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COVERT SENSITIZATION TREATMENT WITH ALCOHOLICS

ABSTRACT: An attempt was made to determine whether a behaviorally oriented conditioning approach, "covert sensitization," is more effective in the treatment of alcoholism than the commonly used problem-solving approach; and whether female counselors employing covert sensitization are more successful than males.

A sample of 32 subjects selected on admission to Henwood Rehabilitation Centre, an in-patient facility of the Division of Alcoholism, in the Province of Alberta, was assigned to 2 treatment groups for the purpose of statistical comparison and evaluation.

Eight staff counselors (4 males, 4 females) especially prepared in a 2-week, in-service workshop conduced covert sensitization with patients in treatment group 1; they also participated at least 50 percent of the time with other staff counselors in the problem-solving approach utilized in treatment group 2.

A 3-month period of abstinence following discharge from Henwood was selected as the criterion measure in determining the results of treatment outcome. Appropriate statistical analysis of the criterion data yielded support for both the hypotheses tested.

Attempts to modify excessive, uncontrolled drinking behavior using a diversity of treatment approaches have met with discouraging results. A review of recent literature supports a similar conclusion presented in a 1967 survey by Hill and Blane (1967). In view of the continuing pattern of results and the seriousness of the problem of alcoholism, an investigation into the effectiveness of a relatively new behavior approach seemed warranted and was subsequently carried out.

Covert sensitization — a relatively new technique based on the principles of aversion therapy — was the new approach selected. First reported in detail by Cautela (1966), covert sensitization involves covert or imagined stimuli for both the conditioned stimulus and the unconditioned stimulus. No external stimuli are presented.

The procedure utilizes both classical and operant conditioning. It involves training the subject in relaxation, sensitizing the individual to alcohol by inducing a nauseous response to the thought or urge to drink, and, finally, developing alternative and more satisfying pro-social responses to such maladaptive and self-defeating behavior. Simply put, covert sensitization consists of the unlearning and relearning of more effective behavioral response through a counter-conditioning paradigm.

The justification for using covert sensitization was derived from experimental and clinical findings of several investigators (Stuart, 1967; Barlow, Leitenberg & Agras, 1968; Viernstein, 1968; Davison, 1968; Anant, 1967; Ashem & Donner, 1968; Cautela, 1967, 1970).

A major implication arising from the review of covert sensitization studies to date is the need for investigations which compare various treatment approaches to the problem of alcoholism. Specifically, the primary objective of the study reported here was to compare and evaluate the effects of the problem-solving treatment normally practiced at Henwood with covert sensitization (behavior training) treatment. It was hypothesized that there would be a significant difference in abstinence between a covert sensitization group and a problem-solving treatment group.

A secondary objective of the project was an attempt to determine whether female counselors employing covert sensitization with male subjects were more successful than male counselors using the same treatment. Ashem & Donner's (1968) findings had suggested partial evidence in support of female counselor effectiveness. Further, information regarding sex difference is important in terms of its implications for lay therapists, nurses, etc.

EXPERIMENTAL DESIGN AND PROCEDURE

Institution

Henwood is a modern 64-bed residential unit for alcoholics, located seventeen miles northeast of Edmonton, Alberta. It provides accommodation for 50 men and 14 women.

Treatment services include individual and group therapy sessions, recreational and occupational activities, informational lectures, and subsequent discussion sessions about the development and progressive phases of alcoholism and the effects of alcohol on the physical and emotional health of the individual.

Those admitted to Henwood are individuals who have failed to respond to treatment in an out-patient clinic or other setting. Each case is dealt with according to need, and requests for admission are processed through out-patient clinics in Edmonton, Calgary, and Red Deer. All those admitted to Henwood enter the rehabilitation centre voluntarily; committal of individuals is not possible.

Referrals for detoxication are not accepted at Henwood. Individuals are required to present a medical certificate of reasonably good

physical health before being accepted. A small infirmary, attended by a nursing staff and a part-time physician, provides for minor medical needs of the residents.

The Sample and Selection

All subjects were male volunteers admitted to the Henwood Rehabilitation Centre for the treatment of alcoholism. They were from all parts of the Province of Alberta, with a large proportion from Edmonton and Calgary. Individuals were either self-referred or referred by others, for example, by a physician. They ranged in age from 21 years to 56 years (median age — 43 years).

