THE PRESENT STUDY
1. **STATEMENT OF THE PROBLEM**

In the present study, the efficacy of a multimodal behavioral treatment program in the management of alcohol dependence was assessed. Variables such as locus of control, personality and motivation for taking alcohol were studied in order to find out their relationship with therapeutic outcome.

This study was undertaken at the Behavior therapy and Biofeedback Unit, Department of Clinical Psychology, National Institute of Mental Health and Neuro Sciences (NIMHANS), Bangalore, India. The sample was drawn from the in-patient and out-patient population of the Department of Psychiatry, NIMHANS. This research project was planned and conducted from September, 1986 to December, 1989.

2. **AIMS AND PROBLEMS TO BE INVESTIGATED**

Aims:

1. To investigate whether a multimodal behavioral treatment program is efficacious in alcohol dependence;
2. To investigate whether there is any relationship between variables such as locus of control, personality and motivation for taking alcohol, and the treatment outcome.
Problems to be investigated:

1. To find out the efficacy of a multimodal behavioral treatment program consisting of techniques viz., alcohol education, faradic aversion therapy, covert sensitization, social skills training and behavioral counseling in alcohol dependence.

2. To assess the locus of control in individuals with alcohol dependence and to find out its relationship with therapeutic outcome.

3. To assess the personality of alcohol dependent individuals and to find out its relationship with therapeutic outcome.

4. To assess the degree of motivation for taking alcohol in alcohol dependent individuals and to find out its relationship with therapeutic outcome.

3. Experimental Design

In the present study a single group outcome design was adopted. In this design, the efficacy of a multimodal behavioral therapeutic program in alcoholism was tried out.

Fig. 1 illustrates the experimental design (Flow chart).
FIG. 1. EXPERIMENTAL DESIGN

INTAKE INTERVIEW

SUITEABLE CASES

↓ YES

PRE-TREATMENT ASSESSMENT

OTHER TREATMENT GIVEN/REFERRED BACK

ADMINISTRATION OF TOOLS 1-4

ALCOHOL EDUCATION

2 SESSIONS

SOCIAL SKILLS TRAINING/BEHAVIORAL COUNSELING

2 SESSIONS

FARADIC AVERSION THERAPY

15 SESSIONS

FARADIC AVERSION THERAPY + COVERT SENSITIZATION

15 SESSIONS

SOCIAL SKILLS TRAINING

3 SESSIONS

BEHAVIORAL COUNSELING

2 SESSIONS

POST-TREATMENT ASSESSMENT

ADMINISTRATION OF TOOL 5

FOLLOW-UP

ADMINISTRATION OF TOOL 5

BOOSTER SESSION

WHERE NECESSARY
METHODOLOGY

SAMPLE

50 males with a diagnosis of Alcohol dependence (ICD-9, 303; WHO, 1978) were taken from the National Institute of Mental Health and Neuro Sciences. Of these, 20 cases dropped out. The sample characteristics are given in Table-1.

The following inclusion and exclusion criteria were used in order to make the group homogeneous and to avoid cases with other disorders that could interfere with therapy.

Inclusion criteria:
1. male;
2. literate; (able to read and write);
3. Age 20 years and above.

Exclusion criteria:
1. Clients with organic brain syndrome;
2. Clients with other psychiatric diagnosis;
3. Clients having previous exposure to therapeutic intervention for alcohol dependence; and
4. Clients with other major systemic disorders.
### TABLE-1

**SAMPLE CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Treatment completers (N = 30)</th>
<th>Treatment drop-outs (N = 20)</th>
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Contd.,
### Table 1 (Contd.)

**Sample Characteristics**

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<th>Variable</th>
<th>Treatment Completers (N = 30)</th>
<th>Treatment Drop-outs (N = 20)</th>
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<tr>
<td></td>
<td>n</td>
<td>%</td>
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<td>In-patient and Out-patient</td>
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**SAMPLE CHARACTERISTICS**

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<th>Variable</th>
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</thead>
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<tr>
<td>Absent</td>
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TOOLS:

1. Alcoholism History Proforma;
2. Drinking related locus of control scale (Keyson and Janda, 1972);
3. The California Test of Personality (Form AA) (Thorpe, Clark and Tiegls, 1953);
4. Rating scale to assess motivation for taking alcohol; and
5. Outcome/Follow-up evaluation proforma.

DESCRIPTION OF TOOLS

1) Alcoholism History Proforma:

This was developed during pilot phase, to suit the Indian Clients, based on Horn, Wanberg and Foster (1977) and Marlatt and Miller (1984) (Appendix-I).

This proforma broadly consisted of the following sections:

1. Personal information;
2. Family history;
3. Drinking history;
4. History of withdrawal symptoms;
5. Problems related to drinking;
6. History of health related problems;
7. Treatment history;
8. History of other substance abuse; and
Following development, this proforma was given to five experts in the mental health field, to judge its utility and to add or delete any of the items. Based on these suggestions, this was modified. During the pilot phase, this proforma was tried out on the alcoholic clients and found useful.

2) Drinking-Related Locus of control scale (DRIE):

The DRIE was developed by Keyson and Janda (1972) to measure the locus of control specifically with drinking related behavior. This scale is a reliable multidimensional measure of alcoholic's specific expectations concerning drinking behavior (Donovan and O'Leary, 1978).

The DRIE translates generalised expectancies of control (internal vs. external) into a measure of specific expectancies dealing with various drinking related behaviors (Oziel and Obitz, 1975).

The DRIE consists of 25 items in a forced-choice format, wherein, the items are provided with two alternative responses; in each item, an internally oriented response alternative (e.g., "one of the major reasons why people drink is because they can not handle their problems") is paired with an externally oriented alternative (e.g., "people drink
because circumstances force them to"). Both these alternatives on every item focus on the same drink-related topic. The DRIE is controlled for an acquiescence response set, wherein, the alternatives indicative of external locus appear 10 times as the first response option and 15 times as the second. The subject has to choose the alternative that more closely represents his 'belief' or 'behavior'. The scale is scored in the external direction, with higher scores reflecting less perceived control over drinking, i.e., more external (Appendix-I1).

Scoring is done as follows:

Total Score:

This is calculated by summing the external items endorsed across the entire scale.

In addition to the above, Donovan and O'Leary (1978) obtained 3 significant factors in their factor analysis. These are:

1) Intrapersonal control factor;
2) Interpersonal control factor; and
3) General control factor.

1) Intrapersonal control factor:

This factor consists of seven items, all stated in the first person. These items are concerned with the individual's apparent inability to resist the temptation to drink (e.g., "I feel completely helpless when it comes to resisting a
drink") and his drinking to overcome negative emotional states (e.g., "I cannot feel good unless I am drinking").

Because of the personal referent and the nature of the items, this factor is labelled as "Intrapersonal control factor".

The intrapersonal control factor is scored as the sum of the external endorsements on items 9, 10, 13, 14, 16, 17 and 25.

2) Interpersonal control factor:

This factor also consists of seven items, stated predominantly in the first person. These items deal with individual's inability to resist interpersonal pressures to drink (e.g., "Often times other people drive one to drink") or his inability to manage anger or frustration-provoking interpersonal situations (e.g., "I get so upset over small arguments that they cause me to drink"). Hence this factor is labelled as "interpersonal control factor".

This factor is scored as the sum of external endorsements on items 3, 4, 6, 7, 10, 22 and 23.

3) General control factor:

This factor consists of three items all having third-person referents. These items are conceived with chance factors influencing one's ability to remain abstinent (e.g., "without right breaks, one cannot stay sober"). Hence this factor is labelled as "General control factor".
This factor is scored as the sum of external endorsements on items 5, 8 and 20.

Psychometric properties of the DRIE:

Donovan and O'Leary (1978) studied the psychometric properties of the DRIE in a series of experiments.

They studied a sample of 120 alcoholic in-patients (all men, mean age 45.0 ± 11.5 and mean educational level 11.95 ± 2.45 years), mostly with a lower-middle-class background, with no history of organic brain syndrome or other psychiatric disorders. The overall mean score on the DRIE scale was 6.32 ± 4.03, the scores ranged 0-17. The internal consistency of this scale was found to be high (0.77).

The concurrent validity was assessed using measures such as Rotter's I-E scale (Rotter, 1966), Mirels's personal Control and Sociopolitical Control Scale (Mirels, 1970), Levenson's multidimensional Locus of control scale (Levenson, 1973) and Tiffany's experienced control scale (Tiffany, 1967).

The construct validity was evident by its relationship to measures of drinking behavior as assessed by the Alcohol Use Inventory. DRIE also significantly discriminated between alcoholic and nonalcoholic subjects.

The scores on the DRIE are also found to be unrelated
to the measures of cognitive function and education (Mirels, 1970) indicating evidence of discriminant validity.

The two primary subscales -- intrapersonal control and interpersonal control factors have significant psychological meaning in assessing alcoholics. According to Donovan and O'Leary (1978) alcoholics experience significantly less control over potential sources of intrapersonal and interpersonal pressures.

3) The California Test of Personality (CTP) :

The CTP was developed by Thorpe, Clark and Tiegs (1953). This test was basically designed to identify certain important factors in personal and social adjustment. This test was developed based on the concept of life adjustment as a balance between personal and social adjustment. Personal adjustment was assumed to be based on feelings of personal security, and social adjustment on feelings of social security.

This test consists of 180 items, wherein, 15 items are arranged in each of the 12 sub-tests (Appendix-III). Overall, the test is divided into two dimensions, namely

1) Personal Adjustment and
2) Social Adjustment.
I. Personal Adjustment:

The Personal adjustment consists of 6 sub-tests:

A) Self-reliance;
B) Sense of personal worth;
C) Sense of personal freedom;
D) Feeling of belonging;
E) Withdrawing tendencies; and
F) Nervous symptoms.

Brief description of each of the above sub-tests is given below:

A) Self-reliance:

An individual is said to be self-reliant when his overt actions indicate that he can do things independent of others, depend upon himself in various situations, and direct his own actions. The self-reliant individual is also emotionally stable and responsible in his behaviors.

B) Sense of personal worth:

A person is said to be having a sense of personal worth, when he feels he is well regarded by others, he feels that others have faith in his future success, and he believes that he has good ability.

C) Sense of personal freedom:

A person is said to be having a sense of personal
freedom when he is permitted to have a reasonable share in the determination of his conduct and in setting the general policies that shall govern his life. Desirable freedom includes permission to choose one's own friends.

D) Feeling of belonging:
An individual feels that he belongs when he enjoys the love of his family, well wishes of good friends, and a cordial relationship with people in general. He would get along well with his teachers, employers and feels proud of his place of work.

E) Withdrawing tendencies:
A person who is said to withdraw is the one who substitutes the joys of a fantasy world for actual successes in real life. Such a person is sensitive, lonely, and given to self-concern. Normal adjustment is characterized by reasonable freedom from these tendencies.

F) Nervous symptoms:
A person who is said to be having nervous symptoms suffers from various physical symptoms such as loss of appetite, frequent eye-strains, inability to sleep or a tendency to be chronically tired.

II. Social Adjustment:
This section on social adjustment also consists of six sub-tests each of which consisted of 15 items.
A) Social standards:

The individual who recognizes desirable social standards is the one who understands the rights of others and who appreciates the necessity of subordinating certain desires to the needs of the group.

B) Social skills:

A person is said to be socially skillful if he shows a liking for people, when he is diplomatic in his dealings with both friends and strangers. The socially skillful person subordinates his egoistic tendencies in favour of interest in the problems and activities of his associates.

C) Anti-social tendencies:

An individual is considered antisocial when he is given to bullying, frequent quarreling, disobedience and destructiveness to property. He endeavors to get his satisfaction in ways that are damaging and unfair to others. A normal adjustment is characterized by reasonable freedom from these tendencies.

D) Family relations:

A person who exhibits desirable family relationships, feels that he is loved and well-treated at home, he shows a sense of security and self-respect in connection with the members of his family.
E) Occupational relations:
An individual is considered having desirable occupational relations, when he is happy in his job because he is assigned to work which fits his capacities and interests; he has interest, sense of worth and efficiency in the job. He also feels that his contribution is important and essential.

F) Community relations:
The individual who is said to be having good adjustment in his community is the one who interacts well with his neighbors and takes pride in community development; satisfactory community relations also include the disposition to be respectful of laws and regulations pertaining to the general welfare.

Psychometric Properties:
This test has been found to have high reliability (The coefficients of various sub-tests ranged from 0.66 to 0.93. (The reliability coefficient for the total test was 0.95). This test has also been found to have high validity.

In the Indian context this test has been found to be useful. This test has discriminated alcoholics significantly from normals on various sub-tests (Suman, et al., 1989).
Scoring:

The scores were obtained on each of the sub-tests; and also, total scores were obtained for each of the total adjustments, i.e., personal and social. The total score for the whole test was also computed. The high score on each sub-test indicates a better adjustment.

4) RATING SCALE TO ASSESS MOTIVATION FOR TAKING ALCOHOL:

Paucity of scales in the literature, specifically to suit the Indian clients, to assess the perceived positive consequences of taking alcohol has led to the development of this rating scale. This was developed based on Horn, Wanberg and Foster (1977) and Ojha (1986). This rating scale consists of 62 items related to the possible reasons for taking alcohol and include items related to 1) Physical, 2) Psychological (positive); 3) Psychological (negative), 4) Social, 5) Occupational and 6) Self-control aspects (Appendix-IV).

During the development, initially items were drawn from two sources: 1) Horn et al., (1977) and Ojha, (1986); and 2) five alcoholics were interviewed to obtain 'possible reasons' why people drink. These items were made into statements. These statements were arranged on a 5-point Likert scale, i.e., 'strongly agree' through 'Can't say' to 'Strongly disagree'. This list of items was given to five
Experts in the mental health field to judge the suitability of these items, to judge whether the items were relevant or not, and to add or omit any of these items. Based on the suggestions given by these judges, items were rearranged, added or deleted. After development this was tried out on clients with alcohol dependence.

Scoring:

Each of the items on this scale was scored on a 5-point scale ranging from 1 to 5. The following ratings were given to each of the five categories.

1) 'Strongly agree' (score 5)
2) 'Agree' (score 4)
3) 'Can't say' (score 3)
4) 'Disagree' (score 2)
5) 'Strongly disagree' (score 1)

The ratings on all these items were added to obtain a total rating on this scale. Ratings were also made on the 1) Physical, 2) Psychological (positive), 3) Psychological (negative), 4) Social, 5) Occupational and 6) Self-control aspects. High scores indicate a perception of more drink-related positive consequences in each of these areas (i.e., higher the score, indicates higher motivation to take alcohol due to the perceived positive consequences).
Items on this rating scale were divided into the following sub-groups:

1. Physical: Included 7 items related to the physical aspects of motivation. e.g., "I drink to get sleep during night".

2. Psychological (positive): Included 20 items, related to the psychological aspects, wherein the individual takes alcohol to achieve a positive psychological benefit from alcohol intake. e.g., "I drink alcohol to keep my memory sharp".

3. Psychological (negative): Included 12 items indicating that the client takes alcohol to avoid negative psychological states. e.g., "I take alcohol to overcome feelings of inferiority".

4. Social: Included 12 items indicative of socially related aspects of drinking expectancy. e.g., "Drink helps me in making friendship".

5. Occupational: Included 7 items, indicating client's perception that he gets benefit in occupational area due to alcohol consumption. e.g., "Drink helps me to work better".

6. Self-control: Included 4 items of self-control aspect of motivation. e.g., "I take alcohol due to my temptation to drink".

Scores of the item on each of the above areas were summed up to obtain a total score, for each of these areas.
5) OUTCOME/FOLLOW-UP EVALUATION PROFORMA

The Outcome/follow-up evaluation proforma was developed to suit the Indian population, in order to assess the outcome after treatment and during follow-up. This proforma broadly consists of the following aspects:

1. Personal data;
2. History of abstinence;
3. History of other substance abuse; and
4. History of relapse and reasons for relapse (if relapse occurred).

After development, this proforma was also given to five experts and were asked to judge its suitability. Suggestions given by these experts were incorporated. Following this, the proforma was tried out with alcoholic clients and found useful (Appendix-V).

PROCEDURE:

The clients with the above mentioned inclusion and exclusion criteria were selected from a group of clients referred from both in-patient and out-patient sections of the Department of Psychiatry, NIMHANS. These clients were detoxified and referred for the behavioral management.

1. Pilot Phase:

During September 1987 to July 1988, the pilot study was conducted with the following objectives:
1. To ascertain the sample size based on the referral;
2. To formulate the tools;
3. To evaluate the adequacy of these tools;
4. To formulate the therapeutic program and to assess its suitability in the treatment; and
5. To gain familiarity and expertise in administering the tools and the therapeutic program.

Work done during the pilot phase:

During this period, the tools such as alcoholism history proforma, rating scale to assess the motivation to take alcohol, and outcome/follow-up evaluation proforma were developed. And also, the techniques in the therapeutic program were developed/modified to suit the Indian clientele. These techniques were tried out on a sample of alcohol dependent clients, to assess their suitability and to gain familiarity and expertise in administering these therapeutic techniques.

2. Intake interview:

Initially, all the clients referred for behavioral management were screened to find out the suitability based on the inclusion and exclusion criteria. Suitable clients were taken up for the treatment program. Clients who were not willing to come for therapy, due to leave problems or difficulty in coming every day, were not taken up. Other
clients who were not motivated for treatment but were forcibly brought by family members, and clients who had other associated problems were also not taken up for the study.

Fig. 2 illustrates the break-up of these cases. During this period of research, a total of 112 referred clients were screened to consider for the treatment program. Of these, 50 (44%) cases could be selected for the therapeutic program. 62 (55%) cases were found to be not suitable for the program due to various reasons. These details are described below.

Of 50 cases suitable for therapy, 30 (26%) completed the total therapeutic program, whereas 20 (17%) cases dropped-out at various stages of the therapy.

As can be seen from the Fig. 2, 62 (55%) cases could not be taken up for the therapeutic program due to various reasons. Of these, 23 (20%) had other associated problems and other clinical conditions in addition to the alcohol dependence. These problems include:

1) Physical conditions such as hypertension, ischaemic heart disease and seizures;

2) Psychiatric disorders such as schizophrenia, paranoia and multiple drug-dependence;

3) Psychological conditions such as tension headache, severe anxiety and depression;

4) Personality problems such as schizoid and antisocial personality and personality disorders; and

5) Family problems such as marital discord and severe intrafamilial conflicts.
FIG.-2

BREAK-UP OF THE TOTAL CASES REFERRED

Total Cases Screened
N = 112

Suitable and taken up for therapy
n = 50; 44.65%

Not suitable
n = 62; 55.35%

Therapy completed
n=30;26.79%

Dropped out
n=20;17.86%

Clients with other problems/diagnosis
n=23;20.54%

Not turned up after 1st contact
n=15;13.40%

Not motivated for therapy
n=11;9.62%

Not reported during/after assessment
n=4;3.57%

Can't come for therapy every day
n=3;2.68%

Poor comprehension
n=2;1.78%

Relapsed cases
n=2;1.78%

Referral withdrawn
n=2;1.78%

* other treatment given/referred back
These clients were treated separately or were referred back to their respective units for further management.

15 (13%) clients did not turn up after the first contact; 11 (10%) clients were not motivated for therapy; 4 (3%) clients did not turn up during/after first assessment. 3 (2%) clients expressed their inability to come for therapy every day. 2 (1%) clients could not be taken up due to their poor verbal comprehension. 2 (1%) clients had history of prior treatment and in 2 (1%) cases, referral from the units was withdrawn hence could not be taken up.

Of the total cases referred, treatment program could be completed with 30 cases. The data for these 30 completed cases and 20 drop-outs were analyzed.

3. Informed Consent:

Clients were explained about the nature and duration of treatment and informed consent was taken for the treatment program. Clients who were not willing to undergo the treatment were not included in this study. These clients were given other treatment or were referred back to the psychiatric units.

4. Program:

Fig.1 illustrates the induction of clients into intervention program and flow-chart of the therapeutic
program. The total program was divided into three phases. These phases include:

i) Pre-treatment phase;
ii) Treatment phase; and
iii) Post-treatment phase.

i) Pre-treatment phase:

This phase consisted of intake interview, and pre-treatment assessment. Following the client's selection into the treatment program based on the initial intake interview, he was administered the tools 1-4 during first two days. This pre-treatment assessment included eliciting detailed history from both client and his family members.

ii) Treatment phase:

Following pre-treatment assessment, the therapeutic program was started. Detailed description of the therapeutic program is described in the following section:

THERAPEUTIC PROGRAM:

The multimodal behavior therapeutic program comprised of the following techniques:

1. Alcohol education;
2. Faradic aversion therapy;
3. Covert sensitization;
4. Social skills training; and
5. Behavioral counseling to significant others.

The following section deals with the rationale, components, instructions and the procedure involved in each of the above techniques.
ALCOHOL EDUCATION

Rationale:

Alcohol education is an essential component in the treatment as it is useful for the following reasons:

1. To provide adequate knowledge and facts about various aspects of alcohol and alcoholism;
2. To clarify the misconceptions the client has regarding alcohol and alcohol consumption;
3. To educate the client regarding various potential hazards related to chronic drinking;
4. To motivate the client for treatment and for giving up alcohol; and
5. To prepare the client for treatment by educating him about alcohol.

Components:

1. What is alcohol?
2. Types of alcoholic beverages;
3. What happens when alcohol is taken;
4. Short-term effects of alcohol;
5. Why people take alcohol;
6. Tolerance and dependence;
7. Why abstinence is essential;
8. Damages due to alcohol:
   a) Health;  b) Family;  c) Occupation;
   d) Finance; and  e) Society.
1. What is alcohol:

Alcohol is a chemical substance called ethyl alcohol which is present in various alcoholic beverages. Alcohol is a colorless liquid prepared mainly by fermentation of various food substances.

2. Types of Alcoholic beverages:

Alcoholic beverages are of different types. These include brandy, whisky, rum, gin, arrack, wine and beer etc. In each of these beverages the content of alcohol varies. Drinks such as whisky, brandy, arrack, gin and rum contain 40-55% of alcohol. Wine contains 10-20% of alcohol and beer contains 6-8% of alcohol. One has to remember that all alcoholic beverages contain some amount of alcohol though it varies depending on the type of beverage.

3. What happens when alcohol is taken:

When consumed, alcohol passes into the stomach. It does not require any digestion like other food substances; it passes directly through the walls of the stomach and intestines into the blood. About 20% of alcohol consumed is absorbed from the stomach wall and about 75% from the intestines. When alcohol enters into the blood, it gets circulated throughout the body. Since it does not require any digestion, and is circulated throughout the body in the blood, the alcohol effects will be experienced by the drinkers within a very short time after its consumption.
4. **Short-term effects of alcohol:**

   The effects of alcohol in the drinker depends on various factors. These include:

   1) Concentration of alcohol in the beverage;
   2) Amount of alcohol consumed;
   3) Speed with which alcohol is consumed; and

When taken in small quantities, alcohol reduces the feelings of anxiety, worry and tension. Hence individuals use it in order to get relief from these problems. Alcohol also temporarily removes the inhibitions of an individual. Hence people who are inhibited, drink as they feel comfortable and less inhibited in interacting with others. However, alcohol consumption can also lead to poor coordination of limbs and slurring of speech.

5) **Why people take alcohol:**

   People start consuming alcohol for various reasons. Some of these include

   1) curiosity and
   2) pressure from friends.

   When alcohol is initiated, the individual may continue, as he experiences its short-term positive effects. As the individual learns about the positive effects he would continue drinking more regularly.
6) Tolerance and Dependence:

When a person starts drinking regularly, he would develop 'tolerance'. This means, though the individual initially takes alcohol in less quantity, he has to gradually increase the quantity over time, in order to get the same effect which he was getting with smaller quantities of alcohol previously. Due to this tolerance, the individual would tend to increase alcohol consumption gradually over a period of time. After some time, the pattern of occasional drinking, would become more frequent and he would start drinking everyday, in larger quantities. If he discontinues drinking temporarily, he would develop problems such as shaking in hands and legs, sweating, head ache and not being able to perform his activities. He would always think of alcohol. This is called dependence. When he becomes dependent, he would start drinking in larger quantities and more frequently in order to reduce the problems related to withdrawal.

7) Why abstinence is essential:

When the individual becomes dependent, alcohol causes damage to himself and to his society, in various spheres due to the long-term use. And also, as the individual becomes a chronic drinker, though he would attempt to drink less, due to the loss of control, he cannot control his drinking and drinks to the extent of becoming totally intoxicated.
Due to the severe and serious negative consequences and due to the individual's loss of control over drinking, it is always essential to give up drinking completely.

As the individual develops more and more attraction towards drinks, and the consumption of alcohol becomes prolonged, it may not be possible for him to give up drinking on his own. It becomes difficult to manage by himself, as his withdrawal problems become severe. Hence he must come to a treatment center in order to give up drinks completely with the help of professionals.

8) Damages due to Alcohol:

Alcohol damages almost all spheres of human life such as health, family, occupation, financial status and relations in the society.

a) Health:

Alcohol affects almost every part of the human body. When a person drinks alcohol, most of it is directly absorbed into the blood from stomach. Because of its direct action on the stomach it causes various problems such as ulcers, bleeding from stomach, cancer of stomach etc. The remaining alcohol passes through liver, causing damage to it. Liver helps us in getting the energy from the food we consume. As the person takes more and more quantities of alcohol, it damages the liver over a period of time. Hence the person
cannot produce adequate energy to function normally. Gradually, increasing liver damage can lead to death. When a person takes alcohol in excessive quantities, his food consumption is reduced, leading to malnutrition. Malnutrition, in turn, leads to various other physical problems.

Alcohol also affects heart; when larger quantities of alcohol is consumed, it can harm the heart and hence leading to death. Alcoholics are known to develop cancer. Alcohol can also affect our muscles because of which alcoholics frequently complain of weakness and severe pain in the muscles. Alcohol affects the blood; due to alcohol's influence the blood cells which save us from various infections, die and make us more susceptible for infections. Continuous alcohol intake can also affect the individual's sexual life. Chronic alcoholics complain of impotence.

Alcohol has an immediate effect on the brain. Hence the brain cells die over a period of time leading to brain damage. This brain damage leads to mental deterioration. Generally chronic alcoholics with brain damage develop problems such as decreased ability to think, decreased intelligence and decreased memory. Following long-term use of alcohol, the person can loose his intelligence, and become totally unaware of his surroundings, and it leads to total
disruption in his occupational and personal functioning. Prolonged drinking of alcohol also leads to mental illness; the alcoholic may occasionally develop fits.

Chronic alcoholic would become older earlier than that of his age and it is likely that he would die earlier than that of other individuals of his age who do not consume alcohol.

b) Family:

In every family, each individual performs specific roles. The individual functions as a son, as a brother, as a father and as a husband. However, when a person is dependent on alcohol, he can not perform his roles adequately in the family. As he always consumes alcohol, and his thinking is always about how to get his next drink, he would not be able to pay attention to his family members. He is not in a position to take the responsibilities in his family. He can't provide love and care to his wife and children. And also, the drinking habit may lead to frequent quarrels at home. Many a time, alcoholic individual physically assaults his spouse and children under the influence of alcohol. This may lead to disturbed functioning among the family members. The wife who is worried about the alcoholic husband and about the maintenance of family, may develop various mental disturbances.
The children, deprived of their parent's love and affection may feel depressed and can not concentrate on their studies. They may also develop various psychological problems such as depression, aggressiveness, not attending to school properly, poor scholastic performance, behavioral problems in the school and at home. Moreover, the children learn various activities by observation from their immediate environment (e.g., family members). The father always comes home drunk and hence can't act as a good model to his children. And at the same time, the children may learn the same habit by modeling their father. Hence the children of alcoholics are at high risk for developing abuse of alcohol and other drugs.

c) Occupation:

As the alcohol dependent is always under the influence of alcohol, he may not be in position to perform adequately, with efficiency, in his occupational sphere. He goes late to the office; he becomes absent from work frequently; and he may take frequent medical leaves as he develops various other physical problems due to heavy drinking. As he neglects his work, it may lead to frequent warnings, memos, loosing salary, suspension from job and ultimately to an extent of loosing his job. This, in turn, leads to severe crisis in the family and financial spheres.
d) **Finance:**

As the individual consumes more and more alcohol, as he becomes dependent, he would require more money for his alcohol consumption. The individual dependent on alcohol would not hesitate to take loans from relatives, friends, colleagues and even from strangers in order to meet his need for alcohol. He would not hesitate to take things from home and sell, demand money from the family members, would even steal money from various sources.

He may sell his property in order to meet with the need for alcohol, and to clear the debts he has made to continue his habit of alcohol consumption. Hence alcohol dependence may lead to severe financial crisis not only to the dependent himself, but also to the family members and significant others.

e) **Society:**

In our society, every individual plays a responsible role in his occupational sphere. As the alcohol dependent is always under the influence of alcohol, he can not perform his role effectively in the society. His functioning is impaired to a great extent. Hence this leads to a great damage to the society.

Alcohol abuse also plays a significant role in various social problems such as traffic accidents due to drunk-
driving, criminal activities under the influence of alcohol, such as violence, murder and rape.

The chronic alcoholic loses his interpersonal relationships with his friends, colleagues, relatives and neighbours. They do not respect him and would try to avoid his presence. This leads to total social isolation. In addition to the alcoholic himself, other family members also loose respect in the society and interpersonal interaction within the society.

Now you know what excessive drinking can do to an individual. Some of which you have already faced in your life due to prolonged drinking. It spoils the individual's health; it creates conflicts in the family; it reduces the person's efficiency and affects his performance; it may lead to loosing job; creates financial crisis; one gets into accidents, harms others and dies earlier due to drinking.

If the individual gives up drinking, he can improve his health, he can lookafter his family members well. He can provide love and care to his spouse and children. He can achieve according to his potential in his occupation; he can save money and can act intelligently; he can develop good relations with his friends, colleagues and relatives; and he can live longer.
The earliest attempt of conditioning treatment of alcoholism was reported by Kantorovich (1929) who used electric shock as the noxious stimulus. Subsequently, McGuire and Vallance (1964) developed faradic aversion therapy. In India Mishra (1971), Ojha (1986), and Mishra and Kumariah (1989) used this therapy with alcoholics.

Rationale:

Aversion therapy is aimed at disorders where the behavior of an individual is undesirable, but he finds it reinforcing, e.g., in alcoholism, the behavior patterns are self-reinforcing and pleasurable, but are maladaptive for reasons outside the control of the client (Eysenck and Beech, 1971).

Various theoretical models have explained the basis of aversion therapy. These models include:

1) Classical conditioning;
2) Avoidance learning; and
3) Punishment paradigm.

1. Classical Conditioning:

In classical conditioning framework behavioral change is attributable to a conditioned stimulus (alcohol) in temporal conjunction with a second stimulus, the unconditioned stimulus (shock) which produces an
unconditioned response (pain). In otherwords, after the aversive conditioning treatment, the subject emits a conditioned response (dislike) in the presence of conditioned stimulus (Grings, 1965; cf. Mishra, 1971).

2. Avoidance Learning:

Avoidance learning is a "procedure in which the learned movement circumvents or presents the appearance of a noxious stimulus" (Kimble, 1961). This explanation is the basis of electrical aversion treatment. The subject is trained to avoid the painful stimulus (shock) by terminating exposure to alcoholic stimuli or avoiding alcohol (cf. Mishra, 1971).

3. Punishment Paradigm:

According to Azrin and Holz (1966) punishment leads to "reduction in the future probability of a specific response as a result of immediate delivery of a (noxious) stimulus for that response". It is hypothesized that the subject will reduce the frequency of alcohol consumption after being systematically presented with an unpleasant stimulus contingent on alcohol intake (cf. Mishra, 1971).

Description of aversion therapy apparatus:

Aversion therapy apparatus consists of a voltmeter, on/off switch, voltage adjusting knob and start button, and a pair of electrodes.
When the on/off switch is on, the apparatus is directly connected to the AC mains. By modulating the voltage adjusting knob, one can increase or decrease the intensity of the electricity to be delivered during therapy. This change in the intensity of the electricity can be monitored through the voltmeter reading. The voltmeter is calibrated from 0 to 100 volts. After fixing the threshold of tolerance of shock the start button has to be pressed in order to administer the sub-dose of electric shock. The duration of shock delivered depends on the duration of pressing the start button.

The aversion therapy apparatus is connected to the individual through a pair of electrodes. These electrodes are fixed on the body, preferably on the biceps muscle of the nondominant upper limb.

Procedure:

This technique was used through two sensory modalities (Mishra, 1971); namely, 1) visual and 2) olfactory. Each modality was administered for five trails. Each trial consisted of 12 stimuli -- out of which nine were alcohol related stimuli and three were neutral stimuli. The alcohol related stimuli consisted of various pictures/slides depicting the alcohol bottles such as brandy, whisky, gin,
rum, arrack (which the client liked and consumed), and also the drinking situations. The neutral stimuli slides consisted of pictures related to soft drinks. Similarly, in the olfactory modality, nine alcohol related and three neutral stimuli were used. In each trial, these stimuli -- both alcohol related and neutral were randomly arranged and presented.

Initially client was given the following instructions:

"Now we are going to start the treatment, which would help you in giving up your drinking problem. Here, I will be showing you some pictures of various alcoholic drinks most of which you might have taken; also some pictures, not related to alcohol, such as soft drinks, e.g., limca, fruity etc., will be presented through slides. Each picture will appear on the screen for a few seconds. During this time I would like you to concentrate on these pictures. Whenever an alcohol related picture will appear on the screen, you will get an unpleasant sensation in your hand. But whenever you see the pictures of soft drinks you will not get any unpleasant experience. To induce this sensation I will be using mild shock".

"To understand this process of treatment, I will give you an example. Whenever you see or think of a food substance which you like, e.g., sweet, you would immediately start
salivating. Similarly, whenever you see alcohol bottles, wine shop or whenever you think of a drinking situation, you would feel like drinking. Consequently, you develop attraction towards drinks and you would tend to go for a drink. Whenever you see an intolerable substance, like spoiled food you would not feel the attraction, but you would feel aversion towards it. Similarly, a person who is not having the habit of taking drinks, if he sees the drinks or when he smells, he would experience uneasiness and nausea."

"The idea of giving this treatment is that, whenever you come across alcohol related situations such as alcohol bottles, smell of alcohol, and wine shop or bar, you get attracted to have a drink; now, you must attempt to get an aversion towards drinks, so that you will lose the attraction towards drinks and would gradually cease the idea of going for a drink. Hence this treatment, though slightly unpleasant but tolerable, is given to you. Whenever you look at the alcohol related pictures you will get the unpleasant shock and when you look at the other pictures such as soft drinks you are totally free from such experience. Though there is some amount of uneasiness involved, in this treatment, it can be accepted without any hesitation, as it would help you in decreasing your attraction towards drinks".
"Let me assure you that this mild electric shock is totally free from any type of harmful effects or side effects on your body".

"Now you are welcome to ask any questions pertaining to the treatment without any hesitation".

After the above instructions, the client's questions/apprehensions/doubts were clarified. Later the following procedure was adopted.

The client was made to sit comfortably in a chair. A pair of electrodes was fixed to the biceps muscle on his nondominant upper limb. These electrodes were connected to the aversion therapy apparatus. The aversion therapy equipment was switched on; a threshold for the electrical stimulation was fixed by the following procedure. The client was asked to inform the therapist when he gets a tingling sensation in his biceps muscle. The start button on the electrical aversion equipment was pressed and simultaneously the voltage adjusting knob was rotated gradually till the client expressed that he is getting the tingling sensation. Further it was increased gradually to a level, where the client reported it to be sufficiently unpleasant but tolerable by him. This point was established as a threshold point for that particular client for electrical aversion. Then, over this threshold point, the voltage was slightly
increased, so that the electrical aversion is slightly but not intolerable. Following this, it was made sure that the pain is tolerable to the client. Now the client was ready for the aversion therapy. He was asked to look at the screen. Initially the visual trial was started with a set of 12 slides (nine alcohol related and three neutral stimuli, randomly arranged). They were presented on the screen, with the help of a slide projector, one after the other. Each slide was exposed approximately for 5-8 seconds; before terminating the alcohol related stimulus, the start button on the electrical aversion apparatus was pressed so as to deliver the painful shock. Immediately, followed by shock, the slide was changed to the next one. If the slide was neutral one, it was terminated after exposure without associating it with electric shock.

The visual trials were immediately followed by olfactory trial. In this, as described earlier, 12 stimuli (nine alcohol related and three neutral stimuli) were presented randomly to the client. The client was asked to sniff the bottles; when the alcohol related stimulus was presented, it was associated with a painful shock, in the similar fashion, as was done in the visual trial. But whenever, the client sniffed the neutral stimulus (eg., soft drink) shock was not given.
In this manner, five visual trials and five olfactory trials were alternatively presented by randomizing stimuli in each trial. Overall, in each session of aversion therapy, the visual trials consisted of 45 alcohol related stimuli and 15 neutral stimuli. Similarly, the olfactory trials consisted of 45 alcohol related stimuli and 15 neutral stimuli. The time taken for each session of aversion therapy was 30-40 minutes.
COVERT SENSITIZATION

Covert sensitization, a covert conditioning procedure, developed by Cautela (1966, 1967) has been used extensively to develop avoidance responses and is applied to 'maladaptive approach behavior' such as excessive drinking. Covert conditioning procedures such as covert sensitization involve a set of imagery-based procedures that alter response frequency by obeying the same laws of operant contingencies as do overt events (Cautela and Brown, 1977).

RATIONALE:

Covert sensitization is based on three basic assumptions, namely,

a) The homogeneity;
b) The interaction; and
c) The learning (Cautela and Baron, 1977).

a) The homogeneity:

According to this assumption, covert events (e.g., thoughts, feelings and images) obey the same laws of behavior similar to the overt events in explaining, maintaining and modifying behavior. Hence, conclusions about overt phenomena can be applied to covert events also. Covert events act as 'stimulus control' for the overt expressions.
b) The interaction:

This assumption denotes a reciprocal relationship between covert and overt events; there is an interaction between covert and overt events; overt events influence covert behavior and vice versa. Hence, manipulation of covert events influences overt events in a predictable manner and vice versa.

c) The learning:

This assumption posits that both covert and overt events are governed by the law of learning, specifically, the principles of operant conditioning. And also, overt and covert behaviors interact according to these same laws.

In covert sensitization, an aversive stimulus is presented simultaneously along with maladaptive response, set as target behavior to be decreased. The term 'covert' is used because neither the undesirable response nor the aversive stimulus is actually presented. These stimuli are presented in imagination. The word 'sensitization' is used as the purpose of this procedure is to build up an avoidance of the undesirable response by arousing negative affect (Cautela, 1972). These stimuli and responses, presented in imagination, are made as similar as possible to the actual stimuli and responses in the real life. Therefore, it is assumed that on the basis of stimulus-response generalization
there will be a transfer to natural environment from imagination (Cautela, 1972) and a cognitive stimulus control will be established in producing aversive response.

In a typical covert sensitization session, the client imagines himself engaging in the target response (e.g., drinking) that is to be suppressed. In this procedure, the scenes are described which depict the client's usual and favorite drinking settings, favorite drinks and companions. At every approach point (i.e., approaching the bar, and touching glass, drinking alcohol), the aversive consequences are presented (e.g., client is told to imagine himself feeling sick and vomiting). These aversive events which are consequent to the drinking behavior are terminated, in imagery, when the individual ceases to perform the target behavior. Following presentation of this sensitization scene, the therapist presents a relaxation scene, in which the client imagines that alcohol is presented to him but he refuses and will have a soft drink or experiencing comfort after a bout of vomiting. Thus, in a covert sensitization procedure, the imaginal scenes (sensitization and relief) are followed by a relaxation scene (Cautela, 1972).

INSTRUCTIONS:

"In this world, every activity in our life is either rewarded or punished; if you are rewarded for a desirable
activity, it would tend to increase; if you are punished for an undesirable activity, it would tend to decrease. Similarly research has shown that, if you imagine a reward after you imagine yourself performing a desirable activity, then you will experience an increase in your desirable activity".

"In this treatment, I will describe various scenes related to your drinking. I would also describe certain feelings related to these drinking scenes. You try to concentrate on my instructions and imagine and visualize as if you are involved in that specific situation. You are to imagine yourself and then the appropriate consequences which I am going to describe. When you imagine yourself, it is important that you involve all your senses. It is essential, that you feel you are actually reliving the experience of the event rather than just seeing yourself. Try to arouse the same feelings which I describe during the session. If you develop nausea and vomiting, do not try to control your sensations".

"Generally, whenever you imagine a positive event or a positive feeling in your life, you would immediately develop a pleasant feeling within yourself. For eg., when you think and imagine about a flower or a beautiful scene which you like very much, you would feel fresh and start feeling
pleasant. Similarly, when you imagine a negative event or an event/person which/whom you do not like, you would develop an unpleasant feeling within yourself. This type of developing a pleasant/unpleasant feeling within an individual is developed by himself through learning".

"Every person would attempt to get the positive feelings and try to avoid the negative feelings. The meaning of this particular treatment remains the same; whenever, the drinking scenes are associated with negative/noxious feelings, over time, you would develop a negative feeling so that the attraction towards drinks within you would come down. Moreover, by imagining the negative/unpleasant feelings attached to the drinks, and drinking behavior you can avoid drinks. You are unable to stop drinking alcohol because it has become a strong learned pleasant habit. To eliminate this habit is to associate the pleasurable object with an unpleasant activity. Consequently, this treatment would help you in reducing your attraction towards alcohol and also would help you how to control yourself with regard to stopping your drinks".

"You are welcome to ask any questions related to this treatment, now, or at a later stage".
PROCEDURE:

Following the above instructions, the questions and doubts raised by the client were clarified. He was instructed not to converse during the session. A visual adequacy test was conducted in order to assess whether the client is able to imagine and visualize the scenes properly.

The client was asked to sit in an arm chair in a relaxing posture. The following instructions were given to test the visual adequacy.

"Take a comfortable position in the chair. Keep your body loose, light and free; feel calm and relaxed. Close your eyes gently. Imagine and visualize the following scene as vividly as possible; avoid stray thoughts entering your mind as far as possible and concentrate on my instructions. Now imagine and visualize a beautiful rose flower. You are able to see a rose flower in front of your mind's eye. Now can you describe the rose flower which is present in front of your eyes?"

After the above visual adequacy test, the client was started with the covert sensitization. The covert sensitization instructions were as follows:

"Now take a comfortable position in the chair. Keep your eyes closed gently. Now imagine and visualize the following
scenes as vividly as possible. Avoid stray thoughts entering your mind. Concentrate on my voice and try to imagine and develop the same visualisations and feelings which I am going to describe now".

"Now imagine and visualize that you are sitting at home after your day's work. You are feeling tired after your day's work. You feel like going to the bar and have a peg of your favourite drink (whisky, rum, brandy etc.). Now you are coming out of your house and slowly walking towards the bar. You are slowly approaching the bar. Now you are able to see the bar from a distance. As soon as you saw the bar from a distance, all of a sudden, an uneasy sensation is starting in your stomach. You are slowly approaching the bar. Now you have reached the bar. You are standing outside the bar and looking at the name board. As soon as you reached the bar, the uneasy sensation is gradually increasing in your stomach. You feel like puking. Now you are entering the bar. You are sitting at one of the tables. The bar is full of people, all of them are drinking alcohol. The bar is full of cigarette smoke; it is suffocating inside the bar. The bar is full of alcohol smell. When you smell the alcohol which is spread all over the bar, the uneasy sensation within yourself is increasing still more. You are able to see various types of liquor bottles such as rum, whisky, brandy and gin on the shelf inside the bar. Now the puking sensation in your
stomach is increasing so much so that you are not able to tolerate it. Suddenly some puke started coming into your mouth from your throat. Mucous started flowing through your nose. You are trying to control the puke and you are swallowing it back down into your throat. Now the bartender is coming towards you. You are ordering a quarter of -- (rum, brandy, whisky, gin) (client's favorite drink). The bartender goes back to get your liquor. The bar is full of people drinking alcohol. The bar is full of alcohol smell. The bar is full of cigarette smoke it is suffocating inside the bar; you feel like running away from the bar.

"Now the bartender is bringing a quarter of your favorite drink in a glass and kept it on your table. It is giving a strong and pungent smell. You are smelling it; you are not able to tolerate your vomiting sensation any more. Now you are taking the rum glass into your hands. The uneasy sensation in your throat and stomach is increasing more and more. It is becoming intolerable. Now you are slowly sipping the alcohol from the glass. Now you can't resist your vomiting any more. You are vomiting. You are vomiting on your clothes. You are vomiting on your hands; and you are vomiting on the table. You are vomiting on the glass of alcohol. The food particles started coming through your mouth in the vomit. The food particles are floating in the glass of
alcohol; when you look at the glass of alcohol in which the vomited material is floating, it is becoming awful and you are not able to tolerate it any more. Now the bartender is coming towards you. You are vomiting on his clothes also. His white clothes are full of vomited material; he is shouting at you. The people in the bar are looking at you. They are laughing at you. Now some long worms are coming through your mouth in the vomit. You are trying to pull the worms out of your mouth. One of the worms got stuck in between your teeth and it got cut. It started bleeding in your mouth. The blood which is there in your mouth is bitter and pungent in taste. You are not able to tolerate it. Now you are vomiting still more. You are looking at the glass of alcohol on the table. Now faecal matter is coming from your mouth in the vomit. It is giving awful smell. Your clothes are full of vomited material. Your clothes are full of food particles. Your clothes are full of worms. Your clothes are full of faecal matter which has come through the vomit. The glass of liquor on the table is full of faecal matter and the worms floating over it. It is awful stink; you are smelling badly. The vomited material is giving an awful smell all over. The people inside the bar are looking at your clothes and your face which are full of vomited material. You are feeling completely tired. You are not able to sit inside the bar any more. You feel like running away from the bar. You
do not feel like looking at the glass of alcohol on the table. You feel like going home and taking rest.

"Now you are slowly coming out of the bar. You are walking towards your house. After you came out from the bar, you are feeling slightly better. You feel like having a wash. You are walking slowly towards your house. Now you have reached your house. You are entering inside. Now you are going into the bathroom. You are changing your clothes. You are feeling more and more comfortable. Just now you had a wash. You are feeling much better. You feel like having a glass of cold water. Now you are slowly drinking a glass of cold water, sitting in a chair and relaxing. The uneasy sensation in your stomach has completely come down. You are feeling completely alright. You feel that you should not go to the bar any more. You don't feel like touching alcohol any more. You are sitting in a chair at home and relaxing. Now you are completely alright. Be calm and relaxed.

"Now slowly open your eyes".

The time taken for each session of covert sensitization was 20-30 minutes.
1. FARADIC AVERSION THERAPY IN PROGRESS

2. COVERT SENSITIZATION IN PROGRESS
SOCIAL SKILLS TRAINING

Social Skills Training is a group of techniques that are used in the treatment of clients whose social functioning is inadequate in some respect. The social skills training incorporates a variety of interpersonal response dimensions, by teaching the client how to effectively perform a specific component of a social skill (Morrison, 1985). This was developed basing on Foy, Miller, Eisler and O'Toole (1976) and Gambrill (1977).

COMPONENTS OF SOCIAL SKILLS TRAINING:

1. Identification and modification of antecedents;
2. Environmental manipulation;
3. Development of alternative behaviors; and
4. Drink refusal skills training.

1. IDENTIFICATION AND MODIFICATION OF ANTECEDENTS:

Usually, in every alcoholic client, the drinking has specific antecedents. These antecedents include various stimulus cues such as specific places, people with whom he drinks, time when he drinks, emotional factors and certain environmental factors. Hence modification of these antecedent stimulus cues is essential in the skills training.

a) Drinking pla

Drinking is more likely to occur at specific places for
Each individual alcoholic; these places may include bar, restaurant, wine shop, arrack shop or special room at home. The client identifies these specific places where drinking frequently occurred and would avoid these places in an attempt to get rid of his drinking problem.

b) Drinking companions:

Each alcoholic usually drinks in the company of various people such as friends, relatives or colleagues. The client is advised to avoid these individuals with whom he was previously involving in drinking, at least in the initial phases, so that it would help him in avoiding the stimulus cues for drinks and also to avoid the pressure for drinking from these individuals.

c) Drinking

As each individual frequently drinks more at a specific time, eg., evening, after the work, etc., the client is advised to engage himself in other alternative activities such as playing with children, reading books, involving in some activity at home, in order to avoid the risk for developing urge during this specific time.

d) Social events:

Many alcoholics involve in activities such as attending to clubs or social parties where drinks are served.
Attending to such gatherings may trigger an urge for drinks, or he may be forced by others to have a drink. Hence specifically, during the recovery phase, he is advised to avoid attending to such activities.

e) Emotional factors:

Many alcoholics resort to drinks during certain emotional states such as anger, depression, frustration, or conflict with family members. The client is advised to avoid drinking related situations during these emotional states; to involve in alternative activities or to talk to someone whom he likes. He is advised to visit the therapist during these severe emotional states, if needed.

f) Other environmental factors:

Occasionally, certain other environmental factors such as looking at the wine shop, bar or a restaurant might induce an urge to have a drink, specifically, in a recovering client. Hence whenever, he comes across such situations, he is advised to imagine the aversive scenes from the covert sensitization, so that nausea/aversive scenes can reduce his urge to go for a drink. In the initial stages of treatment, the client may develop craving for a drink more frequently; during this time if he has money with him, the chances for going for a drink are high. Hence the client is advised not to keep 'more' money with him, or to store alcohol at home.
2. **ENVIRONMENTAL MANIPULATION** :

a) At Home:

The client is advised to remove the 'stimulus cues' related to drinks from home environment. These include alcohol bottles, alcohol glasses and keeping drinks in the refrigerator or at home. The client is advised not to offer drinks to guests and visitors at home. He is advised not to invite guests home, who drink, especially in the initial stages of recovery.

b) At Office:

Since the alcoholic client takes alcohol everyday, specifically, if he takes along with colleagues in the office, he is advised to stop going with these individuals in the office. He is advised to avoid these individuals by asserting with them that he has given up drinks. Many alcoholics, drink or bring drinks home, after the work, especially while returning home. Hence the client is advised to change his routine by changing the route through which he comes home so as to avoid the view of the bar/wine shops, which he was previously visiting.

3. **DEVELOPMENT OF ALTERNATIVE BEHAVIORS** :

a) At Home:

The chronic alcoholic client is always under the influence of alcohol and is intoxicated. He does not involve
in any other alternative activities at home. During the recovery phase, the client is advised to develop certain alternative activities at home; these include:

1. After the work, he is advised to sit along with the family members and talk to them about their day activities;
2. To have food along with family members together during night;
3. To take the children for an evening stroll along with him;
4. To go for shopping along with wife and children during evenings;
5. To go for outings periodically, along with family members.

b) At work spot:

The client is encouraged to develop the following alternative behaviors at the office:

1. Involve in the drink-free associations;
2. To develop friendship with nonalcoholic individuals;
3. Involve in the cultural activities organized by the work associates.

C) Within himself:

He is advised to develop certain hobbies/interests within his sociocultural purview. These may include
inculcating such hobbies as:

1. Reading books;
2. Participating in games/sports;
3. Developing new hobbies such as gardening, teaching children at home etc., and
4. Any other activity which he was performing before the onset of alcoholism.

4. **DRINK REFUSAL SKILLS TRAINING:**

   The basic principles client is advised to follow to refuse drinks effectively include:

   1. Be assertive in informing your friends that you have given up drinks;
   2. Do not feel embarrassed or ashamed to tell them that you have stopped drinks;
   3. Be prepared for the reaction from your friends when you inform that you have given up drinks. Some people may make fun of you, make faces at you, or they may ridicule at you for giving up drinking.
   4. Do not hide or lie the fact that you have given up drinks. You let everyone know that you have given up drinks.
   5. Do not try to give logical explanations to rationalize your giving up of drinks;
   6. Avoid situations where you may have to yield to
pressures from your superiors with regard to drinking.

7. When you meet new people during an occasion, do not tell them that you have given up drinks. But tell them that you do not drink.

**Drink refusal training proper:**

This was done in the clinic situation with role play and behavioral rehearsal by the therapist and client. This involves various steps; these include:

1. informing;
2. resisting;
3. suggesting alternative activity;
4. redirecting; and
5. threatening.

a) **Informing:**

1. Inform your friends firmly that you have given up drinks;
2. Request them not to insist that you have drinks;

b) **Resisting:**

1. Repeat your insistence that you are not going to have drinks any more and that you have given up drinks completely;
2. Repeat your request more firmly not to insist that you should have drinks.
c) Suggest an alternative activity:

1. Suggest that you are interested in going for a coffee shop along with them rather than to a wine shop/bar;
2. Request them to join you for a cup of coffee/tea in a coffee shop;
3. Emphasize that you are interested in going for a nonalcoholic beverage rather than for a drink.

d) Redirecting:

When your friends insist you to come for a drink, then follow these:

1. Try to change the topic;
2. Talk about some totally different topics such as family members/business/work etc. or about a movie running in the city.

e) Threatening:

If your friend still insists that you must go for a drink then,

1. Threaten that you don't mind breaking your relationship with him if he insists on you to go for a drink;
2. Try to quit the place by refusing your friend's offer.
BEHAVIORAL COUNSELING

RATIONALE:

The reinforcing consequences of excessive drinking help in maintaining the drinking behavior. Thus, increased attention from significant others may exacerbate the alcoholic's problem drinking. Hence behavioral counseling attempts to schedule the social and environmental consequences in an individual and his family, so that the alcoholic client receives maximum rewards for abstinence and withdrawal of rewards for drinking. In behavioral counseling, the appropriate behaviors are reinforced, and the drinking behavior is not reinforced, by the significant others. These significant others may include family members, relatives, friends or colleagues. This helps in strengthening the alternative behaviors of the client in his natural environment (Miller, 1976).

According to Miller (1976), the following elements are necessary in the behavioral approach to counseling.

1. Removal of reinforcers for abusive drinking;
2. Reinforcement of behaviors incompatible with excessive drinking; and
3. Rearrangement of environmental cues which set the occasion for drinking.
In the present study, these steps were included in the behavioral counseling procedure. This procedure was developed based on Miller (1976) and Gambrill (1977). This involves counseling the significant others (e.g., spouse, or any other family members).

The significant others were advised to follow the steps mentioned below in order to deal with the client effectively in the natural environment.

STEPS:
1. Do not suspect the client;
2. Develop trust in the client;
3. Do not discuss about the client's previous drinking habit and consequences with others;
4. Eliminate the stimulus cues related to drinking from the home environment;
5. Reinforce the 'dry' habit;
6. Time out the drinking related behavior;
7. Provide alternative activities at home;
8. Express happiness over the client's 'dry' habit;
9. Provide feedback to the client regarding changes in the environment, family and psychological aspects following abstinence;
10. Alert the friends, relatives and other family members;
11. Identify the potential risk factors of relapse;
12. Identify the behavior that may indicate a potential relapse;
13. Deal with the familial interpersonal problems;
14. Improve communication and avoid criticism.

1. Do not suspect the client:
   Many a time, the family members develop a habit of suspecting the client whether he had a drink or not; they smell the body/dress of the client; they become strict about his behavior; and do not trust him. Hence the family members are advised to stop suspecting the client especially with regard to his abstinence. To stop smelling his clothes; stop checking his belongings etc, especially when the client comes home late.

2. Develop trust on the client:
   Usually due to the chronic alcoholism, the family members do not trust the client in the familial, financial and his vocational matters. Hence the significant others are advised to trust him especially when he says that he is abstained from drinks. He can be trusted in the financial matters also.

3. Do not discuss the client's previous drinking problems and consequences with others:
   The family members frequently tend to discuss, the
client's habit of excessive drinking, various consequences being experienced by the client and family members due to alcohol, with the visitors, friends and relatives at home. They tend to criticize the client and ridicule him. Hence the significant others are advised not to discuss any of the drinking related issues with the visitors, relatives and friends, either in presence or absence of the client.

4. Eliminate the stimulus cues from the home environment:

Generally, the client with chronic alcoholism tends to keep the glasses and alcohol bottles at home; he tends to drink at home frequently. He also stores drinks at home, at specific places such as refrigerator, corners etc. The significant others are advised to totally eliminate these drinking related cues such as alcohol glasses, alcohol bottles and storage of alcohol from the house.

5. Reinforce the 'dry' habit:

The spouse/significant others are advised to reinforce positively, the client's dry habit; the spouse would positively reinforce every day, consistently, during the 'dry' days.

6. Time-out the drinking related behavior:

The spouse/significant others are advised not to pay attention towards the client's alcohol related behavior. They were also advised not to discuss about the maladaptive
behavior that had occurred during the drinking episodes in the past.

7. Provide alternative activities:

The family members were advised to encourage the client in various alternative activities such as developing certain hobbies at home, going for marketing, teaching children, etc. during the time client was spending for drinks previously.

8. Express happiness:

when the client comes home 'dry', the spouse and other family members express their happiness over his coming home without alcohol, in time.

9. Provide feedback:

The spouse gives the client a feedback with regard to various changes that have occurred due to the client's abstinence. The spouse explains him that there is a change in the client's behavior, and the children's behavior too; e.g., now the children feel happy as he has given up drinks; there is a change in the emotional atmosphere at home. Now the family members talk to each other; the client takes care of children and other family members, and also the client attends to his office regularly.

10. Alert the friends, relatives and other family members:

The spouse is advised to warn various significant
others, in the client's immediate environment, such as friends, colleagues and relatives who have the drinking habit. These individuals are firmly told not to discuss about alcohol related matters with the client; not to offer him drinks; and not to invite him to situations where drinking is involved.

11. Identify potential risk factors for relapse:

Spouse and other family members were advised to identify potential risk factors such as meeting with specific situations, various stressors at home or at work situation, crisis and conflicts, where the individual was previously resorting to drinks. They were advised to identify these situations and take necessary steps so that the client would not go for a drink. Moreover, during such risk situations, the significant others were advised to bring the client to the therapist, if necessary.

12. Identify the behavior that may indicate a potential relapse:

The significant others were advised to identify any change in the individual's behavior that may indicate a potential relapse in the client. These factors include restlessness, boredom, frequent spells of anger, returning home late etc. During these situations the significant others were advised to be vigilant and bring the client to
the therapist.

13. **Deal with the familiar interpersonal problems:**

   During the drinking period, the alcoholic client might have developed interpersonal difficulties with relatives and other family members. Hence these individuals were advised not to probe into those aspects again. These individuals were to be requested to co-operate with the client, so as to reinforce his abstinence and change in his behavior.

14. **Improve communication at home and avoid criticism:**

   In majority of the cases, the client at home does show disturbed communication patterns due to the excessive alcohol intake. He does not communicate with any of the family members. And also, many a time, the family members communicate with an alcoholic client only by criticizing and ridiculing him. Hence the family members were advised to once again initiate communicating with the client and interact with him in a positive manner, instead of criticizing and ridiculing him.
Initially, for the first two days, the client and his spouse (or any other family member if the client is not married) were given the comprehensive alcohol education. Following this, the client was given the social skills training (the initial stages) during one session. At the same time, the spouse or any significant others was given behavioral counseling. Later, faradic aversion therapy was started. The faradic aversion therapy was continued for 15 consecutive sessions on an everyday/session basis. Following the faradic aversion therapy, client was given faradic aversion therapy plus covert sesitization in the same session. This combination of faradic aversion therapy associated with covert sesitization was administered for the next 15 consecutive sessions. After this, the client was given once again the social skills training in the following three sessions. During this time, behavioural counseling was once again given to the significant others for two sessions.

Approximately a total of 40 sessions with each client and family members was conducted at the clinical setup for therapy.

3) Post-treatment phase:

After completion of the above therapeutic program, client was administered outcome/follow-up evaluation proforma in order to assess the outcome. Following this, the client
was terminated from the treatment program.

The client and his significant others were advised to come for follow-up once a month regularly. The importance of follow-up was also emphasized. During follow-up once again the outcome/follow-up evaluation proforma was administered in order to assess the outcome and other changes in various parameters. The client was advised to bring the spouse (or any other family member) when they come for follow-up. The outcome was also ascertained from significant others. During the follow-up sessions the client was reinforced for his abstinence; the significant others were once again given behavioural counseling. The significant others were also reinforced for their cooperation and for adhering to the instructions given in order to manage the client adequately at home.

BOoster sessions:

During follow-up for some clients, where it was felt necessary, were given booster sessions. Each booster session consisted of faradic aversion therapy and covert sensitization.

Mention may be made that on the average for each individual client 45 hours were spent by the therapist, during the period from first-contact to the point of completion of follow-up.
In the present study, client who discontinued after the 1st session of therapy was considered as "Drop-out".

Statistical Analyses:

The following statistical techniques were used in the analyses of data:

1. Descriptive statistics such as mean, S.D. and percentage (Garratt, 1966) to describe the data
2. "t test" (McGuigan, 1969): a) To find out the significance of difference between the treatment completers and drop-outs on variables; b) To find out the significance of difference between among outcome groups of treatment completers.
3. "F test" (McGuigan, 1969): To find out the significance of difference among outcome groups of treatment completers on variables.