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THE RELATIONSHIP OF ATTRIBUTIONAL STYLE AND
PRECONCEPTIONS OF CAUSALITY WITH EXPECTANCIES
FOR THERAPEUTIC OUTCOMES.

THE OHIO STATE UNIVERSITY, PH.D., 1979
THE RELATIONSHIP OF ATTRIBUTIONAL STYLE AND
PRECONCEPTIONS OF CAUSALITY WITH EXPECTANCIES
FOR THERAPEUTIC OUTCOMES

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the
Degree Doctor of Philosophy in the Graduate School of the Ohio
State University

By

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* * * * *

The Ohio State University

1979

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For my parents.
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Clients' expectancies for successful counseling outcomes have been positively related to the efficacy of various types of treatments and placebos, with the strongest expectancies preceding the most positive results (Frank, 1961; Kazdin and Wilcoxon, 1976; Wilkins, 1973). Researchers have identified some counselor characteristics which contribute to increased expectancy effects such as the counselor's interest in the patient, treatment, and results, and the counselor's appearance as an expert (Feldman, 1956; Feldman, 1963; Goldstein, 1960; Goldstein and Shipmen, 1961; Heller and Goldstein, 1961; Uhlenluth, et al., 1959). However, there are no conclusive data identifying any client characteristics, other than a high level, free-floating anxiety, that accompany constant expectancy effects (Shapiro, 1971). As the profession moves toward individualizing therapeutic treatments, it becomes increasingly important to identify those client characteristics which interact with the treatments to make them more or less efficacious (Cranbach, 1975; Mischel, 1976; Paul, 1967), and, by extrapolation, it is important to identify those client characteristics which lead to greater expectancies for successful counseling outcomes.
There appears to be an interaction between the placebo stimulus used and the subject variables resulting in inconsistent placebo reactions, and it is necessary to identify the various interacting elements in order to understand placebo effects (Shapiro, 1971). Since expectancy effects in treatments and in research are consistently found only if the subject's expectancies are strong (Berscheid and Walster, 1974; Kazdin and Wilcoxon, 1976; Snyder, Tanke, and Berscheid, 1977), it is important to identify those factors which will increase the subject's or client's expectancy for a successful outcome. Several subject/client variables have already been studied, although no consistently positive results have been achieved. Suggestibility, personality traits, sex, age, intelligence, and psychiatric diagnosis have all been tested for a relationship with placebo reactions, and all have produced inconclusive results (Shapiro, 1971). The following study attempts to identify a client-treatment interaction which influences expectancy effects, and thus add another dimension to current understanding of the construct of placebo effect.

The client variable used is the characteristic style of the individual's perception of locus of control. Developed by Julian Rotter, the locus of control concept describes the way in which individuals view causal relationships:

When a reinforcement is perceived by the subject as following some action of his own but not being entirely contingent upon his action, then, in our culture it is typically perceived as the result of luck, chance, fate, as under the control of powerful others or as unpredictable because of the great complexity of forces surrounding him. When the event is interpreted in this way by an individual, we have labeled this a belief in external control. If the
person perceives that the event is contingent upon his own behavior or his own relatively permanent characteristics, we have termed this a belief in internal control (Rotter, 1966, p. 1).

Individuals apparently have generalized styles of perceiving "internally" or "externally," with the population distribution approximating a normal curve. Although an individual's belief in internal or external control will change with changes in the situation, the importance of his generalized style "goes up as the situation is more novel or ambiguous and goes down as the individual's experience in that situation increases" (Rotter, 1975, p. 57).

Although Rotter's construct internal vs. external locus of control describes a rather global characteristic, it appears that an individual's perceived locus of control may depend more upon the type of situation with which s/he is faced than upon his or her general style. For example, the individual in a social situation may experience internal control, but the same individual may feel externally controlled in an academic situation (Crandall, Katkovsky, and Crandall, 1965).

In order to understand how a person's style related to his or her expectancies about counseling success, the researcher would need to assess the person's usual locus of control in a counseling-type situation. Since there is evidence that the individual's general locus of control is related to positive treatment outcomes (Meichenbaum and Smart, 1971; Wolk and Kurtz, 1975), it is logical to assume that more specific perceptions of locus of control in counseling may interact with the treatment.
A related area of research on causal relationships which has focused more on specifying situations than identifying global styles is the area of causal attributions. Those factors which a person identifies as the causes of an event can be classified as internal or external; and the individual may be seen as an internal or external attributor, although attributions usually are seen as more complex than this bipolar distribution (Frieze, 1976; Valle & Frieze, 1976; Weiner, et al., 1976). The basic difference between "locus of control" and "attributional styles" seems to be that the former exists before the situation and the latter occurs after experiencing the situation. However, even this distinction does not hold true. One way of clarifying individuals' attributional styles is to identify their a priori attributions about an event which has not occurred and with which they are unfamiliar. Kelley (1973) hypothesizes that people have preconceptions, preconceived attributions, about causal relationships based on previous experiences, and that they will make causal attributions about purely hypothetical situations. Thus the difference between locus of control and attributional style is more accurately seen as the difference between a global style and a style which applies to generic types of situations. Both may be assessed as internal or external, and it is hypothesized that both will influence expectancy effects.

If the treatment mode is consistent with the client's preconceived attributions, then the treatment effect is likely to be enhanced by positive expectancy effects. Styles of preconceptions may explain inconsistencies in the literature on placebo effects. Furthermore, there is some direct evidence that a relationship exists between preconceptions and treatment effects (Levine, 1974; Lowery, 1975). A more thorough
understanding of this relationship is called for, since it has implications for discerning appropriate treatment modes for various individuals and for enhancing placebo effects. In addition, it may not always be possible or advisable to use the treatment which is closest to the client's preconceptions, even if another treatment results in the loss of placebo effects. For example, a client whose attributions are primarily external, and whose reason for seeking help involves his or her need to have more control, probably would not benefit from an externally controlled treatment. In such a case the client's preconceptions would be consistent with the treatment, but the expectancy effects might not be sufficient to resolve the client's difficulty. Since the client's preconceptions could conceivably be detrimental, it is important to discern whether or not those preconceptions can be changed. Although it appears to be difficult, attributions and preconceptions in other situations can be changed by the introduction of new information (Frieze, 1976; Weiner, et al., 1971). Thus it is likely that clients' preconceptions about counseling situations will change with new information about the situations.

Summary

In general, the purpose of this study is to investigate how individuals' cognitive styles interact with treatment methods to affect individuals' expectancies for successful outcomes. More specifically, the experiment will look at the relationship between subjects' general attributional style (internal or external) and their preconceived attributions in a counseling situation. Additionally, the study will look for
a relationship between these attributions and the subjects' expectancies of success with specific types of treatments which appear to be more internally or externally controlled. Finally, the study will investigate the effect of confirming or disconfirming subjects' expectancies for a counseling outcome in order to see if subjects' attributions will change.

The findings of this research will have direct implications for the use of types of treatments and placebos in actual counseling situations. If client attributions do affect client expectancies in various types of treatment modalities, then the appropriate treatment for the client would be the one with which the client's attributions are consistent. On the other hand, counselors may prefer to use a treatment modality which is discrepant with the client's attributions. In this case, if the counselor is aware of the discrepancy, he or she can take steps to influence the client's attributions to be more consistent with the treatment. If a counselor is using a placebogenic treatment with a client, the efficacy of the placebo may depend on the counselor attributing its potency to causes which conform to the preconceived attributions made by the client.
Locus of Control and Treatment Outcome

One of the most widely used constructs identifying individuals' characteristic styles is internal-external locus of control as defined by Rotter (1966). Based on social learning theory, Rotter's theory describes those individuals who are internally controlled as having the perception that their actions will be consequential. Put another way, internally controlled individuals attribute outcomes to themselves rather than to some external circumstances. The belief that one can effect outcomes has been shown to be related to actual improved effectiveness in tubercular patients (Seeman and Evans, 1962), in college students (Meichenbaum and Smart, 1971), in children (Nowicki & Strickland, 1973), and in the elderly (Wolk and Kurtz, 1975). The Wolk and Kurtz (1975) study used ninety-two men and women, ages 60 to 85, who completed the Rotter I-E Scale (1966) and several scales showing adjustment to aging (e.g. decrease in physical strength and health, death of spouse, loss of peer support, etc.), involvement in the day-to-day living process, and satisfaction with life. The findings indicate that expected internal locus of control, or internally attributed causality is related positively to adjustment, involvement, and satisfaction. Thus if one attributes results to one's own behaviors, the one is more likely to act and adapt even when the environment and physical limitations are foreclosing the number of actions possible. On the other hand, if one attributes outcomes to external causes, one would logically be more susceptible to manipulations.
of external factors. This indicates a possible cause for individual differences in placebo reactions. Shapiro, et. al. (1968) found that positive placebo reactors are more dependent on external stimuli while negative reactors depend more on internal stimuli and tend to be more paranoid and masochistic.

Preconceived Internal-External Attributions for Counseling Outcomes

Unfortunately, the internal-external locus of control concept appears to be too general to explain individual differences in expectancy effects, and I-E is most usefully seen as one dimension of the more complex system of causal attributions (Weiner, Nierenberg, and Goldstein, 1976). The process of making causal attributions, according to Kelley (1973), is gathering sufficient evidence to explain why an event occurs. The process itself varies according to whether the individual makes several observations of the event (in which case those factors which covary with the event are attributed with causing it), or a single observation (in which case the individual uses an "analysis of variance" model to identify multiple sufficient causes for the event). It is the multiple sufficient causes, or configuration, model with which this paper is concerned, primarily because of what Kelley (1973) calls the discounting effect: "the role of a given cause in producing a given effect is discounted if other plausible causes are also present" (p. 113). In other words, one does not see all possible causes as equally accountable for an event, and as one cause appears more likely, other causes appear less so. Kelley's (1973) causal schema consist of
various types of attributions divided into internal versus external and stable versus unstable characteristics. These are the same schema which have been more elaborately researched by Weiner (Weiner, et al, 1971; Weiner, et al, 1976).

According to Weiner and his colleagues, one's outcomes on tasks are attributed to a combination of ability, effort, task difficulty, and luck. These four elements may be dichotomized as internally versus externally controlled factors or as stable versus unstable factors. Each factor thus has two characteristics: ability is internal and stable, effort is internal and unstable, task difficulty is external and stable, and luck is external and unstable. The stability, rather than the internality, of causal attributions appears to be related to expectancy for a successful outcome, if one uses Weiner's four elements (Weiner, et al, 1976). For example, the more an individual attributes an outcome to a stable factor such as ability or task difficulty, the more certain s/he is about his or her predictions on future trials. However, these causal attributions do not appear to remain static, and confirming or disconfirming one's expectations of success affects the way in which one explains an outcome. For example, if a person predicts success at a task and is successful, s/he is likely to attribute the outcome to ability or task difficulty. On the other hand, if the expected success does not occur, the individual will attribute the results to effort or luck (McMahan, 1973; Valle and Frieze, 1976; and Weiner, et al, 1971). These attributions then affect subsequent expectations of success with ability and task attributions positively related to
expectancies following success and negatively related to expectancies following failure. Attributions of effort and luck are positively related to subsequent expectancies following failure and negatively related to subjects' expectancies following success.

Although ability, luck, effort, and task difficulty do appear to account for some of the attributions individuals make, they are theoretically rather than empirically derived factors. When provided with the four factor schema, subjects utilize it; however, subjects also use more complex schema. For example, Valle and Frieze (1976) use six factors: ability, luck, stable effort, unstable effort, stable task, and unstable task. Again, when subjects are presented with a set of possible causes, they make attributions according to those categories; however, those categories simplify more complex attributions by combining factors. For example, in Valle and Frieze's (1976) study, the effects of various others on the action are assumed to be elements of the "unstable task" rather than a separate category. This assumption may be misleading as Frieze herself shows in her empirical derivation of attribution categories (Frieze, 1976). In two studies using open-ended questions and factor analysis, Frieze (1976) finds that subjects' self-generated causal attributions fall into eight categories which account for over 90% of their attributions. The factors include Weiner's original four categories of ability, task, luck, and effort on the task, and the other person, mood, stable effort (across tasks), and "other".

One of the interesting results of Frieze's (1976) studies is that the eight categories changed in their degree of importance depending on
the type of situation. The "other person" category increased in importance as a cause of success when the situation became a more specific learning situation. The other person involved is more important for academic achievement, in which the teacher plays a highly active role, than for a general achievement task, in which the teacher's role is minimal. The result implies that external attributions other than luck and task difficulty should be measured in those types of situations which involve learning. This result also indicates that the "other person" as a cause of success may be seen as even more important for those types of tasks which involve highly specialized learning or extended interpersonal exchanges.

While it appears that Rotter's (1976) construct of internal-external locus of control is too broad, it seems likely that individuals have styles of attribution depending on the type of task. Kelley (1973) discusses this when he explains that even single observations are not isolated from similar events. The individual making causal attributions about the event "has observed similar effects before and has some notions about possibly relevant causes and how they relate to this type of effect" (p. 113). In order to measure attribution styles it is thus necessary to define a category or generic situation in which the attributions are to be made. Following this logic, Crandall, Katkovsky, and Crandall (1965) developed an instrument which measures internal and external locus of control in one type of situation: intellectual-academic achievement situations. The original instrument was developed for use with children and adolescents; however, it has been modified for
college students (House, 1976; Massari and Rosenblum, 1972; McGhee and Crandall, 1968). The situations described are limited to individual successes or failures in which the alternatives for attributions are the "self" or "situation". The situation may be task difficulty or the actions of significant others such as a teacher or parents. In many ways the situations described are similar to counseling situations. The actor's effect on the outcome is ambiguous and will thus be determined by the subject's preconceptions about the situation. The actor is attempting to succeed, and the "other" present has a professional responsibility to assist him. Who receives credit for the actor's success or failure will depend on the subject's causal schema, or attributional style.

The first hypothesis of this study is that individuals will have preconceptions about the causes of counseling outcomes, and that these preconceptions may be categorized as internal and external. It is hypothesized that those subjects who attribute academic outcomes to internal causes will attribute hypothetical counseling outcomes to internal causes even if the subjects have had no prior exposure to counseling. Similarly, those subjects who are external attributors in academic situations will externally attribute counseling outcomes. Because academic achievement situations and counseling both involve extended interactions between an actor and a professional, highly trained other, it is hypothesized that an individual's causal attributions for academic success will be similar to his/her causal attributions for counseling success. There should be a correlation between
the general attributional style as measured by the Intellectual
Achievement Responsibility Questionnaire (Crandall, Katkovsky, and
Crandall, 1965), and preconceived attributions for counseling outcomes.

**Consistent and Discrepant Preconceptions’ Effects on Expectancies**

The utilization of internal and external attributions in thera­
peutic treatments is not new; however, individual differences in
attributions remain unexplored, and may be the reason for inconsistent
outcomes. Nisbett and Schacter (1966) and Storms and Nisbett (1970)
have used what they term "misattribution" to assist subjects in over­
coming pain and insomnia. By giving subjects a placebo which purportedly
caused physiological arousal, the experimenters induced the subjects to
attribute their arousal to external causes. Nisbett and Schachter's
(1966) subjects taking the placebo were able to withstand electric
shock four times as strong as other subjects. Storms and Nisbett (1970)
also found the "misattribution" phenomenon. Their subjects were insomniacs
who were told that an inert pill would cause physiological arousal. The
subjects took the placebos before going to bed and found they were able
to get to sleep more quickly than they did without the pills. The authors
describe this as an example of misattribution. In other words, the
subjects attributed their arousal to the pill, rather than to their in­
somnia, and relaxed enough to fall asleep. Storms and Nisbett (1970)
also gave some of their subjects the placebo with the expectancy that
the pill would decrease their arousal. These subjects subsequently
had more difficulty falling asleep, since their arousal could only be
attributed to internal causes. Misattributing autonomic responses
results in the reverse of placebo effects, and may account for inconsistencies in individuals' responses to placebos. However, misattributions do not appear to occur consistently either. Singerman, Borkovec, and Baron (1976) attempting the misattribution of arousal with speech anxious subjects, show that none of their subjects reported much attributing of arousal to the placebo (background noise). The placebo effect appears to be stronger in this experiment, since those subjects who expected the noise to arouse them were more anxious than those who expected the noise to sedate them, and the opposite occurred when the placebogenic noise was removed. The authors explained the failure of their manipulation by stating that the subjects were already familiar with their own aroused states; however, this does not explain other similar situations in which the misattribution theory does hold true. It also does not explain why the placebogenic effect does not show up in the Storms and Nisbett (1970) study.

In another attempt to use attributions as part of a treatment, Keltner and Marshall (1976) treated spider phobics with systematic desensitization and attributed success either to the subjects' efforts or to the treatment combined with a placebogenic drug. An attention placebo, in which subjects made positive statements about spiders and attributed success to their own will-power, and a no-treatment control were also used. All treatment groups were divided into those having self-control over exposure to the spiders and those in which the experimenter controlled exposure to the spider. The authors
hypothesized that maximum change should occur for those subjects who controlled their exposure to the spider and who attributed change to themselves. However the results did not confirm this hypothesis. All treatment groups were better than the no-treatment control, but the only treatment significantly more effective than the rest was the "other attributing/self-control" treatment. One of the problems with the study is that the subjects' attributions were assumed to coincide with the experimental manipulations, and any preconceptions the subjects might have had were not taken into account. In fact, the subjects' self-reports showed that their attributions were not solely dependent upon the experimenter's instructions, since those subjects in the self-attribution groups reported that the therapist contributed to their success. These subjects attributed the outcome to the therapist who attributed the outcome to the subjects, and thus there was an obvious discrepancy between the subjects' attributions and the treatment mode. The subjects' expectancy of success was likely to be reduced as they experienced this dissonance, and the efficacy of the treatment was likely to decrease with the decrease in expectancy. Thus consistency between the subjects' attributions and the type of treatment appears to be an important variable.

Other studies using the "self" and "other" attribution manipulation reveal that consistency between type of attribution and type of treatment yields positive results only if the attribution manipulation is successful. Lowery (1975) used systematic desensitization with snake phobic women and either urged them to take more responsibility for relaxing themselves
or left control of the relaxation with the therapist. Intrinsic or extrinsic attributions were made at the end of each session by the therapist, so that the subjects were strongly persuaded to attribute success according to the experimenter's wishes. The results show that those subjects receiving the self-control treatment which confirmed their intrinsic attributions improved more than the other subjects. Levine (1974), on the other hand found that intrinsic and extrinsic attribution manipulations did not yield differential results when the subjects' own attributions did not differ. In a behavioral self-control study program, subjects were told that success resulted from the procedures (extrinsic attribution) or their own efforts (intrinsic attributions). After the treatment, groups did not significantly differ in behavior or on the Rotter I-E Scale. Interestingly, they also did not differ on their causal attribution ratings between "self", "procedure", or "therapist", thus indicating that the attribution manipulation failed. Follow-up data showed that subjects did utilize the information they received from the treatments, but not exactly as predicted. The intrinsic attribution group attributed more to the "procedures" than did the others and the extrinsic attribution treatment group attributed more to the "therapist". Only those subjects in a non-directive placebo group attributed more to the "self". The results indicate a treatment effect on attributions, but not the effect assumed to be caused by the manipulation. It seems plausible that the subjects' preconceptions about the causes of a successful outcome interacted with the observable causal elements in the treatments.
Since these may have been in conflict, some subjects may have been less receptive to the treatments. If the subjects had been blocked according to their pre-treatment attributions, it is possible that the experimenter would have found significant treatment effects.

The accumulated evidence shows that attributions contribute to treatment effects, but not in a consistent pattern. Internally controlled individuals appear to be more adaptable, active, and achieving (Rotter, 1966; Lefcourt, 1966), yet intrinsically attributed treatments are not consistently effective (Keltner and Marshall, 1976). Perhaps the reason is that while internally controlled individuals will expect self-attributed treatments to work, externally controlled individuals will not. It is hypothesized here that the reason the results are contradictory is that subjects' attributions are assumed to be controlled by the experimenters rather than by the subjects' previous experiences, preconceptions, and cognitive styles. It is hypothesized that the most efficacious treatments will be those for which the necessary causal attributions are consistent with the subjects' preconceptions of causality.

The second purpose of this study is to investigate the relationship between clients' causal preconceptions for successful outcomes and their expectancies of success for various types of counseling. Specifically, it will focus on subjects' perceptions of internal versus external reasons for successful counseling. Assuming that subjects will make hypothetical causal attributions even before exposure to a task situation (in this case successful counseling), this experiment will look at the
effect of confirming or disconfirming these preconceptions. The second hypothesis of the study is that the more a treatment appears to rely on the factors to which a subject generally attributes success, the more the subject will expect a successful outcome. Conversely, the more discrepancy there is between the treatment rationale and the subject's general attributions, the less the subject will expect a successful outcome. Such findings would have meaningful applications to counseling. If the client a priori attributes successful counseling to external causes, then s/he will expect a treatment which consists primarily of externally controlled activity to be more successful than a treatment which consists of primarily internally controlled activity. If two treatments appear to be equally externally controlled, then the externally attributing client will expect equally successful outcomes from the two treatments. Conversely, the internally attributing client will expect a successful outcome from a treatment consisting primarily of internally controlled activities. The more closely the treatment conforms to the preconceptions of the client, the greater the client's expectancy for successful outcome and the more likely such an outcome will actually occur.

Confirmed and Disconfirmed Expectancies' Effects on Attributions

As stated earlier, the research does indicate that confirmed or disconfirmed expectancies affect causal attributions (House, 1976; McMahan, 1973; Valle and Frieze, 1976; Weiner et al, 1971). The third
part of this study investigates the generalizability of these findings to a counseling setting. Because one's attributions change with an increase in information (Frieze, 1976), it is expected that subjects' attributions will change after they have seen an actual treatment session as Levine's (1974) subjects did after undergoing treatments. Therefore, the third hypothesis is that subjects who expect a successful treatment outcome will maintain their preconceived causal attributions following a confirmation of their expectancies about the treatment outcome, whereas subjects who do not expect a successful treatment outcome will alter their causal attributions when their expectancies are disconfirmed. Attributions should change in the direction of those causes which are overtly significant factors in the treatment. For example, an internally attributing subject, who expects an externally controlled treatment to be unsuccessful, will make external attributions after his/her expectancy has been disconfirmed. In the same manner, an externally attributing subject will make internal attributions if his/her expectancies for an unsuccessful internally controlled treatment have been disconfirmed.

Comments on the Methodology

One phenomenon which recurs in attribution research is the discrepancy between causal attributions made by actors and observers. Actors consistently tend to attribute their behaviors more to situational (external) circumstances while the observers attribute actors' behaviors more to the actors' personal characteristics. This systematic discrepancy poses a problem for any research in
which the results obtained from observers are to be applied to actors. However, there are data which indicate that observers can assume the role of actors if they receive the proper assistance. Storms (1973) had his observers view an interaction from the actor's point of view by using a videotape. Observers who saw the interaction from this new orientation attributed behaviors more to situational than to dispositional factors. Thus Storms succeeded in creating an experiment in which observers responded quite similarly to actors. Galper (1976) also succeeded in "Turning observers into actors" by instructing her subjects to empathize with the actor in a story. Combining instructions to empathize with a videotape from the actor's perspective should ensure that the observers' attributions are fairly close to what they would be if the observers were themselves acting.

**Hypotheses**

In summary, there are three major hypotheses with which this study is concerned. The first is that individuals' preconceived attributions about the causes of counseling outcomes will be positively correlated with the causal attributions they make concerning general intellectual achievement outcomes. Secondly, it is hypothesized that the more a treatment appears to rely on those factors consistent with the subject's preconceptions, the more the subject will expect counseling to be successful. Finally, if the subject's expectancy for an outcome is disconfirmed, the subject's attributions are predicted to change in the direction of the more overtly active treatment elements.
METHODOLOGY

Subjects -- Subjects consisted of 143 undergraduate women at the Ohio State University who were enrolled in psychology 100. Students received one hour of credit toward their experimental requirement. All subjects were female in order to avoid any confounding of the data by sex differences.

Procedure -- Subjects signed up to participate in the experiment and were seen in groups ranging from one to five subjects. The experiment was offered at various times of the day during the spring and summer quarters of 1978. Because subjects selected their own experiment times, treatments were randomly assigned to the subject groups.

Upon arrival at the laboratory, subjects were given a package containing the questionnaires and a rationale for the treatment to be viewed. Instructions were printed in the package, and the experimenter remained in the room to answer any questions the subjects had. First subjects responded to the questionnaire measuring internal-external locus of control in an academic situation (Intellectual Achievement Responsibility Questionnaire, Crandall, Katkovsky, and Crandall, 1965), and then they responded to the questionnaire assessing their preconceived attributions of counseling outcomes (Internal Attributions of Treatment success--hypothetical). Next they read the rationale of the appropriate therapy and viewed the videotaped session after being asked to try to identify with the client. Subjects were then
asked to rate their expectancies for a successful outcome, using the adaptation of the Borkovec and Nau (1972) questionnaire. Finally, they were asked what they thought were the causes of their predicted outcome for the treatment (IAT-post-treatment). At this point subjects were informed that the counseling actually was a highly successful treatment, and they were asked to attribute the causes for success by completing the IAT-post-manipulation. When all the questionnaires were completed, the experimenter thoroughly debriefed the subjects and answered any questions they had. Most of the subjects seemed interested in the experiment, and their only concern was for the privacy of the "client" on the tape.

Independent Variables -- Subjects received a description and rationale for one of the three types of counseling, and then viewed a twenty-minute videotape of a simulated session. Each videotaped session used the same male counselor and the same female client. The client was the same sex as the subjects in order to maximize the similarities and allow the subjects to identify with the client. The same counselor was used in each treatment in order to avoid confounding the data with treatment and counselor interaction effects. The written descriptions and the videotapes were constructed in such a way that causality of the outcome was implied. That is, the client-centered treatment consisted almost entirely of client activity and its rationale included only internally controlled elements. The systematic desensitization rationale included internal and external causes for success, and the client and counselor were both active.
In the subconscious reconditioning tape, only the counselor was active, and the rationale for success was entirely external to the client.

**Treatment 1:** The 49 subjects in this condition were given a description of the treatment similar to that given the other treatment groups. This description was taken from Russell, Lent, and Crimmings (1978) and described the placebo treatment known as subconscious reconditioning (see Appendix). Subjects then watched a videotape of the counselor confirming that the client understood the procedure, turning on the tachistoscope, and proceeding with the subconscious reconditioning of the client. The counselor then terminated the interview by stating that they would continue the treatment the next week.

**Treatment 2:** These 44 subjects were given a description of systematic desensitization similar to that in Treatment 1 (see Appendix). They then viewed the counselor briefly reminding the client of how the procedure works, relaxing the client, and then leading her through several steps of systematic desensitization. The client spoke to indicate that she understood the procedure, and she would signal nonverbally when she visualized and/or felt tense. At the end of this session the counselor brought the client out of her relaxed state, told her to practice the relaxation, and agreed that they would continue the following week.
Treatment 3: The 50 subjects in this group were given instructions about the tape along with brief description of the philosophy and technique of client-centered therapy (see Appendix). Subjects then viewed a videotape of the female client discussing her anxiety about talking with people. The counselor reflected her statements with accurate empathy and generally displayed warmth and concern for the client. He did not recommend that she take any action, but showed that he understood her determination to overcome her problem. The session ended with the counselor asking if she wished to continue next week.

Dependent Variables -- Subjects were asked to complete: 1) the Intellectual Achievement Responsibility Questionnaire (IAR) (Crandall, Katkovsky, and Crandall, 1965); 2) a questionnaire measuring their attributions of the causes of successful counseling in general (Internal Attributions of Treatment success-hypothetical) (IAT-hypothetical); 3) a questionnaire measuring their causal attributions for the expected outcome of the type of counseling they viewed (IAT-post-treatment); 4) a measure of their causal attributions after they were informed of the successful outcome (IAT-post-manipulation); and 5) an adaptation of Borkovec and Nau's (1972) questionnaire measuring subjects' expectancies for a successful counseling outcome. See the appendix for a copy of the complete package received by the subjects.

The IAR has been assessed for reliability and validity by Crandall, Katkovsky, and Crandall (1965), and Massari and Rosenblum (1972). Test-retest reliability for ninth grade students after a two month interval was .65 for the total I scale and .47 for the I+ subscale.
(attributions for successes only). Both correlations were significant at the .001 level. Split-half reliability was .60 for both the I+ and I- subscales. Construct validity appears to be reasonably well established, with internality being related to age, and family position and sex (first born children and girls are more internal). Children's scores are unrelated to intelligence test scores, socioeconomic status, and Children's Social Desirability Questionnaire (Crandall, Crandall, and Katkovsky, 1964). Massari and Rosenblum (1972) found IAR-adult scores significantly negatively correlated with the Rotter IE scale scores. Since the scales score in opposite directions, this result supports the validity of the IAR as measure of internal attributional style.

The IAT measures, developed by the experimenter, are seven point Likert scales similar to the face-valid questions used by Weiner et al (1971, 1976). The Borkovec and Nau (1972) questionnaire consists of 10 point scales, developed to measure the credibility and expectancy of success of analogue therapy rationales. The expectancy questionnaire used in this study differs from the Borkovec & Nau (1972) measure in the use of the phrase "talking with strangers" rather than "making speeches". An additional question, "How successful do you think this type of counseling would be with this client?" was asked to insure that the subjects' expectancies were based on the actual session that they viewed.

Statistical Design -- Means and standard deviations were computed for the seven variables within groups, and a 7 x 7 correlational matrix
was computed for each of the three treatment groups. Post hoc tests were used to analyze those group differences which appeared to be significant. Alpha was set at the .05 level for all statistical tests.

Although several of the predicted relationships were not of statistical significance, a step-wise multiple regression was performed and linear regression equations were derived for the three post-treatment variables within each group. This statistical manipulation reveals some of the more subtle treatment influences not made obvious by the grosser correlational design.

**Statistical Hypotheses**

1. There will be a significant positive correlation between the IAR measure of internality, the IAT-hypothetical, and the IAT-post-treatment. All scores increase with internality.

2. There will be a significant positive correlation between subjects' scores on the IAT-hypothetical and their expectancy for a successful outcome due to client-centered therapy.

3. There will be no significant negative correlation between subjects' scores on the IAT-hypothetical and their expectancy for a successful outcome due to systematic desensitization.

4. There will be a significant negative correlation between subjects' scores on the IAT-hypothetical and their expectancy for a successful outcome due to the placebo treatment.

5. Once the subjects had been informed that the treatment was successful, those subjects whose expectancies have been disconfirmed
should change their attributions. The changes should be in the
direction of the treatment mode, and should result in significant
shift for the group.

a. For those subjects who viewed the client-centered
session, IAT-post manipulation should be greater than
IAT-hypothetical and IAT-post treatment.
b. For those subjects who viewed the systematic desensitization, IAT-post manipulation should not be
different from IAT-hypothetical or IAT-post treatment.
c. For those subjects who viewed the placebo session,
IAT-post manipulation should be less than IAT-hypothetical
and IAT-post treatment.
RESULTS

The data were analyzed several ways to determine the relationships among the various measures. Within each of the three treatment groups seven variables were analyzed. \(X_1\) is a bivariate measure identifying those subjects who have experienced some counseling, \(X_2\) is the Intellectual Achievement Responsibility Questionnaire-total score ranging from zero to thirty-two. The \(I^+\), or internal responsibility for successes, from the IAR is variable \(X_3\), with possible scores of zero to sixteen. \(X_4\) is a measure of Internal Attributions of Treatment Success-hypothetical, ranging from four to twenty-eight, and \(X_5\) is the adaptation of Borkovec and Nau's measure of expectancy for successful treatment, with scores of six to sixty. \(X_6\) and \(X_7\) are measures of the Internal attributions of treatment success (\(X_4\)) given after the treatment has been witnessed (\(X_5\)) and after the treatment has been described as highly successful (\(X_7\)).

Means and standard deviation for each variable within each treatment group are available in Table I. There were no significant differences between groups on any of the measures administered before the treatment. Significant differences did exist on the expectancy measures, and the two post-treatment measures of internal attributions of treatment success. The client-centered therapy treatment group showed significantly greater expectancy for success (Variable \(X_5\)) than did either the subconscious reconditioning group or the systematic desensitization group ($p \leq 0.05$).
After treatment the client-centered group expressed significantly greater internal attributions to outcome than did the subconscious reconditioning group. Both the client-centered and the systematic desensitization groups had higher internal attribution scores than subconscious reconditioning following the manipulation describing treatment success.

Within groups there were no significant differences for the systematic desensitization or the client-centered groups on any of the three measures of internal attributions of treatment success. The subconscious reconditioning group, however, showed a significant decrease in the internal attributions from the pretreatment measure to the final measure. The internal attribution scores following the treatment (but before the success manipulation) approached but did not reach significance for the subconscious reconditioning group. The relationships of these measures are shown graphically in Figure 1.

**Correlational Relationships**

The data were also analyzed for correlational relationships and for the more complex relationships revealed by a step-wise multiple regression. Each treatment group was analyzed independently.

Within each treatment group several statistically significant simple correlations were found. Alpha was set at .05, and the cut-off point for significance was .28 for the subconscious reconditioning and client-centered groups, and .30 for the systematic desensitization group. See Tables II, III, and IV for the complete correlational matrices for the treatment groups.
<table>
<thead>
<tr>
<th></th>
<th>Subconscious Reconditioning</th>
<th>Systematic Desensitization</th>
<th>Client-Centered</th>
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<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
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<td>.364</td>
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<td>IAT Post-Manipulation X7</td>
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N = 49  N = 44  N = 50
FIGURE 1

Differences Between Treatment Groups on Pre-treatment and Post-treatment Internal Attributions of Treatment Success
### TABLE 2
Correlation Coefficients for Variables X₁ to X₇
Subconscious Reconditioning Treatment Group

<table>
<thead>
<tr>
<th></th>
<th>X₁</th>
<th>X₂</th>
<th>X₃</th>
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</table>

* Significant at the .05 level

X₁ = Experience in Therapy
X₂ = IAR Total
X₃ = IAR = 1+
X₄ = IAT-hypothetical
X₅ = Expectancies
X₆ = IAT-post-treatment
X₇ = IAT-post-manipulation
### TABLE 3

Correlation Coefficients for Variables $X_1$ to $X_7$

Systematic Desensitization Treatment Group

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* Significant at the .05 level

$X_1$ = Experience in Therapy
$X_2$ = IAR = Total
$X_3$ = IAR = I+
$X_4$ = IAT - hypothetical
$X_5$ = Expectancies
$X_6$ = IAT-post-treatment
$X_7$ = IAT-post-manipulation
TABLE 4  
Correlation Coefficients for Variables $X_1$ to $X_7$ 
Client Centered Therapy Treatment Group

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<th>$X_5$</th>
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</thead>
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<td>$X_2$</td>
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* Significant at the .05 level  

$X_1$ = Experience in Therapy  
$X_2$ = IAR - Total  
$X_3$ = IAR = I+  
$X_4$ = IAT hypothetical 
$X_5$ = Expectancies  
$X_6$ = IAT - post-treatment 
$X_7$ = IAT - post-manipulation
Responses from the subjects in all these conditions revealed a high correlation between the IAR total and the IAR I+ scores, indicating that the subscale is not independent of the total scale. Individuals' attributions for successes are probably the result of their attributional style as are their attributions for failures. Subconscious reconditioning and client-centered therapy both show correlations between both of those variables and the expectancy measure. Counseling experience was positively related to expectancy for the systematic desensitization group and negatively related to expectancy for the client-centered group. Within the systematic desensitization group, the expectancy for success measure was negatively correlated to the Internal Attribution of Treatment Success in all three cases: hypothetical (X4); post-treatment (X6); and post-manipulations (X7). The IAT-hypothetical was correlated with the IAT-post-treatment and IAT-post manipulation for the systematic desensitization and the client-centered groups, but not for the subconscious reconditioning group. The IAT-post-treatment and the IAT-post manipulation were correlated in all three groups.

Multiple Regression Equations

Multiple regression equations were derived for the three post-treatment variables: expectancy of success, internal attributions of treatment outcome-post-treatment, and internal attributions of treatment success-post manipulation. (Note: variables X5, X6, and X7, respectively). For each of the three variables within each of the three treatments, two regression equations are given. The first
is for the maximum $R^2$ obtained, the maximum percentage of the variable's variance predictable within this sample. The second equation is for the maximum adjusted $R^2$, in which those variables are deleted which tend to lessen the criterion variable's predictability in other samples. By using a step-wise multiple regression, equations were obtained which maximize the amount of the criterion variable's variance accounted for beyond this limited sample. Data have been rounded to the nearest .01.

These equations derived from the subconscious reconditioning groups provide the least predictive power. For variable expectancy $X_5$, the maximum $R^2$ is .23 and the maximum adjusted $R^2$ is .21.

Eq. 1. $X_{5SR} = 1.80, X_3 (.44) + X_4 (-.07) + X_2 (.04)$

$R^2 = .23$ adjusted $R^2 = .18$

Eq. 2. $X_{5SR} = -1.49 + X_3 (.47)$

$R^2 = .23$ adjusted $R^2 = .21$

The equations predicting variable $X_7$ have a maximum $R^2$ of .23 and a maximum adjusted $R^2$ of .18.

Eq. 3. $X_{7SR} = 6.66 + X_6 (.39) + X_4 (.16) + X_5 (-.15) + X_3 (.07) + X_1 (.04)$

$R^2 = .23$ adjusted $R^2 = .14$

Eq. 4 $X_{7SR} = 6.53 + X_6 (.39) + X_4 (.18)$

$R^2 = .21$ adjusted $R^2 = .18$

The criterion variable $X_6$ in the subconscious reconditioning group is not predictable from the variables used. The maximum $R^2$ is only .066 and no adjusted $R^2$ is greater than .026.
The percentage of variance predictable for the criterion variables in the systematic desensitization group are the largest of the three treatment groups. The additional predictor variables add so little to the maximum $R^2$ that only the equation for the maximum adjusted $R^2$ is given for variable $X_5$.

Eq. 5. $X_{5SD} = 53.18 + X_4 (-.49) + X_1 (.35) + X_3 (.17)$

$R^2 = .39$  adjusted $R^2 = .34$

In this treatment group $X_6$ is a great deal more predictable than in the subconscious reconditioning group, with the maximum $R^2$ being .31, and the maximum adjusted $R^2$ equaling .24.

Eq. 6. $X_{6SD} = 13.14 + X_5 (-.24) + X_4 (.34) + X_1 (-.17) + X_2 (.20) + X_3 (-.15)$

$R^2 = .31$  adjusted $R^2 = .22$

Eq. 7. $X_{6SD} = 14.76 + X_5 (-.24) + X_4 (.34) + X_1 (-.16)$

$R^2 = .29$  adjusted $R^2 = .24$

The criterion variable $X_7$ in the systematic desensitization group is the most accurately predicted of all those tested. Within the sample the maximum predictive equation accounts for 63%, and even adjusting for sampling error 60% of the variance can be predicted.

Eq. 8. $X_{7SD} = 8.64 + X_4 (.70) + X_2 (-.18) + X_6 (.08) + X_1 (-.06) + X_5 (.04)$

$R^2 = .63$  adjusted $R^2 = .58$

Eq. 9. $X_{7SD} = 7.70 + X_4 (.07) + X_2 (-.19) + X_6 (.11)$

$R^2 = .62$  adjusted $R^2 = .60$
Each of the criterion variables in the client-centered group has a predictive equation; although the percentages of explained variance are not as great as those in the systematic desensitization group. Variable \( X_5 \) has a maximum \( R^2 \) of .21 and a maximum adjusted \( R^2 \) of .21 and a maximum adjusted \( R^2 \) of only .16.

Eq. 10. \[ X_{5C} = .46 + X_2 (.153) + X_1 (.12) + X_4 (.11) + X_3 (-.13) \]
\[ R^2 = .21 \quad \text{adjusted } R^2 = .14 \]

Eq. 11. \[ X_{5C} = 3.46 + X_2 (.44) + X_1 (12) \]
\[ R^2 = .19 \quad \text{adjusted } R^2 = .16 \]

For variable \( X_{6C} \) the percentages are better, with the maximum \( R^2 \) being .33 and the maximum adjusted \( R^2 \) equaling .27.

Eq. 12. \[ X_{6C} = 11.34 + X_4 (.58) + X_5 (-.16) + X_3 (.29) + X_2 (-.23) + X_1 (.04) \]
\[ R^2 = .33 \quad \text{adjusted } R^2 = .25 \]

Eq. 13. \[ X_{6C} = 12.25 + X_4 (.56) + X_5 (-.16) \]
\[ R^2 = .30 \quad \text{adjusted } R^2 = .27 \]

Again the variable \( X_7 \) is the most predictable with the available predictors. Only the equation for maximum adjusted \( R^2 \) is given, since the increase in \( R^2 \) is so slight.

Eq. 14. \[ X_{7C} = 7.64 + X_4 (.41) + X_5 (0.28) + X_1 (-.25) + X_6 (.27) \]
\[ R^2 = .49 \quad \text{adjusted } R^2 = .44 \]

Although the regression equations derived from these data do not account for large percentages of the criterion variables' variance (only one equation accounts for over 50%), they do provide some
information for predicting clients' actions. One of the most interesting results of the multiple regression analysis lies in the differences between the predictor equations for the various treatment groups. These differences will be discussed more fully in the next chapter.
DISCUSSION

The Hypotheses

Hypothesis I: There will be a significant positive correlation between the IAR measure of internality, the IAT-hypothetical, and the IAT-post-treatment. All scores increase with internality.

This hypothesis was only partially confirmed by the results, and this has implications concerning the use of the measures of internal-external style. As predicted, there was a high correlation between the IAR-total and the IAR-I+ subscore in all three groups. The means are somewhat lower than those found by Crandall, Katkovsky, and Crandall (1965) for high school girls; however, that difference should not affect the correlational findings.

There was not a significant correlation between the IAR-total and IAR-I+ scores and the IAT-hypothetical or IAT-post-treatment scores. These results indicate that the measure of attributional style in an academic setting does not generalize to a counseling situation. The subjects' preconceptions of counseling must be based on experiences other than those they have had in a classroom, and thus their style of causal attributions changes for the counseling situation.

The third part of hypothesis I was partially confirmed. IAT-hypothetical and IAT-post-treatment were significantly correlated in the systematic desensitization and the client-centered therapy groups.
indicating that those two treatments did not significantly change the causal attributions made by the subjects. The subconscious reconditioning treatment affected its subjects sufficiently so that their answers on the identical questions were not correlated. This result contradicts results which show that strongly held preconceptions are not easily changed (e.g. Berscheid and Walster, 1974; Chapman and Chapman, 1967 and 1969), but they are consistent with evidence that individuals' attributions change with new information (Frieze, 1976; Levine, 1974). The preconceptions held by these subjects were not strong enough to withstand information which showed causes obviously discrepant from those to which the subjects had previously attributed the hypothetical outcome. The change in means shows that indeed the shift in attributions by the subconscious reconditioning group was to more external causes. This effect is even greater after the success manipulation as is discussed in the section on hypothesis V.

Hypothesis II, III, and IV: There will be a significant positive correlation between the subjects' scores on the IAT-hypothetical and their expectancy for a successful outcome due to client-centered therapy.

There will be no significant correlation between subjects' scores on the IAT-hypothetical and their expectancy for successful outcome due to systematic desensitization.

There will be a significant negative correlation between subjects' scores on the IAT-hypothetical
and their expectancy for a successful outcome due to the placebo treatment.

The second hypothesis was not supported. The data indicated that subjects' internal attributions of treatment success in a hypothetical situation are not related to their expectancy of success for an internally oriented treatment. The fourth hypothesis was also unconfirmed since the data have an insignificant relationship with subjects' expectancies for the success of subconscious reconditioning. In light of these results, it is puzzling that hypothesis III is also unconfirmed. There was an unpredicted significant negative correlation between subjects' internal attributions of a hypothetical treatment success and their expectancies for success for systematic desensitization. The stronger the internal attributions (preconception) made, the less likely the subject was to expect systematic desensitization to work.

Looking at the regression equations, the differences in predicting expectancies for the three treatments become clearer. For the subconscious reconditioning group, the single most informative variable was the IAR-I+ subscore which can account for 21% of the variability in subjects' expectancy scores ($r=.48$). On the other hand, the IAR-I+ subscore contributes only slightly to the best regression equation for the systematic desensitization group, and not at all for the client-centered therapy group. Predictions of expectancies for systematic desensitization are most appropriately based on the attributions of treatment success, whether the subjects have had counseling experience, and the IAR-I+ subscore. These variables will account for 34% of the variability of
expectancy scores. For subjects in the client-centered therapy group, expectancy scores are best predicted by looking at the IAR-total score and whether the subject has had counseling before. However, these variables only account for 16% of the expectancy scores' variability.

Obviously there are factors influencing subjects' expectancies which were not measured by the instruments used here; however, it is important to note that the attribution styles (IAR-total and IAR-I+) did contribute to expectancies for each group. Preconceptions of internally caused treatment success are associated with negative expectancies for systematic desensitization. A significantly higher expectancy rating was obtained from those subjects in the client-centered therapy treatment, and expectancy ratings for systematic desensitization and subconscious reconditioning were not significantly different from each other.

Hypothesis V: Once the subjects have been informed that the treatment was successful, those subjects whose expectancies have been disconfirmed should change their attributions. The changes should be in the direction of the treatment mode, and should result in a significant shift for the group.

a. For those subjects who viewed the client-centered session, IAT-post manipulation should be greater than IAT-hypothetical and IAT-post treatment.

b. For those subjects who viewed the systematic desensitization, IAT-post manipulation should not be
different from IAT-hypothetical or IAT-post-treatment.
c. For those subjects who viewed the placebo session, IAT-post manipulation should be less than IAT-hypothetical and IAT-post-treatment.

The predicted relationships in hypothesis V were partially confirmed. There were no significant differences on the attribution scale immediately following the treatment; however, those subjects in the subconscious reconditioning group did somewhat decrease their internal attributions (see hypothesis I). After the success manipulation, those subjects in the subconscious reconditioning group decreased their internal attributions even more, so that there was a significant difference between their preconceptions and their final attributions. According to the predicted pattern, subconscious reconditioning subjects' attributions of counseling success became more external.

As expected, the systematic desensitization subjects' attributions did not significantly change; however, there was a definite trend for the attributions to become less internal after the treatment and success manipulation. Apparently subjects perceived this treatment as being externally controlled, a result which strengthens the interpretation of the negative correlation between the internal attributions and the expectancy of success for systematic desensitization. This analysis is not completely clear, though, since subjects' attributions for systematic desensitization's success are significantly more internal than subjects' attributions for subconscious reconditioning's success. Immediately following the treatments, subjects' attributions for client-centered
therapy were significantly more internal than were those for subconscious reconditioning. The attributions made for client-centered therapy's success (post-manipulation) were also significantly more internal than for subconscious reconditioning, but not significantly more internal than for systematic desensitization. These results affirm that subjects' attributions changed slightly after viewing the treatment and even more after the success manipulation. Both subconscious reconditioning and systematic desensitization subjects made increasingly fewer internal attributions, while the client-centered subjects increased their internal attributions following treatment and then decreased them following the success manipulation.

One explanation of the decrease in the client-centered therapy group's internal attributions may be the form of the success manipulation. One of the manipulation statements was "This type of counseling is quite often used with clients who have similar problems, and research shows that the client nearly always improves." This may have been so similar to the statement "The counselor used a procedure which solved this problem," that subjects gave added weight to the external factor "procedure".

Additional Findings

Successful predictions of post-treatment attributions have important applications for treatment procedures, especially if the client's attributions affect his general well-being (Lefcourt, 1966; Meichenbaum and Smart, 1971; Rotter, 1966; Wolk and Kurtz, 1975). Unfortunately,
the results of this study show that the post-treatment attributions of subjects viewing subconscious reconditioning cannot be predicted for the predictor variables used. The interaction of counseling experience, the pre-treatment testing of attributional style, attributions of counseling success, and expectancies for success is not sufficient to account for causal attributions made after the treatment. For those attributions made after viewing systematic desensitization and client-centered therapy, an appreciable amount of variance can be accounted for. After viewing systematic desensitization, subjects' attributions can be partly accounted for by looking at their pre-treatment attributions, whether or not they have had counseling, and their expectancies for a successful outcome. For the client-centered therapy subjects also, pre-treatment attributions and expectancies provide an index for predicting post-treatment attributions. Expectancies have a greater impact on the systematic desensitization subjects' attributions than on those of client-centered therapy subjects, and pre-treatment attributions are more important for client-centered therapy subjects than for systematic desensitization subjects. In both cases, the expectancy effect is negative and the pre-treatment attribution effect is positive. This indicates that viewing the treatment and reacting to it with high or low expectancies changes the subjects' causal attributions and that these changes are greater for systematic desensitization than for client-centered therapy.

The regression equations for attributions made after the success manipulation also vary according to treatment, although each of the equations includes the previous attribution scores. For those in the subconscious
reconditioning group, the post-treatment attribution is the most important predictor variable, and only the pre-treatment attribution score contributes anything else significant to the equation. Within the systematic desensitization group, subjects' post-manipulation attributions are predicted from subjects' pre-treatment attributions, a negative effect from their attributional styles (IAR-total), and their post-treatment attributions. These variables are listed in order of importance and account for most of the IAT-post manipulation variance (60%). Much of the IAT-post manipulation variance (44%) within the client-centered therapy group is also accounted for by the predictor variables. The hypothetical attribution (preconception) score, a negative effect from expectancies, a slight negative from previous experience with counseling, and post-treatment attributions form the predictors.

Again the amount of predictable variance for the subconscious reconditioning group is small (18%) and relies primarily on the post-treatment attribution score, whereas the other two groups rely primarily on the pre-treatment attribution score to predict the post-manipulation score and do so with much greater accuracy. Obviously the effect of the subconscious reconditioning treatment on attributions is important, but not clearly positive or negative.

For the client-centered and systematic desensitization groups the treatment effects also vary somewhat. Expectancies and previous counseling experience negatively effect the post-manipulation attribution scores of the client-centered group, and the post-treatment score is relatively less important for that group than for the systematic desensitization group.
This, in conjunction with the equations for the post-treatment attribution score, indicates that the impact of the manipulation was greater for the client-centered group than for the systematic desensitization group. Since simply viewing the video-taped treatment had more impact on the systematic desensitization group (see post-treatment attribution scores), this difference is not unreasonable. The systematic desensitization group made more changes in their attributions immediately after seeing the treatment, while the client-centered group made their major changes after the success manipulation.

Implications and Limitations

Several of the findings in this study reveal relationships which are directly important for counseling procedures, while other findings add to counseling psychology only indirectly. A summary of the findings and a discussion of their implications follow.

1. The measures of attributional style in an academic setting does not generalize to a counseling situation. This result suggests the need for even more specification of the internal-external attribution construct. The categorization of settings in which various styles are used needs to be made empirically rather than intuitively. If it is true that individuals have several styles of attributing which are differentially employed in different settings, then observation is needed to discover those aspects of a situation which determine the individual's attributional style.

One reason academic attributional styles and preconceived attributions about counseling may not be related is that college students have such different degrees of experience with the two
situations. All of the subjects had had at least twelve years of educational experience, while fewer than half had had any counseling. Most of those who had received counseling obtained it from guidance counselors or academic advisors rather than psychologists. The effect of this experience is unclear.

Finally, it was assumed that subjects would interpret both academic and counseling success as intrinsically rewarding and of primary importance only to the individual. In fact this may not be the case. Certainly there will be a difference in attitude between the client who seeks emotional support from a counselor and the student who is sent to the guidance counselor for an academic or disciplinary problem. It seems likely that the attributions of success will be different for each of these individuals, and these attributions may be very different from those of academic success. A more detailed investigation of the elements affecting attributions is needed. Only then will we be able to compare attributional styles across settings.

2. Attributional style does affect expectancy of success for all three types of treatment. Internality is positively related to expectancy in each group, although the relationship is weaker in the systematic desensitization group. One interpretation of this result coincides with previous results showing that internally controlled individuals respond more favorably to treatments (Lefcourt, 1966; Meichenbaum and Smart, 1971). Because of their belief that their behaviors are effective, these individuals are generally more optimistic about outcomes. Their high expectancies for treatment success
are due to this pervasive optimism rather than to their beliefs about a particular treatment mode. It is possible that if individual subjects were asked to rate their expectancies for the success of different types of treatments that differential rates would be found.

One possible explanation of this result cannot be overlooked. In spite of Crandall, Katkovsky, and Crandall's (1965) evidence that the IAR is free of a social desirability bias, it is possible that such a bias does exist in favor of internality. The same subjects who give socially desirable answers are quite likely to try to please the experimenter, thus giving the treatment a high rating. The experimenter attempted to minimize this effect through the instructions (see appendix) and by leaving the room when the treatment was presented. However, this interpretation cannot be entirely overlooked.

In light of these findings, however, it is reasonable to recommend that counselors attempt to influence clients' attributional styles before treatment, regardless of the treatment method used. Since internality is related to greater expectancies of success, it may also be used as a prognostic tool. Those counselors whose clients are external would be well advised to include reattribution as part of their goals. This finding is limited to general attributional style, and should be contrasted with the following point.

3. Preconceptions of causal factors in counseling (pre-treatment attributions) do not influence expectancies for subconscious reconditioning or client-centered therapy, but do affect expectancies for systematic desensitization. The more internal attributions s/he makes, the less the subject will expect the systematic desensitization
to be successful. In light of the preceding finding, this result is somewhat confusing. However, it should be remembered that there is no relationship between the general attributional style for academic situations and the specific preconceptions about counseling. At any rate, there is substantial evidence here that clients who expect to be responsible for their own counseling success will not expect systematic desensitization to be effective. At least their expectancies will not be as great as those clients whose preconceptions are more external.

Counselors would be well advised to assess clients' preconceptions before beginning systematic desensitization as a treatment. Although there is no evidence here to recommend using an alternative treatment, there is sufficient evidence to justify changing the clients' preconceptions. By emphasizing the importance of the treatment and the counselor (without diminishing the client's role), the counselor should be able to raise the client's expectancies.

One additional point concerns the lack of relationship between pre-treatment attributions and expectancies for subconscious reconditioning. Since post-treatment attributions for subconscious reconditioning were significantly more external than for systematic desensitization, this lack of relationship cannot be due to a manipulation failure. Expectancies for systematic desensitization and subconscious reconditioning were equivalent, so the lack of relationship is not because both internally and externally attributing subjects have low expectancies. In fact, the result may be interpreted to mean
that internally attributing subjects expected success from subconscious reconditioning as much as externally attributing subjects did. The subconscious reconditioning placebo treatment is so convincing that even internally attributing subjects (who don't expect success from systematic desensitization) expect the subconscious reconditioning to work. Russell, Lent, and Crimmings (1978) found this placebo as credible as systematic desensitization; however, further research may show that it is even more credible. A closer look at the exact elements of the treatment may lead to a new understanding of effective placebo treatment.

4. Expectancies for client-centered therapy are greater than for subconscious reconditioning or systematic desensitization. The equal expectancy ratings for systematic desensitization and subconscious reconditioning was a replication of previous findings (Evans, Kazarian, and Greenough, 1977; Marcia, Rubin, and Efran, 1969; Russell, Lent, and Crimmings, 1978); however, expectancies for client-centered therapy have not been contrasted with these types of treatments. Although studies have shown that placebos with expectancies equal to systematic desensitization are equally effective (Kazdin and Wilcoxon, 1976), they have not shown that less effective treatments may create equally strong expectancies. In light of the evidence that systematic desensitization is a more effective treatment for anxiety than is insight therapy, similar to client-centered therapy (Paul, 1966), the current finding implies that more than an expectancy effect is at work in systematic desensitization.
Subconscious reconditioning is also an effective treatment for anxiety, and the situation is even more complex since the subconscious reconditioning subjects had expectancies significantly less than those who saw client-centered therapy. Although systematic desensitization may contain actual therapeutic elements, subconscious reconditioning is a *bona fide* placebo, and is assumed to work because of the expectancy effect. Since the expectancy effect for client-centered therapy ought to be even greater, then client-centered therapy should be an effective treatment for anxiety, at least as a placebo. This is not the case according to the research, and therefore, the placebo effect of subconscious reconditioning must be the result of more than just expectancies. More research on the relationship between expectancies and placebos is needed to clarify these results, especially research which measures the changes in clients' expectancies throughout treatment.

5. Attributions made on the basis of preconceptions (pre-treatment attributions) change according to the information which is supplied. Subconscious reconditioning subjects make more external attributions. Systematic desensitization subjects' attributions tend to become more external, but are more internal than the subconscious reconditioning subjects' attributions. Client-centered therapy subjects do not change significantly, but remain significantly more internal than subconscious reconditioning subjects. Again, the only statistically significant change in subjects' attributions occurred in the subconscious reconditioning group. In this treatment group, the videotape and the success
manipulation were sufficient to overcome the subjects' preconceptions. A predicted change to more internal attributions did not occur for subjects in the client-centered group. One plausible explanation is that the subjects in the client-centered group did not change their preconceptions because they received no contradictory information. Even those subjects whose preconceived attributions were external may have expected the method of counseling to be similar to client-centered therapy. In light of the fact that most of the subjects' counseling experience was with school counselors, this is not surprising.

Counselors who use client-centered therapy should be aware of this possible failure of the treatment method. Since one of the explicit goals of client-centered therapy is to have clients assume responsibility for solving their own problems, a strong emphasis on self-attributions may be necessary for those clients who initially attribute counseling outcomes more externally. One shortcoming of this study is that subjects attributed outcomes on the basis of only one session. Presumably, the effect of the treatment method would increase over time, and client-centered therapy clients would make more internal attributions of success.

Summary

These findings indicate that specific internal and external attributions may effect clients' expectancies for the success of a particular type of treatment. The type of treatment definitely has some effect on the clients' attributions of outcome, with subconscious
reconditioning having the most powerful influence. The precise relationship between attributions, expectancies, and placebo effects remains unknown, but further research in the area promises to be fruitful.
APPENDIX

The following questionnaires were constructed to help me find out what your ideas are. Please answer all the questions as honestly as you can. All of the information will be strictly confidential, your identity will not be revealed, and your answers will be used only as part of a group. Please do not try to answer what you think I want you to answer. I am interested in your own ideas.

Since this experiment is about counseling, I need to know what experience you have had with counseling.

1. Have you ever had counseling or psychotherapy?
   _____ Yes  _____ No

2. If yes, where did you receive this service?
   (Check all that apply.)
   _____ high school counselor  _____ college advisor
   _____ college counseling center  _____ mental health center
   _____ private psychologist  _____ private psychiatrist
   _____ other (please specify) _________________________________

Please go on to the next page.
IAR

Instructions: Put an X beside the response which is most true for you in the situation described. Please answer all the questions.

1. If a professor passes you in a course, would it probably be
   ___ a. because he like you, or
   ___ b. because of the work you did?

2. When you do well on a test in class, is it more likely to be
   ___ a. because you studied for it, or
   ___ b. because the test was especially easy?

3. When you have trouble understanding something in class, is it usually
   ___ a. because your professor didn't explain it clearly, or
   ___ b. because you didn't listen carefully?

4. When you read a book and can't remember much of it, is it usually
   ___ a. because the book wasn't well written, or
   ___ b. because you weren't interested in the book?

5. Suppose your parents say you are doing well in college. Is this likely to happen
   ___ a. because your work is good, or
   ___ b. because they are in a good mood?

6. Suppose you did better than usual in a subject in college. Would it probably happen
   ___ a. because you tried harder, or
   ___ b. because someone helped you?

7. When you lose at a game of cards or chess, does it usually happen
   ___ a. because the other player is good at the game, or
   ___ b. because you don't play well?

8. Suppose a person doesn't think you are very bright or clever.
   ___ a. Can you make him change his mind if you try to, or
   ___ b. Are there some people who will think you're not very bright no matter what you do?

Please go on to the next page.
9. If you solve a puzzle quickly, is it
   ___ a. because it wasn't a very hard puzzle, or
   ___ b. because you worked on it carefully?

10. Suppose you study to become a teacher, scientist, or doctor
    and you fail. Do you think this would happen
   ___ a. because didn't work hard enough, or
   ___ b. because you needed some help, and other people didn't
give it to you?

11. When you learn something quickly in a course, is it usually
   ___ a. because you paid close attention, or
   ___ b. because the professor explained it clearly?

12. If a professor says to you, "Your work is fine," is it
   ___ a. something professors usually say to encourage students, or
   ___ b. because you did a good job?

13. When you find it hard to work math problems for your class,
    is it
   ___ a. because you didn't study well enough before you tried them, or
   ___ b. because the teacher gave problems that were too hard?

14. When you forget something you heard in class, is it
   ___ a. because the professor didn't explain it very well, or
   ___ b. because you didn't try very hard to remember?

15. Suppose you weren't sure about the answer to a question your
    professor asked you, but your answer turned out to be right.
    Is it likely to happen
   ___ a. because he wasn't as particular as usual, or
   ___ b. because you gave the best answer you could think of?

16. When you read a book and remember most of it, is it usually
   ___ a. because you were interested in the book or
   ___ b. because the book was well written?

17. If your parents tell you you're acting foolish and not
    thinking clearly, is it likely to be
   ___ a. because of something you did, or
   ___ b. because they happen to be feeling cranky?

18. When you don't do well on a test in a course, is it
   ___ a. because the test was especially hard, or
   ___ b. because you didn't study for it?

Please go on to the next page.
19. When you win at a game of cards or chess, does it happen
   ___ a. because you play really well, or
   ___ b. because the other person doesn't play well?

20. If a professor didn't pass you in a course, would it probably be
   ___ a. because he "had it in for you," or
   ___ b. because your work wasn't good enough?

21. If people think you're bright and clever, is it
   ___ a. because they happen to like you, or
   ___ b. because you usually act that way?

22. Suppose you don't do as well as usual in a subject in college. Would this probably happen
   ___ a. because you weren't as careful as usual, or
   ___ b. because somebody bothered you and kept you from working?

23. Suppose you became a famous teacher, scientist, or doctor. Do you think this would happen
   ___ a. because other people helped you when you needed it, or
   ___ b. because you worked very hard?

24. Suppose your parents say you aren't doing well in your course work. Is this likely to happen more
   ___ a. because your work isn't very good, or
   ___ b. because they are feeling cranky?

25. Suppose you are showing a friend how to play a game and he has trouble with it. Would that happen
   ___ a. because he wasn't able to understand how to play, or
   ___ b. because you couldn't explain it well?

26. When you find it easy to work math problems for class, is it usually
   ___ a. because the teacher gave you especially easy problems, or
   ___ b. because you studied your book well before you tried them?

27. When you remember something you heard in class, is it usually
   ___ a. because you tried hard to remember, or
   ___ b. because the teacher explained it well?

28. If you can't work a puzzle, is it more likely to happen
   ___ a. because you are not especially good at working puzzles, or
   ___ b. because the instructions weren't written clearly enough?

29. If your parents tell you that you are bright and clever, is it more likely
   ___ a. because they are feeling good, or
   ___ b. because of something you did?

   Please go on to the next page.
30. Suppose you are explaining how to play a game to a friend and he learns quickly. Would that happen more often
   ___ a. because you explained it well, or
   ___ b. because he was able to understand it?

31. Suppose you're not sure about the answer to a question your professor asks you and the answer you give turns out to be wrong. Is it likely to happen
   ___ a. because he was more particular than usual, or
   ___ b. because you answered too quickly?

32. If a professor says to you, "Try to do better", would it be
   ___ a. because this is something he might say to get students to try harder, or
   ___ b. because your work wasn't as good as usual?

Please go on to the next page.
Frequently an individual finds herself dissatisfied with some aspect of her life and seeks assistance from a counselor. This is often a successful experience and the individual changes to have a more satisfying life. There are many factors which may contribute to the success of a counseling experience. Based on your own experience and ideas, what do you think are the reasons counseling is a successful experience? Please indicate your answers by placing an X to show how important each reason is. (Please place the X between the vertical lines, not on them.)

1. The counselor is a trained professional who can help people.
   / / / / / / / / / / not at all somewhat very
   important important important

2. Most personal problems can be easily solved.
   / / / / / / / / / / not at all somewhat very
   important important important

3. The client already has the ability to solve her problems.
   / / / / / / / / / / not at all somewhat very
   important important important

4. The problem will eventually disappear on its own.
   / / / / / / / / / / not at all somewhat very
   important important important

5. The client works very hard to overcome her problems.
   / / / / / / / / / / not at all somewhat very
   important important important

Please go on to the next page.
6. Parents help the client overcome her problems.

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7. The counselor can give the client a treatment which will solve the problem.

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Rationale for Subconscious Reconditioning

The emotional reactions that a person experiences are a result of previous experiences with people and situations; these reactions often times lead to feelings of anxiety or tenseness which are really inappropriate. Since perceptions of situations occur within ourselves, it is possible to work with the reactions in the counseling setting by having the individual learn new ways to overcome the anxiety.

The specific technique described below is one called subconscious reconditioning. This procedure recognizes that many times the anxiety a person experiences in a given situation is not totally "rational" or "logical". For example, in an exam setting an individual may know intellectually there is nothing to be terribly nervous about, yet s/he still feels highly anxious. Unfortunately, this feeling of anxiety frequently persists in spite of logical arguments to the contrary. In this treatment program efforts are directed at overcoming the source of the inappropriate anxiety. Accordingly, we avoid dealing with conscious, rational thought processes, but instead work directly with subconscious thoughts and feelings. By doing this, it is possible to eliminate the cause of the anxiety.

The development of this treatment stems from theoretical and applied research on tachistoscopic influence begun in the 1950's. During treatment, the individual is presented with visual information at speeds faster than can be perceived by the conscious mind. The messages are picked up by the subconscious, however, and it is at that level that the relearning process occurs. The instrument that is used during treatment is a tachistoscope, and essentially it functions like a high-speed slide projector. Treatment itself consists of two steps. First, an assessment is made of the individual's threshold of awareness to determine the point at which the messages can be consciously perceived. Secondly, the tachistoscope is set at a level below this awareness threshold, and a succession of treatment messages are presented to the individual. These messages consist of anti-fear statements such as "Exams-Relax", and "Do not Fear". By continuing this procedure over the treatment program, these new, more appropriate statements become more strongly acquired in the subconscious. As this takes place, the anxiety once automatically thereby eliminated.

The tape you are about to see is an example of subconscious reconditioning therapy. As you watch the tape try to put yourself into the position of the client. Try to understand how she feels and what she is experiencing in the session.

Please stop. Do not go on to the next page.
Rationale for Systematic Desensitization

The emotional reactions that a person experiences are a result of previous experiences with people and situations; these reactions often times lead to feelings of anxiety or tenseness which are really inappropriate. Since perceptions of situations occur within ourselves, it is possible to work with the reactions in the counseling setting by having the individual image or visualize those situations.

The specific technique described below is one called systematic desensitization. This technique utilizes two main procedures -- relaxation and counterconditioning -- to reduce anxiety. The relaxation procedure is based upon years of work that was started in the 1930's by Dr. Jacobsen. Dr. Jacobsen developed a method of inducing relaxation that can be learned very quickly, and which allows an individual to become more deeply relaxed than ever before. Of course, the real advantage of relaxation is that the muscle systems in the body cannot be both tense and relaxed at the same time; therefore, once a person has learned the relaxation technique, it can be used to counter anxiety, tenseness, and feelings like those sometimes experienced in an exam situation.

Relaxation alone can be used to reduce anxiety and tension. Often, however, relaxation is inconvenient to use, and really doesn't permanently overcome anxiety. Therefore, we combine the relaxation technique with the psychological principle of counterconditioning to actually desensitize situations so that anxiety no longer occurs.

The way in which this is done is to determine the situations in which an individual becomes progressively more anxious, building a hierarchy from the least to the most anxious situations. Then the person is taught the technique of progressive relaxation and practices this. After the individual is more relaxed than ever before, the counterconditioning begins. This is done by having the person repeatedly image the specific situations from the anxiety hierarchy while under relaxation. By having the individual visualize very briefly, while deeply relaxed, the situations that normally arouse anxiety, those situations gradually become desensitized, so that they no longer create anxiety. We start with those situations that are the least anxiety producing and gradually work up to the most anxiety producing. Since each visualization will lower the anxiety to the next, a full-fledged anxiety reaction never occurs.
The tape you are about to see is an example of systematic desensitization therapy. As you watch the tape try to put yourself into the position of the client. Try to understand how she feels and what she is experiencing in the session.

Please stop. Do not go on to the next pane.
Rationale for Client Centered Therapy

The emotional reactions that a person experiences are a result of previous experiences with people and situations; these reactions often times lead to feelings of anxiety or tenseness which are really inappropriate. Since perceptions of situations occur within ourselves, it is possible to work with the reactions in the counseling setting by having the individual discuss his or her feelings of anxiety.

The counseling process described here is one called client-centered therapy. This procedure recognizes that many times the anxiety a person experiences in a given situation is the result of lack of self-trust. In this program efforts are directed at overcoming the source of the inappropriate anxiety. Accordingly, we deal with the natural tendency of the individual to become a fully functioning person and to increase his or her self-trust. By doing this, the individual eliminates the cause of his or her anxiety.

The development of this type of counseling stems from theoretical and applied research on the processes and outcomes of phenomenological approaches to counseling. Dr. Carl Rogers developed the approach beginning in the 1940’s. The client-centered approach focuses on the client’s responsibility and capacity to discover ways to more fully encounter reality. The client, who knows himself or herself best, is the one to discover more appropriate behavior for himself or herself.

The client comes to the counselor in a state of incongruence; that is, a discrepancy exists between how the client would like to see herself or himself and the reality of her or his experience. Clients initially may expect the counselor to provide answers or directions; however, within the client-centered framework, clients soon learn that they are responsible for themselves. As therapy progresses, the client is able to explore a wider range of his or her feelings. Gradually the client moves in the direction of being more open to all experience, less defensive, more in contact with what he or she feels at the moment, and increasingly trusting in himself or herself to effectively manage his or her own life. With this increased self-trust, the anxiety or fear that the client felt is eliminated.

The tape you are about to see is an example of client-centered therapy. As you watch the tape, try to put yourself into the position of the client. Try to understand how she feels and what she is experiencing in the session.

Please stop. Do not go on to the next page.
EXPECTANCY MEASURE

You have just seen one type of counseling. Based on what you have seen along with your own ideas and experience, what do you think about this type of counseling? Please indicate your answers by placing an X to show how you feel about each question. (Please place the X between the verticle lines, not on them.)

1. How logical does this type of treatment seem to you?

/ / / / / / / / /
not at all somewhat very
logical logical logical

2. How confident would you be that this treatment would be successful in eliminating one's fear of talking with strangers?

/ / / / / / / / /
not at all somewhat very
confident confident confident

3. How successful do you feel this treatment would be in decreasing a different fear; for example, fear of speaking before a group or fear about taking tests?

/ / / / / / / / /
not at all somewhat very
successful successful successful

4. How confident would you be in recommending this treatment to a friend who was extremely anxious about talking with strangers?

/ / / / / / / / /
not at all somewhat very
willing willing willing

5. If you were extremely anxious about talking with strangers, would you be willing to undergo such treatment?

/ / / / / / / / /
not at all somewhat very
willing willing willing

Please go on to the next page.
6. How successful do you think this type of counseling would be with this client?

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What do you think is responsible for the success or lack of success of this counseling approach? Please indicate your answers by placing an X to show how important each reason is.

1. The difficulty of the problem the client has:

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2. The ability of the counselor to help the client:

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3. The effort the client is putting into overcoming her problem:

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4. The help that the client's parents will give to help her solve her problem:

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5. The ability the client has to solve her own problems:

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6. The kind of procedure that the counselor uses to solve the client's problem:

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7. The fact that the problem may disappear on its own:

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IAT - Post-Manipulation

The counseling that you saw was, in fact, successful, and the client was eventually able to overcome her fears. This type of counseling is quite often used with clients who have similar problems, and research shows that the client nearly always improves. Although we know that this type of counseling is successful with this type of client, we have not been able to identify all of the reasons why it works. Knowing that the counseling was successful in the case you saw, what do you think were the causes of this success? Please indicate your answers by placing an X to show how important each reason is. You may change your mind from previous answers if you wish. (Please place the X between the vertical lines, not on them.)

1. The counselor was a trained professional who could help people.

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2. This client already had the ability to solve her problems.

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3. The client worked very hard to overcome her problems.

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4. The counselor used a procedure which solved this problem.

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5. Most problems go away by themselves if you wait long enough.

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6. The client's ego became stronger.

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7. The client didn't have much of a problem to begin with.

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REFERENCES