The original sample consisted of 35 subjects, 17 in the covert sensitization group and 18 in the problem-solving (regular Henwood) treatment group. With the exception of 3 subjects in the covert sensitization group and 4 subjects in the problem-solving group, all others in the project had received prior treatment for alcoholism.

Two persons were excluded from the covert sensitization group for the following reasons: one person was extremely depressed and withdrawn and required psychiatric assistance during his stay at Henwood; the other left Henwood for personal reasons ten days after he began treatment.

One person in the second treatment group was excluded from the sample because of refusal to cooperate in any phase of the study.

Thus, the original sample of 35 subjects was reduced to 32. Treatment group 1 consisted of 15 subjects; treatment group 2 consisted of 17 subjects.

It should be noted that it was not possible to randomly select subjects for the study, as a waiting list is not maintained at Henwood. Therefore, it was assumed that all subjects involved in the project were representative of the population of alcoholics.

Formation of Groups

For the purposes of the study two treatment groups were established: covert sensitization, designated as treatment group 1, and problem-solving, named as treatment group 2. The designation of treatment groups was based on the following consideration: since only a portion of the entire treatment staff was trained in covert sensitization, and since it was necessary to assign these counselors to one of the treatment groups in order to determine the effectiveness of covert sensitization vis à vis the problem-solving treatment, covert sensitization was designated as treatment group 1, problem-solving as treatment group 2.

The subjects were alternately assigned to each of the two groups. Similarly, male and female counselors were alternately assigned to individuals in group 1. Each counselor worked with at least two subjects in the covert sensitization group.

While it is desirable that a nontreatment control group be formed in experiments designed to determine the effects of different types

of treatment, the inclusion of such a group in the present study was not possible. Henwood policy selects only those individuals who are currently experiencing problems with alcohol. All other persons are referred to out-patient clinics or day-care centres located in various parts of the province.

The Counselors

A total of 18 counselors (10 males, 8 females) comprised the entire treatment staff at Henwood. The counselors' age range was 22 to 52 years; all had previous counseling experience ranging from 1 to 10 years. The formal training and educational level attained by staff members ranged from grade 12 (1), to registered nurse (8), to bachelor's degree (9).

Prior to the initiation of the investigation, the researcher outlined the proposed study to the entire staff complement, requested volunteers for counselor training and skill development in covert sensitization, and received the names of 10 volunteer members who agreed to participate in the study. Subsequently, these individuals were engaged in a two-week workshop, the format of which consisted of lecture, discussion, practice, and evaluation sessions. Audio tape recordings and notetaking were utilized during the workshop and throughout the actual study. Of the 10 who took part in the workshop, 8 counselors (4 males, 4 females) were employed 2 hours per day carrying out covert sensitization. In addition, these counselors contributed a minimum of 1 hour daily in the problem-solving treatment.

The Treatments

Subjects assigned to the covert sensitization groups were treated individually; those assigned to the problem-solving group were treated in small groups of varying size with a counselor-subject ratio of one-to-two. All counselors understood that the criterion of success was to be abstinence.

The treatment schedule extended over a 20-day period with each group receiving a total of 40 treatment sessions of one hour's duration. With the exception of these sessions, subjects of both groups participated fully in the regular Henwood schedule of activities, e.g. lectures, recreational activities, and occupational therapy.

Covert Sensitization (Group 1). This treatment consisted of a slightly modified and systematic form of treatment advanced by Cautela (1966). Covert sensitization comprised 2 main procedures — relaxation and aversive conditioning — to eliminate the drinking problem.

Problem-Solving (Group 2). The problem-solving approach is characterized by the counselor attempting to help the subject gain insight into the nature of his drinking problem and its accompanying effects on himself and his relationship with others. Although some variations existed in this approach because of differences in counselor experience and training, all counselors agreed that greater self-insight of one's drinking behavior was an important treatment goal.

The Instruments

The instruments utilized in the study were of two basic types — questionnaires and commercially produced standardized tests. Data were gathered on the variables of socio-economic status, intelligence, and personality.

The Cautela Alcohol Questionnaire

The questionnaire by Cautela (1966) was designed to elicit information about an individual's excessive drinking behavior. It consists of 17 questions about such items as frequency, intensity, and duration of drinking behavior; types of alcoholic beverages preferred and most frequently consumed; most frequent place where drinking occurs; whether drinking is done alone or with others such as wives, parents, relatives, friends; reasons for drinking and for wanting to stop. The questionnaire yields no numerical score. Its chief purpose was to provide realistic content for scene construction and use during covert sensitization treatment.

Follow-Up Drinking Scale

Boggs (1967) developed drinking scales to improve the measurement of the effects of alcoholism treatment programs. Using Guttman scaling techniques, he constructed a drinking scale in which five items were identified and scored and applied to pre- and post-drinking patterns of persons who had participated in the evaluation of two different treatment programs. This study used a slightly modified version of the scale used by Boggs for follow-up interview purposes. Scoring procedures for the scale were left unchanged. Scores of 1 or above on the follow-up scale were considered as treatment failures.

TABLE 1

Summary of Treatment Group Samples by Age, Number of Years of Successfully Completed Educational Training, Number of Years Drinking A Problem, and Employment Status Pre-Treatment

Item	Group 1	Group 2
Subjects	15 males	17 males
Range of Ages	28-56 years	21-55 years
Median Age	47 years	42 years
Range of Years of Successfully Completed Education	5-18	7-18
Median Years of Successfully Completed Education	10	11
Range of Years Drinking a Problem..	4-25	2-27
Median Years Drinking a Problem	15	18
Employment Status Pre-treatment	5 employed 10 unemployed	7 employed 10 unemployed

The Results

Hypothesis 1 specified that treatment 1 would be superior to treatment 2. Results indicate that although a slightly larger proportion of treatment 1 subjects abstained for at least three months than did treatment 2 subjects, a difference of this small magnitude could be expected approximately 25 times out of 100 by chance alone, and the findings did not approach statistical significance.

Hypothesis 2 stated there would be a significant difference in treatment effectivness between male and female counselors employing covert sensitization with male alcoholics. The statistical evidence suggests that although a slightly larger proportion of female counselors working with male subjects were more successful, this difference could be expected approximately 20 times out of 100 by chance alone, and the findings did not approach statistical significance.

TABLE 2

Summary of Counselor Groups by Sex, Age, Years of Education Beyond Grade 11, and Years of Counselling Experience

Item	Group 1	Group 2
Sex	4 males; 4 females	6 males; 4 females
Range of Ages	26-63 years	25-53 years
Median Age	35 years	28 years
Range in Years of Education beyond Grade 11	1-5	1-6
Median Years of Education beyond Grade 11	3	3.5
Range in Years of Counselling Experience	1-10	1-5
Median Years of Counselling Experience	3	1.5

TABLE 3

Summary of Treatment Results Showing the Proportion of Abstinent and Drinking Subjects for Each Treatment Group

Group	Abstinent	Drinking	Total
1	6 (.40)	9 (.60)	15
2	5 (.29)	12 (.71)	17
	11	21	32

TABLE 4

Summary of Treatment Results Showing the Proportion of Abstinence and Drinking Subjects for Male and Female (Covert Sensitization) Counselors

Sex of Counselor	Abstinence	Drinking	Total
M	2 (.29)	5 (.71)	7
F	4 (.50)	4 (.50)	8
	6	9	15

SUMMARY OF MAJOR TIME AND TECHNIQUE PARAMETERS WITHIN INDIVIDUAL COVERT SENSITIZATION*

Operation and Parameter	
Relaxation training:	
Within session time	20-35 minutes
Total No. of sessions	10
Muscle sequence	Dominant (D) Hand and Forearm, D biceps, Non-dominant (ND) Hand and Forearm; ND biceps, Forehead, Nose, Mouth, Jaw, Chin and Throat, Abdomen, D upper leg, D calf, D foot, ND upper leg, ND calf ND foot;
Duration of tension	5-7 seconds
Duration of release	10-20 seconds
Manner of release	Abrupt
No. of tension release cycles	2-4
Use of suggestion	Indirect only
Other features	All muscle groups covered each session; Phase to large groups as skill acquired; later by image alone;
Covert Sensitization Proper:	
Within session time	30-45 minutes
Total No. of sessions	30
Session 11 to 24	Aversive conditioning (nausea) relaxing;
Session 25 to 32	Aversive conditioning (nausea) turning away (relief) from alcohol and relaxing;
Session 33 to 40	Aversive conditioning (nausea) turning away (relief); feelings of well-being and adequacy feelings associated with sobriety.
Scene presentations 3-7	Mean = 5

*The investigator wishes to acknowledge that the idea for this tabular presentation developed out of the work of G.L. Paul, reported in an article entitled, "Outcome of Systematic Desensitization, "in" C. M. Franks (Ed.), *Behavior Therapy: Appraisal and status*, New York; McGraw-Hill 1969.

DISCUSSION

Two limitations of this experiment should be noted. First, the design makes it impossible to determine which of the treatment components — relaxation, covert sensitization, or covert reinforcement — was effective in the covert sensitization (abstinent) treatment group. Second, a notable feature of covert sensitization concerns the degree of control individuals have over their own behavior. While this aspect of treatment resulted in little resistance during their stay at Henwood, subsequent follow-up interviews revealed 6 of the 9 nonabstinent subjects had not carried out any practice sessions, while 3 did so only sporadically during the first month of treatment. It was originally assumed that subjects, having been taught the procedure, would transfer this training when needed in their every day environments.

Two practical implications may be drawn from the experiment. First, the use of behavioral methods by regular alcohol counselors is quite possible. It need not be relegated to only those therapists with the highest level of training. Second, further investigation and experimentation with covert sensitization should include the provision of "booster" sessions after discharge. This might be accomplished by providing a bimonthly treatment session during the first month following discharge with subsequent monthly sessions conducted during the first 6 months following in-patient treatment. Such a practice would also ensure that appropriate utilization of covert sensitization takes place.

RESUME: On s'est efforcé de déterminer si une approche de conditionnement béhavioral est plus efficace, dans le traitement de l'alcoolisme, que l'approche communément utilisée. On a aussi voulu déterminer si les conseillers féminins utilisant une telle approche était plus efficace que les conseillers masculins.

Pour les fins de comparaison et d'évaluation, on a assigné à 2 groupes de traitement un échantillon de 32 sujets sélectionnés au moment de leur admission au Henwood Rehabilitation Centre, une agence de la Division de l'Alcoolisme de la province de l'Alberta.

Huit conseillers (4 hommes, 4 femmes) spécialement préparés au moyen d'un atelier de 2 semaines ont utilisé l'approche numéro 1; ils ont aussi participé, dans une proportion de 50 pourcent du temps, avec les autres conseillers de l'agence à l'approche traditionnelle utilisée.

Pour déterminer les résultats du traitement, on a utilisé comme critère de mesure une période d'abstinence de trois mois consécutive au congé donné par le centre de réhabilitation. Les analyses statistiques appropriées aux données ont confirmé les deux hypothèses avancées.

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ATELIERS SUR L'HYPNOSE À MONTRÉAL 1974

A l'occasion de son 26e congrès annuel, la SOCIETY FOR CLINICAL AND EXPERIMENTAL HYPNOSIS offrira, du mardi au vendredi 11 octobre 1974, à l'hôtel Ritz-Carlton, à Montréal, des ateliers sur l'usage de l'hypnose (a) en psychothérapie et (b) en recherche, ainsi que des ateliers spéciaux destinés (c) aux candidats au doctorat et (d) aux résidents en psychiatrie. Les ateliers seront suivis d'un programme scientifique qui se terminera le dimanche après-midi, 13 octobre.

Les ateliers sont parrainés par les Départements de psychiatrie de l'Université de Montréal et de l'Université McGill, les Départements de psychologie de l'Université de Montréal et de l'Université Sir George Williams, l'Institut national de la Recherche scientifique, secteur santé, et l'Hôpital Saint-Jean-de-Dieu.

Ce congrès, qui se tient pour la première fois hors des Etats-Unis, marquera le 25e anniversaire de cette Société scientifique.

Pour plus d'informations, écrivez à:

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