INTRODUCTION
From times immemorial human beings in every society discovered certain substances which are said to influence the mind, reduce fatigue and promote a temporary sense of well-being. For centuries, all over the world, a variety of these mood altering substances have been in use. Alcohol is one of such substances that has been widely used.

In our society, individuals have free access to alcohol; a substantial number of these individuals who drink develop problems as a result of or connected to their use of alcohol. These problems are referred to as 'alcohol abuse' and 'alcohol dependence'. Persons with this habit present a variety of problems consequent to their use of alcohol with variation in magnitude.

Research in the area of alcoholism* and its management have been quite challenging because of its heterogeneity in aetiology and manifestation. It is a complex disorder involving physical, psychological and social aspects of the individual and having far reaching harmful effects on the family and society (Edwards and Gross, 1976). Problems related to alcohol use are considered as 'individual' as well as 'social' in nature; 'individual' -- as it affects many

* In the present study the terms 'alcoholism' and 'problem drinking' were used synonymous to 'alcohol dependence'.
facets of a person's life; 'social' -- as it affects a substantial number of people in the environment. Hence the efforts and skills of professionals from various disciplines are utilized to deal effectively with this condition (Poley, Lea and Vibe, 1979).

Alcoholism is accompanied by a preoccupation with obtaining alcohol in quantities sufficient to produce intoxication over long periods. As alcoholism progresses and problems from drinking become more serious, the individual drinks alone, and tries to conceal the seriousness of the condition (Goodwin, 1989).

According to Edwards, Grossman, Kellar, Moser, and Room (1977) there are seven elements in the alcohol dependence syndrome; these include:

1. The feeling of being compelled to drink. The dependent is aware that he is not sure of stopping drinking once started; during his attempt to give up drinks, he experiences craving.

2. A stereotyped pattern of drinking. The dependent takes drinks at regular intervals to relieve or avoid withdrawal symptoms.

3. Primacy of drinking over other activities. The individual dependent on alcohol, gives priority for drinks over all other activities.
4. Altered tolerance to alcohol. The dependent is relatively unaffected at blood levels of alcohol that would incapacitate others; this tolerance increases with increasing dependence.


6. Relief drinking. As withdrawal symptoms follow cessation of drinking, dependent would take a drink immediately on waking to get relief from withdrawal symptoms.

7. Reinstatement after abstinence. A dependent drinks again after a period of abstinence, relapses quickly and totally returning to the old drinking pattern.

According to ICD-9 (W.H.O., 1978) alcohol dependence is defined as "a state psychic, and sometimes also physical, resulting from taking alcohol, characterised by behavioral and other responses that always include a compulsion to take alcohol on a continuous or periodic basis in order to experience its psychic effects, and sometimes to avoid the discomfort of its absence, tolerance may or may not be present".
EFFECTS OF ALCOHOL:

Alcohol causes damage to an individual in physical, social, familial, financial and occupational spheres.

Physical:

Excessive consumption of alcohol may lead to physical damage in several ways. 1) It can have a direct toxic effect on the organ systems of the individual and lead to: liver abnormalities such as fatty infiltration, cirrhosis and hepatoma; gastrointestinal complications such as gastritis, peptic ulcer and pancreatitis; central nervous system complications such as peripheral neuropathy, epilepsy and dementia. Cancers of the mouth, tongue, pharynx and oesophagus are found to be more common in alcoholics. 2) Alcohol consumption is accompanied by poor diet intake leading to deficiencies of proteins, vitamins and minerals; anaemias are frequently seen in alcoholics (NIAAA, 1983). In pregnant women excessive alcohol use may lead to foetal alcohol syndrome in the new born.

Psychological:

Excessive alcohol consumption may lead to certain psychiatric conditions such as alcoholic psychosis, alcoholic hallucinosis, pathological jealousy and certain affective disorders.
Social :

Alcohol abuse plays a role in many kinds of social problems. The alcoholic fails to fulfil his expected social role as a family member, employee, a good neighbour, or a law-abiding citizen; this may be detrimental to himself as well as to the society.

Excessive drinking causes social disruption, especially in the family; marital and family problems are evident in alcoholics' families (Orford, 1979). Divorce rates among alcoholics are high; wives of alcoholics are likely to become anxious, depressed and socially isolated (Wilkins, 1974). Heavy drinking plays a role in family violence and abuse of spouse and children.

The home atmosphere is often detrimental to the children because of frequent quarreling and violence. In children of alcoholics, there is a general and nonspecific increase of anxiety; the child becomes anxious in various environments such as home, school etc., consequently, leading to learning and social disability; he may also develop overt neurotic or behavior symptoms. These children are at risk for developing various mental disorders (NIAAA, 1983).

There is also a strong association between road accidents and alcohol abuse (NIAAA, 1983). Excessive drinking is associated with crimes such as sexual offences,
acts of violence and murders (Edwards, Hensman and Peto, 1971). Among alcoholics high suicide rate of 8-20% is observed (Kendall, 1983; Berglund, 1984).

Occupational:

The adverse effects due to excessive drinking are extensive. Alcoholic develops a poor work record with frequent absenteeism, erratic time-keeping, low productivity and has increased risk for accidents involving himself and others. The decreased efficiency and poor performance may lead to removal from job and consequently unemployment (NIAAA, 1983, 1987).

Financial:

Maintenance of regular alcohol habit is expensive. Poverty is further aggravated because of the reduced earning capacity. Demotion, sickness and unemployment add to the problem. Debts also accumulate over time; these debts may create problems at home and provoke violence, marital breakdown, and disintegration of the family. The problem drinker becomes unemployed, lonely, and goes into the company of heavy drinkers and consequently drinking increases once again. This vicious cycle of the social disability is replicated in worsening physical problems and personality deterioration (NIAAA, 1987).
ASSESSMENT:

The behavioral view of assessment is derived from the assumption that both maladaptive and adaptive behavior is learned, hence subjected to continual alteration and modification by past and present environmental circumstances. Tharp and Wetzel (1969) outlined five elements as crucial in assessment in the behavioral perspective. They are:

1. **The target behavior(s)** — frequency, intensity and pattern. The excessive drinking and behavioral deficits and excesses which typically accompany are considered as target behavior(s).

2. **Antecedent events** — the setting events for the individual's maladaptive behavior. Alcoholic's reaction to stress, anxiety, depression, marital discord, job dissatisfaction and interpersonal inadequacy are the factors which may lead the individual to uncontrolled drinking.

3. **Maintaining stimuli** — The environmental factors which reinforce the target behaviors include continued intoxication, as well as sympathetic or nurturant behaviors from significant others which reinforce the target behavior(s).

4. **Reinforcement hierarchy** — the range of factors in the environment which reinforce both target and nontarget
behaviors. Identify the reinforcers other than alcohol, environmental and personal, which can modify the environment.

5. Potentials for remediation in the environment. Identifying various reinforcers in the individual's environment, other than alcohol which are capable of affecting behavior change including modification or elimination of their maladaptive drinking.

Zimberg (1980) recommends a multifactorial assessment in alcoholism. According to him, psychological factors alone are not sufficient to produce alcoholism in an individual. Sociocultural and physiological factors along with psychological mechanisms are the necessary contributors to the development of alcoholism. It is also essential to evaluate the social circumstances -- family, marital relationships and occupational relationships of an alcoholic. In addition, Zimberg emphasized the assessment of cultural attitudes towards drinking and drunkenness that existed in the individual's family while he was growing up, and now he integrated into his present drinking behavior.

The social, family and cultural contexts in which the problem drinking occurs are significant factors in determining which treatment approach can be most effective with the individual. To formulate the treatment approaches,
assessment of the sociocultural norms, attitudes and needs of the client are essential. The sociocultural influences are often major contributing factors in the etiology of alcoholism, and such influences must be understood if the alcoholic is to be successfully treated (Zimberg, 1980). According to Briddel & Nathan (1976) alcoholism is a multifaceted disorder with physical, psychological and interpersonal sequelae; hence a successful treatment would aim to modify all the aspects.

TREATMENT:

Research in the behavioral treatment of alcoholism has produced valuable information; behavioral treatment methods have been increasingly recognized as making significant contributions to the treatment of alcoholism and related problems (NIAAA, 1987).

Since many factors play significant role in the aetiology of alcoholism, any single modality of treatment used alone cannot yield impressive results. Clinical trials indicate that when two or more treatment modalities are used in combination, the effectiveness of treatment outcome improves significantly. Hence many modalities of treatment techniques can be used in logical and consistent fashion, based on functional analysis.
Effective comprehensive treatment program requires intervention on one or more of several levels which include:

1) efforts to modify the drinking response itself within a controlled environment by aversive conditioning;

2) treating the alcoholic's functionally related problems by teaching more effective coping responses to stressful situations, through assertive behavior; and

3) providing continuing community support and reinforcement for appropriate social and vocational behavior by contingency management of drinking in the natural environment (Briddel and Nathan, 1976).

According to the social learning perspective, factors such as learning experiences within the family, peer modeling, and expectancies are relevant to problem drinking. Thus each individual's drinking behavior is likely to have multiple determinants and would require treatment incorporating various techniques, hence a broadspectrum approach is appropriate (Hamburg, 1975; Nathan, 1976). This approach provides the alcoholic with the means of achieving reinforcement from sources other than alcohol consumption. It involves identifying both the discriminative stimuli for drinking and the reinforcing consequences, and making the occurrence of other more satisfying behaviors through a variety of techniques (Chaney, O'Leary and Marlatt, 1978).
According to Miller & Barlow (1973) a comprehensive behavioral treatment requires two types of goals:

1) Techniques which decrease the immediate reinforcing properties of alcohol (Ashen & Donner, 1968; Blake, 1965). This involves associating aversive or unpleasant stimuli with both the consequences of the drinking patterns and various environmental cues (eg. sight/smell of liquor, advertisements, drinking bars etc.) which elicit the behavior. This also includes use of self-control techniques to control urges (Cautela, 1966) and rearrangement of environmental stimuli associated with urges (Mertens, 1964).

2. Techniques to provide the alcoholic with behaviors which are incompatible with alcohol abuse including attempts to teach the client alternative ways to deal with stressful social situations (McBreaty, Dichter & Garfield, 1968). In addition, significant persons in the environment are taught ways of reinforcing new sober patterns of behavior and of punishing or extinguishing excessive drinking (Cheek, Franks, Laucius & Burtle, 1971; Miller, 1972).

According to Miller and Foy (1981) comprehensive behavioral programs use a variety of operant, aversive and social learning techniques to attain the following goals in the treatment of alcoholism:
1. Provide accurate, complete information about alcoholism to clients through comprehensive alcohol education.
2. Obtain a thorough functional analysis of client's drinking patterns so that specific drinking situational and topographical parameters may be modified;
3. Decrease the immediate reinforcing properties of alcohol;
4. Teach clients new behaviors (eg. problem solving and drink refusal skills) that are incompatible with alcohol abuse;
5. Rearrange client's social and vocational environment to maximize opportunities for exercising self-control over drinking.

The above objectives are accomplished in an intervention program with three focal areas:

1) The drinking response per se;
2) Clients associated behavioral problems; and
3) Client's relationships with significant others (Briddel and Nathan, 1976).

In view of the increasing multimodal nature of alcoholism treatment programs, various aspects have often been included in the intervention strategies. The services provided in the treatment of alcoholism include: detoxification, inpatient rehabilitation, outpatient clinics,
day hospital, and partial hospital services, family
treatment, aftercare and residential or supervised living
services (NIAAA, 1987).

Behavioral techniques frequently used in the
broadspectrum treatment programs include aversion therapies,
covert sensitization, relaxation training, self-control
training, cognitive restructuring, social skills and
assertiveness training and contingency management
(NIAAA, 1983).

OUTCOME & DROP-OUT:

Outcome of alcoholism treatment is a complex issue
involving various factors. Outcome can be influenced by
various factors such as client characteristics, sample
selection, client's experiences outside and after treatment
and duration of follow-up (Emrick and Hansen, 1983).
Studies on treatment of alcoholism have not yielded
differences in outcome of clients treated in inpatient
setting, out-patient setting, partial hospitalization and day
clinic setting (NIAAA, 1987). Length of treatment has also not
been found to have an effect on the outcome (Miller and
Hester, 1980; Powell, Penick, Read and Ludwig, 1985).

High drop-out rate is also a significant problem in the
treatment of alcoholism; 52-75% of clients drop-out before
the fourth session from the out-patient treatment; a
significant number of clients leave treatment before any therapeutic change occurs (Baekeland and Lundwall, 1975).

**FACTORS RELATED TO TREATMENT OUTCOME:**

Various factors have been found to influence the treatment outcome. These include: locus of control, personality and expectancy.

**Locus of control:**

Individuals differ with regard to their learned habits and its relationship to reinforcement. Hence they also vary in their control orientation; consequently, control orientation can be of two types -- internal or external. Individuals with internal locus of control perceive that personal events and their consequences depend on their own actions; but individuals with external locus of control perceive reinforcements as dependent on external aspects such as 'chance', 'fate' or 'powerful others'. Thus, an individual's locus of control, internal or external, indicates the variability of responsibility that he perceives himself to have on various meaningful events in his life (Donovan and O'Leary, 1978).

The perceived locus of control is the expectancy that reinforcement follows a potential response. This perceived locus of control is a learned phenomenon. Expectancy of a
relationship between a specific behavior and its outcome is obtained by various situations perceived by the individual as having similar stimulus characteristics (Phares, 1975). Accordingly, the reinforcement strengthens the expectancy of contiguity between a given response and anticipated response and anticipated reinforcement (cf. Donovan and O'Leary, 1978).

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

Huckstadt (1987) compared the DRIE scores among alcoholics, recovering alcoholics and nonalcoholics. Results indicated significant differences among these groups, with nonalcoholics scoring more internally than other two groups. Caputo and McGovern (1983) found that clients with internal locus of control had more successful outcome.

Personality:

Three major aspects related to personality and alcohol use have been investigated in the literature:

1) the personality precursors of alcohol use;
2) the personality characteristics of alcoholics; and
3) the immediate and long-term effects of alcohol on personality (Cox & Klinger, 1987).
The researchers in this area also studied the relationship between personality and alcohol to obtain four kinds of links:

1) personality and etiology;
2) personality and course;
3) personality and response to treatment; and,
4) personality and maintenance of treatment gains (Nathan, 1988).

Graham and Strenger (1988) while reviewing the MMPI research on alcoholics concluded that alcoholics, as a group have in common a tendency to be impulsive, to resent authority, to have low frustration tolerance and to have poorly controlled anger. Alcoholics are also found to be stimulus augmenters (Barnes, 1983). Other personality characteristics in alcoholics include nonconforming, immediate reward seeking, field dependent and low self-esteem (Cox and Clinger, 1987).

Research relating personality with response to treatment of alcoholism has focussed on the identification of personality factors associated with favourable or unfavourable response to treatment. This research aimed at identifying alcoholics who are likely to respond well to treatment. However, the personality characteristics of those
who abuse alcohol and of those who are most likely to benefit from treatment have not yet been identified (Nathan, 1988).

According to Graham and Strenger (1988) although alcoholics share some common characteristics, there seem to be important individual differences among alcoholics that need to be considered in developing treatment programs.

Expectancy:

The cognitive factors play a significant role in understanding and management of behavior related to alcohol consumption. Recently, attention has been given to the study of cognitive factors in addiction behavior. There has been increasing recognition that cognitive factors play a great role in determining drug effects and in an individual's choice to use or not to use a drug. 'Expectancy' is one such cognitive factor which needs further exploration in the context of alcoholism.

Expectancy, implicit or explicit, is the knowledge (information, encoding, schema and scripts) about relationships between events or objects in the environment. It can have a causal role in an individual's own actions. Researchers intend to find a close linkage between the cognitive expectancy and antecedent stimuli and consequent behaviors in the environment. (Goldman, Brown and Christiansen, 1987).
Expectancies are learned; when situational cues or a particular organismic response, and a particular environmental outcome, are correlated and repetitive, an expectancy is acquired in the organism. The registration, encoding, and storage of a high correlation between cues and outcome is the expectancy.

Expectancy theorizing offers a number of directions for prevention and treatment of alcoholism. Expectancy assessment can suggest intervention strategies. Attempts can be made to modify these expectancies that are strongest in the individuals (Goldman, Brown & Christiansen, 1987).

**NEED FOR THE PRESENT STUDY:**

Since alcoholism is viewed as a response maintained by its consequences, with cognitive, physiological, emotional, social and situational cues (Miller, 1976), various aspects of this condition should be dealt with simultaneously in the treatment. Though, various studies show the efficacy of behavioral techniques, their results are found to be inconclusive as they could not control all the maintaining factors in this condition (Franks, 1969; Mishra, 1974). Hence multifaceted broad-spectrum treatment methods are important in controlling these variables. This kind of programs are found to be very few in the therapeutic intervention of
alcoholism, specifically to suit the Indian clients. Hence there is a need to develop a comprehensive behavioral program consisting of appropriate therapeutic techniques which would deal with these dimensions. Few studies have examined the relationship between variables such as motivation to take alcohol, locus of control, personality and the therapeutic outcome, especially in the Indian context. Hence these gaps in the literature for the management of alcohol dependence have led to the present attempt to develop a multidimensional approach to the treatment of this condition, with heterogeneity in etiology and maintenance.

THE PRESENT STUDY:

The present study was aimed at developing a multidimensional behavioral treatment program consisting of such techniques as alcohol education program, faradic aversion therapy, covert sensitization, social skills training and behavioral counseling, and to find out its efficacy in the treatment of individuals with alcohol dependence. In this study the clients with primary alcohol dependence were given the comprehensive treatment program and followed-up for a minimum period of six months in order to assess the outcome. The study also aimed at finding out the relationship between such variables as personality, drinking related locus of control, motivation to take alcohol, and the therapeutic outcome.
UTILITY OF THE STUDY:

The present study would help us in understanding the efficacy of the multidimensional treatment program in the intervention of alcohol dependence. This would also help us in gaining insight into variables related to outcome. The study would throw light on the prognosticators and characteristics of drop-outs from treatment. Consequently, it would help in developing a model for drawing intervention strategies in alcohol dependence, specifically related to Indian conditions.