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A comparison of three treatments for the outpatient alcoholic

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A Comparison of Three Treatments for the Outpatient Alcoholic

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The abuse of alcohol is a complex behavior pattern exhibited by approximately nine million people in this country (Tarter & Sugarman, 1976) and has become a field of interest to science, industry, and the helping professions.

Estimates of spontaneous recovery among alcoholics vary drastically. In 1971 the National Institute on Alcohol Abuse and Alcoholism began sponsorship of a comprehensive alcoholism treatment program located in 45 community centers throughout the nation. Using a multiple criterion measure of improvement, their report (Rand Corporation, 1976) estimated the rate of spontaneous improvement for alcoholics to be as high as 53%. In reviewing the rates of spontaneous improvement from a number of studies, Baekland (1977) states, "It thus appears that depending on the patient's personal and social assets, there is a 2-15% spontaneous improvement rate in alcoholics who do not receive formal treatment" (P 390). Unlike the Rand Report, Baekland used total abstinence as the measure of spontaneous improvement.

Traditional psychologically oriented treatments (i.e., individual and group psychodynamic therapy, psychodrama, milieu therapy, medication therapy, community abstinence groups, and Antabuse) have fared little better than no treatment. The Rand Corporation reported that

only 25% of their clients who had been treated traditionally and interviewed at an 18-month follow-up had abstained for at least six months. In a comprehensive analysis of 265 studies of traditional psychological treatments for alcoholism, Emrick (1974) found approximately 33% abstinence at a six-month follow-up. Likewise, Rohan's (1972) review of the nonbehavioral treatments indicated that 23% of the clients treated were abstinent at a six-month follow-up. The results of these investigations strongly point to the inadequacies of the traditional therapies for treating alcoholism.

Treatment based upon social-learning formulations (Bandura, 1969) offers a promising alternative to traditional therapies. Within the social-learning model, alcohol abuse is viewed as a socially acquired, habitual behavior pattern maintained by reinforcement contingencies. According to Miller (1976), "Excessive drinking may enable the alcoholic to avoid or escape from unpleasant, anxiety-provoking situations, exhibit more varied, spontaneous social behaviors, gain increased social reinforcement from relatives and friends, or avoid withdrawal symptoms associated with cessation of drinking" (P 10).

One class of behavior therapy techniques, aimed at decreasing the immediate reinforcing properties of

alcohol, has involved associating aversive or unpleasant stimuli with both the sequence of the drinking pattern and the environmental cues which precede the behavior. According to Rachman and Teasdale (1969), "Aversion therapy is an attempt to associate an undesirable behavior pattern with unpleasant stimulation or to make the unpleasant stimulation a consequence of the undesirable behavior (P 12)". The most common aversive stimuli used with alcoholics are chemical, electrical, and verbal.

Chemical aversion techniques have involved the use of a nauseating agent (e.g., apomorphine or emetine) presented in such a way that the adverse effects closely follow the presentation of alcohol or alcohol related stimuli (Davidson, 1974). One of the most comprehensive, systematic, and soundly executed programs of therapy using drug-induced aversion to alcohol is that of Voegtlin and Lemere (1950) and their group at the Shadel Sanitorium in Seattle. They summarized their results with 4,096 cases treated over a thirteen year period as follows: "44% have remained abstinent since the first treatment, 60% have remained abstinent for one year or longer, and 23% for ten years or longer." Thiman (1949) used emetine to treat 245 subjects. After a four-year follow-up, 51% were still abstinent. Beaubrun (1967) used group emetine aversion treatment to increase subjects' suggestibility

for conversion to Alcoholics Anonymous. Of the 231 subjects available at follow-up (original N=370), approximately one-half were completely abstinent or drinking only socially. The results of these studies are clearly better than the results obtained in traditional therapies.

Another drug employed in chemical aversion therapy has been succinylcholine chloride dehydrate (Anectine). The drug induces temporary respiratory arrest (apnea) which is paired with the sight and smell of alcohol. Despite its powerful aversive properties, very few long-lasting abstentions have been noted following this treatment (Farrar, Powell, & Martin, 1968; Madell, Campbell, & Laverty, 1966). For a comprehensive review of the use of drugs in treating alcoholism, see Mottin (1973).

Recently, aversion therapy with alcoholics has made use of electric shock as the aversive stimulus. Electrical aversion methods involve administering electric shock to the subject at levels above a predetermined pain threshold, contingent upon the subject's attending to (smelling, sipping, etc.) alcohol. Rachman and Teasdale (1969) list the following advantages of electric shock over chemical aversion: (a) greater precision with respect to the timing of presentation of the aversive stimulus, (b) trials can be administered more frequently, and (c) fewer possibilities of medical complications.

Despite the procedural advantages of electrical aversion, this approach has not been demonstrated to be superior to chemical aversion. Numerous investigators (Blake, 1967; Glover & McCue, 1977; Kantorvich, 1934; Lovibond & Caddy, 1970) have found electrical shock to be an effective treatment for alcoholism, while others (Devenyl & Sereny, 1970; Hallam, Rachman & Falkowski, 1972; Hedberg & Campbell, 1974, MacCulloch, Feldman, Orford & McCulloch, 1966; Regester, 1971; Vogler, Lunde, Johnson, & Martin, 1970) have found negative results with electrical aversion. In general, electrical aversion strategies have shown inconsistent results, suggesting that the aversive techniques per se may not be the essential element for successful treatment.

One of the problems with the use of shock or drugs in aversion therapy is that the induction of the trauma is beyond the control of the subject and hence less likely to be acceptable to him/her. Furthermore, the use of physical aversive stimuli always brings with it the possibility of medical hazards. Finally, generalization of the treatment to the real world may be a problem since the aversive stimulus is usually presented in a very artificial setting (i.e., therapist's office).

A recent development in the treatment of alcoholism by aversion therapy, which eliminates the problems mentioned

above, is the use of noxious images as the aversive stimulus. This procedure has been labeled covert sensitization (Cautela, 1967). Before administering covert sensitization, the client is told that he/she is unable to stop drinking in excess because drinking has become a strong learned habit which gives him/her a great amount of pleasure. The client is also told that the way to eliminate this habit is to associate alcohol with an unpleasant stimulus. Emphasis is placed on the use of covert sensitization as a self-control procedure. Scenes leading up to drinking are vividly described. These scenes include thoughts and events which initiate the drinking behavior chain, drinking companions, the setting in which drinking occurs, and the types of liquor usually consumed. The client is first given relaxation training, and then aversive scenes are presented and associated with all aspects of the sequence of behavior leading to drinking. Alternated randomly with the aversive imagery are scenes in which images of refusing alcohol are associated with feelings of relief and relaxation. Clients are usually given homework to practice these associations on their own.

The results of the covert sensitization procedure in treating some problems have been quite favorable. Some evidence has been gathered which indicates it may be an effective treatment for a wide range of maladaptive approach

behaviors. Numerous case studies have been reported which have successfully used it in treating nail biting (Daniels, 1974), hydrocarbon inhalation (Blanchard, Libef, & Young, 1973), stealing (Guidry, 1975), barbiturate addiction (Polakow, 1975), heroin addiction (Wisocki, 1973), compulsive behavior (Cautela, 1966; Wisocki, 1970), homosexuality (Curtiss & Presley, 1972; Kendrick & McCullough, 1972; Segal & Sims, 1972), transvestism (Gershman, 1974), exhibitionism (Maletzky, 1974), other sexual deviations (Anant, 1968; Cautela & Wisocki, 1971), and cigarette smoking (Cautela, 1972; Stuart, 1967).

These case studies taken together support the efficacy of covert sensitization in treating alcoholism as well as a wide range of other maladaptive approach behaviors. Nevertheless, as a consequence of the inherent weaknesses in the case study design (i.e., lack of adequate controls, presentation of other confounding techniques, etc.), the results of the above studies are suggestive at best.

Several better controlled studies have been conducted to test the effectiveness of the covert sensitization procedure for obesity and sexual deviations. In a study testing the effect of covert sensitization on obesity, Janda and Rimm (1972) divided 18 subjects into triplets based on their percentage of excess weight. Subjects in each triplet were randomly assigned to one of three groups: a) no-contact

control, b) attention control, and c) covert sensitization. Subjects in the attention control and the covert sensitization groups were seen for six 40-minute weekly sessions. At a six-week follow-up, results of the study indicated that subjects in the covert sensitization group lost significantly more weight than either of the control groups. The small number of subjects (n=6) in each group and the presentation of the data in terms of raw pounds rather than percentage of weight lost, however, renders this study inconclusive.

Diament and Wilson (1975) attempted to replicate the previously mentioned study of Janda and Rimm (1972) using a larger sample size (n=12) and two additional dependent variables (taste-rating task and a salivary response measure). The results showed no differential effects among the three treatment groups on any of the three behavioral measures. These results are consistent with Foreyt and Hagen (1973), who also compared covert sensitization, attention placebo, and no-contact treatment groups. The authors concluded that covert sensitization is no more effective than a placebo treatment and that its effects are probably due to the role of suggestion and demand characteristics as opposed to any conditioning process.

With regards to treating sexual deviations, Callahan and Leitenberg (1973) used a counterbalanced within-subject design to compare contingent shock with covert sensitization in the treatment of six sexual deviates. The results indicated that both covert sensitization and contingent shock were equally effective in reducing penile circumference during deviate slide material, while covert sensitization was more effective than contingent shock in reducing subjects' reported frequency of sexual urges.

In a well designed within-subject study, Barlow, Leitenberg and Agras (1969) investigated the effects of covert sensitization on the pedophillic sexual urges of two sexual deviates. The experimental design used was an A-B-C-B design, where A is baseline, B is verbal description of deviant sexual activity and introduction of the nauseous scene, and C is a verbal description of deviant sexual activity but no introduction of the nauseous scene (extinction). From the A to the B phase, the results showed a drastic decrease in the frequency of sexual urges, thus showing the effectiveness of covert sensitization. When the nauseous scene was removed during extinction (C phase), sexual urges drastically increased suggesting that the nauseous scene was the critical variable. In the final B phase (reinstatment of nauseous scene), a renewed decrease in the data resulted, which demonstrated the controlling

effects of the nauseous scene. Although this study appears to have demonstrated that the nauseous scene was the controlling variable, the experimental design does not rule out the plausible alternative that the therapeutic instructions and the resulting expectancy of improvement present in both covert sensitization phases were responsible for the effectiveness of the treatment, since the client may have viewed the middle extinction phase as nontherapeutic.

To test this notion, Barlow, Agras, Leitenberg, Callahan, and Moore (1972) told four homosexuals that the acquisition procedures (covert sensitization) would temporarily worsen their sexual deviation and that the extinction procedure (no noxious imagery) was therapeutic. The results of the study indicated that contrary to the instructions, homosexual arousal as measured by penile circumference decreased substantially during covert sensitization with negative instructions. The results of the two studies taken together strongly support the contention that the nauseous imagery is the critical variable in covert sensitization with sexual deviations.

Regarding the treatment of alcoholism, Cautela (1970) used covert sensitization to treat a 29-year-old female alcoholic. With ten weekly treatment sessions, the client reported decreased urges to drink and abstinence from

drinking alcohol. In an earlier work, Miller (1959) used the presentation of noxious images under hypnotic relaxation instructions to treat 24 alcoholics. Results indicated that 83% of the patients were completely abstinent at a nine-month follow-up.

Anant (1967) treated 26 patients using group covert sensitization. After five treatment sessions 96% of these patients remained abstinent at a follow-up ranging from eight to 15 months.

With regards to administering covert sensitization in groups, Miller (1976) has suggested that group procedures may facilitate conditioning as well as provide mutual reinforcement for participation in therapy and maintenance of sobriety after treatment is complete. Also, since much drinking occurs in social settings, conditioning may generalize more easily to the natural environment. Up to date, no controlled outcome studies utilizing group administered covert sensitization with alcoholics has been reported.

Controlled studies evaluating covert sensitization with alcoholics have been very scarce. In a frequently cited study, Ashem and Donner (1968) matched subjects (n=9) into triplets on the basis of IQ, age, and drinking experience, and then randomly assigned subjects to one of three experimental groups: covert sensitization (forward

conditioning), pseudo-conditioning (which consisted of a backward covert sensitization procedure in that the nauseous image preceded the image of alcohol), and a no-contact control group. The treatment program consisted of nine sessions which ranged in time from 30-40 minutes. During the study, the authors noted that the subjects in the pseudo-conditioning group made forward associations between the alcohol and the nausea. As a result, they combined both treatment groups and found that 40% of those subjects were abstaining at a six-month follow-up while none of the controls were abstaining. According to Baekeland (1977), the results of the Ashem and Donner study are very promising considering the patients treated had a poor prognosis (i.e., they had been previously unsuccessfully treated by A.A., clinic treatment, or private psychotherapy).

Regarding the authors' decision to combine the forward and backward covert sensitization groups, Cautela (1970) states "the authors were wise to consider both treatment groups as forward conditioning since it is apparent that the subjects were asked to imagine the alcohol while they were nauseous. If the conditioned stimulus precedes the unconditioned stimulus or is contiguous with it, the procedure is labeled forward conditioning" (P 89).

Fleiger and Zingle (1973) compared the effectiveness of covert sensitization to an insight oriented group problem-solving treatment. Subjects were 32 male alcoholics 21 to 56 years old who had been admitted to an inpatient treatment facility. The results indicated that 40% of the subjects receiving covert sensitization were abstinent after a three-month follow-up as compared to 29% for the group problem-solving treatment. This difference was not statistically significant. The results of this study would have been more meaningful with a longer follow-up (six and twelve months). In any case, the 40% abstinence rate for the covert sensitization group is consistent with the results of Ashem and Donner and exceeds the abstinence rates reported for traditional therapy.

In a study comparing four behavior therapy approaches to the treatment of alcoholism, Hedberg and Campbell (1974) randomly assigned 49 alcoholic outpatients to either behavior family counseling, systematic desensitization, covert sensitization, or contingent shock treatment. The results showed abstinence rates for the four treatments as 74%, 67%, 40%, and 0% respectively after a six-month follow-up. The reported 40% abstinence rate for the covert sensitization group is consistent with the results reported by Ashem and Donner (1968) and Fleiger and Zingle (1973).

Just what the crucial variable(s) are in covert sensitization with alcoholics is not clear. Ashem and Donner give the following quote from one of their treated patients to support the contention that it is the induction of a phobic-type response to alcohol which is the crucial variable: "Around Christmas I wanted to buy my wife a bottle of Southern Comfort. As I approached the liquor store I broke out in a cold sweat and could hardly open the door. When I finally got in I could hardly talk, for my throat was dry and choking and my stomach was flipping" (P 11). Further research is needed to determine if the crucial variable in covert sensitization is the induction of a phobic-type response.

Another variable which may play a role in the covert sensitization is the client's ability to evoke clear mental imagery. Although clinicians employing covert sensitization generally agree that clients' imaging ability is an important consideration, a systematic attempt to relate imaging ability and covert sensitization treatment outcome is lacking. More research is needed to isolate the role of imagery, relaxation training, subject expectancies, and therapist contact in the covert sensitization procedure.

The studies reported to date on the use of covert sensitization with alcoholics are promising. However, several problems will have to be resolved before definite

conclusions can be reached regarding the procedure's effectiveness. The first and most obvious problem is the paucity of controlled outcome studies. Second, it is essential that adequate control procedures be used in future studies to determine the crucial components of the covert sensitization procedure.

A third problem is the lack of a standardized procedure for describing alcoholic subject characteristics. In addition to commonly reported characteristics such as age, sex, marital status, IQ, chronicity, previous hospitalizations, socioeconomic status, etc., it is suggested that learning history characteristics be reported. Such things might include drinking environment (bar, home, parties, etc.), drinking associates, types of liquor consumed, drinking cycle (daily, weekly, binge), average time of abstinence outside the hospital, and precipitating circumstances.

A final problem is the lack of objective, quantitative measures of alcoholic drinking. Researchers' reliance on the subjects' self-report as the sole measure of drinking behavior poses difficult problems. First of all, subjects may report information which they feel is expected (e.g., total abstinence for six months). Secondly, self-reports of drinking are also subject to the client's forgetfulness and misperceptions (Miller, 1976). Finally, subjects may

report a dramatic improvement in order to avoid certain treatments. This will be especially true when unpleasant treatments such as aversion therapy are used.

More objective data are needed to substantiate subjects' self-reports. Reports from relatives, friends, and co-workers on the subjects' drinking behavior would help determine the reliability of the subjects' reports. Probably the best alternative, however, is the use of periodic blood/alcohol level determinations via a blood or breath test. The data obtained in these determinations would provide a validation of subjects' self-reported drinking. If reliance on the self-report data is necessary, having the subject record specific frequency counts, such as the number of drinks consumed per day, provides a simple quantitative method for monitoring drinking behavior and better enables the researcher to verify the subject's drinking frequency.

Taking into consideration the problems mentioned above, the present study sought to compare the relative effectiveness of group administered covert sensitization with traditional insight-oriented group therapy in treating alcoholism. To control for the effects of relaxation training, therapist contact, favorable outcome expectancy, and the act of imaging (variables inherent in the covert sensitization procedure but not controlled for in the previously cited outcome studies),

a relaxation placebo control group was employed which was empirically evaluated for its credibility.

Unlike the previously cited outcome studies, the present study sought to use more objective measures of drinking behavior. The following dependent measures were used: a) self-reported mean daily number of drinks consumed, b) subjects' mean daily ratings of urges to drink, c) randomly sampled blood/alcohol concentration, d) subjects' scores on the Michigan Alcoholism Screening Test, e) significant others' scores on the Michigan Alcoholism Screening Test, and f) subjects' self-efficacy ratings (Bandura, 1977).

It was hypothesized that subjects in all three groups would show significant improvement over time on each of the dependent measures, and that subjects receiving covert sensitization would show significantly greater improvements than subjects receiving traditional group therapy or the relaxation placebo treatment. No differences were expected between group therapy and the relaxation placebo treatment.

Method

Subjects

A total of 33 subjects were selected from a population of 95 alcoholic clients interviewed by the principal investigator. The population of clients included all levels of diagnostic severity as defined by the Diagnostic and Statis-

tical Manual II (1968). The following criteria were used to select subjects: a) consent to treatment, which included each subject's written consent to have their blood/alcohol level checked periodically at their homes (see Appendix 1 for consent form), b) subjects had to live within a 10-mile radius of the University of the Pacific, c) subjects had to acknowledge that alcohol was a problem in their life, and d) subjects had to acknowledge that they wanted help in controlling their drinking.

Of the original 33 subjects selected for the study, four dropped out prior to the first treatment session. One other subject dropped out after the second treatment session. Of the 28 subjects completing treatment, there were 26 males and two females. For a more detailed description of the characteristics of the subjects in each of the treatment groups, see Table 1.

Setting

Treatment was conducted in one of several, well lighted, non-soundproof conference rooms averaging 5m. by 8m. The rooms were furnished with 15 foam padded chairs arranged in a semicircle. The experimenter was seated facing the semicircle at a radius of approximately 3m.

Apparatus

The Alcohol Screening Device (ASD) (Model #14625), designed for the National Highway Traffic Safety Administra-

tion was used to assess subjects' blood alcohol concentration level. The ASD is a completely portable battery operated instrument which gives an instantaneous measure of the amount of alcohol contained in a subject's breath. The instrument has two display modes: a three-digit readout giving a direct blood alcohol level reading, and a three-light readout giving either a pass, warn, or fail indication. The instrument utilizes a chemoelectric fuel cell which uses the alcohol in the breath sample as a fuel, oxidizes it, and generates an electric current proportional to the amount of alcohol in the breath.

Therapist

The therapist and principal investigator in the present study was a second year graduate student in psychology. He had had one year of prior clinical training in administering covert sensitization and progressive muscle relaxation. His orientation at the time of the study was cognitive-behavioral.

Procedure

Dependent Measures

Blood/alcohol concentration (BAC). Two weeks prior to the commencement of treatment, subjects were visited at their place of residence and given the following instructions: "Hello, my name is _____. I'm helping Mike Telch who is going to be working with you at the Alco-

holic Rehabilitation Clinic. I came by to see how you're doing. We are very interested in measuring your progress before, during, and after treatment. One of the measures we are going to use is a breath test. It is very simple and only requires that you blow in this machine for a few seconds. I will come by from time to time to check how you're doing." A weekly BAC measure was obtained for all subjects throughout the study by making random visits at their homes within a time interval specified in advance by the subjects as to when they did most of their drinking. To assure the spontaneity of the home visit without infringing on the subjects' privacy, each subject was telephoned no more than 30 minutes before the scheduled home visit and informed that a worker would be coming by to see them. BAC checks were not made prior to 11:00 A.M. or after 10:00 P.M., however, the subjects were not informed of these limits.

Self-reported daily number of drinks consumed. Following the breath test, subjects were handed a weekly drinking summary sheet (see Appendix 2) with the following instructions: "As I have already mentioned, we are very interested in finding out how well the treatment you will be receiving helps you. One way to find out if your treatment is successful is to compare how many drinks you have each day before treatment and how many drinks you have each day after treatment. On this sheet I want you to write down the number

of drinks you have each day. It is very important that you report your drinking honestly. You won't be criticized for saying that you have had something to drink. I will come by at the end of the week to pick up the data sheet and give you a new one for the next week. Are there any questions you have?" If a subject failed to fill in any or all of the data on the weekly summary sheet, he/she was given the following instructions: "I see that you didn't fill in your data for _____. Could you please tell me if you had any drinks on _____." If the subject reported that he/she had been drinking during the missing day(s), the experimenter asked the subject to estimate the number of drinks he/she had on each of the missing days. The experimenter then recorded this information on the subject's weekly summary sheet.

Daily urges to drink. After completing the weekly summary sheet for the daily number of drinks consumed, subjects were asked to rate on a 10-point scale (see Appendix 3) their average number of urges to drink each day. Subjects were given the following instructions: "In addition to knowing how many drinks you actually had during a week, it is also important to know how many times you thought about wanting a drink during the past week. As you look at the scale you will notice that the low end of the scale (numbers 1-3) means that you rarely thought about

wanting a drink (say one or two times per day), the middle part of the scale (numbers 4-6) means that you thought about wanting a drink on the average between four and ten times per day, while the end of the scale (numbers 7-10) means that you thought about wanting a drink more than ten times per day. Do you have any questions about the scale or what I am asking you to do? Each time I come by I will ask you to rate your urges to drink." Subjects' ratings of urges to drink were collected each week.

Michigan Alcoholism Screening Test (MAST). During the initial intake interview, subjects and their significant others were administered the MAST. The MAST was revised so that only the previous eight weeks of drinking behavior prior to treatment at the alcoholism out-patient facility were incorporated in the items of the survey. Following the completion of the Social Intake Form, each subject's significant other was asked to step outside for approximately 10 minutes. During this time the MAST was administered to the subject. The following instructions were given: "I am now going to ask you some general questions about your drinking. Answer each question according to how it has been for you the past two months. It is very important that you answer every question honestly." After the subject completed the MAST, the subject was asked to step outside for approximately ten minutes. During this

time the MAST was administered to the subject's significant other. The following instructions were given: "I would now like to ask you some general questions about _____'s drinking. Answer each question with regards to _____'s drinking in the last two months. It is very important that you answer each question honestly." All significant others not present at the initial intake interview were administered the MAST during the first home visit.

Subjects and their significant others were readministered the MAST on the final treatment session. Those significant others not present during the final treatment session were readministered the MAST during the final home visit.

Self-efficacy ratings. Subjects' self-efficacy (Bandura, 1977) was assessed before and after treatment via a self-efficacy rating scale modeled after the one used by Bandura and Adams (1978) (see Appendix 5). The purpose of the self-efficacy assessment was two-fold: a) to examine whether subjects' perceptions of their own ability to cope with situations involving alcohol improved as a function of going through treatment, and b) to determine if subjects' self-percepts corresponded with the other measures of treatment outcome. Subjects in the covert sensitization and relaxation placebo groups were administered the self-efficacy scale on the first and last treatment sessions. The follow-

ing instructions were given to the subjects: "Before we begin I'd like to get some idea of your own feelings about your ability to deal with various situations involving alcohol. The questionnaire I am passing out to you will present you with several alcohol-related situations. For each situation circle the number on the scale below it which best describes your confidence in being able to deal with that situation. Do you have any questions?"

Therapist Follow-up Questionnaire. The purpose of the questionnaire was to assess whether subjects' perceptions of the therapists' effectiveness differed among the three treatment groups. During their last home visit, all subjects were asked to anonymously complete the Therapist Follow-up Questionnaire (see Appendix 6). The questionnaire attempted to assess via a Lickert-type rating scale subjects' perceptions of the therapists' warmth, sincerity, and helpfulness. For a description of the instructions given to the subjects during the administration of the questionnaire see Appendix 6.

Treatment Procedures

Intake interview. Subjects were first seen at an initial intake interview held at the Alcoholic Rehabilitation Clinic. The interview lasted approximately 60 minutes and served to assess the severity of the subject's drinking problem through a discussion of presenting problems, educational,

vocational, and family history. In addition, each subject completed the social intake form (see Appendix 7) and the MAST. Just prior to the termination of the interview, subjects were informed that a staff member would contact them to schedule their first appointment. Those individuals who met the previously mentioned criteria for the study were randomly assigned to one of the following experimental groups: a) group-administered covert sensitization, b) group-administered relaxation placebo control, and c) insight-oriented group therapy.

Covert sensitization. At the beginning of the first session the standard treatment rationale for covert sensitization (Cautela, 1966) (see Appendix 8) was presented to the subjects. Following this, subjects were asked to complete the Cautela Alcohol Questionnaire (Cautela, 1977). The following instructions were given: "The questionnaire I am handing out will ask you questions about your drinking. Your answers to these questions will help me to design the most appropriate treatment for this group. Please be very honest when answering these questions. Does anyone have any questions?" The Cautela Alcohol Questionnaire consists of 17 questions about such items as frequency, intensity, and duration of drinking behavior; types of alcoholic beverages preferred; most frequent place where drinking occurs; whether drinking is done alone or with others; reasons for

drinking and wanting to stop. The questionnaire yields no numerical score. Its purpose was to provide realistic content for constructing the covert sensitization scenes (see Appendix 9).

Following the completion of the Cautela Alcohol Questionnaire, subjects began progressive muscle relaxation training as outlined by Wolpe and Lazarus (1961) (see Appendix 10). Following relaxation training, subjects began the actual covert sensitization procedure. For a procedural description of each session of the covert sensitization treatment see Table 2.

The covert sensitization treatment was administered in groups ranging in size from 4-6 subjects per group. All subjects receiving covert sensitization met for two 45-minute sessions per week for six weeks. Subjects were asked to practice the relaxation exercises and noxious imagery at home for 15 minutes each day. At the beginning of each week during the treatment session, subjects were asked to rate on a scale (see Appendix 11) the average daily number of minutes spent practicing the homework assignment. This was done to examine the relationship between subjects' reported duration of homework practice and treatment outcome.

At the end of the final treatment session, subjects were told to continue using the relaxation exercises and aversive imagery whenever they had the urge to drink.

Table 2

Covert Sensitization Treatment Procedure

Session	
1.	35 minute discussion followed by 15 minutes relaxation training.
2.	35 minutes relaxation training followed by 10 minute discussion.
3.	35 minutes relaxation training followed by 10 minute discussion.
4.	25 minutes relaxation training followed by 15 minutes (3) of pairing images of situations involving drinking with images of becoming violently ill, 5 minute discussion.
5.	15 minutes relaxation training followed by 25 minutes (5) of pairing images of situations involving drinking with images of becoming violently ill, 5 minutes discussion.
6.	15 minutes relaxation training followed by 25 minutes(5) of pairing images of situations involving drinking with images of becoming violently ill, 5 5 minute discussion.
7.	10 minutes relaxation training followed by 30 minutes (6) of pairing images of situations involving drinking with images of becoming violently ill and being arrested for drunk driving, 5 minute discussion.
8.	10 minutes relaxation training followed by 30 minutes (6) of pairing images of situations involving drinking with images of becoming violently ill and being arrested for drunk driving, 5 minute discussion
9.	30 minutes (6) of pairing images of drinking situations with images of becoming violently ill and being arrested for drunk driving, followed by 10 minutes (2) of pairing images of refusing alcohol

Table 2 Cont.

Session
10. 30 minutes (6) of pairing images of drinking situations with images of becoming violently ill and being arrested for drunk driving, followed by 10 minutes (2) of pairing images of refusing alcohol with images of relaxation, 5 minute discussion.
11. 20 minutes (4) of pairing images of drinking situations with images of becoming violently ill, followed by 20 minutes (4) of pairing images of refusing alcohol with images of relaxation, 5 minute discussion.
12. 20 minutes (4) of pairing images of drinking situations with images of becoming violently ill, followed by 20 minutes (4) of pairing images of refusing alcohol with images of relaxation, 5 minute discussion.

Note: Numbers in parentheses indicate the number of scene presentations.

Subjects were then thanked and reminded that they still had two home visits remaining.

Relaxation placebo control. At the beginning of the first session, subjects were provided with the following treatment rationale: "As you probably know, one of the major reasons why people drink is to relax. For instance, we have all heard people say 'relax and have a drink' or 'boy do I need a drink'. In fact, some scientists have shown that alcohol can help some people to relax. The purpose of the treatment you are going to begin today is to teach you to relax without the use of alcohol. This will be accomplished by relaxation therapy. The relaxation method we will be using will consist of two parts. First, you will learn how to relax the muscles throughout your body by practicing some tensing and releasing exercises. Second, you will learn how to relax by forming some pleasant images in your mind. This will teach you how to relax your mind as well as your body. As therapy progresses you will find that as you learn to relax more and more, your need for alcohol will be less and less. Are there any questions before we begin?"

After the treatment was described to the subjects, each subject was asked to complete the Cautela Alcohol Questionnaire. The procedure for administering this questionnaire was identical to the covert sensitization group. After com-

pleting the questionnaire, subjects began the relaxation placebo treatment. The treatment schedule consisted of two 45-minute sessions per week for six weeks. For a procedural description of each session refer to Table 3. As in the covert sensitization group, subjects were instructed to practice the relaxation exercises at home for 15 minutes each day. The monitoring of subjects' completion of homework assignments was carried out using the same procedure as the covert sensitization group.

Supportive group therapy. This group participated in weekly 90-minute sessions. Groups ranged in size from 10 to 15 subjects. Each subject was assigned to one of several groups on the basis of space availability in the groups and according to each subject's particular schedule. Group therapy was conducted by one of several regular Alcoholic Rehabilitation Clinic staff members (one group per staff member). The goal of therapy was to facilitate group discussion supportive of alcohol abstinence by the members of the group and to generate alternative attitudes toward alcohol consumption.

Credibility probe. In an attempt to assess the credibility of each of the treatment groups, a preliminary study (Telch & Gipson, Note 2) was conducted which asked subjects to rate the usefulness, logic, and desirability of each of the three treatments. A credibility questionnaire (see

Table 3

Relaxation Placebo Treatment Procedure

Session	
1.	35 minute discussion followed by 15 minutes relaxation training.
2.	35 minutes relaxation training followed by 10 minute discussion.
3.	35 minutes relaxation training followed by 10 minute discussion.
4.	25 minutes relaxation training followed by 15 minutes of pleasant imagery, 5 minute discussion.
5.	25 minutes relaxation training followed by 15 minutes of pleasant imagery, 5 minutes discussion.
6.	20 minutes relaxation training followed by 20 minutes of pleasant imagery, 5 minute discussion.
7-12	Same as session 6.

Appendix 12) was administered to 45 alcoholics at the Alcoholic Rehabilitation Clinic. The alcoholics who completed the questionnaire did not serve as subjects in the remainder of the study. Results of the credibility study revealed that covert sensitization was rated less credible than either group therapy or the relaxation placebo.

Results

Means and standard deviations for each of the dependent measures are presented in Table 4. A multivariate analysis of variance (MANOVA) with respect to time (computer program BMD11V, 1973, Health Sciences Computing Facility, UCLA) was used to test for significant differences. For a description of the rationale for using multivariate statistics with studies encorporating multiple dependent measures see Harris (1975).

Blood/alcohol concentration levels (BAC's), reported daily drinking frequency, and reported urges to drink were analyzed within a 3 X 5 factorial design. Treatment groups served as the between-subjects variable and five two-week time blocks (one pretreatment, three during treatment, and one posttreatment) served as the within-subjects variable.

Subjects' blood/alcohol concentration (BAC's) are shown in Figure 1. The results indicated that the three treatment groups did not significantly differ with regards to the subjects' BAC's. Likewise, the within-subject com-

Table 4

Means and Standard Deviations for Each of the Dependent Measures

Dependent Measure	Relaxation		Covert Sensitization*		Group Therapy	
	Pre	Post	Pre	Post	Pre	Post
Drinking Frequency						
$\bar{X}$	.98	1.23	3.78 (1.10)	3.12 (1.51)	3.06	1.46
Sx	1.03	1.55	8.98 (1.28)	5.62 (1.87)	2.06	1.82
BAC						
$\bar{X}$	.016	.021	.041	.024	.058	.022
Sx	.024	.032	.037	.040	.077	.024
Urges						
$\bar{X}$	2.25	1.06	2.59	1.14	3.11	1.16
Sx	2.36	2.01	2.33	1.61	2.85	.99
MAST						
$\bar{X}$	14.0	4.87	14.4	3.36	13.8	5.0
Sx	5.68	5.49	8.69	2.38	6.85	5.17
MAST S O						
$\bar{X}$	14.0	4.71	11.9	3.17	17.5	5.0
Sx	8.79	4.46	6.22	3.19	6.41	4.10
Efficacy Ratings						
$\bar{X}$	22.6	35.6	31.2	39.6	-	-
Sx	19.1	16.6	18.3	11.6		
Therapist Follow-up						
$\bar{X}$	-	58.0	-	59.2	-	58.7
Sx						

*Numbers in parentheses refer to means and standard deviations with subject #11 excluded.

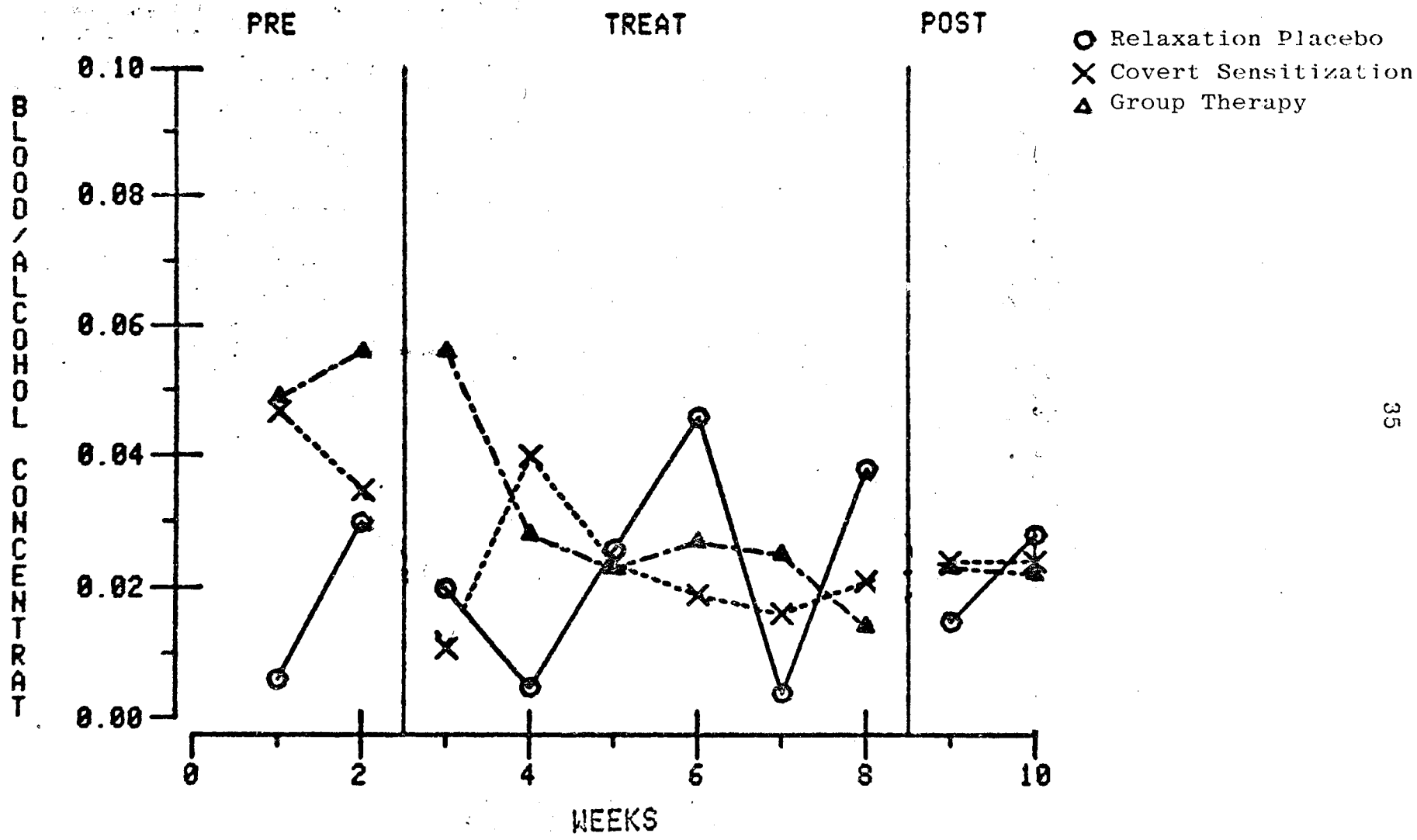

Figure 1. Subjects' randomly sampled blood/alcohol concentration for each of the three treatment groups before, during, and after treatment.

parison indicated that there was no significant change in subjects' BAC's over time. The group by time interaction was also not significant.

Subjects' reported mean daily drinking frequency is shown in Figure 2. The results indicated that there were no significant differences in reported drinking frequency between the three treatment groups. The within-subjects comparison revealed that there was no significant change in subjects' drinking frequency across time. The group by time interaction was also not significant.

A closer analysis of the mean daily drinking frequency revealed that one subject in the covert sensitization group reported drinking over thirty drinks per day at pretreatment. This subject's data greatly inflated the group mean as well as the standard deviation. To examine the extent to which the subject's data influenced the entire covert sensitization group data, the results were reanalyzed with this subject's data excluded. Figure 3 shows the mean daily drinking frequency with this subject's data omitted. Numbers in parentheses in Table 4 represent the corrected covert sensitization group means and standard deviations. The results indicated a significant main effect between groups $\underline{F}(10,40)=2.21$, $\underline{p}<.05$, however, there was still no significant main effect across time. The group by time interaction approached signifi-

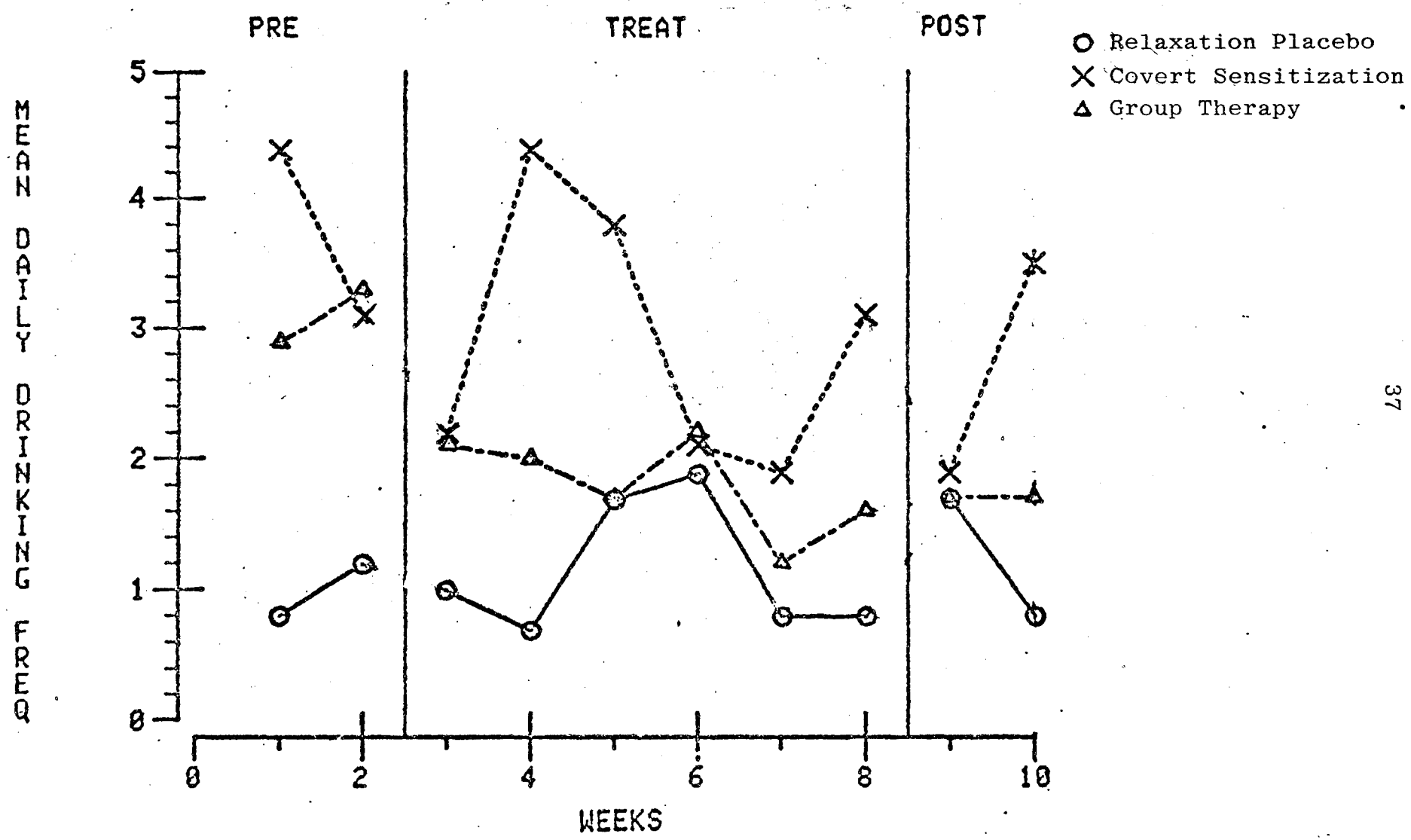

Figure 2. Subjects' reported mean daily drinking frequency for each of the three treatment groups before, during, and after treatment.

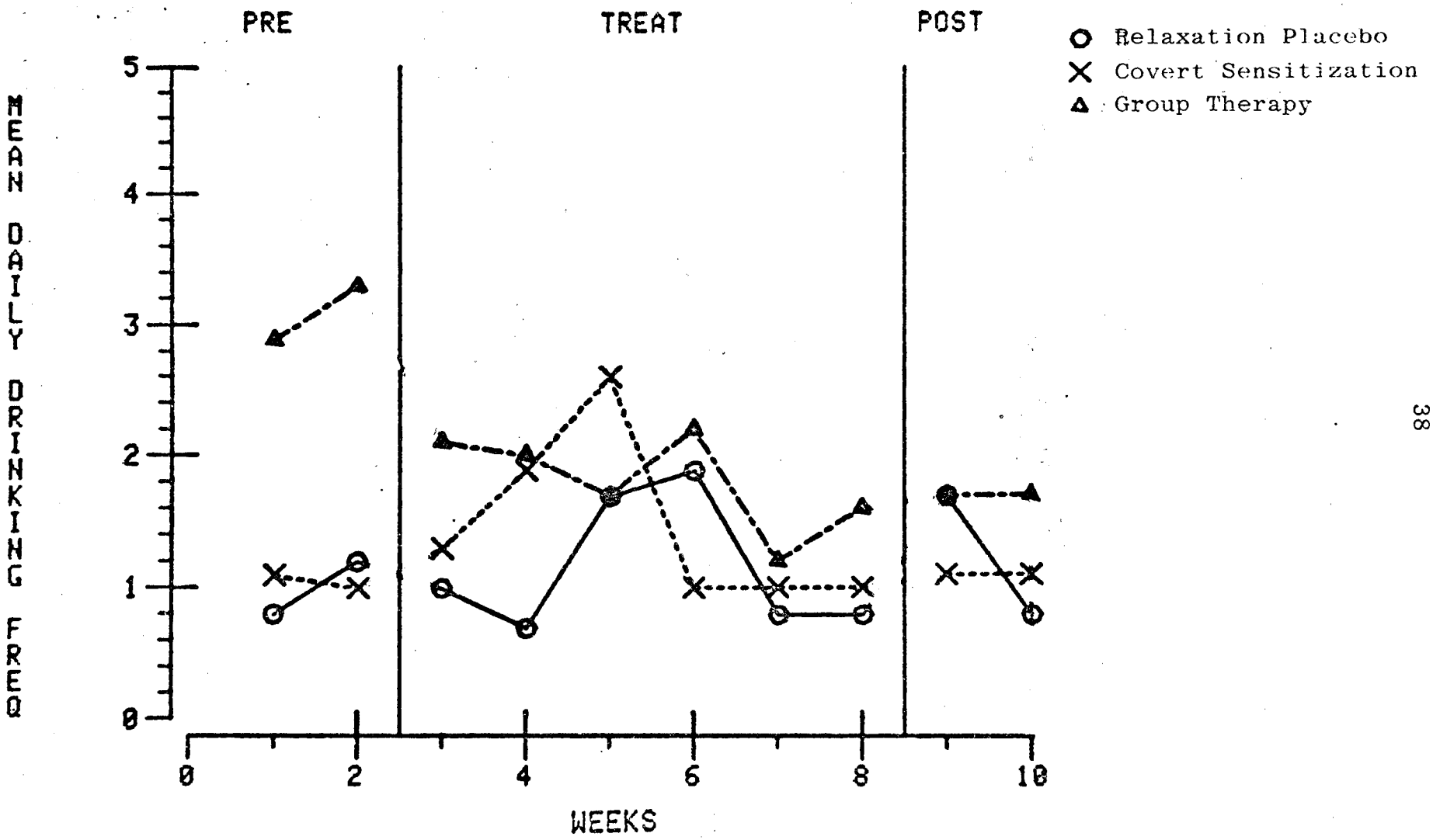

Figure 3. Subjects' reported mean daily drinking frequency for each of the three treatment groups before, during, and after treatment (Subject #11 excluded).

cance $F(8,42)=2.04$, $p>.05$. A multiple comparison analysis at each of the time periods indicated that at pretreatment, group therapy subjects reported drinking significantly more than subjects in the relaxation placebo group $t(24)=2.81$, $p<.05$. No other between-group comparisons were significant.

Subjects' ratings of urges to drink are shown in Figure 4. The results revealed that there were no significant between-group differences in subjects' ratings of their urges to drink. However, a significant decrease in subjects' ratings of urges to drink was found over time $F(4,22)=8.35$, $p<.01$. The group by time interaction was not significant.

Subjects' MAST scores and their significant other MAST scores were analyzed within a 3 X 2 factorial design. Treatment groups served as the between-subjects variable and time (pre and posttreatment) served as the within-subjects variable.

Subjects' MAST scores are shown in Figure 5 (high scores indicate a more severe alcohol problem). Results of the MANOVA showed no significant main effect between groups. However, there was a significant main effect from pre to posttreatment $F(1,25)=39.7$, $p<.001$, indicating that all treatment groups showed a significant improvement (reduction) in MAST scores over time. The interaction was not significant.

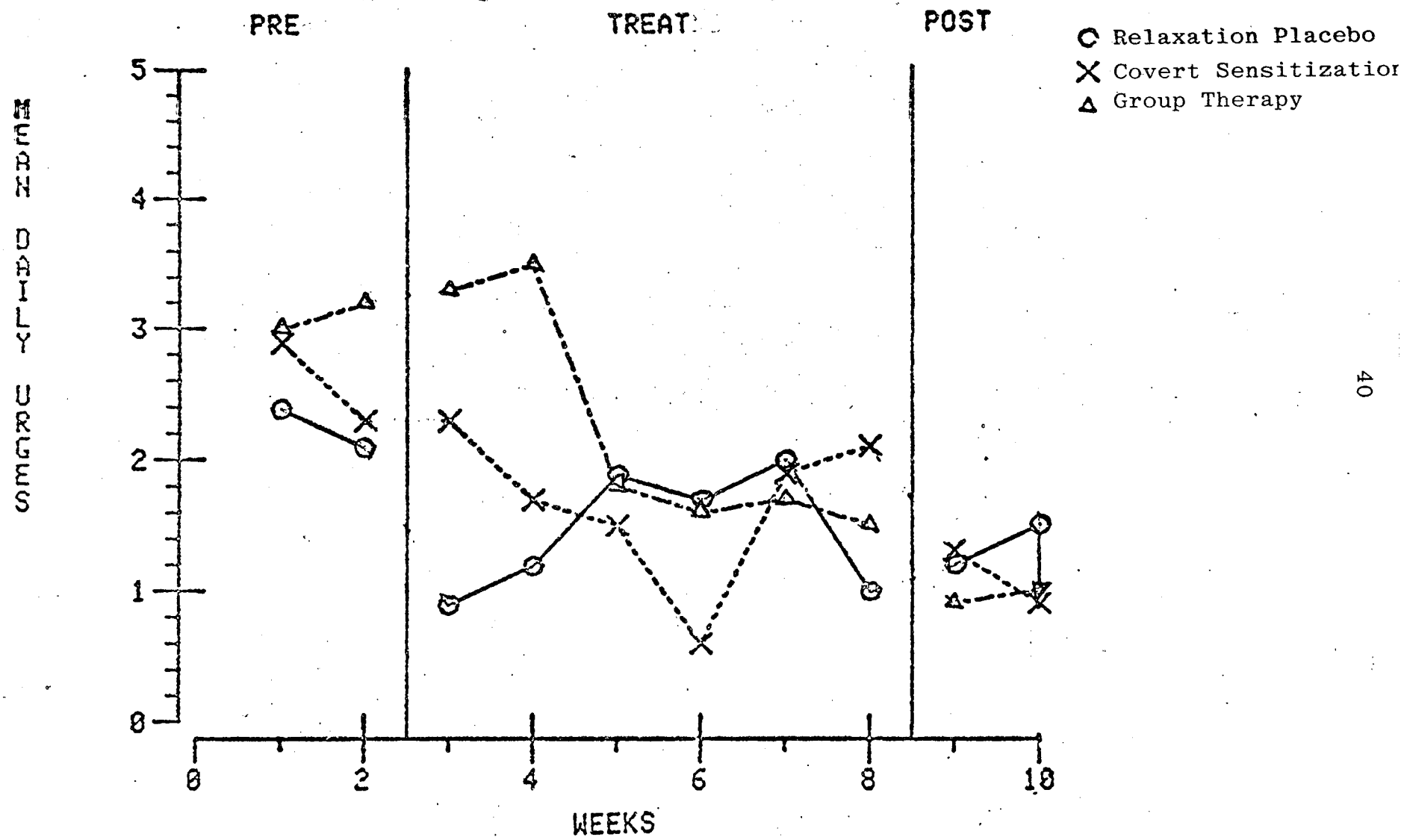

Figure 4. Subjects' mean daily ratings of urges to drink for each of the three treatment groups before, during, and after treatment.

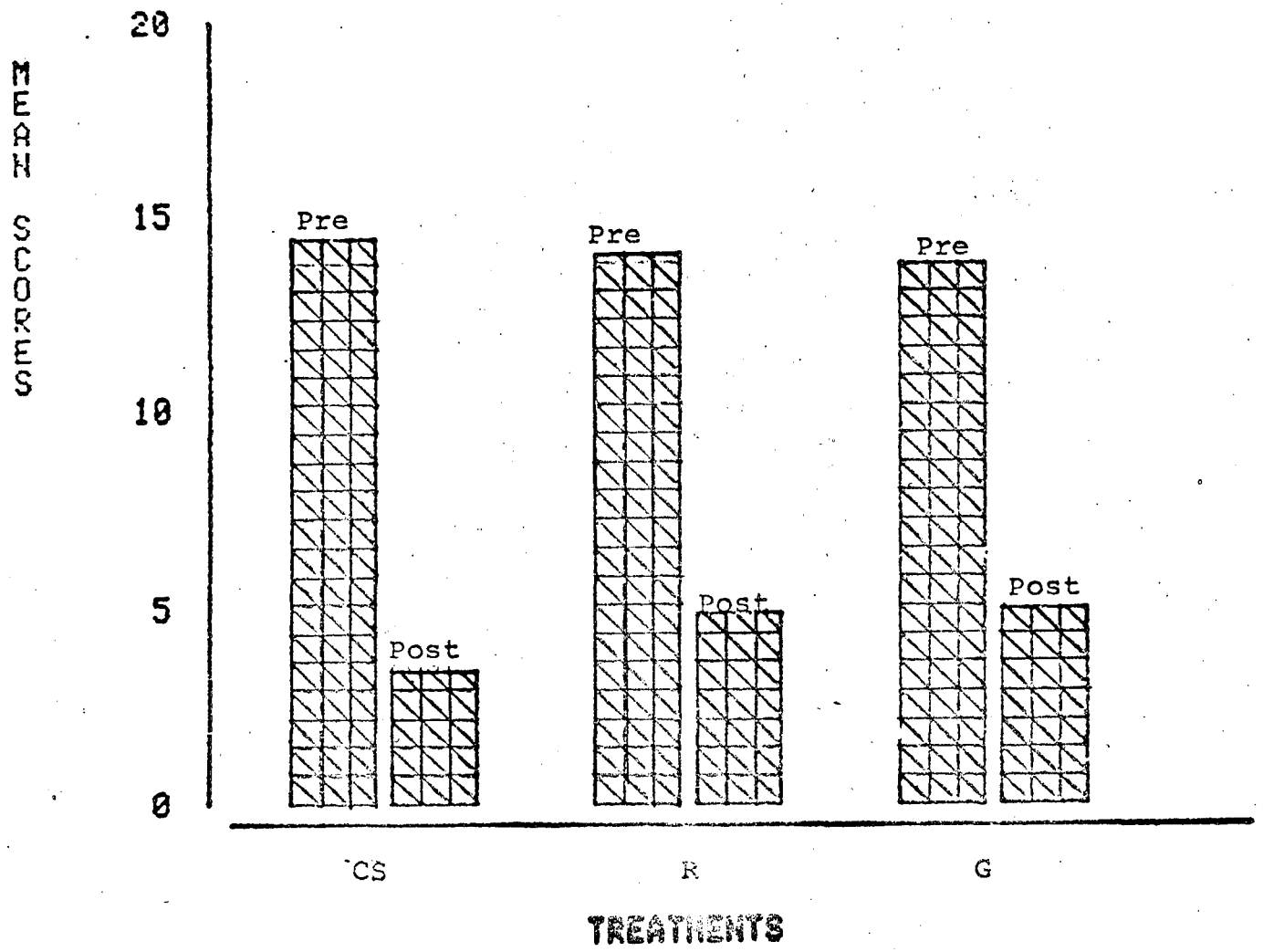

Figure 5. Subjects' mean MAST scores at pre-test and post-test.

Subjects' significant other MAST scores are shown in Figure 6. The results showed that there was no significant main effect between-groups, however, a significant main effect from pre to posttreatment was found $F(1,17)=86.5$, $p<.001$. The group by time interaction was also significant $F(1,17)=38.3$, $p<.001$. A simple main effects analysis was performed on the data to determine which treatment group(s) changed significantly from pre to posttreatment. The results indicated that each of the treatment groups showed a significant improvement over time $F(1,17)=24.7$, $p<.001$ (relaxation placeblo); $F(1,17)=23.9$, $p<.001$ (covert sensitization); $F(1,17)=38.3$, $p<.001$ (group therapy). Multiple comparison tests for between-group differences at pre and posttreatment revealed that significant others' pretreatment MAST scores were significantly higher (more severe) in the group therapy condition than in the covert sensitization group $t(17)=3.68$, $p<.01$. No other between-group comparisons were significant.

Subjects' self-efficacy ratings are shown in Figure 7. The results indicated that there was no significant difference between groups, however, a significant improvement over time was shown for each of the groups $F(1.17)=4.34$, $p<.05$. The group by time interaction was not significant.

Subjects' scores on the Follow-up Therapist Questionnaire are shown in Figure 8. These scores were not subjected to a statistical analysis since the mean scores for each of

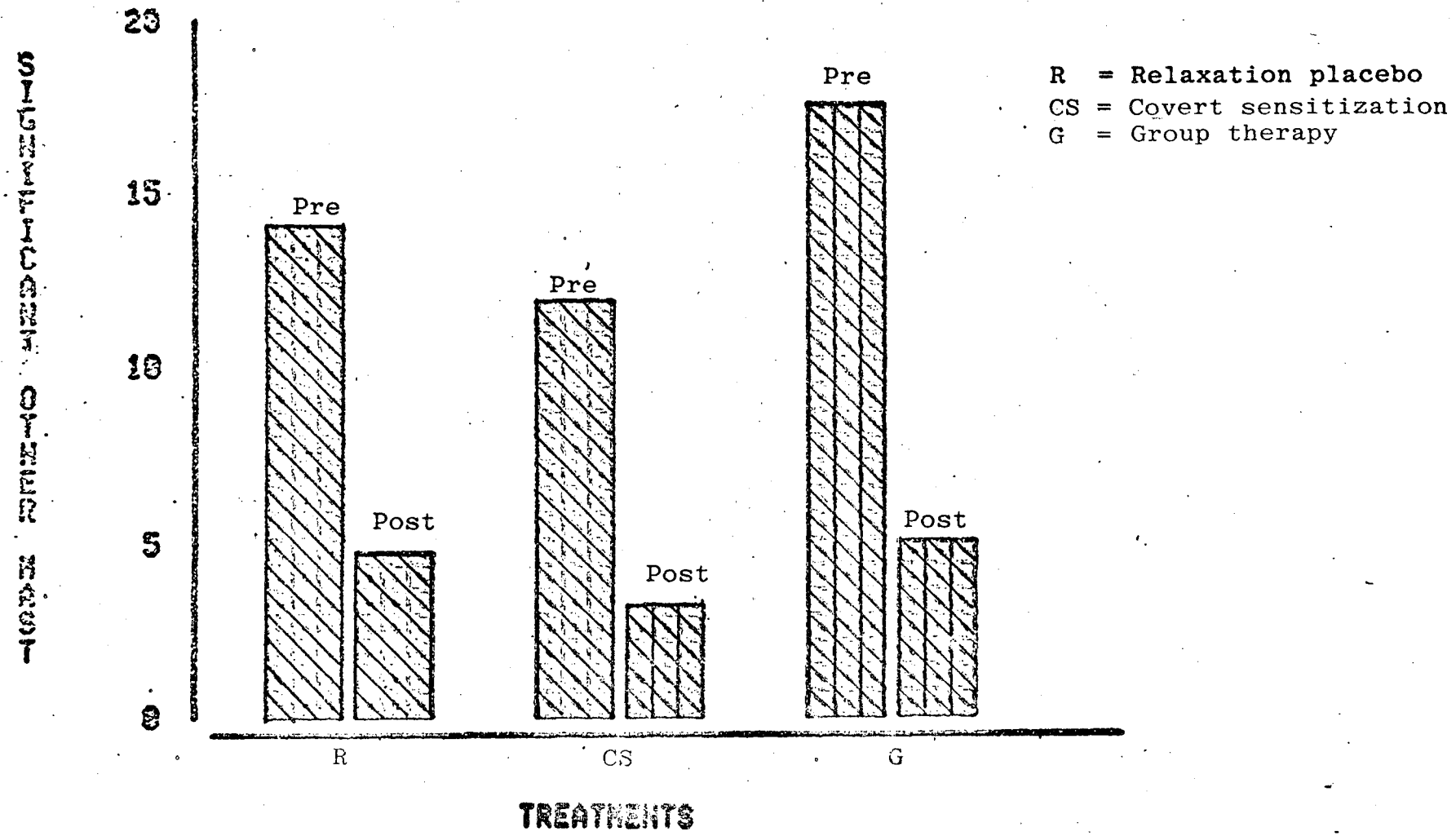

Figure 6. Subjects' significant other mean MAST scores at pre-test and post-test.

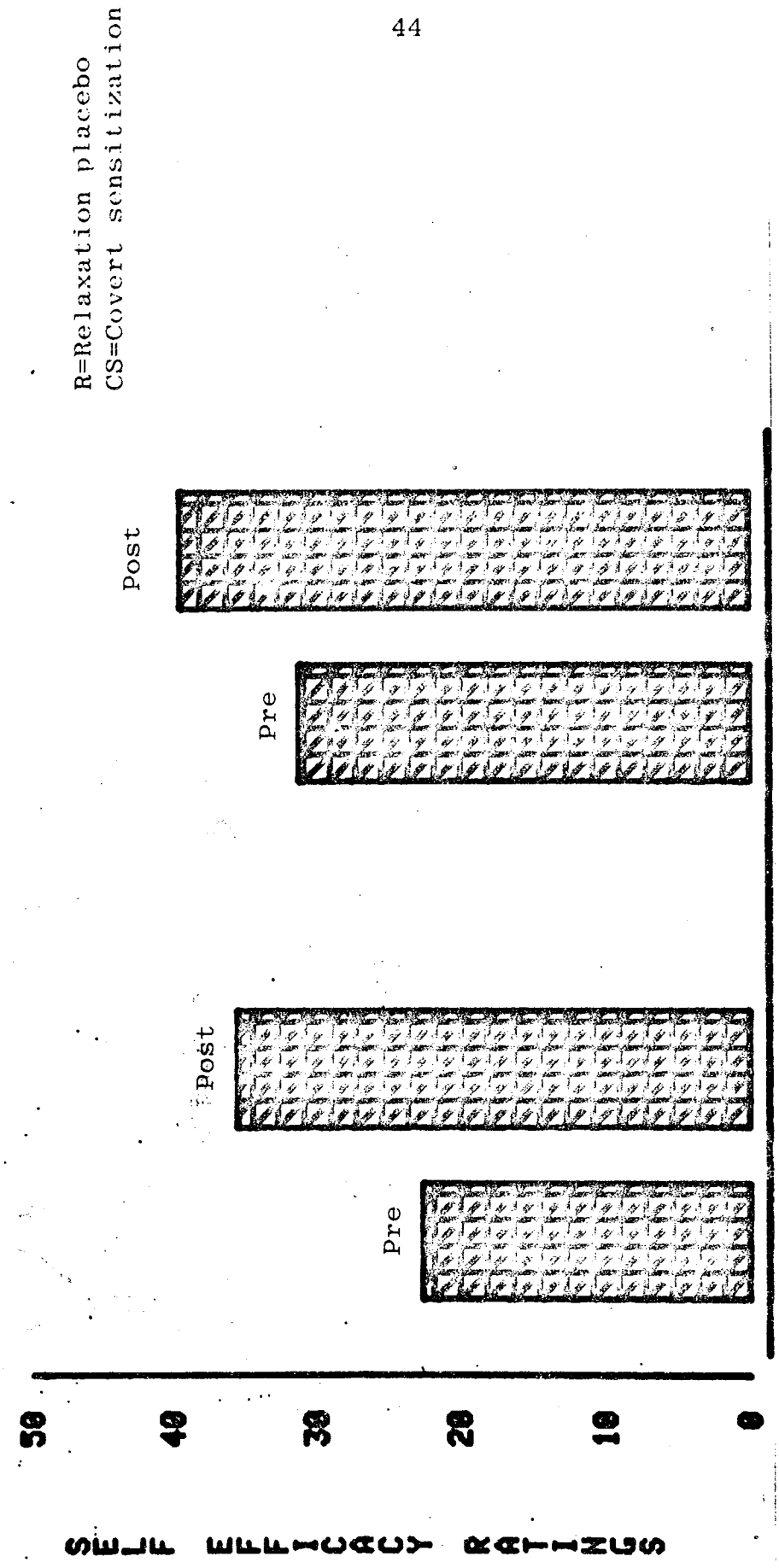

Figure 7. Subjects' mean self-efficacy ratings at pre-test and post-test.

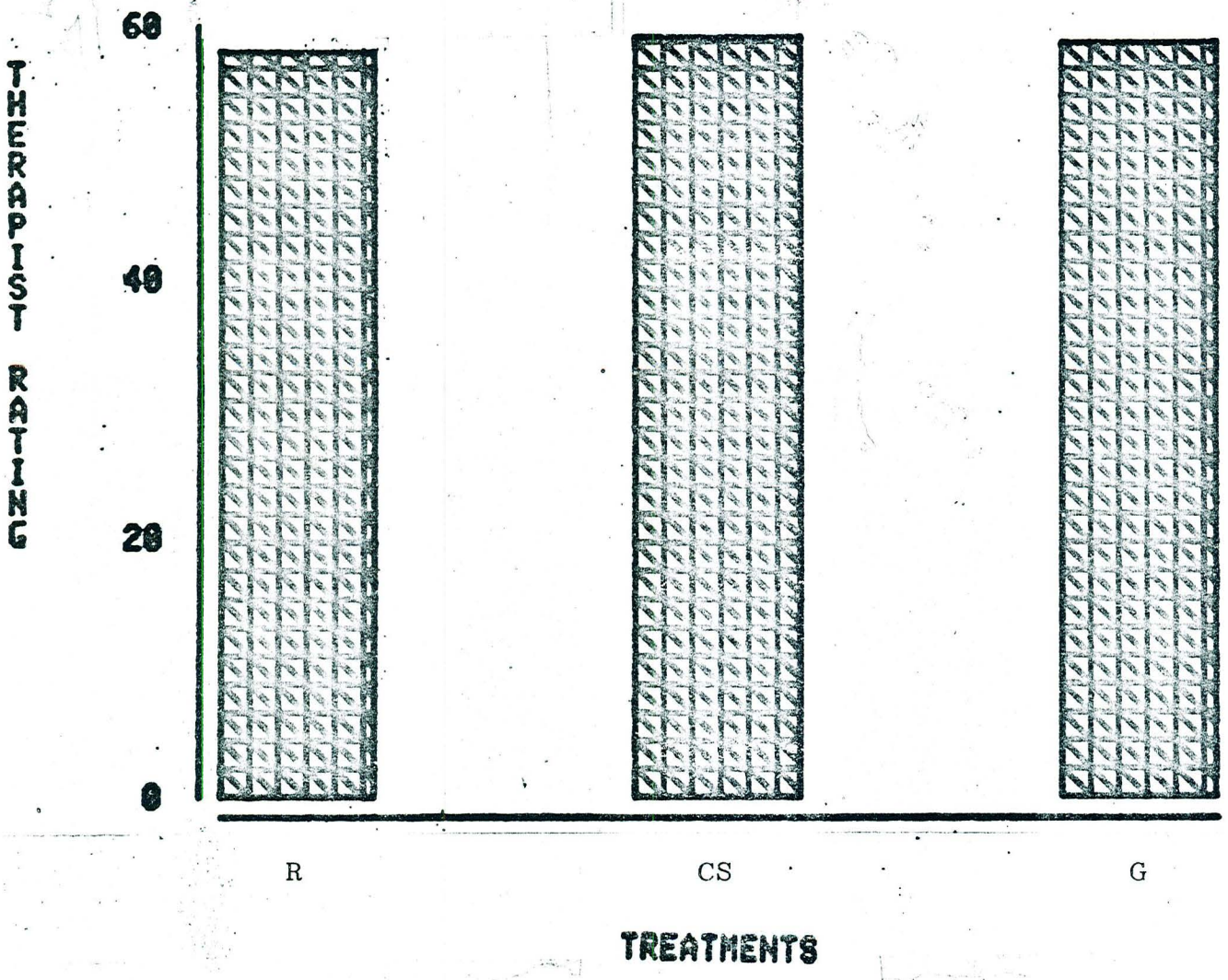

Figure 8. Subjects' mean scores on the Follow-up Therapist Questionnaire.

the groups revealed that subjects' perceptions regarding their therapist's characteristics were virtually identical among the three treatment groups.

In an attempt to investigage the relationship between the various dependent measures, a correlation analysis (computer program BMD11V, 1973, Health Sciences Computing Facility, UCLA) was performed on the data. Results of the correlation analysis are presented in Table 5. As expected, the correlation between subject's reported drinking frequency and subjects' ratings of urges to drink was significant $t(26)=2.22$, $p<.05$. However, the correlation between BAC and reported drinking frequency was not significant. It was also found that subjects' ratings of homework completion correlated significantly with reported drinking frequency $t(26)=2.64$, $p<.01$; ratings of urges to drink $t(26)=3.62$, $p<.01$; and self-efficacy ratings $t(26)=3.44$, $p<.01$.

With regards to the self-efficacy measure, the results indicated that subjects' pretreatment self-efficacy ratings correlated significantly with reported drinking frequency $t(26)=3.18$, $p<.01$; reported ratings of urges to drink $t(26)=2.87$, $p<.01$; and ratings of homework completion $t(26)=3.44$, $p<.01$.

The correlation between alcoholics and significant others' MAST scores was significant at posttreatment ($r=.41$)

Table 5

Correlation Matrix of the Various Dependent Measures

		(1)	(2)	(3)	(4)	(5)#	(6)	(7)	(8)
Drinking Frequency Pre	(1)	-							
Drinking Frequency Post	(2)	.90***	-						
Ratings of Urges Pre	(3)	.67***	.46**	-					
Ratings of Urges Post	(4)	.56**	.65***	.80***	-				
BAC Pre	(5)	.19	-.03	-.11	-.19	-			
BAC Post	(6)	.13	.30	.26	.40*	-.01	-		
Self-efficacy Ratings Pre	(7)	-.53**	-.49**	-.42*	-.38*	-.14	-.25	-	
Self-efficacy Ratings Post	(8)	.36*	.17	.05	-.03	.08	-.05	.01	-
Homework Rating	(9)	.22	-.37*	-.50**	-.52**	.18	-.46**	.56**	-.14

* $p < .05$

** $p < .01$

*** $p < .001$

(t=2.29, p<.05) but not at pretreatment (r=.31).

Discussion

Contrary to expectation, the results of the present study demonstrated that group-administered covert sensitization was no more effective than traditional insight-oriented group therapy or a relaxation placebo treatment in helping subjects overcome their problem drinking. This conclusion is strengthened by the fact that the three treatments did not differ on any of the dependent measures.

These results are consistent with the findings of Fleiger and Zingle (1973) who also found no statistically significant difference between covert sensitization and a group problem-solving treatment. Likewise, the present study's demonstration that covert sensitization was no more effective than a placebo treatment is consistent with Ashem and Donner's (1968) finding that subjects receiving covert sensitization fared no better than subjects receiving a backward conditioning placebo treatment.

The lack of between-group differences is also consistent with a review by Emrick (1975). Of the 384 comparative outcome studies of various alcoholism treatments Emrick reviewed, only five studies were found that presented significant long-term differences between treatment groups. Furthermore, Emrick has suggested that even in these five cases where significant between-group differences

were found, the results could have been due to a "demoralization effect" due to subjects' feelings of disappointment and rejection for having been placed in a no-contact control group.

Although no between-group differences were found in the present study, there still remains the question as to whether subjects improved as a function of receiving any of the three treatments. The within-subject comparisons across time were equivocal. On the actual drinking behavior measures (i.e., BAC and reported drinking frequency), the results clearly indicated that subjects did not improve as a result of going through treatment. These results contradict those of Ashem and Donner (1968) and Fleiger and Zingle (1973) since each of these studies found a 40% reported abstinence rate for subjects receiving covert sensitization. However, both of these studies used subjects who were inpatients at a residential treatment facility. The fact that the previous studies used inpatients rather than outpatients and that neither of the previous studies used direct measures of drinking behavior may account for the discrepancy in findings between previous research and the present study.

For each of the remaining measures of problem drinking used in the present study (i.e., reported urges to drink, MAST scores, and self-efficacy ratings) significant improvement over time was found. Subjects reported a significant

reduction in their urges to drink. Likewise, subjects' MAST scores and MAST scores from subjects' significant others showed a dramatic improvement from mean scores in the moderately alcoholic range at pretreatment to mean scores in the non-alcoholic range at posttreatment. Similarly, the self-efficacy results showed a significant increase from pre to posttreatment in subjects' perceptions of their ability to cope with situations involving alcohol.

Several hypotheses can be offered for explaining why improvement was found on the urges, MAST, and efficacy measures, while no improvement was found on the BAC and reported drinking frequency measures. One possible explanation for this discrepancy can be given in terms of demand characteristics. It is possible that none of the treatments actually improved the subjects' drinking problem, but that the urges, MAST, and efficacy measures allowed subjects to respond in a manner which they felt was expected. The nature of the BAC measure, however, precluded subjects from altering their response to the measure to correspond with expectations for treatment outcome, and thus may explain the lack of improvement found on the BAC measure. Subjects may have resisted falsifying reported daily drinking due to their awareness that the therapist had a reliability check (via the BAC tests) on their reports. This could account for the lack of improvement on

the reported drinking frequency measure.

Unlike the BAC and reported drinking frequency measures, the four remaining measures (i.e., urges to drink, MAST scores, significant other MAST scores, and self-efficacy ratings) could be more easily influenced by subjects' desire to respond in a favorable light, since they are based on unverifiable self-reports. The fact that a large majority of the subjects (26 out of 28) were court referrals may have increased the likelihood that subjects responded in a manner which corresponded with a favorable treatment outcome under the erroneous assumption that if they did not show improvement they would be incarcerated. The fact that subjects in the placebo condition improved as much as subjects receiving group therapy or covert sensitization strengthens the conclusion that subjects' improvement was a function of their response to demand characteristics.

It is possible, however, that subjects' reported improvement on the urges, MAST, and efficacy measures was a valid reflection of their functioning in these areas. If this is the case then an alternative hypothesis to account for the discrepancy between dependent measures is that subjects may have learned to eliminate or significantly reduce their alcohol-related problems without reducing their intake of alcohol. For instance, subjects may have learned to think about drinking less, avoid drinking on the job, use

alternative forms of transportation when drinking, or to perceive themselves as being able to cope with situations involving alcohol. To the extent that these changes did occur in the subjects' behavior, one would expect a corresponding improvement on the measures which tap those behaviors (i.e., reported urges, MAST scores, and efficacy ratings). The possibility that these improvements could have been made without a significant reduction in alcohol consumption is consistent with a substantial number of studies that have found varying proportions of former alcoholics drinking at moderate levels without apparent difficulties or serious impairment (Davies, 1962; Kendell, 1968; Gerard & Saenger, 1966; Pattison, 1966; Kish & Hermann, 1971; Sobell & Sobell, 1973).

Results of the correlation analysis performed in the present study reveal rather low, but in some cases significant correlations between measures. The significant correlation found between reported drinking frequency and reported urges to drink is somewhat surprising considering that subjects' reported urges to drink significantly decreased over time while subjects' reported drinking frequency remained at the same level.

The correlation between subjects' BAC's and reported drinking frequency was to serve as a reliability estimate of the subjects' self-monitoring of drinking frequency. The

low correlation obtained between these two measures seriously questions the accuracy of the subjects' self-monitoring. However, there is a strong likelihood that the low correlation was due at least in part to the method in which the data were collected. On the reported drinking frequency measure, subjects recorded the number of drinks consumed each day. This data were then averaged over a one week period to obtain a mean daily drinking frequency. The BAC measure, on the other hand, was obtained once each week. The problem with correlating the mean daily drinking frequency with BAC is that the BAC measure may have been obtained on days which were atypical for the week. Thus the discrepancies between subjects' reported mean daily drinking frequency and their BAC's may be accounted for in terms of subjects' variable drinking habits rather than inaccurate self-monitoring.

Due to the problem with trying to correlate reported mean daily drinking frequency with subjects' BAC's, an alternative post hoc method was used to estimate the reliability of the subjects' reported daily drinking. On each weekly BAC administration the subjects' weekly drinking summary sheet was analyzed to determine whether the subjects reported drinking on each BAC administration day. If a subject's BAC reading was equal to or greater than .015 (a BAC reading obtained by consuming one ounce of alcohol) and the

subject reported that they had been drinking on that day, it was scored as an agreement. Likewise, if a subject's BAC reading was less than .015 and the subject reported that they had not been drinking, it was scored as an agreement. If a subject's BAC reading was greater than or equal to .015 and the subject reported that they had not been drinking, it was scored as a disagreement. Likewise, if a subject's BAC reading was less than .015 and they reported that they had been drinking on the day of the BAC test, it was scored as a disagreement. Using this method of reliability assessment, the two measures agreed on 86% of the 280 possible comparisons.

These results suggest that subjects were fairly accurate in reporting whether or not they had been drinking on the days of the BAC tests. Armor et al (1976) found similar results using an identical reliability procedure. Of the 593 outpatients interviewed at an initial intake, 91% gave accurate responses. It should be emphasized, however, that this reliability method is crude since it does not provide any information as to the reliability of the subjects' reported drinking magnitude (i.e., number of drinks consumed).

Although significant in one case, the correlation between subjects' MAST scores and their significant other MAST scores was surprisingly low. These results indicated that even though significant improvement was found on both

measures, subjects and their significant others disagreed as to the extent of the subjects' improvement. This finding lends some support for the hypothesis that subjects' improvement on the MAST was a function of subjects and significant others' response to demand characteristics.

Results of the correlation between self-efficacy ratings and the other treatment measures only partially support Bandura's self-efficacy theory. As predicted by Bandura's theory, self-efficacy ratings significantly correlated with several other measures of treatment outcome (i.e., reported drinking frequency, and reported urges to drink). Although the correlations were significant in some cases, they did not approach the high correlations found in Bandura's research on avoidance behavior. This finding is understandable since Bandura's avoidance research has investigated the relationship between very specific self-percepts (e.g., Can you walk up to within five feet of the snake's cage?) and their corresponding overt behavior. The present study investigated the relationship between specific self-percepts (e.g., Can you turn down a drink offered to you at a party?) and dependent measures which are somewhat removed from the original self-percept. To the extent that the self-percept (efficacy expectation) differs from the dependent measures, one would expect a concomitant reduction in the magnitude of the relationship

between efficacy expectations and the dependent measures.

Bandura's contention that self-efficacy mediates behavior change was not supported in the present study. The results demonstrated that subjects' efficacy expectations increased from pre to posttreatment. However, a corresponding change in overt behavior (i.e., drinking frequency) was not found. This fact in part may explain why significant correlations between self-efficacy and other dependent measures were found at pretreatment but not at posttreatment.

More research is needed to assess the utility of the self-efficacy construct in alcoholism research. One suggestion for future research is to use efficacy scales which more closely resemble the overt behavior being measured.

The significant negative correlations found between subjects' reported homework completion (covert sensitization and relaxation placebo groups only) and each of the other dependent measures (excluding MAST scores) suggests that subjects' completion of homework treatment assignments may be an important variable in determing covert sensitization and relaxation treatment outcome. This finding is consistent with Cautela's (1970) contention that homework assignments are an important aspect of covert sensitization treatment. Although most behavior therapists advocate homework assignments for their clients, a systematic investigation of the role of homework assignments in therapy is lacking. Results

of the present study suggest that such an investigation is needed.

The present study raises serious questions with regards to the findings of previous alcoholism outcome research. The obvious question is whether previous studies would have reached similar conclusions if they had incorporated direct drinking measures. Based on the results of the present study, it is possible that the conclusions drawn from previous studies, stating that certain treatment strategies are effective with outpatient alcoholics, may be an artifact of the types of measures used to evaluate treatment effectiveness. Since all alcoholism treatment programs are aimed at reducing or eliminating the client's alcohol consumption, it is suggested that future studies directly measure (via BAC's) alcohol consumption. The inclusion of a direct drinking measure has several advantages: (a) BAC obtained via a breath test is a quick and reliable quantitative measure of alcohol consumption, (b) The BAC measure may serve to validate subjects' self-report of alcohol consumption, (c) The BAC measure better enables the researcher to study the relationship between alcohol consumption and other measures of impairment (e.g., physical, social, and psychological), and (d) The inclusion of a BAC measure better enables researchers to study levels of alcohol consumption as a subject variable, thus making it possible to determine whether there exists a differential

response to various treatment modalities.

The present study demonstrated that group-administered covert sensitization was not effective in reducing subjects' alcohol consumption. More research is needed to assess what types of clients (if any) will benefit from covert sensitization therapy. Since certain subject characteristics (e.g., social stability) have been found to predict treatment outcome with traditional alcoholism treatments (Armor et al, 1976), a clear specification of other relevant subject characteristics may help identify subgroups of alcoholics who will benefit from covert sensitization treatment. In addition to commonly reported characteristics such as age, sex, marital status, IQ, etc., it is suggested that learning history characteristics be reported. Such things might include drinking environment (e.g., bar, home, parties, etc.), drinking associates, types of liquor consumed, drinking cycle, average level of alcohol consumption, and precipitating circumstances.

Future research is urgently needed to discover effective treatments for this enduring problem. More work needs to be done in the development and evaluation of efficacious "treatment packages" (Hunt & Azrin, 1973; Sobell & Sobell, 1973). Due to the complexity of the problem it may be necessary to use a combination of behavioral and nonbehavioral treatment procedures (e.g., relaxation training, covert sensitization,

group therapy, social skills training and vocational training) to effectively treat this multi-dimensional problem.

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Appendix 1

Treatment Consent Form

I _____ give my consent to enter a comprehensive treatment with Michael J. Telch at the Alcohol Rehabilitation Clinic. As part of my treatment I fully understand that I will be visited at my home and required to take a breath test at least once a week. I also understand that I have the right to discontinue treatment at any time I feel fit.

Signed _____

Date _____

Appendix 2

Weekly Drinking Summary Data Sheet

DAY	NUMBER OF DRINKS	TIME	PLACE OR SITUATION
MONDAY			
TUESDAY			
WEDNESDAY			
THURSDAY			
FRIDAY			
SATURDAY			
SUNDAY			

Appendix 3

URGES TO DRINK RATING FORM

Instructions: Listed below is a scale. Read the scale very carefully and then rate the average number of times per day that you think about wanting a drink. Rate your urges by circling the number which best describes the number of urges (thoughts about wanting a drink) you have each day.

1	2	3	4	5	6	7	8	9	10
Rarely thinks about drinking (once or twice each day)			Sometimes thinks about drinking (3-10 times per day)					Frequently thinks about drinking (more than 10 times per day)	

NAME_____ PRETEST POSTTEST

DATE:_____

Appendix 4

CONDITION_____

MAST

1. Within the last two months have you felt that you are a normal drinker? YES NO

2. Within the last two months have you ever awakened the morning after some drinking the night before and found that you could not remember a part of the evening before? YES NO

3. Within the last two months has your wife or parents complained about your drinking? YES NO

4. Within the last two months have you been able to stop drinking without a struggle? YES NO

5. Within the last two months have you felt bad about your drinking? YES NO

6. Within the last two months have your friends felt you are a normal drinker? YES NO

7. Within the last two months have you tried to limit your drinking to certain times of the day or to certain places? YES NO

8. Within the last two months have you been able to stop drinking when you want to? YES NO

9. Within the last two months have you attended a meeting of Alcoholics Anonymous (AA)? YES NO

10. Within the last two months have you gotten into fights when drinking? YES NO

11. Within the last two months has your drinking created problems with you and your wife (other family member)? YES NO

12. Within the last two months has your wife (other family member) gone to anyone for help about your drinking? YES NO

13. Within the last two months have you lost any friends because of your drinking? YES NO

14. Within the last two months have you ever gotten into trouble at work because of your drinking? YES NO

15. Within the last two months have you lost a job because of your drinking? YES NO

16. Within the last two months have you neglected your obligations to your family or your work for two or more days in a row because you were drinking? YES NO

17. Within the last two months have you drank before noon? YES NO

NAME_____ 74 PRETEST POSTTEST

DATE_____

CONDITION_____

MAST

18. Within the last two months have you been told that you have liver trouble? YES NO

19. Within the last two months have you had delerium tremens (DTs) severe shaking, heard voices, or seen things that weren't there after heavy drinking? YES NO

20. Within the last two months have you gone to anyone for help about your drinking? YES NO

21. Within the last two months have you been hospitalized because of your drinking? YES NO

22. Within the last two months have you been a patient in a psychiatric hospital or psychiatric ward where drinking was part of the problem? YES NO

23. Within the last two months have you been seen at a psychiatric or mental health clinic, or gone to a doctor, social worker, or clergyman for help with an emotional problem in which drinking had played a part? YES NO

24. Within the last two months have you been arrested for drunk behavior? YES NO

25. Within the last two months have you been arrested for drunk driving or driving after drinking? YES NO

Date_____ 75 Pre____ Post____

Name_____ Appendix 5 Tre____ Follow-up____

A number of situations involving drinking are described below. Please rate how self-confident you would feel in handling each of these situations. Then circle the number listed on the scale which comes closest to describing your confidence according to the following scale.

3 extremely confident

2 very confident

1 quite confident

0 moderately confident

-1 mildly confident

-2 a little confident

-3 not at all confident

1. You are at home. An old friend comes by to visit. He asks if there is anything to drink in the house. Could you offer your friend a drink without having one yourself?

3	2	1	0	-1	-2	-3
extremely confident			moderately confident			not at all confident

2. You are eating at a nice restaurant with your spouse (boyfriend/girlfriend). The waiter comes over to your table and asks you if you would like a drink before dinner. Your spouse (boyfriend/girlfriend) tells the waiter that they would like a gin and tonic. Could you tell the waiter that you would not care for a drink?

3	2	1	0	-1	-2	-3
extremely confident			moderately confident			not at all confident

3. You are sitting at home watching television. You feel the urge to have a drink. Could you control your urges and not drink?

3	2	1	0	-1	-2	-3
extremely confident			moderately confident			not at all confident

4. You are at a party. The hostess comes over to you and asks you what you're drinking. Could you tell the hostess that you would not care for a drink?

3	2	1	0	-1	-2	-3
extremely confident			moderately confident			not at all confident

5. You have just had a tense argument with your spouse (boyfriend/girlfriend). You are very upset. While walking through the kitchen you notice a bottle of your favorite alcoholic beverage sitting on the shelf. Could you walk by the bottle without having a drink?

3	2	1	0	-1	-2	-3
extremely confident			moderately confident			not at all confident

6. You are at work. It's almost lunch time. Some people you work with come over to you and ask you to go out with them for a quick drink. Could you thank your friends but tell them that you would rather not go?

3	2	1	0	-1	-2	-3
extremely confident			moderately confident			not at all confident

7. You are feeling depressed due to some bad news you have just received. You feel like having a drink. Could you control yourself and decide not to have a drink?

3	2	1	0	-1	-2	-3
extremely confident			moderately confident			not at all confident

8. You are with your family at home. You have just received the good news that you are now an uncle (aunt). Everyone wants to celebrate. Someone gets out a bottle of liquor. Could you tell them that you do not want to drink?

3	2	1	0	-1	-2	-3
extremely confident			moderately confident			not at all confident

9. (In the space provided write in a situation in which you frequently encounter and rate your confidence in dealing with that situation)

3	2	1	0	-1	-2	-3
extremely confident			moderately confident			not at all confident

10. In terms of your own experiences, how realistic were the first eight situations that were presented.

3	2	1	0	-1	-2	-3
Very Realistic			Somewhat Realistic			Not Realistic at ALL

Group (Day and time)_____ Date_____

Appendix 6

Therapist Follow-up Questionnaire

Instructions to subjects: The clinic is very interested in getting your impressions of Mike as an alcohol counselor. In a moment I will present you with some statements about Mike and your treatment group. Each statement will have an agreement scale ranging from 1 to 12 directly below it. The higher the number the more you agree with the statement being presented. If you agree very strongly with a statement circle either a 10, 11, or 12; if you agree somewhat with the statement circle either a 7, 8, or 9; if you disagree somewhat with the presented statement circle either a 4, 5, or 6; and if you strongly disagree with the statement circle either a 1, 2, or 3. Please respond to each statement according to your own true feelings. In other words please be honest when you respond to each statement. You do not have to put your name on this questionnaire. Just put the night your group met on the top of the page. Do you have any questions about the questionnaire or about what I have asked you to do? Okay let's begin!

1. Mike really tried to help the members of the group.

1	2	3	4	5	6	7	8	9	10	11	12
Strongly disagree			Disagree			Agree			Strongly agree		

2. Mike was warm and sincere during the group sessions.

1	2	3	4	5	6	7	8	9	10	11	12
Strongly disagree			Disagree			Agree			Strongly agree		

3. Mike really didn't care enough about the people in his group.

1	2	3	4	5	6	7	8	9	10	11	12
Strongly disagree			Disagree			Agree			Strongly agree		

4. Mike asked too many personal questions in the group sessions.

1 2 3 4 5 6 7 8 9 10 11 12

Strongly disagree — Disagree — Agree — Strongly agree

5. Mike really showed an interest in things I had to say.

1 2 3 4 5 6 7 8 9 10 11 12

Strongly disagree — Disagree — Agree — Strongly agree

6. Mike showed a lot of enthusiasm in the group sessions.

1 2 3 4 5 6 7 8 9 10 11 12

Strongly disagree — Disagree — Agree — Strongly agree

7. If in need of further counseling I would like my counselor to be like Mike.

1 2 3 4 5 6 7 8 9 10 11 12

Strongly disagree — Disagree — Agree — Strongly agree

SOCIAL INTAKE

Name _____ Sex: Male ___ Female ___
Last First Initial

Address _____ Telephone _____
Street No. City State Zip

Social Security No. _____ Age _____

Birthdate _____ Birthplace _____ Highest Grade Completed _____

Length of residence at present address _____ Religion _____

Number of address changes in last 5 years _____ Military Service: Yes ___ No ___

Marital status:
1. Never married
2. Now married
3. Widowed
4. Divorced
5. Separated
6. Common-law
99. Unknown

Ethnic background:
1. White/Anglo
2. Black
3. Mexican/American
4. American Indian
5. Chinese
6. Japanese
7. Filipino
8. Other non-white
99. Unknown

Current occupation _____ Place of Employment _____

Past occupation _____ Spouse's name & occupation _____

Number of job changes in last 5 years _____

Current employment status:
0. Unemployed
1. Employed full-time
2. Employed part-time
3. Self-employed
4. Retired
5. Housewife
6. Student
7. Disabled
8. Other _____
99. Unknown

Monthly income: $_____
0. None
1. Less than $200
2. $ 200 - 399
3. 400 - 599
4. 600 - 799
5. 800 - 999
6. 1000 - 1499
7. 1500 - 1999
8. 2000 and over
99. Unknown

Source of income:
0. No means of support
1. Job
2. Supported by relatives
3. Public Assistance
4. S.S.I.
5. Social Security
6. Retirement Pension
7. Unemployment Insurance
8. Other
99. Unknown

Living situation:
0. No permanent address
1. Living alone
2. Living with spouse
3. Living with other relatives
4. Living with friends
5. Recovery House
6. Board & Care or other institutions
7. Other _____
99. Unknown

Usual type of residence:
0. No usual type of residence
1. House
2. Apartment
3. Trailer
4. Hotel/Motel
5. Board & Care or Nursing Home
6. Recovery House
7. Other _____
99. Unknown

Source of referral _____

Person to notify in case of emergency: Name _____ Relationship _____
Address _____ Phone _____

Program _____ Account Number _____

Date of Admission _____ Registration Number _____

Patient Status: 1. New
2. Readmit
3. E visit only (ARC)

Intake Worker _____

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NAME: _____

ADDRESS: _____

_____

PHONE: _____

The following questions will help you and the counselor learn if you have some of the symptoms of alcoholism, and whether or not you may need help.

1. Have you noticed that you are able to handle more liquor now than you did in the past? Yes _____ No _____
2. Do you occasionally drink heavily after a disappointment, a quarrel, or when the boss, your spouse or parents or others give you a hard time? Yes _____ No _____
3. When you have trouble or feel under pressure, do you drink more than usual? Yes _____ No _____
4. Did you ever wake up on the "morning after" and discover that you could not remember part of the evening before, even though your friends tell you that you did not "pass out"? Yes _____ No _____
5. When drinking with other people, do you try to have a few extra drinks when others will not know it? Yes _____ No _____
6. Are there certain occasions when you feel uncomfortable if alcohol is not available? Yes _____ No _____
7. Have you recently noticed that when you begin drinking you are in more of a hurry to get the first drink than you used to be? Yes _____ No _____
8. Do you sometimes feel a little guilty about your drinking? Yes _____ No _____
9. Are you secretly angry when your family or friends discuss your drinking? Yes _____ No _____
10. Have you become aware of an increase in the number of times you are unable to remember things that happened the day before? Yes _____ No _____
11. Do you often find that you wish to continue drinking after your friends say they have had enough? Yes _____ No _____
12. Do you usually have a reason for the occasions when you drink heavily? Yes _____ No _____
13. When you are sober, do you often regret things you have done or said while drinking? Yes _____ No _____
14. Do you find you are getting into fights and quarrels when you drink? Yes _____ No _____
15. Have you tried switching brands or following different plans for controlling your drinking? Yes _____ No _____
16. Have you often failed to keep the promises you have made to yourself about controlling or cutting down on your drinking? Yes _____ No _____
17. Have you ever tried to cut down your drinking by making a change in jobs, or moving to a new location? Yes _____ No _____
18. Do you try to avoid family or close friends while you are drinking? Yes _____ No _____
19. Do you find you are losing friends? Yes _____ No _____
20. Are you having an increasing number of financial and work problems? Yes _____ No _____
21. Do more people seem to be treating you unfairly without good reason? Yes _____ No _____
22. Do you eat very little or irregularly when you are drinking? Yes _____ No _____
23. Do you sometimes have the "shakes" in the morning and find that it helps to have a little drink? Yes _____ No _____
24. Does it take fewer drinks now to get you drunk that it did in the past? Yes _____ No _____
25. Do you sometimes stay drunk for several days at a time? Yes _____ No _____
26. Do you sometimes feel very sad or unhappy and wonder whether life is worth living? Yes _____ No _____
27. Sometimes after periods of drinking, do you see or hear things that aren't there? Yes _____ No _____
28. Do you get terribly frightened after you have been drinking heavily, without knowing what it is that you fear? Yes _____ No _____

EVALUATION

Location of Evaluation _____ Account Number _____

Date of Evaluation _____

Name _____
Last First Initial

Prior Treatment:
0. None
1. A.A.
2. A-2
3. Starting Point
4. RTC/FAITH
5. ARC
6. Recovery House
7. Mental Health
8. State Hospital
9. Private Physician
10. Church
11. DWI School
12. V.A.
13. Other _____
99. Unknown

Days of gainful employment, last six months:
0. No days
1. Less than 30 days
2. 30 - 60 days
3. 61 - 90 days
4. 91 - 120 days
5. 121 - 150 days
6. Over 150 days (five months)
99. Unknown

Longest period abstinent, last six months:
0. 0 months
1. 1 month
2. 2 months
3. 3 months
4. 4 months
5. 5 months
6. 6 months
99. Unknown

Drinking behavior, last six months:
0. No intake of beverage alcohol.
1. Drinking, but never to excess.
2. One or two periods of drinking to excess.
3. More than two periods of drinking to excess.
4. Frequent drinking to excess. (several times per month)
99. Unknown

Drunkenness arrests, last six months:
0. No arrests
1. 1 arrest
2. 2 arrests
3. 3 arrests
4. 4 arrests
5. 5 arrests
6. More than 5 arrests
99. Unknown

Drunk driving arrests:
0. No arrests
1. 1 arrest
2. 2 arrests
3. 3 arrests
4. 4 arrests
5. 5 arrests
6. More than 5 arrests
99. Unknown

Other arrests:
0. No arrests
1. 1-2 arrests
2. 3-4 arrests
3. 5-6 arrests
4. 7-8 arrests
5. 9-10 arrests
6. More than 10 arrests
99. Unknown

Prior history, other drugs:
0. No drugs
1. Marijuana
2. Other hallucinogens
3. Amphetamines
4. Tranquilizers
5. Anti-depressants
6. Heroin
7. Opiates
8. Barbiturates
9. Other _____
99. Unknown

History of alcohol-related disease or symptoms:
0. No alcohol-related disease or symptoms.
1. Cirrhosis
2. D.T.'s
3. Seizures
4. Brain Damage
5. Blackouts
6. Other _____

Is client now taking any drugs listed above? (List numbers) _____

Other medical problems _____

Family history of alcoholism? Yes___ No___
1. Father
2. Mother
3. Brother or Sister
4. Spouse
5. Other

Comments: _____

Preliminary diagnoses: Primary _____ Secondary _____

Referred to _____ Evaluator _____

Comments:

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Appendix 8

Covert Sensitization Treatment Rationale

"Your drinking is a habit which has been associated with many different situations. For instance at parties, after dinner, meeting with friends, etc. The goal of therapy will be to make drinking a very unpleasant experience for you. Therapy will begin by teaching you how to relax. After you have learned to relax, you will be asked to imagine in your mind a situation in which you usually drink. For instance sitting alone at your favorite bar. Once this image is clear you will be asked to imagine yourself getting violently sick and puking all over your drink and clothes. By pairing these disgusting images with drinking your desire to drink will be eliminated. Do you have any questions?"

Appendix 9

ALCOHOL QUESTIONNAIRE

1. When did you take your first drink? _____
2. How long have you been drinking? _____
3. When was the last time you had a drink? _____
4. What is the longest amount of time you've abstained from drinking since you've had this drinking problem? _____
5. Which alcoholic beverages do you prefer? _____

   _____
6. Which alcoholic beverages do you usually drink? List the ones you usually drink, with the most frequent one first.

   a. _____ e. _____

   b. _____ f. _____

   c. _____ g. _____

   d. _____ h. _____
7. What are your favorite drinks? List your most favorite first.

   a. _____ d. _____

   b. _____ e. _____

   c. _____ f. _____
8. Where do you usually do your drinking? Give the most frequent place first.

   a. _____ d. _____

   b. _____ e. _____

   c. _____ f. _____
9. Do you prefer to drink alone _____ or with someone else _____? (check one)
10. Do you usually drink alone _____ or with someone else _____? (check one)
11. Does your husband _____ wife _____ drink? _____
12. If so, how much? A lot _____ Moderately _____ Little _____
13. Does or did you father drink? _____ If so, how much?

    A lot _____ Moderately _____ Little _____
14. Does or did you mother drink? _____ If so, how much?

    A lot _____ Moderately _____ Little _____

15. Are there any of your relatives, including close family, who have a drinking problem? List the individuals according to their relationship to you, and specify how much they drink.

a. _____ d. _____

b. _____ e. _____

c. _____ f. _____

16. Why do you drink? Give any possible reason.

17. Do you want to stop? If so, why?

Appendix 10

Relaxation Instructions

Begin by getting as comfortable as you can. Settle back comfortably. Just try to let go of all the tension in your body. Now take in a deep breath. Breathe right in and hold it (five-second pause). And now exhale. Just let the air out quite automatically and feel a calmer feeling beginning to develop. Now just carry on breathing normally and just concentrate on feeling heavy all over in a pleasant way. Study your own body heaviness. This should give you a calm and reassuring feeling all over (ten-second pause). Now let us work on tension and relaxation contrasts. Try to tense every muscle in your body. Every muscle: your jaws, tighten your eyes, your shoulder muscles, your arms, chest, back, stomach, legs, every part just tensing and tensing. Feel the tension all over your body—tighter and tighter—tensing everywhere, and now let it go, just stop tensing and relax. Try to feel this wave of calm that comes over you as you stop tensing like that. A definite wave of calm (ten-second pause).

Now I want you to notice the contrast between the slight tensions that are there when your eyes are open and the disappearance of these surface tensions as you close your eyes. So while relaxing the rest of your body just open your eyes and feel the surface tensions which will disappear when you close your eyes. Now close your eyes and feel the greater degree of relaxation with your eyes closed (ten-second pause) all right, let us get back to the breathing. Keep your eyes closed and take in a deep, deep breath and hold it. Now relax the rest of your body as well as you can and notice the tension from holding your breath. Study the tension. Now let out your breath and feel the deepening relaxation—just go with it beautifully relaxing now. Breathe normally and just feel the relaxation flowing into your forehead and scalp. Think of each part as I call it out—just relaxing—just letting go, easing up, eyes and nose, facial muscles. You might feel a tingling sensation as the relaxation flows in. You might have a warm sensation. Whatever you feel I want you to notice it and enjoy it to the full as the relaxation now spreads very beautifully into the face, into the lips, jaws, tongue, and mouth so that your lips are slightly parted as the jaw muscles relax further and further. The throat and neck relaxing (five-second pause), shoulders and upper back relaxing, further and further, feel the relaxation flowing into your arms and to the very tips of your fingers (five-second pause). Feel the relaxation in your chest as you breathe regularly and easily. The relaxation spreads even under your armpits and down your sides, right into the stomach area. The relaxation becomes more and more obvious as you do nothing but just give way to the pleasant serene emotions which fill you as you let go more and more. Feel the relaxation—stomach and lower back all the way through in a warm, penetrating, wavy, calm and down your hips, buttocks, and thighs to the very, very tips of your toes. The waves of relaxation just travel down your calves to your ankles and toes. Feel relaxed from head to toe. Each time you practice this you should find a deeper level of relaxation being achieved—a deeper serenity and calm, a good calm feeling.

Now to increase the feelings of relaxation at this point what I want you to do is just keep on relaxing and each time you exhale, each time you breathe out for the next minute, I want you to think the word

relax to yourself. Just think the word *relax* as you breathe out. Now just do that for the next minute (one-minute pause). Okay, just feel that deeper relaxation and carry on relaxing. You should feel a deeper, deeper feeling of relaxation. To even further increase the benefits, I want you to feel the emotional calm, those tranquil and serene feelings which tend to cover you all over inside and out, a feeling of safe security, a calm indifference—these are the feelings which relaxation will enable you to capture more and more effectively each time you practice a relaxation sequence. Relaxation will let you arrive at feeling a quiet inner confidence—a good feeling about yourself (five-second pause). Now once more feel the heavy sensations that accompany relaxation as your muscles switch off so that you feel in good contact with your environment, nicely together, the heavy good feeling of feeling yourself calm and secure and very, very tranquil and serene.

Now we can deepen the relaxation still further by just using some very special stimulus words. Let's use the words *calm* and *serene*. What I would like you to do is to think these words to yourself twenty times or so. Don't bother to count. Approximately twenty or thirty times just say to yourself *calm* and *serene* and then feel the deepening—ever, ever deepening—waves of relaxation as you feel so much more calm and serene. Now you just do that; take your time, think of the words and feel the sensations over and over (pause of about one minute). Good.

Now I am going to count backward from 10 to 1. At the count of 5 I would like you to open your eyes, and then by the time I reach 1, just kind of stretch and yawn and then you can switch off the recorder and just go back and relax on your own. Okay, now counting backward: 10, 9, 8, 7, 6, 5, open your eyes 4, 3, 2, and 1. Now just stretch and kind of yawn and then slowly get up and switch off the recorder and then you can go back and carry on relaxing as long as you wish.

NOTE: For further reference consult A. Lazarus, "Daily Living: Coping with Tensions and Anxieties" (a series of cassette recordings incorporating three relaxation instructions) Chicago, Ill.: Instructional Dynamics Incorporated.

Appendix 11

Homework Assignment Rating Form

Instructions: Listed below is a rating scale. Please rate the average daily number of minutes spent practicing your homework assignment. Please circle the point on the scale which best describes the number of minutes you spend each day practicing the relaxation and aversive thought exercises.

Relaxation Exercises

1	2	3	4	5	6	7	8	9	10

Did not practice — Did some practice (1-7 minutes) — Did all of assigned practice (15 minutes)

Aversive Thought Exercises

1	2	3	4	5	6	7	8	9	10

Did not practice — Did some practice (1-7 minutes) — Did all of assigned practice (15 minutes)

Appendix 12

Alcoholism Treatment Questionnaire

Directions: The purpose of this questionnaire is find out your view of different alcoholism treatments. A description of three different alcoholism treatments follow, each on a seperate page. Please read each description very carefully and then based on your best judgement answer the four questions which follow each description. Answer each question by circling the number on the scale which best describes your opinion. Please note that the scales run from left to right with less confidence in the treatment on the left and greater degrees of confidence on the right. This is not a test, so there are no right or wrong answers. Your best judgement is all that is required. It is not necessary for you to put your name on this questionnaire.

TREATMENT (R)

Your therapist tells you that recent medical research has shown that people learn to drink to reduce tension. For instance after a hard day at work, or after an argument with a loved one, many people find that a drink makes them feel better. The goal of therapy is to learn how to relax in these stressful situations without drinking. The therapist will begin by asking you to do some exercises. During these exercises you will be asked to tense and then relax various muscles throughout your body. After you have learned to relax the muscles throughout your body, you will practice replacing nervous thoughts with pleasant relaxing thoughts. For instance the therapist may ask you to imagine yourself lying on a beautiful beach listening to the waves crashing, whenever you have a nervous thought. This treatment will continue for 10 weekly sessions. By learning to relax your body and mind, the need to drink will be eliminated.

QUESTIONS

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

1	2	3	4	5	6	7	8	9	10
Very illogical				Somewhat logical					Extremely logical

2. How confident would you be that this treatment would be successful in eliminating your drinking?

1	2	3	4	5	6	7	8	9	10
Very unconfident				Somewhat confident					Extremely confident

3. How confident would you be in recommending this treatment to a friend who wanted to quit drinking?

1	2	3	4	5	6	7	8	9	10
Very unconfident				Somewhat confident					Extremely confident

4. Overall, do you feel that this treatment would be more effective than quitting without any treatment?

1	2	3	4	5	6	7	8	9	10
Equally effective				Somewhat more effective					Much more effective

TREATMENT (CS)

Your therapist tells you that your drinking is a habit which has been associated with many different situations. For instance at parties, after dinner, meeting with friends, etc. The therapist tells you that the goal of therapy will be to make drinking a very unpleasant experience for you. Therapy will begin by teaching you how to relax. After you have learned to relax, you will be asked to imagine in your mind a situation in which you usually drink. For instance sitting alone at your favorite bar. Once this image is clear you will be asked to imagine yourself getting violently sick and puking all over your drink and clothes. This treatment will continue for 10 weekly sessions. By pairing these disgusting images with drinking your desire to drink will be eliminated.

QUESTIONS

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

1	2	3	4	5	6	7	8	9	10
V									
Very illogical				Somewhat logical					Extremely logical

2. How confident would you be that this treatment would be successful in eliminating your drinking?

1	2	3	4	5	6	7	8	9	10
Very unconfident				Somewhat confident					Extremely confident

3. How confident would you be in recommending this treatment to a friend who wanted to quit drinking?

1	2	3	4	5	6	7	8	9	10
Very unconfident				Somewhat confident					Extremely confident

4. Overall, do you feel that this treatment would be more effective than quitting without any treatment?

1	2	3	4	5	6	7	8	9	10
Equally effective				Somewhat more effective					Much more effective

TREATMENT (G)

You sit down in your group and your councelor tells you that alcoholism is a chronic disease. You are told that the only way you can live successfully is by never touching alcohol again. Although this may sound overwhelming, you can achieve this goal by concentrating on remaining abstinent for one day at a time. Before you know it the days will turn into weeks and the weeks into months, and the months to years. Gradually you will find that your desire to drink will become less and less, and you will become aware of the fact that you don't need alcohol to function. While in your group, the councelor asks you about some of the problems you are facing right now. As you talk about your problems, the members of the group offer their suggestions to help you. Likewise, when other group members discuss their problems you offer your suggestions. Your group meets once each week for 90 minutes.

QUESTIONS

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

1	2	3	4	5	6	7	8	9	10
Very illogical				Somewhat logical					Extremely logical

2. How confident would you be that this treatment would be successful in eliminating your drinking?

1	2	3	4	5	6	7	8	9	10
Very unconfident				Somewhat confident					Extremely confident

3. How confident would you be in recommending this treatment to a friend who wanted to quit drinking?

1	2	3	4	5	6	7	8	9	10
Very unconfident				Somewhat confident					Extremely confident

4. Overall, do you feel that this treatment would be more effective than quitting without any treatment?

1	2	3	4	5	6	7	8	9	10
Equally effective				Somewhat more effective					Much more effective