive, (B) resent it and hold it against them	A ☐	In between ☐	B ☐
15. I find myself upset rather than helped by the kind of personal criticism that many people make	Often ☐	Occasionally ☐	Never ☐
16. Often I get angry with people too quickly	True ☐	In between ☐	False ☐
17. I feel restless as if I want something but do not know what	Very rarely ☐	Sometimes ☐	Often ☐
18. I sometimes doubt whether people I am talking to are really interested in what I am saying	True ☐	In between ☐	False ☐
19. I have always been free from any vague feelings of ill-health, such as obscure pains, digestive upsets, awareness of heart action, etc.	True ☐	Uncertain ☐	False ☐
20. In discussion with some people, I get so annoyed that I can hardly trust myself to speak	Sometimes ☐	Rarely ☐	Never ☐

CONTINUE ON NEXT PAGE.

A Score

Do not write in this column

Q1(−)

C(−)

L

O

Q

50

21. Through getting tense I use up more energy than most people in getting things done	True ☐	Uncertain ☐	False ☐	
22. I make a point of not being absent-minded or forgetful of details	True ☐	Uncertain ☐	False ☐	
23. However difficult and unpleasant the obstacles, I always stick to my original intentions	Yes ☐	In between ☐	No ☐	$Q_3(-)$
24. I tend to get over-excited and "rattled" in upsetting situations	Yes ☐	In between ☐	No ☐	
25. I occasionally have vivid dreams that disturb my sleep	Yes ☐	In between ☐	No ☐	
26. I always have enough energy when faced with difficulties	Yes ☐	In between ☐	No ☐	C(—)
27. I sometimes feel compelled to count things for no particular purpose	True ☐	Uncertain ☐	False ☐	
28. Most people are a little queer mentally, though they do not like to admit it	True ☐	Uncertain ☐	False ☐	
29. If I make an awkward social mistake I can soon forget it	Yes ☐	In between ☐	No ☐	L
30. I feel grouchy and just do not want to see people: (A) occasionally, (B) rather often	A ☐	In between ☐	B ☐	
31. I am brought almost to tears by having things go wrong	Never ☐	Very rarely ☐	Sometimes ☐	
32. In the midst of social groups I am nevertheless sometimes overcome by feelings of loneliness and worthlessness	Yes ☐	In between ☐	No ☐	
33. I wake in the night and, through worry, have some difficulty in sleeping again	Often ☐	Sometimes ☐	Never ☐	O
34. My spirits generally stay high no matter how many troubles I meet	Yes ☐	In between ☐	No ☐	
35. I sometimes get feelings of guilt or remorse over quite small matters	Yes ☐	In between ☐	No ☐	
36. My nerves get on edge so that certain sounds, e.g., a screechy hinge, are unbearable and give me the shivers	Often ☐	Sometimes ☐	Never ☐	
37. If something badly upsets me I generally calm down again quite quickly	True ☐	Uncertain ☐	False ☐	
38. I tend to tremble or perspire when I think of a difficult task ahead	Yes ☐	In between ☐	No ☐	Q_4
39. I usually fall asleep quickly, in a few minutes, when I go to bed	Yes ☐	In between ☐	No ☐	
40. I sometimes get in a state of tension or turmoil as I think over my recent concerns and interests	True ☐	Uncertain ☐	False ☐	

Do not write in this column

STOP HERE. **BE SURE YOU HAVE ANSWERED EVERY QUESTION.** **B Score**

Name_____ **Sex**_____ **Age**____ **Date**_____ **Examiner**_____

Raw Scores: A Score (Covert, indir.)_____ (p. 2 score) B Score (Overt, manifest, sympt.)_____ (p. 3 score).

Q_3(–)_____, C(–)_____, L _____, O_____, Q_4_____. Overt-Covert Ratio $\left(\frac{B}{A}\right)$ _____.

TOTAL RAW SCORE _____ (A + B)

Stens: Q_3(–)_____, C(–)_____, L _____, O_____, Q_4_____.

TOTAL, STANDARD STEN SCORE _____ (from Table 4)

Qualitative Observations:

Diagnostic Summary:

Name_____ Sex_____ Age____ Date_____ Examiner_____

Raw Scores: A Score (Covert, indir.)_____ (p. 2 score) B Score (Overt, manifest, sympt.)_____ (p. 3 score).

Q_3(–)_____, C(–)_____, L _____, O_____, Q_4_____. Overt-Covert Ratio $\left(\frac{B}{A}\right)$ _____.

TOTAL RAW SCORE _____ (A + B)

Stens: Q_3(–)_____, C(–)_____, L _____, O_____, Q_4_____.

TOTAL, STANDARD STEN SCORE _____ (from Table 4)

Qualitative Observations:

Diagnostic Summary: