

THE CONSTRUCTION AND TESTING OF AN INTERACTIVE
MODEL FOR UNDERSTANDING ALCOHOL MISUSE IN MIDDLE ADOLESCENCE

by

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To Dimitrios
for giving me the time, the support
and the confidence necessary to
undertake this project.

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ABSTRACT

A synthesis of two distinct research methods was used to investigate the extent to which Rhodes & Jason's (1988) Social Stress model, Olson's et.al. (1985) Family Cohesion and Adaptability theory and the Self-Efficacy construct (Lawrance, 1988) were associated with adolescent drinking behaviour. Two studies were carried out, one qualitative and one quantitative, based on the responses of a non-random sample of 60 and 238 adolescents respectively. Differences between Abstainers, Drinkers and Occasional Drinkers were investigated. No significant gender differences were identified in both studies, in regard to drinking practices reported by adolescents themselves. Analyses of the data in the qualitative and quantitative study reveal that family interactional patterns, locus-of-control, self-efficacy, peer drinking and peer pressure to drink accounted for the differences between Drinkers, Abstainers and Occasional Drinkers. In contrast, the three groups did not differ significantly in self-esteem, knowledge, social anxiety, social support and ability to resist pressure to drink. The findings are interesting in focusing on the fact that Drinkers differ significantly in a variety of measures from Occasional Drinkers and not just from Abstainers. Implications for future research are discussed.

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CHAPTER 1: INTRODUCTION

Research on the aetiology of alcohol use has sought to identify factors which place individuals at risk. Early research, focused almost exclusively on knowledge and attitudes about alcohol and their effects on the individual behaviour. The assumption was that adolescents would not use alcohol if they knew the facts about drinking. Subsequent research began to address psychological and social variables such as self-esteem, locus-of-control and stress and also began to explore social factors, focusing on peer, family and media influences. However, most efforts were based on survey data, with a tendency to employ self-report instruments and large samples with data collection, allowing few possibilities to research in depth the individual's own interpretation of the situation and the psychosocial factors affecting drinking. As a result, although several studies are concerned with the aetiology of drinking in this particular age group, one is struck by the large number of correlates in the absence of any theoretical framework (Shore, 1990).

"First, many correlates are found only in cross-sectional studies, second there is no information about the relationships among the correlates; and third investigators use different labels with different orientations for the same phenomenon or construct or the use of the same label for different constructs or phenomena" (Shore, 1990).

Consequently, there is no comparability across studies (Shore, 1990). In addition, data collection is limited by the need for consent by children and parents at

school given also the fact that children at risk cannot be singled out in school.

"At the end of the day we know little and can ask children very little about their contact with drugs; ranging from alcohol to illicit drugs..." (Jores & Battjes, 1990).

In this thesis, the main aim was to consider the impact of sociopsychological and familial experiences on adolescent drinking as well as to explore adolescents' perceptions of drinking behaviour; for that purpose qualitative and quantitative methods of data collection were employed. The study derives from the hypothesis that adolescent drinking incidents are related to a variety of psychosocial factors which affect the well-being of the individual. Such hypothesis can be deduced from the literature review and relevant studies in the area where the current trend is to examine adolescent drinking in the social context in which it takes place (Rhodes & Jason, 1988; 1990), indicating that drinking is characteristic of this age group and its causes are multiple.

However, in this area of research an emerging problem facing the researcher derives from the considerable confusion over the definition of drinking and the identification of the individual at risk and of what constitutes a risky environment (Mayer & Filstead, 1980).

There are no clear definitions as to who is an abuser, a user and an abstainer, making the research task often difficult. Consequently, the following questions are being asked:

- what are the patterns of use?
- which are the most contributing to drinking factors?
- who are the children most at risk?

According to Mayer & Filstead (1980), the concept of "at risk" refers to having characteristics of being in a situation that is associated with serious involvement in the use of alcohol; contributory factors combine to create chains of events that lead to the onset, exacerbation and maintenance of alcohol use; alcohol involvement ranges across a broad continuum from none whatsoever to the threatening levels of use.

In the adult population a heavy drinker is defined as the one who, for at least a year, drinks periodically six or more drinks at a time (Mayer & Filstead, 1980). In adolescence the definition of a drinker, or at least the one who is misusing alcohol, differs from the one given for an adult drinker, mainly because during adolescence the most commonly occurring phenomenon is intoxication, whilst problems such as addiction or dependence are not yet identified. However, recent research claims that chemical dependence is a phenomenon found in all age groups; in adolescence it is often described as "problem behaviour" (Donovan, 1986).

In adolescence, the descriptive phrase "heavy drinking" has meant such behaviour as 4-5 incidents of drunkenness per year, drinking every weekend or every week (Mayer & Filstead, 1980). Misuse of alcohol is also defined in terms of frequency of drinking, although this definition imposes limits and focuses attention on only a few aspects of the possible disruption that alcohol may cause. Seeing this in

relation to the definition of health, given by the World Health Organisation, according to which health is being defined as a state of complete physical, mental and social well-being and not just the absence of disease (WHO, 1985), one realises the risks which adolescents put themselves under, since alcohol represents one of the three major causes of death in modern societies (Newcomb & Bentler, 1988).

Therefore, it is rather difficult to associate problem drinking with adolescence and to determine the indicators of alcohol misuse, since adolescents have not been drinking long enough to develop chronic physiological or medical problems. Consequently, the concept of problem drinking does not imply an entity or state (Mayer & Filstead, 1980), although use of alcohol in early adolescence is likely to reflect problems in psychosocial development, difficulties in the immediate social environment or stresses related to the adolescent transition itself (Hawkins et. al., 1991).

Consequently, theoretical formulations present their own flaws, which result from the lack of clear definitions of use, misuse and abuse. In the adult literature, the most recent approaches suggest that a biopsychosocial model should be employed to the understanding of adult drinking (Donovan, 1986), demonstrating a greater consensus over what constitutes problem behaviour and where the causes of this behaviour can be sought.

To address the issue of the need of a theoretical framework within which research could be carried out, we have adopted the Rhodes & Jason (1988) Social

Stress model of adolescent drinking which presents an ecological approach to the understanding of the behaviour by considering personal and social variables affecting the individual behaviour. The above model is supplemented with Family Cohesion and Adaptability theory (Olson et.al., 1985) that examines in depth the familial roles and interactions. As the literature suggests (Steinglass et.al. 1988; Baumrind, 1990) familial relationships are contributing factors to the manifestation of a maladaptive behaviour. However, the relevance of family relationships and other psychosocial variables needs more systematic exploration since the significance of family factors is well documented as being relative to alcohol misuse. The thesis supports the notion that the above two theories can be complementary to each other and contribute to the understanding of how drinking emerges from a set of available activities as the most preferred one. As in adult use, the biopsychosocial model is adopted for explaining adult drinking; in adolescence alcohol use, a comprehensive and even ecologically oriented approach considering familial interactions, is the way forward.

Additionally, a new stage of development in alcohol use research is related to the capability to increase methodological sophistication using qualitative and quantitative techniques of evaluation.

As a result, a third issue that faces the researcher is the methodological problems presenting difficulties in basing theoretical formulations on in-depth investigations; such problems derive from pragmatic hindrances to ensure an adequate and representative sample, to be given access to adolescents, to make rapport with teachers, parents and peers and to carry out investigation on socially sensitive areas.

In light of these difficulties one is likely to rely on survey research and questionnaire data which however reduces the possibilities of investigating further the factors associated with drinking. However, research interest should be directed at investigating in depth, smaller samples rather than carrying out large scale research that give little understanding of the correlates of drinking.

"We need to sub-sample our large studies, look at various samples and develop measurements that give us a greater understanding at different levels of phenomena... We are currently using questionnaire data and correlating traits without other means of validity reports or obtaining intrapsychic, interpersonal or developmental data on the subjects" (Shore, 1990).

Another problem derives from the measurement of drinking behaviour per se; self-report measures have their advantages and disadvantages affecting reliability and validity of the findings.

In view of the difficulties it was decided that qualitative and quantitative measures should be utilized to investigate further the different aspects of adolescent drinking and focus on adolescents' own perceptions and interpretations of the drinking behaviour.

Therefore, the current study makes use of two separate research methods, which raise questions about the individual's own interpretation of the situation and the research designs used for understanding such a behaviour; through the two distinct

methods, the study considers the impact of social, psychological and familial experiences on adolescent alcohol use. The theme of this thesis reflects the current trend of research on adolescent alcohol use.

The adoption of two, different methods of research, makes it possible to contribute to the ongoing debate amongst theorists, as to which is the best method of research in social sciences. In the literature, there is often a qualitative/quantitative debate distinguishing two fundamental paradigms of research; the "scientific" and the "interpretive" or "humanistic" (Walker & Evers, 1988). Quantitative researchers have often seen qualitative research as lacking in objectivity, rigour and scientific control (Kerlinger, 1973), therefore being unable to produce a set of laws of human behaviour and to apply adequate tests for validity and reliability. On the other hand, many qualitative researchers, invoking the explanation/understanding direction, claim that human behaviour cannot be captured by statistical generalisation and causal laws. In addition to being unable to capture the necessary relation between the human mind and social reality, the quantitative approach is accused of being unable to capture the essential role of values in that kind of knowledge we need to improve the human condition. The present thesis suggests that the two approaches are equally legitimate; they are not exclusive but complementary to each other. Clearly, what interests the researcher is to distinguish between real and pseudo-problems and between better and worse formulation of the problem.

The qualitative approach has the advantage of assisting the researcher to gain a clear focus and understanding of the factors associated with any behaviour, by

allowing the interviewee to open-up and expand on the most relevant to his/her situation areas.

One of the aims of combining different methods of research was to concentrate on the most significant factors of drinking, as those are identified with the use of quantitative techniques, and then to explore in depth, via qualitative techniques, the most significant factors, by allowing the individual to give his/her own interpretation of reality.

Consequently, the scope of the study is broad; we are not only focusing on the individual but relating the person who drinks to family and peers; our framework adopts an ecological view, since the factors presented are often interrelated, in the sense that more than one of them is present in the lives of many youth and may interact in ways that increase or decrease risk.

More specifically and in order to assist in the understanding of the process, the current study wishes to consider three fundamental needs of research:

- a) to identify factors which seem to relate to alcohol use and place them within a theoretical framework,
- b) to explore the ways in which research methods can assist ~~to~~ the understanding of the behaviour, with the additional purpose to expand upon the use of these research methods, when exploring the particular behaviour,
- c) to identify areas for future research on the aetiology of alcohol use, which can contribute to the development and refinement of preventive interventions.

Therefore, the second chapter is concerned with the presentation of the current drinking practices in adolescence. In this chapter, gender issues in relation to the drinking practices are addressed, whilst the use of alcohol in different countries is speculated in terms of frequency and quantity of drinking.

The third chapter is set to present the role that familial practices and especially family interactional patterns play, in the adoption of drinking behaviour. Family is seen not only in terms of providing role models for drinking but mostly as a setting where the constant dynamic interactions influence the well-being, the decisions and actions of the individual. Olson's et.al. (1985) Family Cohesion and Adaptability model is presented in line with the findings on the area of alcohol use and misuse. In addition the concept of social support and the role of significant others, are introduced to the explanation of the behaviour.

The fourth chapter, addresses Rhodes & Jason (1988) Social Stress Model of Adolescent Alcohol Abuse; several sociopsychological factors relative to the model are examined in relation to the current findings in the area. The addition of the Self-efficacy notion and its implications for drinking are discussed along the lines of Rhodes & Jason (1988) model.

The fifth chapter has two aims; one is to attempt to place Family Cohesion and Adaptability theory vis-a-vis the Social Stress Model in the effort to present a more comprehensive view of the factors associated with drinking. In this chapter, it is claimed that familial factors need to be addressed in relation to other variables and

receive the appropriate attention. The second aim concerns the research methodology; the study supports the significance of using two separate research methods for exploring the same phenomena in an attempt to gain a deeper understanding of the processes that associate with drinking. The general hypotheses, worthy of investigation are put forward.

Chapter six presents the research methodology of the quantitative study. The assessment measures, the procedure and design and issues of reliability are addressed. Chapter seven is concerned with the analysis of the results, where the regression model for identifying the most significant to drinking variables is adopted and then these are examined separately and in relation to the drinking groups. Gender issues are addressed in relation to both, drinking patterns and the underlying factors associated with them.

Chapter eight presents a discussion of the major findings of the study, addressing its limitations and suggesting the areas in which future research should be directed. The significance of sensitive investigation tools and awareness of limitations and biases are discussed.

Chapter nine, is concerned with the presentation of the qualitative study. The construction of the interview schedule, the procedure and design that has been followed and the findings of the qualitative study are put forward. Individual's own interpretations of the drinking setting and the relevant experience preceding and following drinking are explained.

Finally, chapter ten presents: a) a discussion of the major findings of the qualitative study, b) an overall discussion of the steps taken in the study, c) the main hypotheses derived from the conjunction of Olson's et.al. (1985) Family Cohesion and Adaptability theory and Rhodes & Jason (1988) Social Stress Model and d) the need for adopting quantitative and qualitative techniques in sensitive research areas.

Overall, the contribution of this thesis lies not only in the synthesis of two recent models but also in the findings about differences among occasional drinkers and drinkers as well as in presenting adolescents' perceptual understanding and interpretation of their own and their counterparts' drinking behaviour; a further contribution consists in the application of distinct methods of research to data set.

CHAPTER TWO: DRINKING PATTERNS IN ADOLESCENCE

2.1) Current drinking practices in adolescence.

A number of studies are interested in investigating children and adolescents' drinking practices. Recent reports demonstrate that in U.K. alone, many children between the ages of 12-17 drink openly in bars (Marsh et. al., 1986). In the U.S., three million children aged 14-17, are thought to be problem drinkers and nearly half of all deaths among those aged 15-19 were involved in traffic accidents in which alcohol was a factor (Dunne & Schipperheinj, 1989). Only 6% of boys and 7% of girls had never been worried about drinking (Dunne & Schipperheinj, 1989). In a Survey by the British Office of Population census (Marsh et. al., 1986) 79% of the 13 year olds had drunk alcohol and 29% reported drinking once a week. At 13, the majority drinks at home, but by the age of 17, 62% drink openly in bars in England; in Wales 43% of the 15 year olds report public drinking (Horn, 1985 cited in Farrell, 1988). Nearly all students in Horn's study (1985 cited in Farrell, 1988) have tried alcohol (93%) and the greater majority of them (72%) have used it in the past month.

As Yamaguchi & Kandel (1984) suggest "the most important trend to emerge from cross-sectional epidemiological surveys is the onset of experimentation with legal and illegal drugs in early adolescence".

Alcohol use begins early in life with almost 20% of the cohort having ever used alcohol by age 10 and over, 50% by age 14. The rate of initiation begins to

increase about the age 10, jumps at age 12 and continues to increase until age 18. Most of the initial experiences with alcohol take place before finishing high school.

From Davies & Stacey's (1972) study it appears that most adolescents remember first experiencing alcohol between the ages of 13 to 14 years; 47% of boys and 27% of girls are introduced before this modal age and 19% of boys and 24% of girls after this age. Hawkins et.al. (1991) study produced a similar finding: boys are more likely to have their first drink before the age of 10. Few of either sex however, delayed their first drink until the age of 15. Plant et. al. (1985) argue that the average age of first taste is 10 years old, for boys and 11.5 for girls.

It is also clear from these studies that the majority of children share their first drink with their parents at home (Plant et. al., 1985; Marsh et. al., 1986). Aitken et. al. (1988) found that children's first drink was generally taken at home, where most 10 year olds have been given sips on special occasion; 76% of the 88% that had tried alcohol, had been given their first drink at home. Jahoda et.al.(1980) report similar experiences for 47% of the boys and 40% of the girls in their study, aged 6-10 years old. Hawkins'et.al. (1991) study confirms the findings; slightly more than half of the sample, that is 54% of both, boys and girls had their first drink from their parents and almost half the sample (50% of boys and 47% of girls) were given their first drink by their parents at home. However, young children have also a good knowledge of alcohol, which is independent of parental drinking (Jahoda et. al., 1980)

The age at which people take their first drink is getting lower; men and women aged 17-30 claimed to have tasted their first drink at 15.1 and 16.4 years respectively; corresponding averages for those aged over 50 were 21.3 and 24.5 years (Robins & Przybeck (1990); they also argue that the potential for problems is significantly greater for those who begin use early in life than for those who begin use later; therefore age of first use appears to be a critical variable.

This phenomenon of adolescent drinking is spread worldwide. A number of studies have compared the drinking habits of young people in different countries, these including England and Ireland (O'Connor, 1978), USA and Ireland (Christiansen & Teahan, 1987), Papua New Guinea, Australia and USA (Wilks et. al., 1985); Australia, France, Norway and USA (Bank et. al., 1985) and Israel, France and the USA (Adler & Kandel, 1982). The youth of these countries exhibit different behavioural drinking patterns. However, the general level of alcohol use in the British studies is markedly higher than those noted in other studies and especially in the USA, where about 80% of the adolescents aged 16 and over reported having consumed alcoholic beverages. In the British studies it is reported that 94% of young people have had a proper drink by the age of 16 (Rowe & Elam, 1987; Plant et. al., 1985) and many had their first drink when they were much younger.

Isralowitz & Borowski (1992) carried-out a cross-cultural study in which a four country comparison (Australia, U.S., Israel and Singapore) showed Australian students expressing highest levels of concern that they may have a drinking problem.

Beck & Zannis (1992) claim in their study that African Americans compared to white students in a middle class suburban high school, reported drinking smaller quantities of alcohol less frequently, were more likely to be non drinkers and to report never having been drunk.

As the review of the studies suggest, not all drinking is sensible drinking. Marsh et. al. (1986) have found that half of the 13 year old girls have been drunk at least once and 17% have been very drunk. Hughes & Dodder (1992) report in their results of a longitudinal study, that even after legislation to raise the minimum drinking age was enforced, reports on problem drinking changed very little.

Beans et. al. study (1988) also reports that the average number of units of alcohol drunk were 3.6 for all 725 children in his population and 6.28 for those drinking alcohol during last week. The 15 year old boys who drunk most were more likely to know and to be offered drugs. The recently published survey of the drinking habits of 13 to 17 year olds, is the first National Alcohol Survey in Britain (1984, cited in Marsh et. al., 1986), to be related to young people. In this survey, 90.3% said that they had drunk alcohol at some time in their lives, 62.6% they had a drink in the last week and 21.8% had taken 9 or more units. The above figures indicate that the problem of excessive drinking goes beyond the adult population and affects the youth.

Drinking is bound to the culture not only geographically, but also in terms of the underlying values and meanings that this culture transmits. Even adolescents who

have not yet started to drink have already formed expectations about alcohol's effect on cognition and behaviour. These beliefs might come about through learning and observing drinking within the immediate social context. Expectations of positive consequences may initiate drinking; subsequent drinking probably modifies expectations; and modified expectations affect future patterns of alcohol consumption. Consequently a variety of personal and environmental characteristics relate to the selection and frequency of drinking in various settings with the strongest relationship being found in the perceived environment of normative support (Lawrance, 1988).

A network of heavy drinking peers increases the possibility of exposure to setting where alcohol is available and consumed. Party drinking contexts are settings of relatively heavier drinking in the ecology of adult drinking. Adolescent involvement in such settings may be seen as exceeding the normative support of drinking in the course of socializing (Grant et.al. 1990). A few studies, that have included children in their sample, report that the latter have occasional direct experiences with alcohol consumption as well as indirect experiences which vary from parental modelling to peer modelling and to media dissemination of cultural values (Goldman et. al., 1986).

According to the above, the National Alcohol Survey in Britain (Marsh et. al., 1986) reports that 8% of boys and 10% of 14 year old girls, drink usually with their girl/boyfriend, whilst for 35% of the 14 year old boys and 25% of the same age girls, their usual drinking companion is the same sex friend. Lastly, 3% of boys and 2% of 14 year old girls drink on their own.

Goldman et. al. (1986) argue that high-risk youngsters are more likely to have expectations of social facilitation and of cognitive and motor functioning, through alcohol use. In their study, groups of children discussed a number of issues concerning advertising, including adverts that children liked and disliked. The findings suggested that adverts of alcoholic drinks became increasingly salient and attractive over the years of 10-14. At 14-16, lager and beer adverts were seen as promoting masculinity, sociability and working class values. Martini was seen as promoting sociability, style, sophistication and attractiveness. Even 10 year old girls said that Martini aimed at sophisticated women.

The findings indicate that adverts for alcoholic drinks, aimed at older teenagers and young adults, actually attract children by promoting certain qualities such as humour, sophistication, toughness, attractiveness and sociability. Thus, the years between 10-14 or 16 are critical in the development of an adult like perception of the imagery in adverts and t.v. commercials for alcoholic drinks (Aitken et. al., 1988).

In sum, culture is partly responsible for the promotion of alcohol use and abuse. Alcohol is part of everyday life, not only in Britain, as the increased evidence of alcohol consumption by young people suggests. Drinking alcohol is considered to be normal part of adolescent life and many young people are introduced to it by their parents (Marsh et. al., 1986; Stefanis et. al., 1993).

As Mandelbaum (1967) concludes:

"Alcohol is a cultural artifact; the form and meaning of alcoholic beverages are culturally defined as are the uses of any other major artifact".

Subsequently, parental attitudes to drinking play an important role in the drinking behaviour of the adolescent. Together with culture, personality factors, peer influences and coping have to be considered. A fruitful study is one that looks at personality traits, the social network, social support and familial environment, since parental drinking often predicts adolescent's drinking habits (Wilks et. al., 1989). In more than a hundred studies, one third of any sample of alcoholics had at least one parent who was alcoholic; in two thirds of the studies at least 25% of alcoholics had fathers who were alcoholic (Murray, 1989). Although members of the same family and ethnic group share the same genes, family structures and recreational opportunities, the majority of all families and ethnic groups do not become alcoholics despite exposure to heavy drinking peers and relatives (Donovan, 1986).

For a more accurate picture of how and why alcoholic experiences succeed one another, the social and cultural background of heavy drinkers and the dynamic interplay of these factors with each other and with genetic, psychological and physiological predispositions must be investigated.

Murray (1989), argues that in the current era, alcohol has been used as an excuse for irrational behaviour and violence. It has been associated with such a variety of effects, from increased crime to increased sociability and relaxation, that determining whether or not alcohol is an effect or a cause of behaviour in a given situation has become even more difficult (Murray, 1989). The above arguments point to the fact that alcohol related problems are manifested in different ways at different levels in the society.

Edwards (1986) also refers to the fact that for men aged 15-64 years old, the standardized mortality ratio is almost twice as high for social class V as for I. This simply indicates that addiction is a challenge to society and not to the individual alone, and that much of it is determined by social and economic factors which operate outside the immediate control of most individuals.

"Addictions are the examples of the very general truth that a wide range of socioeconomic influences bear on the individual's capacity to handle his/her inalienable personal responsibility. Different substances, cigarettes, alcohol, illicit drugs, medically prescribed drugs, offer variations of this central theme" (Edwards, 1986).

In line with Edwards' arguments other researchers (Newcomb & Bentler, 1988; Rhodes & Jason, 1988; 1990; Wordaski, 1990) also claim that substance abuse is a problem for all age groups and for the whole of the social system. Much of the current research also points to the fact that many of the individuals who use alcohol, use simultaneously other substances (Wordaski, 1990).

Society builds up certain expectations from individuals and similarly individuals expect certain "benefits" by taking drugs and alcohol. It is difficult to define the nature of these expectations, but a starting point can be found within the shared characteristics of substances. These are found in the sociocultural, psychological and biological level (Rodin et. al., 1984).

The literature acknowledges the presence of six properties common to the development of many habitual health damaging behaviours. These are a) the ability of the substances to act as reinforcers, b) the acquired tolerance-reduced effectiveness of the same dose of exposure over time, c) the physical dependence and withdrawal, d) the affective constant euphoria followed by dysphoria, e) the capacity of substances to act as effective Pavlovian unconditioned stimuli and f) the capacity of states like arousal to influence use.

Today, many argue that alcohol consumption precedes any other involvement with drugs, both licit and illicit. In accordance with the stepping stone theory of progressing into drug use 27,000 seventh to eighth grade students in the state of New York have been surveyed. The data showed that students do not use other drugs unless they also use alcohol. White, Black and Hispanic students all tend to initiate the use of drugs in the following order, Alcohol, Marijuana, pills and hard drugs. Cigarettes form an important step between alcohol and marijuana use for younger students, particularly for females (NIDA, 1987).

Amongst the 27,000 young people over 22,000 have used alcohol and 4,600 have used hard drugs. Only 40 individuals reported use of hard drugs without ever having used alcohol. Wordaski (1990) also argues that among those who drink alcohol, 37% also use marijuana and 9% cocaine. Among those who use marijuana, 84% drink alcohol.

In a similar Greek study, Stefanis et. al. (1993) has found that for 70.6% of the adolescents in his population, the use of alcohol precedes smoking, for 65.7% it precedes the use of medically prescribed drugs and for 93.6% the use of hash.

Several explanations have been offered as to why alcohol is the "entry drug" for most adolescents in the U.S.A. One of them, comes from research of Yamaguchi & Kandel (1984), who have suggested that this phenomenon may be indicative of the association of each class of drugs with the different ages of initiation and with individual attributes. Ages of initiation can explain why certain drugs, when they are used, always come first and in a certain order. Therefore, as Free (1993) suggests, the models of drug-use should be drug specific as the importance of variables may vary depending on the stage of drug involvement.

Over the past twenty years there has been a re-appraisal of the nature of alcohol problems. In earlier conceptualization, alcohol related problems were identified only within the alcoholic population; in fact, researchers used to separate alcoholics from the rest of the population who consumed alcohol and perceived alcohol related problems as exclusive to the first drink.

Nowadays, drinking and drinking problems are understood on a continuum, ranging from minor alcohol problems to heavy consumption and many and various problems (Saunders, 1984). This new understanding assumes that problem drinking is a learned habitual behaviour in the same category in which compulsive gambling and tobacco use are. In addition, it gives the opportunity to the scientists to identify

the problems related to alcohol consumption and to classify the specific problems that adolescents experience due to alcohol consumption, without running the risk of labelling them as either "sick" or "helpless".

Saunders (1984) identifies three categories of problems: i) problems relating to intoxication, ii) problems relating to heavy alcohol consumption and iii) problems relating to alcohol dependence. Beyond moderate levels of three to four units, alcohol intoxicates and the type of intoxication will vary from individual to individual. Alcohol intoxication is linked with legal, medical and social problems.

Similar is the case for problems relating to excessive use and dependence. In the latter category are included those who are labelled as alcoholic, since they experience all three problems; intoxication, regular use and dependence. The hallmark symptom of dependence is an inability to withdraw from the use of alcohol. This was believed to be a symptom exclusively found in adults, but current research rejects this point by identifying a new category of the Chemically dependent adolescent (Newcomb & Bentler, 1988).

Chemical dependence in adolescence is described in terms of risk factors which include family structure, peer group, personality and behaviour. Psychological factors include low self-esteem, delinquency, need for excitement and depression. Other researchers (Jessor, 1987; Donovan, 1986) describe chemical dependence in behavioural terms as part of the syndrome of "problem behaviour".

2.2) Gender differences on drinking practices.

Males tend to report more drinking than females, although recent evidence suggests that such differences are less apparent in recent findings (Stefanis et. al., 1993; Marsh et. al., 1986). The argument that Marsh et. al. (1986) bring forward probably is the best example of how culture influences drinking behaviour.

"...some of the older girls are undoubtedly under-reporting their consumption...for boys to get drunk at a young age is to achieve an adolescent ambition. Many will do so as young as possible. Enjoying the status their outraged behaviour attracts, they repeat it. Girls are not drinking by an urge to heroic drinking. Getting drunk is likely to detract from as to add to a girl's status, it may attract a reputation for commonness" (Marsh et. al., 1986).

In the National Alcohol Survey it is reported that 14% of the 14 year old boys and 12% of the same age girls, reported being drunk, more than once during the last year, whilst 2% of boys and 2% of girls, at the same age group, reported drinking on a daily basis. Amongst the 14 year olds, 35% of boys and 36% of girls reported having an alcoholic drink during last week.

When the total consumption of alcohol in Standard Units was tested, 9% of the 14 year old boys and 8% of the same age girls reported drinking 11-15 Standard Alcohol Units last week (Marsh et. al., 1986). In the same study, equal numbers of 14 and 15 year old girls and boys reported alcohol related amnesia.

In a Greek study (Stefanis et. al., 1993), 7.8% of the adolescent boys and girls reported trouble due to drinking. In the Mostriou et. al. (1990) study, 1.1% of boys and 7.6% of girls aged 12-17 years old, also reported having at least an alcoholic drink, 40-49 times during the last 12 months, whilst for those aged 18-24 years old the figures are 18.3% for boys and 4.8% for girls respectively. In addition, for the last month, 10.9% of boys and 6.6% of girls reported having 20-39 drinks, 3.5% of boys and 1.8% of girls having 40-49 drinks, whilst for those aged 18-24, the relevant figures are 21.4% to 11.1%, 18.3% to 4.8% and 2.5% to 0.9% showing a convergence for the two gender groups.

In Hawkins et. al. (1984) study, 95% of boys and 90% of girls have given a positive response to the question "have you ever tasted an alcoholic drink?", by the age of 13 and by the age of 16, this had risen to 98% for both sexes.

Davies & Stacey (1974) report similar findings; 92% of boys and 85% of girls have tasted alcohol by the age of 14, which increased to 98% and 96% respectively by the age of 17. For the 14 year olds, 15% of boys and 14% of girls reported drinking at least once a week, whilst 36% of boys and 33% of girls reported being drunk more than once.

In a study by Mostriou et. al. (1990) which has been carried out in Greece, it is suggested that for the 12-17 year old adolescent boys and girls, the patterns of drinking are quite similar. In the above mentioned study, 68.5% of boys were defined as drinkers as opposed to 66.2% of girls, and 4.1% of boys as Abusers as opposed to

2.9% of girls. 4% of boys and 3% of girls said they got drunk because they enjoy drinking, whilst absenteeism from school due to drinking was reported by the 16 year olds of both sexes.

In the National Alcohol Survey carried out by the National Institute of Drug Abuse in 1990 in the USA, 25.3% of boys and 23.7% of girls aged 12-17 years old, reported drinking during the past month, whilst for those aged 18-25, some gender differences are present (73.3% of boys and 53.3% of girls). However, interestingly enough the Survey reports that 15 year old girls in England and Wales appear to drink more often than even 16 year old boys in Scotland. 4% of boys and 3% of girls said they got drunk because they enjoyed drinking. 17% of the boys said that after having had a lot to drink, they behaved in an aggressive manner compared with 12% of girls, whilst 12% of girls, compared with 6% of boys reported being afraid to go home. The most likely age of any of these experiences was 15 and 16 years old, for both sexes.

Gross (1993) carried-out a study on gender differences in college student's alcohol consumption. The findings suggest that although men reported significantly greater alcohol consumption than did women, in addition there was a significant interaction between gender and age. Women under the legal drinking age had higher rates of consumption than women of legal drinking age; the opposite pattern was found for men. Finally, results indicate that illegal under-age drinking by men and women occurs at a high rate.

Isralowitz et.al. (1993) also argue that in their study which was concerned with male and female differences in alcohol use and behaviour, slightly more women (94%) than men (90%) used alcohol. However, men were more likely to report problem behaviour as well as drinking and driving.

In the above pages we have been concerned to present current drinking practices in adolescence. Review of the literature suggests that a relatively small percentage of adolescents have never had alcohol. In addition, age of first time alcohol experimentation appears to have get lower, showing that an increasing proportion of adolescents have their first taste at around the age of 10.

The drinking levels of frequency and quantity may differ from culture to culture, but overall drinking starts much before the legal age. Boys tend to report more drinking than girls, but recent evidence, at least in the Greek studies, suggest that such differences are less apparent.

The relatively high level of exposure to alcohol and of first time of experimental misuse of alcohol as opposed to frequent misuse underlines the importance of identifying the most salient to drinking factors. Even allowing for the possibility that adolescents over-reported their drinking when the above mentioned studies have been carried out, surveys indicate that the percentage of those who regularly drink alcohol is rather high.

There is clearly a need for more research into the extent and nature of alcohol misuse among the young and the problems associated with it. The following pages are concerned with presenting the conflicting messages that adolescents receive within their cultural context and which are likely to affect the manifestation of the drinking behaviour.

2.3) The effects of media and alcohol advertising on youth.

Adolescence is a critical period for developing the self-concept in the search of identity and for integrating into society. Since these processes are heavily dependent on social interactions, leisure and youth activities constitute a central context of testing, accepting and forming new identities. These activities help the adolescent to find his/her unique place in society through free role experimentation and broad experiences of identification.

Adolescents exist simultaneously within, both family and peer groups, and one may ask how such dual commitments influence adolescents' behaviour and socialisation. Most generalisations about socialisation emphasize the pivotal role of interpersonal processes featuring family and peers (Bandura, 1986), whilst it has been argued that youth socialisation is also affected by the messages that the current culture transmits, with the aid of media and through education.

"Whether we drink heavily, moderately or are totally abstinent, we all possess a host of common sense understanding of the effects of alcohol on man. The bits and pieces of "evidence" upon which these shared understandings are based come to us from a wide variety of sources, parents, peers, schools, books, magazines, radio and television programmes, movies and of course our own everyday experiences" (Tucker, 1987).

In order to understand how drinking practices and beliefs are developed and maintained we must turn to the social systems which sustain alcohol images and behaviour. In modern, western societies the system which provides the most widely shared and continuous flow of drinking images is that of the mass media in general and television in particular, which provide a pool of values, norms, information of reality available and frameworks of understanding through which social reality may be interpreted.

So far the main focus of research on alcohol and mass media has been and continues to be: a) on the content and effects of persuasive communications namely b) advertising of alcoholic beverages and c) alcohol education and information campaigns. Therefore it is interesting to know the extent to which television cultivates and reinforces beliefs that alcohol consumption is the norm rather than the exception in social interaction, that alcohol consumption is the sign of manly behaviour, that alcohol consumption is the mark of, or attributes to, affluent lifestyles, entrepreneurship and achievement, that different types of alcoholic drinks are linked differentially to social class and sex of drinker, and that alcohol consumption rarely contributes to accidents, violence or ill-health.

Therefore, it is reasonable to question the contribution of media involving screen watching, in adolescent socialisation and personal growth, since many (Bandura, 1986) maintain that the media should not be ignored as an agent of socialisation. In the theoretical area, Cultivation theory (Werner, 1986) holds that media exposure tends to cultivate certain kinds of beliefs (e.g. fear of crime) in

members of the audience, acting as an indirect formative agent in the area of values and behaviour (Ried, 1989). This cultivation of beliefs has as a result the formation of value systems in adolescents. Others claim that parents and media work together in the formation of adolescents' values and beliefs. Certain patterns of family communication exert a mediating effect in the media orientations and behaviour of their children (Strickland & Pitman, 1984 cited in Hansen, 1986). In Western societies, the media transmits favourable views of drinking, which often correspond with parent's behaviour and beliefs and in turn influence the adolescents' behaviour.

Consequently, the influence of television on adolescents' behaviour does not depend only on the amount of time spent viewing, but also on the quality of programming, the developmental state of the adolescent and family interactions. Evidence comes also from empirical research. A study by Lawrence (1986) demonstrates that children spend 65% of their total viewing time watching television with another family member. The omnipresence and existence of television suggests that there is a basic source of stimulation and input for the growing child.

In sum, contemporary research indicates that television is one of the most powerful and persuasive teachers in our society. Unfortunately many of the subtle messages conveyed by the colourful medium conflict with the principles promoted by professionals in health and medical sciences.

"Widespread t.v. viewing by the general population, especially young adults and children may be contributing to maladjusted health habits. There is no question that television has an enormous influence over our lives, that television can be presumed to influence health attitudes and behaviour" (Tucker, 1987).

Television has unique properties in dealing with the problem of alcohol and youth. It offers role models who are known and loved and believed. Just as problem drinking is a crucial issue for youths, so television is an important part of their socialisation environment. What television says and does about drinking is important. Television has the business of educating youth, whether this function is fully realised or not, since school lost its role as main source of information a number of years ago.

Educational programmes are at a disadvantage, when compared with the health messages transmitted through the media. To understand the implications of the damage, we have to examine firstly the role of media in affecting health beliefs and secondly the educational attempts to promote a healthy lifestyle.

Although some argue that the impact of the media is limited, due to its "parasocial" interaction, within which identification with the person on the screen, is not complete, others claim that mass media is crucial even for the development of adolescents' personality. In fact, the direct social effects of a high degree of consumption and dependence on mass media, are attributed mainly to the presentation of a highly distorted view of man and the world in the telecasting of "pseudo-real" environments such as styles of living, behaviour, status and social activities. These

may seriously tempt the adolescent to identify and select models for imitation, leading to unrealistic aspirations and expectations (Schneller, 1988).

"Mass media tells the man who he is, what he wants to be, how to get that way and how to feel that he is that even when he is not" (Mills, 1969 in Schneller, 1988).

Without traditional ties, strong role models and opportunities to satisfy interpersonal needs the adolescent retreats almost totally to screen watching. In this way he/she seeks to build an identity in the pseudo-reality of a pseudo-world. Hence, it is not surprising that the latest findings suggest that human development and behaviour are affected by television to a degree far exceeding earlier judgments.

Public concern about the effects of television and other mass media on young people has been reflected in academic research since the turn of the century. Young people watch a great deal of television averaging to 27 hours per week (Nielsen, 1986 cited in Smith et. al., 1988). This is more hours than they spend in school per year. As they proceed through school, they turn increasingly to adult programs and by the sixth grade 80% of children's preferences consist of adult programs (Singer, 1983). Adult programs contain many scenes involving drinking. Televised drinking scenes have an impact on the beliefs and behaviours of children. Evidence comes from current research.

Tucker (1987) claims that heavy viewers among high school boys drink more frequently than moderate viewers. Nevendorf (1985 cited in Smith et. al., 1988),

argues that heavy viewing is associated with more favourable beliefs about drinking among 10 to 14 year olds. Fifth and sixth grade boys, but not girls expressed a more favourable attitude towards alcohol after viewing drinking scenes on television. Tucker's study (1987), suggests that light-television viewers are more physically fit, emotionally stable, sensitive, imaginative, outgoing, physically active, self-controlled, intelligent, moralistic, college bound, career oriented and confident than their counterparts, especially heavy viewers who also use drugs and particularly more alcohol. With the above evidence in mind it is rather discouraging to consider that the amount of time adolescents spend viewing television is at least 147 minutes per day, or else 17,5 hours per week on average (Lawrence,1986).

In order to begin the understanding of the possible contribution of television to alcohol related beliefs and practices, it is necessary to look beyond the traditional research on persuasive communication to the images of alcohol in television programmes generally. A systematic content analysis of the portrayal of alcohol on prime time television programmes, is the point of departure in understanding the effects of alcohol advertising. On one hand, the analysis shows that alcohol images are prominent in fictional programmes. Alcohol consumption is associated with pleasant sociable behaviour and glamorous and affluent lifestyles, while there is little portrayal of the potentially negative effects and consequences of drinking. Therefore, analysis of the content of the present day television programs shows that many inconspicuous health messages are broadcasted repeatedly which may affect viewers over time.

Therefore, research designed to determine the impact of television on health and human functioning has many channels still to explore. Given that youths spend enormous amount of time each year watching television and that countless health messages are conveyed by this colourful and convincing teacher, the effect that television might have on health related attitudes and practices is of vital importance to health professionals and to our society. Singer (1983) concludes that this indifference by social scientists reflects a massive blind spot that is only recently being corrected.

To unveil a significant relation between television, alcohol adverts and human behaviour would add credence to the supposition that television may influence the minds and bodies of the viewers. Such data will provide teachers and parents with additional information regarding the wisdom of limiting exposure to the tube. Such findings would enable scientists to begin the process of guideline formulation relative to healthy levels of t.v. viewing.

Another important chapter in the study of the effects of television is that of advertising, since advertisements of alcoholic beverages are attractive to young children and adolescents. "Advertising has always been the soul of trade, television advertising is the soul of mass communication" (Vota, 1986 cited in Pendleton et. al., 1988). The behavioural patterns that it suggests and fosters, deeply affect the customs and modes of the whole consumer society. And children are in the most vulnerable position.

In Italy alone, in 1987 -between RAI and private TV channels- 585,000 commercials were broadcasted-1500 per day, worth 6 thousand billion lira. What are the cultural and psychological mechanisms behind the influence and the success of a TV spot? Not much is known on this subject. Aitkin et. al. (1987) examined the influence of advertising on excessive and dangerous drinking in a survey of 1,200 adolescents and young adults who were shown advertisements depicting excessive consumption themes. Results indicated that advertising stimulates consumption levels, which leads to heavy drinking and drinking in dangerous situations.

Although, the advertising of alcoholic beverages on television in U.K. is governed by a number of regulations (Section 34 of the IBA Code of Advertising Standards and Practice), research, carried-out by Pendleton et. al. (1988) found that 14 out of 21 alcohol advertisements have been thought by the majority of the students to break the regulations. Regulations forbid advertisements showing solitary drinking, associating drinking with social success or with sexual success or promoting the attraction of high strength drinks. However, a number of advertisements have been contravening the regulations in some way.

With the above evidence in mind, we may wish to present educational programmes which try to reduce adolescent drinking within a sociocultural context which promotes drinking as a desirable behaviour. The aim is to point out that educators have a very difficult role to play, since they have to teach children about the negative effects of drinking on one hand, and they have to fight contradictory messages coming from the broader society, on the other hand. This might be the main

reason of the low rates of success of educational attempts to reduce drinking. It is unrealistic to expect that education will succeed in changing pupils' attitudes and behaviour, by relying on its limited resources. Therefore, the broader community and other family members have to be actively involved in future attempts to deal with drinking. The following pages are concerned with presenting current educational trends and programmes in England and other countries, to reduce adolescent drinking and conclude that to fight the conflicting messages, all parties should be involved.

2.4) Preventive educational programmes.

In order to understand the role of education in current preventive strategies and their relation to health enhancing behaviours, we have to agree on a definition of educational programmes.

Under the heading of alcohol, the definition of an educational program remains unclarified (Howe, 1989). That is because we are not really aware of the extent to which we can link prevention and education. Are we trying to prevent people from drinking or from drinking in a harmful way, or are we aiming at high-risk groups? (Howe, 1989). In other words which is our target group? How do educational programmes define prevention?

Howe (1989) gives some very good definitions of prevention, which is mainly divided in three types-primary, secondary and tertiary prevention.

a) Primary prevention is aimed at healthy people, who are moderate drinkers, and it seeks to educate them about alcohol, to enable them to enjoy it and avoid any harmful effects.

b) Secondary prevention is aimed at those who may be in the early stages of developing an alcohol problem and it seeks to identify problems at the earliest possible stage and prevent them becoming chronic and irreversible. It is also aimed

at special groups within the population thought to be particularly vulnerable to alcohol problems or in need of alcohol education.

c) Tertiary prevention is aimed at those known to be damaging themselves by their drinking and it seeks to encourage them to accept treatment and to maximise their remaining potential for healthy living.

There are several approaches to alcohol education. In the following pages we are going to examine first the approaches and second how these are used within the present educational system. These approaches are used mainly with people who already have a problem related to drinking and not necessarily with adolescents.

i.) ALCOHOL EDUCATION PROGRAMMES:

Some of the main approaches to alcohol education, include information giving, shock-horror, affective, situational, behavioural and harm-minimisation. We are going to explain first the aims of each approach and then the strengths and weaknesses associated with each one. Most people find that effective educational programmes incorporate a variety of approaches.

Starting from the information processing approach, the focus is on providing information and increasing knowledge. The approach is based on the belief that human behaviour is rational and that increased knowledge will lead to changed behaviour. During the early ages of adolescence and before the onset of drinking, it would be beneficial to teach children the true nature and properties of alcohol. Although, the accumulation of knowledge does not necessarily lead to behavioural modification, an awareness of the effects of alcohol in the human body, will help to reduce fallacies and dispel myths.

A further component of the information giving approach involves shock-horror or attempting to deter people from a given behaviour by appealing to their fear of the outcome. However, as an approach it is contradictory to the widely held acceptance of drinking behaviour by society and it also fails to convey a clear-cut message. Research also shows that in many cases the use of this approach has the opposite effect to that intended (Howe, 1989). This could especially be the case with



adolescents who are more likely to rebel to any kind of authority and even engage in behaviour regarded as undesirable and in fact health harming.

The next approach in the area is the affective approach which considers the attitudes, opinions and values held by the individual with regard to alcohol. The aim of the approach is to clarify them and to examine them with a view to modification or change. It assumes that by raising self-awareness one can succeed in modifying one's behaviour. This approach can be used in conjunction with the information giving approach. As it is often the case that individuals form their attitudes on the basis of lack of knowledge, the information giving approach can facilitate the formation of the desirable attitudes prior to onset of drinking, while the effective approach will contribute to the change of attitudes, once being formed. However, it is debatable whether attitude change is followed by behavioural modification.

The situational approach concentrates on the skills needed to cope effectively with various drinking situations and can be used with clients wishing to stop drinking. Within the situational approach, a very useful trait for development is that of self-efficacy. Self-efficacy is that specific characteristic of the individual which leads him to believe that he can cope effectively with risk situations (Bandura, 1986). Adolescents, often find themselves in drinking situations and they therefore need the necessary skills to both cope with such situations and believe that this is not going to affect their status within the peer group.

Ewles & Simnett (1985) sum up the aim of the behavioural approach as being the change of people's attitudes and behaviour and the adoption of a healthy life style. The approach includes increasing assertiveness and raising an individual's personal sense of control, confidence and coping abilities. However, it has been criticised as neglecting the broader influences on an individual's drinking and as focusing only on the individual him/herself. Finally the harm minimisation approach, which is the most recent one in the field of alcohol consumption, has as an aim to reduce or minimise patterns of drinking and not to stop people from drinking altogether.

Therefore, it encourages controlled drinking and it offers alternatives to it. In the case of adolescents, the usefulness of the harm minimisation approach is questionable and is regarded by some as encouraging health harming behaviour and engagement with other drugs as well as with alcohol. The shock-horror approach probably has no effect, since people are not bound to believe its messages or even worst they are not interested in what will happen to them after 10 years time, but are more prone in enjoying their current lifestyle.

The situational approach, that teaches the individual to avoid drinking situations, is probably not desirable, since the individual perceives drinking situations through the media, as being attractive. Finally, the harm minimisation approach is at least more realistic by teaching individuals to regulate drinking.

Hence, most approaches seem to have been developing without taking into consideration the messages that the individual receives from the media, and without tackling the dilemma of indulging into a short-term rewarding behaviour or sustaining one's pleasure for the rewards of a healthy living.

In the following pages we are going to discuss briefly the nature and aims of educational programmes, as reported in the current literature. However, it is beyond the scope of this chapter to suggest alternatives. This will be done at a later stage and in accordance with the findings of the present study.

ii.) ALCOHOL EDUCATION PROGRAMMES IN BRITAIN AND AMERICA:

The most widely used alcohol education programme in Britain, is the one which was developed by TACADE (Teachers Advisory Council on Alcohol and Drug Education). In their alcohol education syllabus which is intended for students from 16 to 19, that is middle and late adolescence, a systematic attempt is made to provide a comprehensive programme of alcohol education for young people.

The programme is based on the latest thinking about the use of informal methods which actively engage young people in their own learning. Although this claim seems to be apparently true, and one can argue that young people are actively engaged in the process of learning, the curriculum does not go as far as to cater for the needs of those at risk. The programme is exclusively designed for adolescents who are moderate or light drinkers, although it involves some situations whereby hazardous drinking may take place. Even so, there is no evaluation of the programme as such and there are no indications of its success or failure. The first question arising, is whether it is adequate to deal with adolescent drinking in general or whether we should go further and attack the minority at-risk.

In the following pages the TACADE programme for the above age group will be presented and the argument for a greater sensitivity towards the vulnerable will be concluded. The syllabus is divided in units and each unit is claiming to respond to the needs of young people, based on the consideration of both, their drinking and

non-drinking behaviour and their personal and social development. This particular package which is intended for use with young people aged 16-19 years, consists of 5 units, each with a different focus or emphasis. Each unit contains systematic teacher's notes and separate sheets of pupil's materials. The first unit is an introduction to alcohol education where alcohol is explored in relation to other drugs, myths about the properties of alcohol are dispelled and attitudes to alcohol are attacked. In the second unit the emphasis is on drinking styles and influences on drinking. The initial task is to identify the drinking styles and explore the range of personal influences on such styles. The unit suggests other ways of relaxing and it provides guidelines for responsible drinking.

In the third unit the focus is on the decision-making process in social situations. The function of the pub and the pros and cons of round-buying are discussed. Some personal characteristics, such as assertiveness, a positive self-image and respect for others, which facilitate decision making are explored. The fourth unit deals with drinking and driving and the decisions which precede such an action. Finally on the fifth unit, other alternatives to alcohol consumption, are offered.

By looking at the above syllabus, several questions come to present themselves and require answering. By the end of the package one realises that the whole process of drinking is regarded as a decision making process, which is mostly the case for individuals who are not at risk of developing a chronic problem. What happens to those at-risk? Is it a matter of personal decision to abuse or misuse alcohol? If not, how does the programme take this into consideration? The point is that it does not,

because it fails to recognise that the troubled individual needs help beyond the point of decision making to the point of actual support and understanding from the environment. Therefore, the above programme oversimplifies the problem of the troubled adolescent and it is addressed exclusively to those who are experimenting with alcohol. Even within this group its levels of success are unknown. However, it is impossible to criticise the success rates of the programme, without having some empirical evidence for its implementation.

There is only one study which is based on the above guidelines and gives some information in relation to a better approach. The study, called Action Plan took place in 1985 by a group of researchers from Bristol University and it was implemented in the South West of England. The Action Plan stresses the need for a social learning approach to alcohol education because this kind of approach recognises the individual's right to choose, the importance of participative forms of learning and the need to locate alcohol issues within the broader question of health and health promotion. A manual known as the Drinking Choices Manual was developed by the TACADE (Teacher's Advisory Council of Alcohol and Drug Education) and it focuses on learning rather than teaching. The programme involves a series of residential Key Tutor training courses, who would then run their own courses for local alcohol educators who would in turn run courses for clients, thus building a pyramidal structure.

However, the programme is not designed for schools or troubled adolescents only but it covers a broader range of drinkers. Therefore, in all regions the

researchers approached the whole range of services available for problem drinkers. Within this framework, the researchers provide a small report of the current situation in schools. They found out that health education varied enormously in how it was taught, with the majority of teachers involved in a didactic and prescriptive approach in which young people are simply warned about the dangers of certain types of behaviour. Health education is often addressed in a fairly incoherent way through a variety of subjects supplied by a variety of teachers, many of whom were chosen because they had the space to take on further commitments.

In America, the realisation has come that the decision to drink is a multidimensional one, in which several processes are involved varying from the micro to macro culture and to the individual him/herself. The efforts vary from one school of thought to another and the distinction between prevention and identification of the high-risk groups is made. In the following pages these programmes will be presented.

In the American tradition it has long been recognised that substance behaviour is related to a variety of factors and not simply to the absence of knowledge about the health, social and legal risks (Rhodes & Jason, 1988). Accordingly the information programmes have been proved to be ineffective and have in fact been associated with an increase in experimentation (Schaps et. al., 1981; Gordon & McAllister, 1982). As a result more sophisticated skill based strategies were developed. These strategies seek to enhance the social coping skills of youth by incorporating attempts to socially inoculate the students and increase assertive behaviour to prevent the onset of drug using.

The above programmes are focusing mainly on smoking behaviour and recognise peer pressure, parental pressure and media messages as the most influential on the decision to smoke (Evans et. al., 1977). Other programmes, such as the CLASP (Counselling Leadership Against Smoking Pressure) have made peers the most important agents.

Overall, psychological inoculation, role playing, cognitive modelling and peer led assertion training have all been utilised with varying success. It has been suggested however that young people with fewer environmental resources and life skills may be less successful in resisting the interpersonal pressures to smoke (Schinke et.al., 1989). Recently, the above programmes moved from focusing exclusively on smoking behaviour to focusing on a variety of drugs. Since 1980, researchers from DePaul University have been implementing a skills-based substance abuse programme in inner-city Chicago Elementary schools.

Evaluations have indicated decreases in substance use as well as improvement in a variety of behavioural and cognitive skills (Rhodes & Jason, 1988). However, the programmes fail to address the ecological factors which may be responsible for engagement with the above behaviours.

Pentz (1985) have developed a programme called Student Awareness and Resistance skills (STAR) which is based on the social competence model of substance abuse. The model makes the assumption that there is a strong correlation between substance use, parent and peer substance use, low self-efficacy, problems behaviour,

stress and low social support from adults. The aim of the programme is to develop students' self-efficacy, to increase social competence and to decrease substance abuse.

A cognitive and behavioural skills training programme has been developed by Schinke & Gilchrist (1984) aiming at the enhancement of such skills as decision-making, problem-solving and interpersonal communications in a variety of social situations. The programme has consistently demonstrated the effectiveness of the cognitive behavioural approach to substance abuse prevention. Finally, Botvin et al. (1984) developed a curriculum based programme for prevention, called Life Skills Training (LST), which seeks to facilitate the development of generic life skills, as well as skills and knowledge more specifically related to substance abuse. The students are taught general assertiveness skills and how to use these skills to resist direct interpersonal pressure to consume drugs. Recent evaluation of the programme indicates that it is capable of producing initial reduction of 50% or more in new cigarette smoking among junior high school students and it has also been found to have a significant impact on both, drinking and marijuana use.

However, as Rhodes & Jason (1988) also point out, it is noteworthy how seldom families have been included in substance abuse prevention programmes, although such involvement should be desirable. Several studies demonstrate that when families are included, risk factors can be reduced, early signs of problems can be reversed and family tights can be strengthened. Although the above programmes have varying levels of success for the adolescent who simply experiments with alcohol, some points remain unspecified in regard to the high-risk youth.

Rhodes & Jason (1988) summarise the problem in a single question: "Can we work with students at lower risk for substance abuse and at the same time adequately address the needs of those already engaging in problematic usage?" The answer is that more intensive and differentiated interventions should be made for those at higher risk. Obviously the starting point is to identify those at risk at an early age and to locate an appropriate programme in accordance to the individual's needs. Adolescents at risk should be identified not through the legal or the mental health system but rather through the teacher and the school system, by the identification of evident behaviours related to substance abuse and by the use of diagnostic interviews with parents and children. This is the only way to ensure that we attack the problem early enough, before it becomes irreversible. The focus is not therefore on which specific treatment to use for intervention but on how to identify and motivate the high risk adolescents to accept treatment.

Intervention programmes might vary from individual to group and family therapy, which cover the set of personal and psychological needs. Regardless of the type of intervention the educational programmes should be designed to identify early enough those at risk, before the development of chronic health endangering patterns of abuse emerge.

SUMMARY AND REVIEW:

The above findings suggest that individuals have to cope with conflicting messages. On one hand, the media sources send messages that exert the positive aspects of drinking, and on the other educational programmes try to prove the fallacies of such beliefs and in addition to modify people's attitudes and behaviour. As a result, health messages remain unclarified and often poorly received by adolescents. According to Barnes (1984) most alcohol education programmes lack of a sound theoretical basis for programme development and evaluation. In addition, those at-risk are never identified through educational programmes and preventive strategies.

In the above pages, we have been claiming that drinking in adolescence is a reality which involves several problems. We have also agreed that in the light of current research alcohol is the stepping stone to other substances. Therefore, the focus has to shift from the macro-culture to the micro-culture, where daily interactions and hassles affect the well-being of the developing adolescent. In the following pages, familial and psychological factors will be explored and they will form the theoretical background upon which the current research wishes to be based.

CHAPTER 3: ENVIRONMENTAL AND FAMILIAL FACTORS AFFECTING ALCOHOL EXPERIMENTATION/MISUSE

3.1) Vulnerabilities for alcohol use amongst children of

Alcoholics:

Risk factors are variables associated with an increased risk of a disorder. Even though, an association does not imply a causal relation, these factors help to identify groups who are at relatively high risk for developing a condition and may provide clues concerning its aetiology (Helzer, 1987). Today, it is recognised that the presence of one or more alcoholic parents might contribute to children's alcohol misuse. We will argue that not only the alcoholic family, but any dysfunctional family as such, constitutes a risk factor to abuse. However, our first concern is the alcoholic family and its biopsychosocial effects on the individual.

Family studies support the association of genetic factors with alcoholism and with the metabolism of alcohol which might influence tolerance and physical dependence (Nordstrom et. al., 1987; O'Connor, 1978; Werner, 1986), indicating that familial alcoholics experience a more severe form of dependence.

A statement which has been widely used for several centuries is that "alcoholism runs in families" (Donovan, 1986). However, scientific evidence and our understanding of the whole process has developed only in the last quarter of this century. Researchers used different methods to investigate the matter. Separating

genetic from environmental influences is difficult, but one of the methods involves the study of identical and fraternal twins, and the other the adoption studies, where people who are known to have alcoholic parents in their biological families but not in the adoptive families are traced. Both approaches will be discussed in terms of both methodology and results.

i.) TWIN STUDIES:

Twin studies, through the comparison of identical and fraternal twins were trying to demonstrate that identical twins were more often concordant to alcoholism than fraternal twins. This, would point to a genetic influence, since the method assumes that MZ and DZ twins have equally variable environments (Searles, 1988). Heritability can be directly estimated from twin studies data, as twice the difference between the intraclass correlations of MZ and DZ twins. [$h^2=2(r_{mz}-r_{dz})$].

In relation to the hypothesis, Kaij (1960), found that identical twins were significantly more concordant than fraternal to alcoholism. A Finnish study (Partanen, et. al., 1966), also found that among younger persons a significant difference between identical and fraternal twins was present in relation to alcoholism. A British study (Murray et. al., 1983; Murray, 1989), showed no difference at all between identical and fraternal twins.

The results of the above studies vary, since a) the criteria for the classification of alcoholism are not commonly shared and b) some methodological problems are inherent in twin studies, making it completely difficult to disentangle genetic from environmental effects (Searles, 1988).

Only two of the twin studies attract considerable attention due to their sample size, the effort made to determine dizygosity and the relatively objective data obtained (Searles, 1988). In both studies, of Hrubec & Omenn (1981) and Loehlin & Nichols

(1976), a model of alcohol abuse influenced by genetics, was supported. The MZ twins were shown to share identical genes, but it is also plausible that they were under the influence of very similar environments. Therefore, twin studies on their own cannot confirm the hypothesis of a genetic basis of alcoholism.

ii.) ADOPTION STUDIES :

The adoption method permits one to access genetic and environmental factors independently. The hypothesis, is that genetically dissimilar individuals reared in the same home, yield a direct estimate of shared environmental factors. Methodologically, these studies provide the most powerful evidence of genetic and environmental contributions to any trait of behaviour, but only few of them are related to the aetiology of alcoholism (Searles, 1988). The first adoption study on alcoholism, done by Roe in 1945, found no difference in alcohol consumption levels between children of alcoholics and children of non-alcoholics, both in their early twenties. The sample size, though, was small and no criteria were presented as for the diagnosis of alcoholism.

A small explosion of adoption studies, began in the early 1970s, by a study comparing half siblings of alcoholics with full siblings (Schuckit et. al., 1972). The hypothesis was that if, genetic factors were significant in the prediction of alcoholism, full siblings would more often be alcoholic than half siblings. However the results failed to prove the hypothesis, although the study suggested that biological factors were more important in leading to alcohol related problems than environmental factors. Similar results were derived from three different studies which took place in Denmark, Sweden and U.S.A. respectively (Goodwin, 1985; Searles, 1988; Bohman et. al., 1987).

These studies concluded that: a) sons of alcoholics were three or more times more likely to become alcoholic, whether raised by their biological or adoptive parents (Goodwin, 1985) and b) sons of alcoholics were no more susceptible to psychiatric disturbances than were sons of non-alcoholics, when both groups were raised by nonalcoholic adoptive parents. The results regarding female alcoholism were more equivocal. The Danish study introduced the notion that adoption might contribute to alcoholism (Goodwin, 1985) by showing that 4% of the daughters of alcoholics were alcoholics themselves, but 4% of the control women were also alcoholics. In a previous study, Goodwin (1973; cited in Goodwin 1985), found a genetic influence in the aetiology of alcoholism, failing however to consider the role of the environment and the social interactions. In addition several problems arose due to lack of control groups, high rates of foster parent psychopathology and high proband divorce rates (Searles, 1988).

The Swedish studies (Bohman et. al., 1987), on the other hand used an adequate sample size to suggest that: a) there are multiple pathways to alcohol abuse, b) men and women do not exhibit the same patterns of abuse, c) one pattern of abuse is highly heritable and is found exclusively in men, d) environmental factors are significantly associated with the most common type of alcohol abuse and e) there is a significant interaction of Genetics X Environment, which is manifested in Type 1* alcohol abuse. The above studies have identified two distinct types of alcohol abuse which they labelled as Type 1 or "milieu limited" and Type 2 or "male limited". Type 1 was associated with both mild and severe abuse and Type 2 only with severe alcohol abuse as well as with severe criminality.

From the methodological point of view the Danish and Iowa studies, involved personal interviews with the adopted children and the application of DSM-III type criteria for the diagnosis of alcoholism. The Swedish study, was based on records linking alcohol-related arrests, demographic information, hospitalizations and clinic visits for alcoholism. The records did not include diagnostic criteria, whilst gender biases were present, due to the heavy emphasis placed on alcohol-related arrests involving more men than women (Goodwin, 1985). Although the above studies offer some useful data on the association between genetic influences and alcohol abuse, they tell us little about how alcoholism is transmitted or what is inherited. The results can be suggestive but not conclusive due to the limitations in the data.

The heightened risk for developing alcohol-related problems is also mediated through learning and imitation of the familial practices. When considering the involvement of alcoholic families in the perpetuation of alcohol problems, it is important to appreciate that this topic can be studied from a variety of divergent perspectives, with the two most influential models being, the stress-victim and the systems approach.

The stress-victim model (Orford & Velleman, 1990) supposes that the drinking behaviour of one family member has a stressful impact upon other members of the family, who then search for ways of responding or coping, in either a functional or dysfunctional way.

The non-excessively drinking members of the family are themselves at risk of developing a drinking problem whilst trying to cope with the stress they experience. Recently, a great deal of research is concerned with the kind of stresses to which children of alcoholics are particularly prone (Orford & Velleman, 1990). Chronic exposure to poor family atmosphere with much parental marital tension, discord and disruption of joint family activities and rituals is amongst the most important sources of stress. Orford & Velleman (1990), also suggest that other forms of stress are particular to this population, such as restriction on meeting friends or reciprocating invitations because of embarrassment about parental behaviour. Thus, the stress-victim approach assigns clear roles to different family members; one is excessive drinker and the rest receive the impact and are at risk of suffering ill effects as a result.

A systems view of families with alcohol problems, treats the family as an indivisible system of people playing interdependent roles, and it eschews the idea of attributing to individuals any particular parts in the drama, such as problem person or stress-victim. From a systems perspective, the role of alcohol in the family is purposive, adaptive and meaningful. The idea of homeostasis is important for understanding the way in which the family has become stuck in a repetitive pattern, involving excessive drinking. It also suggests the difficulty the whole family might have, in accepting and adjusting to change. However, systems thinking runs the risk of losing sight of the common sense approach; that partners and children of alcoholics are victims of the excessive drinking with which they have to cope. On the other hand, the stress-victim approach runs the risk of ignoring the interactional nature

of family life and the possible family functions that continued excessive drinking might be serving (Orford & Velleman, 1990).

There is an intensive study of limited number of families of alcoholics searching for markers that are present in alcoholic relatives but absent in non-alcoholic relatives. The alcoholism literature suggests that families with male alcoholics have matriarchal family structures in which drinking allows the husband to play a more dominant role (Jacob & Leonard, 1988). Another theme, featured in the early literature, is the systemic notion that alcoholism serves a stabilising and even adaptive function for families.

One of the most important contributions in the area, is the work carried-out by Steinglass et. al. (1988). He suggests that alcohol intoxication can in fact facilitate the expression of certain family behaviours while inhibiting others. At first, he argued that alcohol use was a signal that the family was experiencing stress, drinking was regarded as part of the ongoing stable family structure, allowing for the clarification of patterns and the establishment of boundaries that would otherwise be unclear. Later formulations led to what Steinglass et. al. (1988) termed as an "alcohol maintenance" model. In this model family behaviour was reported to be more exaggerated and restricted in range under states of intoxication. Moreover, alcohol seemed to serve an adaptive problem-solving function, although the resolution was seen as only temporary.

Other familial factors, such as degree of dependency, family conflict, modelling of abuse, social isolation and parental neglect, also point to environmental influences which contribute to alcohol abuse. Tarter (1988), reported that well before any exposure to drinking, biological sons of alcoholics are deficient in emotional self regulation, planning, memory, perceptual motor functioning and language processing in comparison with matched control subjects. At the physiological level, the same investigators located the area of deficit at the prefrontal cortex and posited a neurotransmitter disequilibrium at the biochemical level.

A study by El-Guebaly (1990), demonstrates that adult children of problem drinkers are more likely to be divorced, separated or remarried themselves, to be heavy drinkers with indications of alcohol problems and to use more sources of help for problems with stress, anxiety and alcoholism. Beardslee et. al. (1986), also found that the degree of exposure to alcoholism in the childhood family environment is highly correlated in later life with alcohol abuse.

Kashubeck & Christensen (1992) study which investigated within-group differences in psychological distress, social support and hardiness among adult children of alcoholics, concluded that not all adult children of alcoholics are the same or that is some common reaction on the part of all individuals to parental alcoholism.

Similarly, Ulman & Orenstein (1994) argued that the power of an alcoholic parent within a household is related to whether offspring become alcoholic. In considering reasons for this relationship, Ulman & Orenstein (1994) suggested that

children and adolescents are more likely to emulate and identify with a powerful alcoholic parent and through these processes learn that alcohol can make them feel powerful. If environmental and psychosocial factors play a role in the occurrence of disorders in the offsprings of alcoholics, then qualitative and quantitative studies of the degree of exposure of the child to the alcoholic parent are needed.

Up to now, studies assume that children in the same family are exposed to similar environmental influences, such as socioeconomic opportunities, child rearing practices, attitudes and other parental characteristics. Rowe & Elam (1987), suggest that in order to understand the extent of familial influences on drinking behaviour we have first to study, what is called the between-family environment or shared E (E2), which acts in order to make individuals in the same family alike, and then the non-shared or the within family environment (E1) which acts to make family members different from one another and unique individuals. Because of the potential of E1, multiple members of the same family can be included in future research, since the family illness, adoption and twin studies establish a modest but significant inherited vulnerability to alcoholism (Donovan, 1986).

In addition to the above, an interesting study with adult children of alcoholics (Black, 1981) suggests that they use one of four family roles: the responsible one, the placater, the adjuster or the acting out child. The responsible one is usually the oldest or the only child who assumes responsibility for him/herself and other family members. This child seldom misbehaves and in fact he/she is very successful in the tasks he/she undertakes. The adjuster deals with the chaotic family by following

directions and adjusting to situations. This is the child who appears most detached from the family and of whom family members take little or no notice. The placater is the family comforter, who tries to make others in the home feel better. This is the most liked child by the family. This child feels safe because he/she never has to experience the pain of dealing with his/her own family reality. Finally, the acting out child draws attention to him/herself by negative behaviour. This child is the family scapegoat. Although the above findings are interesting they are also limited. The study is retrospective and applied to alcoholic families only.

Most alcoholics live within their own miniculture, a family system which can serve to maintain their drinking so that alcoholism can be seen as both, the cause and the effect of family dysfunction. Consequently, the study of children of alcoholics may be fruitful due to the different roles adopted by alcoholic children in response to the family disorganisation and confusion which might encourage some children to require a greater degree of responsibility and to exercise greater decision making. The above might also explain abstinence (Berkowitz & Perkins, 1988). Daniels (1986) found that the sibling who experiences more maternal closeness, who participates in family decisions, who experiences more peer and sibling congeniality shows better psychological adjustment as reported by parents, teachers and children themselves.

Other studies in the literature also address the problem of alcohol and drug abuse among adolescent children of alcoholics as a function of psychosocial characteristics (Krois, 1987). Children of unrecovered alcoholics when compared with children of recovering alcoholics, score higher on external locus-of-control (Krois,

1987), whilst children of alcoholics in general, make significantly more external attributions than children of non-alcoholics. Prewett et. al. (1981) argue that this is due to the fact that children of alcoholics are not exposed to many, of the normal socialising experiences, necessary to develop the competency required to cope effectively with their environment.

Thompson & Wilsnack (1987) also, report that parental drinking influences adolescent drinking in several ways; by modelling the drinking behaviour, by exhibiting and expressing positive attitudes towards their children's drinking and by generating conflict with their children which motivates them to drink. For the above researchers the most important influence is the parent-child conflict. Adolescents who are alienated from their parents and hostile towards them, are more likely to start drinking and to develop drinking patterns that involve heavier consumption, more frequent drunkenness and more problem consequences.

The connection, between conflict and drinking, deserves further analysis in order to determine: a) how many adolescents use alcohol as a way of coping with the tension and anxiety they experience at home, b) how many use it to show rebellion against parental authority, c) how much conflict leads adolescents to peer oriented involvements, attachments and commitments and finally d) how many they generally conform to peer expectations in order to avoid exclusion, ridicule or ostracism. In that light commitment to the world of youth may become predictive of occasional or even heavier alcohol use.

However, our concern is not just the alcoholic but any dysfunctional family where children and adolescents are at increased risk of developing problems. Within such families, life is often chaotic, unpredictable, arbitrary and inconsistent; children are neglected, disciplined inconsistently, scapegoated and given few concrete guidelines for behaviour. The family is uncommunicative and the family relationships pathological. Consequently, such family practices are likely to hinder emotional development and to generate stress in children, being clearly outside the range of human experiences usually considered to be normal. As Lowe & Foxcroft (1993) argue "family dynamics incorporate non-alcoholic specific and alcoholic-specific socialization influences for teenage alcohol use". (Lowe & Foxcroft, 1993).

3.2) Vulnerabilities for alcohol use amongst children in

Dysfunctional Families: Cohesion and Adaptability.

Of particular interest to this study is to find the link between alcohol misuse in adolescence and family interactional patterns. Thus, the main concern is to identify the relationship between adolescent's perception of his/her family, irrespective of parental drinking practices and alcohol related behaviour. The idea of a dysfunctional family has been used here.

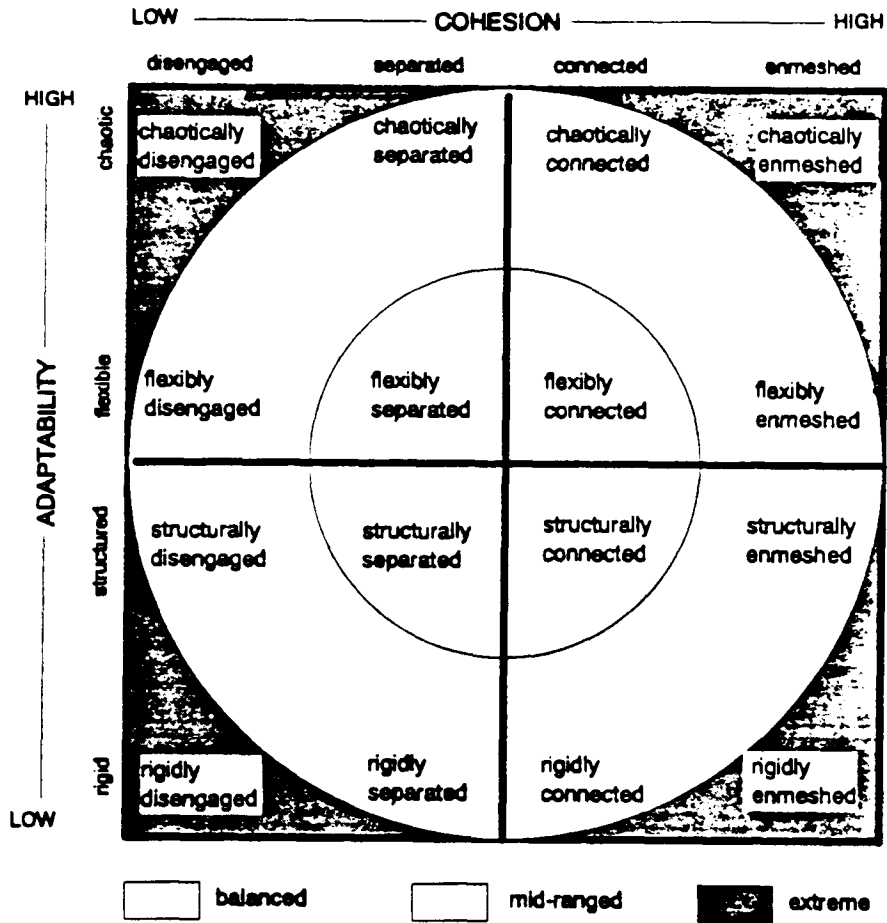
Basic dimensions which help to characterise a family as functional or dysfunctional, are those of cohesion and adaptability. The conceptualization of the family as cohesive and/or adaptable has been presented by Olson et. al. (1985) after several years of study and research. Olson et. al. (1985) and his co-workers, define cohesion as the emotional bonding that members of the same family have with one another and the degree of individual autonomy a person experiences in the family system.

Adaptability, refers to the ability of a family system to change its power structure, role relationships and relationship rules in response to situational and developmental stress. Besides Olson et. al. (1985), other family researchers (Moos, 1974) have stressed the role of cohesion and adaptability in families. Families which have adolescents function better when they are balanced (mid-range scores) on the dimensions of cohesion and adaptability. Often adolescent's perceptions of family

functioning differ from parental perceptions. In Patterson & McCubbin (1987) study adolescents believed that their families were less adaptable than their parents believed. They claimed that the present family system was not very flexible in its ability to change its power structure, role relationships and rules in response to situational or developmental stress. Adolescents also expected the family to be less cohesive.

Within the Circumplex model (Olson et. al., 1985), there are four levels of family cohesion ranging from extreme low cohesion to extreme high cohesion; these are as follows: disengaged, separated, connected and enmeshed. The two moderate or balanced levels have been named, separated and connected. There are also four levels of family adaptability, ranging as well from extreme low to extreme high adaptability, named as: rigid, structured, flexible and chaotic. The two moderate or balanced levels have been named, flexible and structured.

For each dimension, the balanced levels are hypothesized to be the most viable for healthy family functioning and the extremes, are generally seen as problematic for couples and families over time. Sixteen types of family and marital systems are identified by combining the four levels of the cohesion and the four levels of the adaptability dimension. Four, of these 16 types are moderate on both, the cohesion and adaptability dimension (balanced-types). Eight types, are extreme on one dimension and moderate on the other (mid-range types) and four types, are extreme on both dimensions (extreme types). On the following page, one can see the sixteen types of marital and family systems, conceptualized in the circumplex model.



A central hypothesis, derived from the model, is that balanced families will function more adequately than extreme families. This hypothesis is built on the assumption that families, extreme on both dimensions, will tend to have more difficulties coping with situational and developmental stress. The above, assumes a curvilinear relationship on the dimensions of cohesion and adaptability, meaning that too little or too much cohesion or adaptability is seen as dysfunctional to the family system. However, families, that are able to balance between these two extremes, seem to be coping better.

Smith et.al (1992) explored how perceptions of family conflict and cohesion were related to alcohol expectancies in the prediction of drinking patterns. Measures of conflict in the family were predictive of both quantity and frequency factors of drinking and of high levels of alcohol related problems. Measures of family conflict and cohesion appear to be important predictor factors of drinking and need further research to understand their role as risk/protective factors in the development of problematic versus non-problematic patterns of drinking.

As research suggests (Barnes & Farrell, 1992; Beck & Lockhart, 1992; Lowe & Foxcroft, 1993) effectiveness at preventing adolescent drinking depends on parental stage of involvement, parental support and family socialization variables.

Studies, focusing on alcoholic families, in which the identified patient is the mother or the father, have found significant differences between the chemically dependent and the non-dependent families (Olson & Killorin, 1984, 1985). As hypothesized,

alcoholic families were more likely to be classified extreme when compared to the non-dependent families. While only 32% of the dependent families were balanced, about 65% of the non-dependent families were balanced.

In their study, Rodin et. al. (1984) compared 58 mother-son dyads from father-absent families in which half (29) had an adolescent juvenile offender and the other half had adolescents with no history of arrest or psychiatric referral. Only 7% of the delinquents' families were balanced while 69% of the non-delinquent families were balanced (Olson et. al., 1985). Kwakman et.al. (1988) study also reports that drinking to facilitate social contact was the most frequently mentioned reason for drinking by adolescents anxiously attached to their parents.

Novy & Donohue (1985) also argue, that children in disharmonious homes are not only exposed to increased risk and more intense delinquent pressure than other juveniles, but they must also face these risks and pressures with underdeveloped socioethical resistance; at the same time these children are being handicapped by emotional disturbance caused by lack of family support. Current research in the behavioural sciences confirms that, day to day social settings serve as important determinants of the patterns of psychological growth, development and adaptation or maladjustment. The adolescent participates in three social settings simultaneously: the family, the peer group and the school.

There are often particular needs, that are not being met in any setting or particular demands for interaction, that are difficult for the adolescent to meet. Either

of these circumstances will make adaptation extremely difficult and the emergence of psychosocial deviance a likelihood (Novy & Donohue, 1985).

Familial relationships are very important determinants of future behaviour. Having parents who drink obviously affects adolescents' decision to be involved with drinking, either by providing role models for imitation (Barnes & Olson, 1985), or by creating an intolerable family atmosphere in which coping resources are unavailable. There is a link between adolescent drinking and family attitudes and behaviour to alcohol, since most adolescents are given their first drink by a family member (Lowe & Foxcroft, 1993). However, the quality of family oriented interactions with alcohol may lead to adolescent drinking behaviour which is socially deviant (Lowe & Foxcroft, 1993).

Not only the presence of a heavy drinking family, but also the presence of extreme familial patterns influence adolescents decision to drink, especially when adolescents do not receive the amount of emotional and pragmatic support, that they would like to receive from other family members. Lack of social support combined with extreme familial practices, constitutes a risk factors for the well being of the individual. Social support will be considered in the following pages, and its relation to drinking practices and familial relationships will be identified.

3.3) The role of Social Support.

The role of social support, as a key factor in the aetiology of health harming behaviour, found recognition in the mid-1970s. Evidence, that the quality and quantity relationships with other people moderate responses to stress and influence health and adjustment, has stimulated research on the characteristics of social support. Most of the literature seems to be based on the assumption that social support is an environmental provision; meaning that the amount of support a person receives, depends on what the environment provides. However of particular importance is the attribution that people make up their own social support levels. How an individual deals with his/her social environment has a great deal to do with what the environment provides (Sarason et. al., 1980).

Despite more than a decade of social support research, we still lack an understanding of how social ties are health protective (Heller et.al., 1986). This lack of understanding, derives from the lack of a methodological framework and of a clear definition of how these processes can be assessed.

Social support, was originally conceptualized as an environmental variable, a resource that resided outside the individual (Cutrona, 1989). In general, it has been characterised as the degree of support provided to an individual, particularly in times of need, by the persons involved with him/her, such as spouse, family, friends or members of the larger community. Specifically, social support has been defined as

information that leads the individual to believe that he/she is cared for and loved, that he/she is esteemed and valued and belongs to a network of communication and mutual obligation.(Cobb, 1976). Cassel (1976), Caplan (1974) and Mechanic (1978), define social support in terms of social networks, which serve multiple functions in helping one adjust to the demands of the environment. Dean (1977), suggests that social support may be viewed as organised around two systems: the instrumental system which is geared to the fulfilment of tasks and the expressive system, which is directed towards the satisfaction of individual needs and the maintenance of social solidarity.

Lazarus & Folkman (1984), identify three categories of social support; emotional support which involves intimacy and receiving reassurance, tangible support or the provision of direct aid and services, and informational support which includes advice concerning solutions to one's problems and feedback to one's behaviour.

Significant others can aid in problem solving by providing information which clarifies a situation and the feelings associated with it, or by suggesting new action alternatives and social activities. A social activity involves social support, if it is perceived by the recipient of that activity as esteem enhancing or, if it involves the provision of stress related interpersonal aid (emotional, cognitive, restructuring or instrumental support) (Heller et. al., 1988).

However, individuals who feel that they cannot or do not reciprocate the support that they receive, are less likely to ask for help, and more likely to feel guilty and to exhibit lower levels of self-esteem (Antonucci & Israel, 1986). The literature

suggests, that the esteem enhancing component of social support is more important for health maintenance than the more practical, stress related component.

In relation to health, social support is perceived as either, a buffer, protecting people from potentially pathogenic influences of stress (Cohen & Wills, 1985), or as a "main effect", as beneficial to the individual regardless of whether he or she is under stress. When social support is perceived as a buffer, one assumes the existence of stressors or stressful circumstances which take place within the social network. These are defined as negative life events and chronic life strains (Thoits, 1982). Negative life events require coping, whether this is an attempt to enhance the fit between person and environment, or attempts to meet environmental demands and to prevent negative consequences (Lazarus & Folkman, 1986).

Social support enters here as another form of coping which provides the individual with instrumental, socioemotional and informational aid, resembling the problem-focused, emotion-focused and perception-focused ways of coping. Social support assists the person to change the situation, to change the meaning of the situation, to change his/her emotional reaction to the situation, or to change all three (Thoits, 1982). On the other hand, the individual is not a passive recipient but a major player in shaping networks and eliciting feedback from others.

During adolescence, consumption of alcohol assists the individual to overcome life stresses by attacking emotions and perceptions of life. During that developmental stage, life stressors derive from several sources. These are related to perceptions of

self-worth, to acceptance by peers and to relationships which take place within the family. In that perspective, stress "must be viewed as arising from interactions between people and that we cannot understand stress solely from a within-organisation or even a within-person perspective". (Worrall & May, 1989).

Assessed relationship between adolescents' problem drinking and their perceptions of stressful relationships with people or situations suggest that perceived stress may have role in etiology of adolescent problem drinking. (Mitic et.al., 1987). In the absence of social support, the adolescent might use or even misuse alcohol as a coping aid alternative to social support.

The individual might drink in order to attack the physiological sensations that accompany an undesirable emotional state. Consequently, the physiological arousal or quiescence associated with a more desirable emotional state will be generated, giving ground to reward and reinforcement of the behaviour. A relevant study, in the area of addiction, demonstrates one way in which support may influence physical health through changes in the performance of health related behaviours, such as decreased cigarette smoking and alcohol use (Mermelstein et. al, 1986). First, support in itself may directly influence the behaviour. Second, social influence processes such as modelling of either the desired or undesired (e.g. drinking) behaviour could also affect behaviour change; third, social support may play an indirect role by modifying other factors that influence the desired behaviour.

Cohen & Wills (1985) define four support resources which are specifically related to the adolescent's family. These are, emotional or esteem support, which is simply information that a person is esteemed and accepted by the family; informational support which is help in defining, coping and understanding problematic events, social companionship; which means spending time with other family members in recreational activity and in leisure, and finally instrumental support which is the provision of financial aid, material resources and needed services by the family.

The term, "perceived support", refers to a generalised appraisal that individuals develop in the various role domains of their lives, in which they believe that they are cared for and valued, that significant others are available to them in times of need and that they are satisfied with the relationships they have.

Unfortunately, there are very few studies that deal specifically with the role of social support during the transactional period of adolescence. Most are concerned with peer pressure and relationships within the social network. However, these relationships do not always have a positive nature and they do not always provide emotional support. In contrast they can lead the adolescent to rather destructive actions and thoughts, without at the same time catering for his true feelings and emotions.

The above have several implications for what needs to be assessed. Mermelstein, et. al. (1986), in their study of social support and smoking cessation, assessed three factors: support from a partner directly related to quitting; perceptions

of availability of general support resources and the presence of smokers in subjects' social networks. Similar kinds of assessment might be fruitful for the present study.

Support from family members for quitting or abstaining from alcohol, perception of availability of general support resources for coping with life events and the presence of drinkers in one's social network, are assumed to have some effect on the health status of the individual. In the above study high levels of partner support and perceived availability of general support were associated with cessation and with short-term abstinence. The presence of smokers in subjects' social networks was a hindrance to maintenance and significantly differentiated between relapsers and long-term abstainers.

The indication of smoking friends in one's social network, also suggests that social support can often have negative effects on the individual. Fisher et. al. (1987), argued that "many people are socially burdened by alcoholic husbands, delinquent children, senile parents and the like...we must not exaggerate the supportiveness of personal relationships" (cited in Coyne & DeLongis, 1986). Within the alcoholic family, the presence of an alcoholic member can be a predisposing factor for alcoholism for some relatives and a threat to the developing adolescent. Social support may be perceived differently by different members of the family. The unaffected members might be the source of social support, carrying the responsibility of abstaining from alcohol.

Family literature researchers tend to assume a curvilinear relation, whereby individuals and their families function best at moderate levels of involvement. Over involvement in close relationships may aggravate and perpetuate other problems. When family members become overprotective, intrusive and excessively indulgent and self-sacrificing, they often discourage autonomy and personal responsibility for self-care (Coyne & DeLongis, 1986). Windle & Miller (1992) study argued that Perceived Social Support, Support provided and Family Intimacy were significantly correlated with adolescent ratings of maternal and paternal support and inversely correlated with primary caregiver ratings of parental role stress and number of days of heavy drinking.

In theory social support might be related to excessive drinking because it affects susceptibility versus resistance to abusing alcohol, it affects self-care or medical self-seeking, once alcoholism is present and it modifies the severity of drinking or the drinking course. In practice, the above questions need to be addressed and the role of social support and alcohol abuse to be understood in the context of individuality and environment. The appeal of being able to link biological processes with important social processes is understandably attractive. This often requires the examination of the quality, magnitude and sources of socially supportive relationships that impact on adaptation and well-being (Lieberman, 1986).

Similar level variables to social support, such as locus-of-control, have to be studied, since we need to learn more about how people find, build, maintain and end

relationships; how they are constrained by their personal characteristics and the pool of people available; and the benefits and costs that they incur (Coyne & DeLongis, 1986). The understanding of the above processes places social support in the position of a general rubric, which leads to the understanding of the potential benefits of social relationships within the dysfunctional family.

For Antonucci & Israel (1986), social support constitutes the most promising field of research. Social support can be regarded as a resistance source within the family, or within the peer group, operating to keep the individual away from destructive behaviours and more specifically away from alcohol consumption. The following questions might contribute substantially to our understanding of the role of social support in abstinence from alcohol.

- Which are the sources of social support during adolescence?
- Are perceived social support and levels of alcohol consumption related during adolescence and if yes, how?
- How social support and cognitive variables jointly, influence health and illness status and more specifically abstinence from alcohol?

Although, social support is most effective in preserving health, we have also to consider the actual quality and availability of support which is affected by the characteristics of the individual. Specifically, individuals who report high levels of social support are instrumental in attracting others and building an affective network of supporters. By contrast, individuals low in social competence may alienate others

or may not know how to communicate their needs. In addition, perceived adequacy of social support is more important than availability per se (Cohen & Wills, 1985).

Since individual differences and the nature of person-environment exchanges influence the amount of given and received social support, personality variables might be worth researching. The adolescent who attracts around him several supporters does not necessarily benefit more than the one who does not. In this case, quality more than quantity is important to the person. The popular adolescent may have to put up with expectations that exceed his/her demands, while at the same time the support network cannot compensate substantially for the losses or for the actual needs of the individual.

Sarason et. al. (1980), goes as far as to suggest that it might be necessary to see the individual's level of perceived support as a personality variable itself. Recent research suggests, that the way in which individuals describe their personal characteristics seems to be related significantly to their self-described support levels. If perceived support and the adolescent's satisfaction with it stay stable over time and across situations, it becomes important to search for their developmental precursors. The family, is an obvious starting point in this research. Although longitudinal data would be preferred to ours, we suggest that the quality of parents' involvement with their children, may be a significant influence over the children's later sense of social embedness. Sarason et. al., (1980) research demonstrates that subjects high in social support see their parents as being more involved with them and in a more positive way, than do low social support subjects.

From the above, we conclude that a measure of social support has to be included in a study which wishes to bring together environmental, psychological and sociocultural determinants in the study of alcohol use and misuse during adolescence. The identification of the support network of the adolescent at-risk facilitates the development of prevention strategies and furthermore increases the possibility of including adolescents' family in the program. We also argued that social support does not necessarily coincide with the peer group, since the peer group often presents the adolescent with dilemmas of choosing one behaviour over others and of losing as a result his/her status within the group. Support might derive from some but not all members of the peer group and from the family.

The family, which has to be another source of support for the developing adolescent, may actually refuse to do so. In that case, the adolescent might grow in isolation and he/she might develop the need to derive resources from within, in order to cope with daily and developmental stressors. Another possibility, is that support is provided by the family, but the individual perceives its quantity and quality as being inadequate. Thus, families, peers and adolescents themselves will have to work on developing better means of communication and exchange, in terms of given and perceived support. In sum, it may be argued that social support can derive from different sources which have to be identified and studied. The adolescent is able to give an account of these sources and to put forward the quality and the quantity of the support he/she receives, in comparison with the support he/she would like to receive, in the presence of stressful encounters, the nature and function of which will be further explained later.

SUMMARY AND REVIEW:

This chapter was concerned with presenting the role that family patterns play in adolescent drinking behaviour. Vulnerabilities for alcohol use amongst children of alcoholics were explored in the literature, presenting findings from Twin and Adoption studies. Vulnerabilities for alcohol use amongst children in dysfunctional families were researched in the literature in relation to the Family Cohesion and Adaptability theory. (Olson et.al., 1985). Finally the role of social support in stressful encounters was also explained.

Overall, the significant role that family interactional patterns and social support resources play for the well-being of the individual, is well documented in the literature. The next step is to examine a model which explains alcohol abuse in adolescence as a social stress phenomenon. Within this model, the argument is made that support resources and family relationships are important determinants of the present behaviour. However, these are overshadowed by the presence of stressful encounters, within which they play the role of the coping resources (Rhodes & Jason, 1988).

The present study, also claims that familial factors have to be incorporated together with other variables, in a new model of abuse. In the following pages, the social stress model will be presented, followed by our own model of adolescent drinking which will be constructed and placed under empirical investigation.

CHAPTER 4: SOCIOPSYCHOLOGICAL CORRELATES OF ADOLESCENT ALCOHOL MISUSE

Scientific interest linking stress with drinking, has been developed by many disciplines, including psychology, sociology, anthropology, physiology, endocrinology and medicine (Fleming et. al., 1984). However, there are two basic perspectives from which research derives: the biological and the psychosocial. In this account we are interested in the psychosocial stress perceptions which has generated a stream of research that is usually considered independent of physiological studies, and which, at its extreme suggests that nothing is stressful unless the individual defines it as such.

Alcohol, is popularly considered to be effective in reducing stress. However, research of the effects of alcohol on stress is neither well characterized or well-understood (Pihl et. al., 1990). A number of studies, correlational and experimental, indicate that alcohol can reduce stress and is consumed for its stress reduction properties (Omizo et.al, 1988; Johnson, 1986) but other studies yield results that contradict these findings. The first are generated from the tension-reduction hypothesis, which assumes that alcohol directly reduces stressful-tension and that this in turn, reinforces drinking, since tension-reduction had long been hypothesized to play a key role in drinking behaviour in general and alcohol abuse in particular; individual differences in this potentially reinforcing effect of drinking are of particular interest (Sher & Walitzer, 1986).

In recent investigations, Berkowitz & Perkins (1988), argue that stress-reducing effects might be worth researching in individuals who demonstrate personality traits that seem to be associated with a predisposition to alcoholism.

Our concern is not to identify the pre-alcoholic personality but to link drinking in adolescence with social support, family cohesion and adaptability and to examine personality and environmental factors in the micro-level. A model suggested by Rhodes & Jason (1988) clarifies the relationship between stress, coping and other sociopsychological variables in relation to alcohol abuse in adolescence. The researchers point to a social stress model of alcohol abuse. This integrates the traditional emphasis on individual and family systemic variables with the recent research on competence and coping and it also addresses the broader social variables that influence adolescent behaviour.

According to this perspective, a youngster's experience in the family, school and community are seen as influencing the identification with parents, peers and role models and the development of affective coping strategies. The risk for substance abuse, can be conceptualized, as a fractional equation with stress in the numerator and positive attachments, coping skills and resources in the denominator. This conceptualization is a derivation of Albee's (1982; cited in Rhodes & Jason, 1988) model of psychopathology, in which the risk for psychopathology is conceived as a function of stress and organic factors and the extent to which the negative impact of these factors is offset by coping skills, competencies and social support. According to this model ecological, environmental, familial, social and cognitive factors have to

be considered. Therefore beyond family patterns and interaction with peers, the model has been adopted for the present research to study cognitive and emotional factors, such as locus-of-control, assertiveness, self-esteem, attitudes, social anxiety and self-efficacy, able to predict future behaviour (DeVries et. al., 1988).

Psychologists, have a rich area of research in the factors involved in the origins of alcohol misuse among adolescents, in family and culture, in the relative influence of parents and peers, the increase in alcohol consumption in late teens and early twenties and the decrease in use for most people as maturity, marriage, vocational advancement and social responsibilities emerge (Murray, 1989).

Figure 1: Social Stress model of Substance Abuse (Rhodes & Jason, 1988)

$$\begin{array}{c} \text{STRESS} \\ \text{-----} = \text{RISK FOR ABUSE} \\ \text{ATTACHMENT + COPING SKILLS + RESOURCES} \end{array}$$

The relationship of stress to psychological adjustment and physical health has been well documented (Johnson, 1986; Omizo et. al., 1988; Novy & Donohue, 1985). although few studies have involved children or adolescents as compared with the number of studies involving adults. Yet, adolescence is one of the most stressful periods, during which the individual is striving to develop a sense of identity and to understand and adapt to the world around him.

The present study wishes to measure social anxiety, as part of every day hassles in adolescence, since the relation of daily stressors with a range of symptoms and disorders has been well documented in adults (Lazarus & Folkman, 1984).

In the following pages, we are going to examine the major areas, that are given by Rhodes & Jason (1988) as correlates of alcohol misuse. The ultimate aim is to arrive at a reconstruction of the abuse model, where family systemic variables also emerge.

4.1.) Stress and Coping:

The most significant factors in Rhodes & Jason (1988) model, are stress and coping, which seem to play a major role in driving the adolescent to alcohol misuse. However, the above concepts are difficult to measure since up to now there is no agreement over their definition. Stress and coping are considered as part of a process involving environmental events, psychosocial processes and physiological responses. Thus, some consider stress to be events external to an organism that make demands on it; others suggest that stress is the organisms response to the events that challenge it (Seyle, 1976). Still, others, view both external and internal events as stress, emphasising the interaction between environment and response (Lazarus & Folkman, 1986).

The definition of stress varies in being either, response-based or stimulus-based. The response-based definition depicts stress as a psychological and/or physiological response made by an individual to an environmental stressor. Stimulus-based definitions, define stress as the force of demands acting upon the individual that results in psychological and physiological strain (Mattesson & Ivancevich, 1987). Stress results from change, uncertainty and imbalance between the demands made on individuals and their ability to respond to them (Mattesson & Ivancevich, 1987). Strain, on the other hand, refers to any psychological and physiological responses made by the individuals to environmental demands and stressors.

In the above definitions the person's present emotional state is seen as crucial in the interpretation of a situation as stressful. Worrall & May (1989) argue that this present emotional state can be understood as being influenced from four sources; situational disturbances being generated in the episode, the anticipatory stress associated with imagined scenarios of the event to be experienced; the day to day or ambient life stresses and the core stress which can be defined as comprising the unresolved residues of past negative experiences from all ages of the person's life history. (Worrall & May, 1989).

Therefore psychological stress and coping have to be seen mainly as transactional since the person and the environment are viewed as being in a dynamic, mutually reciprocal and bidirectional relationship. Stress is conceptualized as the relationship between the person and the environment, that is appraised by the person as exceeding or taxing his or her resources and as endangering his/her well-being (Lazarus & Folkman, 1986).

The theory identifies two processes, cognitive appraisal and coping, as critical mediators of stressful, person-environment, relationships. Cognitive appraisal, is a process through which the person evaluates the ways in which a particular encounter with the environment is relevant to his/her well-being. There are two kinds of cognitive appraisal: primary and secondary. In primary appraisal the person evaluates whether he or she has anything at stake in this encounter. For example is there potential harm or benefit to self-esteem? Is the health or well being of a loved hence

at risk? A range of personality characteristics including values, commitments, goals and beliefs about oneself and the world help to define the stakes that the person identifies as having relevance to his/her well-being in specific stressful transactions. In secondary appraisal the person evaluates what, if anything, can be done to overcome or improve the prospects for benefit. Various coping options are evaluated, such as changing the situation, accepting it, seeking more information or holding back from acting impulsively (Fleming et. al., 1984).

Coping, on the other hand, even though it is a widely used construct in the literature, is also poorly defined and it is frequently invoked to explain individual differences in response to stressful situations. Despite the frequency with which coping has been used in the literature, neither an agreed typology of coping strategies nor an adequate method of assessing coping is currently available (Stone, 1981). Studies of coping have often relied on interview assessments; however some of these procedures are extremely lengthy and the reliability of interview assessments is difficult to establish (Barber, 1976). Yet, coping is often regarded as a dynamic process that changes over time. Some, have used personality inventories to measure coping.

Although personality traits may be related to coping, they do not actually describe the coping process. Most researchers define coping as a response to stress, behaviourally or physiologically designed to somehow reduce the aversive qualities of stress (Fleming et. al., 1984), aiming to serve two major functions : problem solving and regulating emotions.

Some researchers (Lazarus & Folkman, 1984, 1986), argue that people use both forms of coping in virtually every type of stressful-encounter, whilst several forms of problem and emotion focused coping have been identified in previous research (Aldwin et. al., 1980; cited in Folkman & Lazarus, 1986). For example problem-focused coping includes aggressive interpersonal efforts to alter the situation, as well as cool, rational efforts to problem-solve, while emotion-focused coping includes distancing, self-control, social support, escape avoidance, accepting responsibility and positive reappraisal.

Coping efforts, such as social support, are often seen as attenuating the effects of stress although one has to accept that coping is not a unitary concept (Stone, 1981). Coping behaviour might be directed at the situation or towards managing emotional response in various ways. For instance faced with an unpleasant event, the individual might attempt to control emotional stress by denying various elements of the situation.

In relation to adolescent drinking, denial can include, ignoring the presence of alcohol misuse, recognising its presence but denying that it has any effects, or recognising both, the presence and the impact of the situation but denying the harmful or stress inducing implications of the events. The above will probably and partially determine, whether or not the individual will move towards abusing alcohol or to the opposite direction. However, laboratory and field research indicate that the relationship between personal control and stress and coping and adaptational outcomes is more complex than was once assumed (Folkman et. al., 1986). In addition, believing that an event is controllable does not always lead to reduction of stress or

to a positive outcome, and believing that an event is uncontrollable does not always lead to an increase in stress or to a negative outcome.

Consequently, when the adolescent perceives an event as being stressful, he/she does not necessarily believe that he/she can control the outcome of the stressful encounter. Consider a situation in which a stressful encounter is realistically appraised as controllable. Two possible appraisals will occur: threat and challenge. A challenge appraisal should promote the more positive outcome because it facilitates effective problem-focused solving and promotes good morale (Folkman et. al., 1986). In contrast, a threat appraisal, with its distressing emotions, may impede problem-focused coping, thereby increasing the possibility of poor problem resolution. The risk of maladjusted outcomes should be greater when the appraisal of control does not match reality.

In the context of alcohol misuse, two possibilities emerge; either the person tends to abuse alcohol in the absence of other coping resources, or alcohol abuse of another family member is regarded as uncontrollable, leading the individual to appraise the situation as threatening and to avoid resolution of the problem. Therefore, coping refers to the individual's cognitive and behavioural efforts to manage, (reduce, minimize, master or tolerate) the internal and external demands of the person - environment transaction that is appraised as taxing or exceeding the person's resources, by serving two major functions; problem solving and regulating emotions.

4.2.) Attitudes and Subjective Norm: Significant Others

Drinking:

In their Social stress model of adolescent abuse, Rhodes & Jason (1988;1990) are talking about the significant cognitive factors or coping skills which contribute to inhibiting adolescent alcohol abuse. They identify these factors as being attitudes, substance use knowledge, general assertiveness, general influenciability, confidence in coping with socially anxious situations, general self-esteem and general locus-of-control. The above are assumed to be amongst the best predictors of adolescent abuse in the literature. In these factors, the researcher added the self-efficacy concept, as a factor directly related to the behaviour under study. In the following pages, we will try to link each variable with the drinking behaviour as it is reported in the current literature.

An important aim of research in adolescent health behaviour, is to identify those psychosocial factors that prevent or postpone involvement in behaviours that comprise health, as well as those, that promote involvement in behaviour that protects and/or enhances health. The potential influence of values, attitudes and beliefs on health related behaviour has long been recognized (Lovallo et. al., 1985; Jessor, 1987; Peele, 1987) and have all been applied with varying success in explaining, predicting and influencing behaviour (Rosenstock, 1988). When explaining health behaviour, much attention is paid to attitudes and subjective norms. It is also assumed that self-efficacy expectations are significantly correlated with the behaviour. (DeVries et.

al., 1988). However, the first step is to examine the relationship between attitudes, subjective norms and overt behaviour.

Fishbein & Ajzen (1975) argue that Attitudes are determined by i) the expectations of various consequences, beliefs (b) about the behaviour and by ii) the corresponding evaluations (e) of the consequences. An attitude is measured as follows: $ATTITUDE = S (b \times e)$, where an Attitude is defined as the sum of the beliefs about a behaviour by the corresponding evaluations of the consequences of the behaviour. The subjective norm consists of i) the expectations of other important persons' opinions, those being normative beliefs (nb) and ii) the degree to which an individual is inclined to agree with these opinions, the motivation to comply (mc). $SUBJECTIVE\ NORM = S (nb \times mc)$ (DeVries et. al., 1988). Therefore, the Subjective Norm is defined as the sum of the expectations of other important person's opinions by the degree to which an individual is inclined to agree with these opinions.

Measurements of attitudes and subjective norms can take different forms. In attitudes measurement, it is important to include all the advantages and disadvantages of a given behaviour. In social norms, a distinction is made between direct social influences, that is what other people expect, and indirect influences, meaning what other people do themselves (modelling). Alcohol related knowledge is also believed to relate with students' attitudes concerning alcohol and their behaviour related to alcohol (Stolberg, 1987; Jackson et. al., 1989), although some argue that alcohol knowledge might have no effect in leading towards the desirable direction (Rivers, 1987).

Adolescents' subjective norms involve the family and the peer group. In the following pages, we would like to examine the extent to which the peer group is central to the adolescent's life and behaviour; all people have peer groups, but the peers that infants or adults have are of relatively little importance to their immediate development. Early in middle childhood, peers begin to assume more importance. Most psychologists agree, that it is during adolescence that peers are most important in the socialisation and emancipation process (Lefrancois, 1981). During adolescence, biological and social drives move the individual away from the family and towards the wider social groups. Peer groups, both, in and out of school, become the major socialisation agents for adolescents. They are assumed to provide adolescents with a great variety of experiences in interaction with people. In this way, they promote the development of essential social skills related to conversation; to judging people; to interpreting verbal and non verbal cues, concerning one's position and power in a group and in determining what is appropriate and what is inappropriate in terms of behaviour, dress, values and ideals.

Peer groups also provide the adolescent with a considerable degree of emotional security. This is particularly important where adolescents are experiencing difficulties, adjusting to parental demands and restrictions and where, they are still in the process of developing a sense of identity. The peer group supplies a wide number of models, necessary in the development of a sense of identity and the opportunities for interpersonal relationships that become prototypes for future adult relationships. This is the time for the adolescent to move from predominantly same sex relationships to a balance between these and heterosexual relationships. Undoubtedly, the peer

group serves also other functions, related to adolescent's emotional, psychological and physical well-being. On occasion, it is implicated in adolescent's maladjustment.

According to Dinges & Oetting (1993), peer influence is not just a broad, general set of attitudes or feelings about drug use; it is highly specific and also has a strong effect which is borne out by the 90% correspondence between an adolescent's use of particular drugs and the use of those exact drugs by friends. A study by Johnson & Johnson (1991) also indicates that children in all grades expect friends to react negatively when an adolescent friend refuses to consume alcohol.

In our study we are concerned not just with how peer pressure affects patterns and levels of alcohol consumption, but also with how susceptibility to it affects experimentation with alcohol. Peer influence, is assessed via measures of perceived substance use by friends and family and by subjects' own perception of peer pressure, within the concept of self-efficacy.

4.3.) Self-Efficacy Expectations:

Self-efficacy is defined as the estimation of the individual about his/her perceived ability to perform a specific behaviour in a specific situation. Self-efficacy expectations are based on our own experience of the behaviour (performance attainments), on observations of others (vicarious experiences), on persuasion by others (verbal persuasion) and on physiological reactions. Performance accomplishments, are the most influential sources of efficacy, followed by vicarious experiences (Bandura, 1986). Verbal persuasion, which is mostly used in health research, is less powerful than the other two, but still very useful. Self-efficacy is also distinct from outcome expectations; the latter being an estimation of the effectiveness of the behaviour to reach a desired goal (Kok et. al., 1991). In sum, efficacy expectations are defined as the conviction that one can successfully execute the behaviour required to produce the outcomes.

Bandura (1986), argues that a given behaviour is determined by expectancies and incentives. Expectancies can be divided into three types: a) Expectancies about environmental cues (beliefs about how events are connected-what leads to what), b) expectancies about the consequences of one's own actions (that is opinion about how individual behaviour is likely to influence outcome), this is termed outcome expectation, and c) expectancies about one's own competence to perform the behaviour needed to influence outcomes. The latter, is termed efficacy expectations or self-efficacy. Incentive, is defined as the value of a particular object or outcome.

The outcome might be health status, physical appearance, approval of others etc. Behaviour is regulated by its consequences or else reinforcements, but only as those consequences are interpreted and understood by the individual (Rosenstock, 1988).

In order say for an adolescent to quit drinking (Behaviour) for health reasons (Outcome), he/she must believe both, that his/her health will benefit (Outcome expectations) and also that he/she is capable of quitting (Efficacy expectations). According to this paradigm, behaviour change and maintenance is a function of outcome expectations which will be the result of one's actual engagement in the behaviour and of one's own ability to execute and engage in the behaviour. Thus, for the behavioural change to succeed, people must have an incentive to take action, they must feel threatened by their current behaviour and they must believe that change of a specific kind will be beneficial by resulting in a valued outcome at acceptable cost; they must also feel themselves competent (self-efficacious) to implement that change. In addition, it is important to understand that the concept of self-efficacy relates to beliefs about capabilities of performing specific behaviour, in particular situations.

Self-efficacy, does not refer to a personality characteristic or a global trait, that operates independently of contextual factors. Consequently, individuals' efficacy expectations will vary greatly, depending on the particular task and context which confronts them.

It is therefore inappropriate to characterize a person as having "low" or "high" efficacy, without reference to the specific behaviour and the circumstance with which

the efficacy judgment is associated. Bandura (1986) argues that perceived efficacy influences all aspects of behaviour, including the acquisition of new behaviour, inhibition of existing behaviours and disinhibition of behaviours.

Self-efficacy also affects people's choices of behavioural settings, the amount of effort they put on a task and the length of time they will persist in the face of obstacles. Finally, self-efficacy affects people's emotional reactions, such as anxiety, distress and thought patterns. Efficacy expectations vary along the dimensions of magnitude, strength and generality. Each, of these dimensions has important implications for performance and each implies slightly different measurement procedures. Magnitude, refers to the ordering of tasks by difficulty level. Persons low in magnitude expectations feel capable of performing only the simpler, of a greater series of tasks, while those high in magnitude, feel capable of performing even the most difficult tasks in the series. Strength refers to a probabilistic judgment, of how certain is one of one's ability to perform a specific task. The generality dimension concerns the extent to which efficacy expectations about a particular situation or experience, are generalized to other situations (Kok et. al., 1991).

In sum, whether, someone performs a particular behaviour is determined by personal conceptions concerning the behaviour (attitudes), the social pressures experienced from other important persons (subjective norm) and the personal expectations about the skills needed to realize the behaviour (self-efficacy). Therefore, attitudes, social norms and self-efficacy expectations are believed to be good correlates of drinking behaviour (Kok et. al., 1991; DeVries et. al., 1988).

In the empirical field, Marlatt et. al. (1988) has utilized the above concepts to explain alcohol use as well as abuse. A central part of his explanation is that alcohol has negatively reinforcing effects. Alcohol use is generalized to other aversive conditions and it is reinforced by what is perceived as a reduction of tension. All drinking behaviour, from moderation to abuse, is governed by the same principles, although such behaviour varies as a function of settings and time. Cognitive mediation factors are central in the explanation of learning the drinking behaviour. The individual's expectations about alcohol effects, will influence his/her behaviour while intoxicated. Thus, drinking is acquired and maintained through reinforcement, modelling, conditioned responding, expectations about alcohol and physical dependence.

Abrahms & Niaura (1987), have identified a set of principles that form a comprehensive version of social learning theory and alcohol use. One of these principles is the developmental notion that learning to drink occurs as part of growing up in a particular culture in which the social influences of family and peers shape the behaviours, beliefs and expectancies of young people, concerning alcohol.

Youthful drinking is influenced by modelling of alcohol consumption, which is the creation of specific expectations of the benefits of drinking via media portrayals of sexual prowess, power and success and by social reinforcement from peer groups. In addition, the attitudes and behaviours of parents regarding alcohol appear to be amongst the best predictors of adolescent drinking. Peers may serve as additional models for using alcohol to reduce tension and may further reinforce its use to

enhance social pleasure. The adolescent who has no other means of modulating anxiety may come to rely increasingly upon alcohol to reduce stress in more and more situations. Alcohol use is strongly influenced by positive reinforcement (euphoria or getting high) or by expectations of positive reinforcements (Marlatt et. al., 1988). Alcohol enhances cutaneous and gastric blood flow and thereby results in a feeling of warmth. Some maturing adolescents never learn alternative ways to experience positive feelings and sensations, so alcohol use develops to serve this need. Social reinforcement becomes another potential source in the same way that a negative reinforcement is (strengthening of behaviour by termination or avoidance of unpleasant experiences).

The concept of self-efficacy is interesting for both prevention and treatment. Self-efficacy can predict abuse, since the individual can recall situations that he may or may not be able to handle in accordance with his social skills. Education can also be used as the agent that transmits efficacy and coping skills to children and adolescents. Therefore, self-efficacy together with attitudes and subjective norms might be able to predict the behaviour and provide the reader with a broader framework of understanding alcohol experimentation/misuse (Wilson, 1987).

In sum current literature (Lawrance, 1988; DeVries et. al., 1988; Kok et. al., 1991) supports the role of self-efficacy in the maintenance of behaviour. The present study proposes that enhancement of self-efficacy in troubled adolescents will make them decide freely on courses of action, feeling confident that they will succeed.

In our study, the concept of self-efficacy is useful for identifying those at risk of becoming drinkers, for identifying component behaviours perceived as difficult to change, or situations in which there is increased vulnerability to drinking. The utility of identifying risk situations is supported also by the work of Marlatt et. al. (1988), where they suggest that self-efficacy can be used to identify situations in which the individual perceives him/herself as likely to use addictive substances and to train the individual to avoid these situations, or to develop coping skills for these situations.

Lawrance (1988), also argues, that in order to prevent or reduce substance use among adolescents, it is important to increase their self-perceived ability to resist influences and to avoid high risk situations. One of the strengths of the self-efficacy concept is its direct applicability to the practice of modifying health behaviours. Suggestions about an overall strategy for enhancing self-efficacy in practice, would include the breaking of the complexities of the target behaviour into components that are relatively easy to manage. The self-efficacy model is divergent from many health behaviour change strategies, providing a theoretical buttress for the notion of an activated individual.

4.4.) Other cognitive and emotional factors linked to adolescent

drinking:

The social stress model emphasizes also the importance of other cognitive and emotional factors which are thought to modulate all person-environment interactions. In the design of health behaviour interventions, the concept of susceptibility to peer pressure, self-esteem and locus-of-control have been regarded as important .

In defining Locus-Of-Control it is worth mentioning that L.O.C. is not synonymous to self-efficacy, since the former is a generalized concept about the self and the latter is situation specific. As Bandura (1986) says, "convictions that outcomes are determined by one's own actions can have any number of effects on self-efficacy and behaviour. People who regard outcomes as personally determined but who lack the prerequisite skills, would experience low self-efficacy and view activities with a sense of futility". In practice, the two concepts are rarely studied together (Rosenstock, 1988).

Since Locus-Of-Control is a general concept, some argue that a health locus-of-control scale, which is defined as a generalized expectation of whether or not one's health is controlled by one's own behaviour or by forces external to oneself, would be more useful in the prediction of health related behaviours than a generalized scale (Dielman et. al., 1987). In examining the correlates of early alcohol use by adolescents, Jessor (1987) found that an internal-external locus-of-control scale did not

predict adolescents' at risk for alcohol use/misuse. In fact, on the other hand, health locus-of-control has been shown to have considerable relevance for children's health orientation and behaviour (Dielman et.al., 1984), although it would be interesting to research further whether health locus-of-control is a significant predictor of children's reports on intentions to use cigarettes, alcohol or marijuana.

Another concept relevant to drinking behaviour is the concept of self-esteem. Many aspects of the individual's perception of himself have attracted the attention of personality researchers, but the concept of self-esteem has been probably the most studied in the area (Kaplan, 1982). "Self-esteem" refers to the liking and respect for oneself that has some realistic basis. Thus, self-esteem is concerned with the evaluation of one's self-worth which arises from the feedback obtained on the effectiveness of behaviour from childhood forward, while self-efficacy refers to the evaluation of one's specific capabilities in specific situations. People often try to develop self-efficacy in activities that give them self-worth, so that the two concepts are frequently intertwined (DeVries et. al., 1988).

Self-esteem has to be differentiated from self-concept, which is a constellation of things a person uses to describe himself (Pope et. al., 1989). Self-esteem is the evaluation of information contained in the self-concept, and it is derived from a child's feelings about all the things he/she is. One way of examining the formation of self-esteem is by thinking about the "ideal" and the "actual" self. The "ideal" self is the kind of person one would like to be, one's sincere desire to possess certain

attributes.

The "perceived" self is the same thing as the self-concept, a view of these skills, characteristics and qualities which are present or absent. When the "perceived" and "ideal" self are a good match the self-esteem is positive. Conversely, discrepancy between the "ideal" and the "actual" self lead to problems with self-esteem.

A high self-esteem is considered to be a healthy view of the self, one that realistically encompasses shortcomings but is not harshly critical of them. Someone with a low self-esteem frequently exhibits an artificially positive attitude to the world, in a desperate attempt to prove to others that he/she is an adequate person. Self-esteem is made up of many components that come from the things in our lives that are important to us. An adolescent's self-esteem will be comprised by the importance he/she gives to each of the following five components: social, academic, family, body image and global self-esteem.

The social area, encompasses adolescent's feelings about himself as a friend to others. The academic area deals with the adolescent's evaluation of himself as a student. The student has to meet here his own standards for academic achievement (these are shaped by the family, friends and teachers) which are not simply an assessment of academic ability and achievement. The family self-esteem, reflects his feelings about himself as a member of the family, somebody who makes a unique contribution and who is secure in the love and respect he receives from other family members. The body image, is a combination of physical appearances and capabilities.

The child's self-esteem in this area is based upon satisfaction with the way his body looks and performs. Typically girls have been concerned more than boys with their body image. Finally, the global self-esteem is a more general appraisal of the self and is based on the adolescent's evaluation of all parts of himself. A positive global self-esteem will result in such feelings such as "I am a good person" or "I like most things about myself".

With the above in mind, the next step is to question why a healthy self-esteem is so important for the well being of the individual. Most psychologists view positive self-esteem as a central factor in good social and emotional adjustment (Pope et. al., 1989). Positive self-esteem is related to happier and more effective functioning and it especially serves as the foundation for the individual's perceptions of life experiences. Positive self-esteem can be a force that helps the adolescent to avoid future serious problems.

Praise and recognition from adults certainly play an important role, but they are not the only elements responsible for the acquisition of a positive self-esteem. For solid self-esteem to develop, adults must set limits regularly and help children to feel strong about tolerating frustration (Livingstone, 1989). It is the empathic understanding that adults convey which helps children and adolescents to grow a capacity to tolerate the frustration, on which the development of self-esteem partly depends. Empathy, can be a form of love and emotional holding, when an adolescent feels angry. Enhancing self-esteem, provides children with more psychic energy for better impulse control; improving impulse control, enhances self-esteem. However,

learning always occurs in some environmental context and obviously some environments are better for learning than others. These environments or settings include the family, the school, the classmates, friends and teachers. Within these settings, adolescents have to learn to identify their feelings in order to understand themselves and others adequately and in order to communicate with others, by expressing their own feelings and by reflecting others' feelings. In line with the above, the purpose of the present study will be among other things to explore the relationship of self-esteem to alcohol use/abuse.

Several other studies have tried to link self-esteem to adolescent's drinking practices, but the results are often controversial (Dielman et. al., 1989). Some (Cappuzi & Lecoq, 1983; Rees, 1983) argue that there is relationship between self-esteem and adolescent alcohol abuse. Rees et. al. (1986) also compare drug-abusing adolescents with non-abusers and their families, via the self-esteem score on the Self-esteem Inventory. However, Dielman et. al. (1984) failed to show such a relationship between self-esteem, drinking, health locus-of-control and behavioural intentions and outcomes.

Some researchers (Bonaguro et. al., 1988) have also tried to examine the evaluation and effectiveness of health educational programmes on substance use, self-esteem and stress among adolescents in fifth through eight grade. Self-esteem is also believed to be a particularly relevant concept to perceived strain. Especially, children who are raised in an alcoholic family are considered to be at increased risk for developing a low self-esteem as well as problems with substance abuse (Krois,

1987). Assertiveness and social anxiety are also linked with substance use and abuse. A survey of 100 non-drinking adolescents designed to assess influences on learning not to drink (Stumphauzer, 1983), discovered that teenagers revealed assertiveness skills in saying no to peer pressure. Hamilton (1985) argues, that reasons given for excessive drinking are associated with enhancement of sociability, with relieving anxiety and feeling good. As a result, treatment methods designed to teach self-help skills to the abusive drinker should include assertiveness training.

SUMMARY AND REVIEW:

In the above pages we have been concerned with the presentation of sociopsychological factors that influence adolescent drinking. The Social Stress model of Alcohol Abuse in Adolescence (Rhodes & Jason, 1988) was explained and the relationship between stress, coping and alcohol use was researched in the literature. Attitudes, Subjective norm and self-efficacy expectations were also placed in relation to the context of adolescent drinking. The importance of these factors has been recognized in the current literature, and two of the most important models include them in their explanation of adolescent health behaviour (Bandura, 1986; Rhodes & Jason, 1988, 1990; DeVries et. al., 1988). However, a more systematic attempt is needed to link sociopsychological and familial factors with adolescent drinking to form a model which firstly incorporates current theoretical approaches to adolescent drinking and secondly is based on empirical research. Such a model could be useful for prevention efforts, as well as for the clarification of current trends. The following pages are devoted to the theoretical construction of a model of adolescent drinking, which will be further researched.

CHAPTER 5: INTEGRATION OF SOCIAL STRESS MODEL AND FAMILY COHESION AND ADAPTABILITY THEORY

Empirical research is often interested on establishing correlates of substance use and abuse (Jessor, 1987; Kandel, 1980), where emphasis is given to understanding the aetiological factors related to the onset of drinking (Johnson, 1988; Murray, 1989; Jessor, 1987), primarily in an attempt to identify those at risk and to suggest effective methods of intervention. From those correlates, socioenvironmental, intrapersonal and behavioural variables yield strong relations with substance use, suggesting that the understanding of adolescent drinking is covered by a wide set of personal, social and familial factors (Jessor, 1987; Yamaguchi & Kandel, 1984).

Drinking is experienced within the micro and the macro culture, whilst at the same time educational programmes are striving to persuade adolescents of its negative properties. As a result substance oriented drug education programmes have a dubious effect probably due to three reasons i) their inadequacy in paying attention to young people, who they are and how they live and teaching them how to overcome day by day difficulties ii) due to their lack of correspondence with empirical evidence from relevant studies, and iii) due to their tendency to discuss drinking in relation to the use of other substances, as well as to address these issues for the majority of the individuals, ignoring the at-risk minority. When programmes overcome the above shortcomings, they become effective not only in reducing drug use, but also in reducing other rebellious or attention-seeking behaviour (DeHaes, 1987).

The shifting of the emphasis is in exploring more practical approaches to the problem where "a better understanding of the more specific and unique reasons for using particular classes of substances may enhance our ability to predict, explain and understand substance use in all its forms" (Johnson, 1986). Accordingly, the current study attempts to understand and predict adolescent alcohol use by identifying the age at which adolescents start drinking as well as the correlate, to the onset of drinking factors.

In order to understand drinking behaviour as a function of several sociopsychological variables, we have to assume that drinking is the result of the interaction between the individual and the environment. Such a perspective is mirrored in "multi-causal models, which de-emphasize the agent but elaborate on environment as a web of reciprocal relationships among factors" (Earp & Ennett, 1991), similar to the biopsychosocial approach which covers the broad range of familial, social, interpersonal and genetic aspects associated with adult drinking (Donovan, 1986).

Adopting a "multi-causal" model the present study incorporates elements of Rhodes & Jason (1988) social stress model of substance abuse, taking into consideration gender differences on drinking practices and on the underlying factors associated to drinking. Rhodes & Jason (1988) emphasize the role of stress as a risk factor for abusing alcohol, provided that the person is lacking in other resources such as attachments, coping skills and community resources. The risk of substance abuse

is conceptualized as a fractional equation with stress in the numerator and positive attachments, coping skills and resources in the denominator. According to this model, ecological, environmental, familial, social and cognitive factors have to be considered. However, in a recent paper Rhodes & Jason (1990) agree that family factors more than stress are one of the best predictors of abuse, and admit that this factor has to be studied further in future research.

Prior to the latest argument by Rhodes & Jason (1990), the researcher hypothesized that it is worth considering familial practices as risk factors for abuse. In order to study familial relationships, the researcher incorporated elements of Olson's et.al. theory (1985) of family interactional patterns pays significant attention to the role of the family in the development of problem behaviour. Particularly, familial interactions amongst different members, cohesion and adaptability of the family are certainly related to the roles that individuals adopt within the same family. Although Olson's (1985) theory is being used mostly in counselling settings where the wish is to understand family dynamics so as to intervene successfully, in some instances it has also been used with adolescents who abuse alcohol.

The present study argues that any dysfunctional family probably constitutes a risk factor for the developing adolescent. Understanding family dynamics and their influence on the adoption of drinking behaviour by the adolescent is worthy of receiving further attention since adolescents' perceptions of family interactional patterns are probably associated with drinking behaviour either as a result or a cause of it with the implication that adolescents drink because they want to cope with

extreme patterns in the familial environment or that adolescents' drinking is partly responsible for the presence of extreme interactional patterns in the familial environment.

However, the understanding of family interactional patterns and their relationship to drinking can more fruitfully be seen in interaction with other factors. Trying to explain adolescent drinking by evaluating parental rules and roles and their effect on the individual family member in itself, without considering the relative importance of other socioenvironmental and personal characteristics, implies that a) the family is the dominant factor affecting the manifestation of a particular behaviour b) that the individual is a passive recipient of familial forces and demands and c) that individuals have hardly any responsibility in exercising a particular behaviour, in evaluating its results on self and others and in evolving and changing maladaptive patterns.

The above assumptions are contrary to research where it is clearly demonstrated that family rules, roles and norms do not give adequate explanation for the occurrence of certain type of behaviour. Many children of alcoholics do not become alcoholic themselves, whilst siblings in the same family more often report differential than similar experiences and parental treatment. Consequently, family interactional patterns have to be seen in relation to other variables that are as likely to affect the individual's decision to drink or abstain; drinking has to be examined from a broader spectrum where a constant interplay amongst the different forces is taking place.

In that respect, Rhodes & Jason's (1988) social stress model was thought to be the most appropriate for integration with Olson's (1985) Family cohesion and adaptability theory. Rhodes & Jason (1988) examine the family impact on adolescent drinking only through the measurement of the perceptions that adolescents have about their parents and siblings drinking behaviour. In that respect, family is seen from the perspective of providing role models that the adolescent might adopt. In depth understanding and insight into the familial relationships might prove to be more fruitful than parental approval or disapproval of adolescent drinking.

Consequently, in the present study it was thought appropriate to bring together both, the social stress model and the family cohesion and adaptability theory, for a global understanding of adolescent drinking behaviour. In addition, the self efficacy concept was added for exploration and a series of hypotheses emerged as worthy of receiving further attention.

Gender differences in relation to the underlying factors associated with alcohol misuse are also examined. Such differences are studied in relation to drinking frequency and quantity patterns since some predict that men are heavier drinkers than women (Maney, 1990; Hanson, 1982).

Having in mind the above theories and findings, one wonders whether it is possible to prevent substance abuse among adolescents. An answer may emerge by comparing adolescents who choose to be involved with alcohol, with those who are not, despite the latter reporting experimentation with alcohol. Within this framework,

we do not regard behaviour as a result of a deficit in the person but rather as an interaction between the individual and the environment. Consequently the researcher is concerned to determine which hypothetical factors have more salience than others in predicting behaviour and what their relation to each other is.

In addition, a theoretical understanding based on the individual's own account of the situation also needs exploration. What is really needed is information regarding the intricate processes that link correlated attributes within a conceptual whole.

From the above a set of general research questions have been put forward:

- a) what are the patterns of adolescent drinking? Are there any gender differences present?
- b) how do adolescents perceive drinking and what is their account of the situation?
- c) what are the most salient factors associated with drinking experiences in adolescence? Are these factors different for each gender group? Are they different at each level of alcohol misuse?

Within the present thesis the above questions are posed in two separate studies; in each study a more specific set of hypotheses is examined with the help of different methodological techniques aiming to address the issues from different perspectives and present a comprehensive account of the situation.

In sum, adolescent drinking is perceived as a function of several variables that are classified as psychological characteristics, social influences, familial interactions and coping resources. Psychological characteristics include such personal factors as

self-esteem, assertiveness, attitudes, substance knowledge, social anxiety, locus-of-control and self-efficacy. Social variables include parental and peer drinking, parental approval of adolescent drinking and familial interactions which are concerned with levels of cohesion and adaptability in the family. Finally, coping resources are examined in relation to emotional and pragmatic support the individual perceives, as opposed to the levels of support he/she expects to find from other family members and peers. However, in this area of research several methodological issues emerge.

METHODOLOGICAL ISSUES

A major challenge in the study of aetiology of drug and alcohol use lies in the area of research methodology (Shore, 1990). One is struck by the large number of correlates in the absence of any theoretical framework (Pentz, 1985). As Pentz (1985) suggests many correlates are found only in cross-sectional studies; second, there is no information about the relationship among the correlates and third, investigators use different labels with different orientations for the same phenomena or constructs, or the use of the same label for different construct or phenomena.

"Findings from correlational and retrospective studies are often contradictory and often coloured by a considerable number of developmental changes, which have not been taken into account, plus other contaminating variables...; applying generic findings from aetiological research can present both, conceptual & methodological hazards" (Shore, 1990).

The obvious question to face the researcher is related to what are the most appropriate research methods for exploring this type of issue. Answering this question is an extremely difficult task requiring careful thought and scrutiny of the research aims and goals; however, the researcher should bear in mind that appropriate research methods for studying drinking behaviour need to meet two general but interrelated criteria. First they ought to allow a relational interpretation and second they ought to be sensitive to people's own account of the situation (Tversky & Kahneman, 1974).

With the above in mind, one can reasonably argue that the adoption of quantitative and qualitative research strategies is highly appropriate for researching sensitive areas, although there is an ongoing argument between "scientific" and "interpretive" or "humanistic" paradigms of research.

The quantitative approach is often seen as anti-human, intrusive, alien and able to distort the study of human affairs, which cannot be captured by statistical generalizations and causal laws. On the other hand, quantitative researchers have often seen qualitative research as lacking in objectivity, rigour and scientific controls, being therefore unable to produce the requisite generalizations to build up a set of laws of human behaviour, or to apply adequate tests for validity and reliability. In short, qualitative research is seen as falling short of the high standards of objectivity and the tight criteria for truth of the quantitative or scientific paradigm.

Further reflection on the integration of Quantitative and Qualitative research would possibly suggest that the two methods are epistemologically distinctive and hence divergent approaches to what is and should count as valid knowledge. This conception has implications for the question of whether they can genuinely be combined or whether they are irreconcilable. (Bryman, 1992 cited in Brannen, 1992).

As single methods each perspective has unique distinctions and limitations. Qualitative research attempts to understand human behaviour from the perspective of the respondent, sacrificing breadth for depth, while quantitative attempts to understand

human behaviour from a generalized cause and effect perspective sacrificing individuality for an explanation of the larger social phenomena. (Ingeroll, 1983).

In addition, each represents distinctive approaches to social research, each is associated with a certain cluster of methods for data collection and both have been influenced by certain epistemological and theoretical positions. The quantitative is influenced by the natural science model of research and its positivist form and the qualitative by an epistemological position that rejects the appropriateness of a natural science approach to the study of humans. Furthermore, the quantitative approach is characterized as rationalistic as opposed to the qualitative which is meant to be naturalistic, the quantitative is interested in the "inquiry from the outside" whilst the qualitative is looking at the "inquiry from the inside" and finally, the quantitative perspective is seen as functionalist in contrast to the qualitative which is regarded as constructivist. These epistemological precursors have influenced the concerns of the two research approaches: the concern of quantitative research about causality, measurement and generalizability can be tracked back to its natural science roots; the concern in qualitative research for the point of view of the individuals being studied can be attributed to its epistemological roots. (Bryman, 1992 cited in Brannen, 1992).

Starting from that point, it is common for quantitative methods to be criticized by qualitative researchers for taking natural science as their model. However, as Hammersley (1992) argues "from a historical point of view and even today there are advocates of the qualitative method who justify their approach precisely on the basis of its similarity to that of natural sciences... and there are few supporters of qualitative

research who would insist that there is no aspect of natural science method that is relevant to social research." (Hammersley, 1992 cited in Brannen, 1992).

Another distinction between the two approaches, relates to the Inductive methods used in qualitative research versus the deductive methods that are used predominantly in the quantitative research. Quantitative research is committed to the discovery of scientific laws where qualitative research is concerned with identifying cultural patterns. Hammersley (1992) argues that all research involves both, inductive and deductive methods and going further he argues that much qualitative research is concerned with description rather than theory development and testing while qualitative researchers claim that their goal is theory rather than description. (Hammersley, 1992 cited in Brannen, 1992).

In agreement to the above, Sawada et.al.(1990) argue that the qualitative/quantitative distinction at the epistemological level is not a problem when a logical transformation and a different set of parameters are used. Sawada et.al. (1990) argue that although in an inductive/deductive world the qualitative/quantitative distinction is of central importance when the new logic of Abduction, Induction, Deduction is used, the above distinction loses its force as the central underlying distinction and therefore it is no longer necessary to think of paradigms in a quantitative/qualitative continuum. Johnson (1993) also recommends an alternative conceptual organization that assumes that qualitative/quantitative research paradigms are best organized into a series of interactive but parallel continuums.

Ingersoll (1983) suggests a research continuum which would balance the two methods. Use of the qualitative perspective would provide a fuller understanding of quantitative findings; data from qualitative research can help suggest interpretation and can enrich our understanding of the frequencies and statistical tests of quantitative research. Howe (1988) also argues that there is no incompatibility at either the level of practice or that of epistemology between qualitative and quantitative methods of research.

However, according to Smith & Heshusius (1985), although the two approaches may be combined, each one's differing logic of justification affects the determination of validity. Since social sciences differ from physical sciences, the context of the human experimenters' subjectivity, emotions and values is significant. Therefore, the two distinct perspectives remain: the quantitative realistic tradition describing independently existing social reality as it really is, and the qualitative, interpretive tradition assuming that social reality is mind constructed according to internal coherence and social conditioning.

The above argument by Smith & Heshusius (1985) brings forward the difference of the two approaches in relation to idealism versus realism. The quantitative tradition is related to a realist epistemology in the sense of assuming that true accounts correspond to how things really are. In contrast, the qualitative tradition rejects any possibility of representing reality in that there may be as many realities as there are persons.

However, as Phillips (1990) argues: "the fields of philosophy of science and epistemology have undergone something of a revolution in recent decades... the traditional foundationalist approach to epistemology has largely been abandoned in favor of a nonfoundationalist approach". (Phillips, 1990).

In addition to Phillips (1990) argument, Hammersley (1992 cited in Brannen, 1992) would argue further that whether there is any necessary connection between the particular epistemological position of idealism and the qualitative method is a philosophical issue.

Beyond the epistemological distinctions of the two approaches, some argue for the complementarity of the approaches while others insist on keeping them separate, bringing forward the issues of "objectivity" and "generalizability". When quantitative researchers criticize qualitative research, what is usually at issue is precision. However, as Hammersley (1992 cited in Brannen, 1992) claims precision does not necessarily require quantification.

In agreement to the above, Tesch (1990) argues: "there was a time when most researchers believed that the only phenomena that counted in the social sciences were those that could be measured... then again Sigmund Freud discovered plenty about the way human beings function and so did Jean Piaget... Neither of them tested hypotheses or used large and representative enough samples of people to satisfy the rules of statistics. As Wertz (1987 cited in Tesch, 1990) said, "they tried to make

sense of what they saw or they tried to find out what it means". (Tesch, 1990).

Hence, qualitative researchers criticize quantitative research for being carried out in artificial settings. The charge of artificiality is directed at the formal structured interviews and questionnaires of the kind used by survey researchers. Therefore, even the ability to generalize that the quantitative tradition carries with it, is challenged by qualitative researchers by claiming that quantitative data do not represent the "real world". On the other hand, qualitative research is criticized by the quantitative tradition for its subjectivity by presenting the world from the point of view of the people studied.

In answering the above arguments, Hammersley (1992, cited in Brannen, 1992) would suggest that all research is subject to potential error of one kind or another and therefore much depends on whether reactivity affects the results in ways that are relevant to the research topic and in ways that cannot be allowed for. Reactivity is sometimes referred to as ecological invalidity. Hammersley (1992, cited in Brannen, 1992) takes the argument further to conclude that in all of the above issues there is no clear distinction between the qualitative and quantitative approaches.

" Quantitative research readily allows the researcher to establish relationships among variables, but is often weak when it comes to exploring the reasons for those relationships. Qualitative research can be used to help explain the factors underlying the broad relationships that are established... employing both may provide a means of bridging the macro-micro gulf. Quantitative can often tap large scale structure

features of social life, while qualitative tends to address small scale behavioural aspects". (Bryman, 1992 cited in Brannen, 1992).

Hence, quantitative and qualitative research can be found together in socially sensitive areas and can be viewed as complementary to the understanding of different aspects of the same phenomenon in question; especially when the phenomenon under study is potentially embarrassing, therefore leading the respondent to protect him/herself by giving partial or biased information. The advantages of both methods can be utilized in such a way as to balance out each other's disadvantages.

Whilst, it is beyond the aim of the current study to present the epistemological argument of the quantitative/qualitative approaches or to argue for their complementarity, it should be noted that complex issues underlie any simple assumption about complementarity.

In the current study the two approaches have been considered complementary in terms of separate investigations. However, sometimes researchers in order to achieve some triangulation or cross-method confirmation of results talk about combining qualitative and quantitative data rather than qualitative and quantitative research. In the present study this is not what has been attempted.

Complementarity of the two approaches need not be considered solely in relation to single projects. As Bryman (1992, cited in Brannen, 1992) argues, there are very few studies in which integration of the two approaches has in fact been

achieved. Rather separate investigations run in parallel. An example derives from his own study, in which the quantitative study was used for conceptualizing fairly broadly situational factors and the qualitative study allowed the significance of these factors to be etched with greater sensitivity. Two phases of the research were entailed, though with common guided questions to be researched. This is similar to the complementarity suggested by the qualitative and quantitative studies carried out in the present research.

As Henwood and Pidgeon (1993) suggest: "In discussing choices made during the process of research it is important that we do not overemphasize the significance of the epistemological distinction... qualitative and quantitative procedures are but different forms of the analytic practice of representation in science in that both seek to arrange and re-arrange the complexities of raw data...where a researcher does rely on either qualitative or quantitative methods this will tend to be justified on pragmatic rather than epistemological grounds". (Henwood & Pidgeon, 1993).

Especially in the study of alcohol use one of the problems likely to be encountered is the measurement of alcohol use. Flay (1985) has called ~~to~~^{for} increased rigor in research methodology applied to the study of alcohol use. The primary assessment strategy is self-report. However, in some contexts youth may over-report their alcohol use whilst in other situations may fear exposure or the threat of unknown consequences and underreport its incidence (Forman & Linney, 1990). Although there has been nothing substantial in the literature dealing with surveys of young people to suggest that they deliberately under-report or over-report their drinking, one should not

be tempted to place excessive trust in the precise percentages produced.

Recent drinking is believed to be the most accurately reported. Self-monitoring procedures which include self-recording of the behaviour may lead to more accurate self-reports of alcohol use by children. In a typical self-monitoring procedure the subject records instances of the target behaviour for a specified duration (e.g. 1 day, 1 week) (Forman & Linney, 1990). This is obtained by asking about drinking over the last 7 days in reverse temporal order; in our case the 7-day retrospective diary was the only promising way forward. A strategy for increasing the validity of self-report data includes the design of a self-report instrument with clear and unambiguous time and event grounded items that make it more difficult or more risky for subjects to misinterpret or withhold information about their behaviour.

Peer or parent ratings can also be used; however the use of peer ratings for the particular behaviour has some ethical implications; asking peers to rate a person on negative characteristics may promote future negative interactions and contribute to negative labelling. On the other hand, parents and teachers may not be aware of adolescent drinking whilst even direct observation of the behaviour, "the ultimate validity criterion", it is highly unlikely that can be used to obtain valid measurement of alcohol (Forman & Linney, 1990).

In such cases, the questionnaire by being anonymous allows the respondent to report the actual behaviour whilst the focused interview enables for flexibility, gives possibilities of depth, detects ambiguity, encourages co-operation, achieves rapport and

makes better estimates of respondent's true intentions, beliefs and attitudes. Most importantly respondents will give sometimes unexpected answers that may indicate the existence of relations not originally anticipated (Kerlinger, 1986).

Certainly one of the limitations of the focused Interview is the involvement of the respondent with the data he/she is reporting and the consequent likelihood of bias. Especially, highly personal data or even memory bias, which renders the individual unable to provide accurate information, have long been suspect but such limitations are not to be rigidly assumed (Festinger & Katz, 1954).

In general, the questionnaire tends to be more reliable but it is also possible to create misunderstandings that cannot be solved in the same manner that the focused interview allows (Cohen & Manion, 1987). As Tuckman (1972) describes it "By providing access to what is inside a person's head", the interview makes it possible to assess what a person knows, what a person likes and dislikes and what a person thinks. In connection with other research it might be used to go deeper into the motivations of the respondents and their reasons for responding as they do.

The current research addresses the above two issues by collecting data on drinking behaviour with the help of Substance Use Scale (Botvin et. al., 1984) and the Behavioural diary that aids recollection by measuring the behaviour over the past seven days. The current study also uses questionnaires and a focused interview schedule for measuring other constructs. In this way, we have tried to minimize the possible disadvantages that the questionnaire and the focused interview carry with

them, and to maximize the advantages of each one.

The strategy for data collection differs for each study in important aspects. The quantitative study uses standardized questionnaire which requires responses on a 5-point scale from the perspective of the adolescent. Issues, are therefore, prescribed by the researcher.

The qualitative study requires the adolescent's own account and interpretation of the situation. In sum, the aim is to examine adolescent behaviour in ways that avoid the unhelpful interpretation of a set of crude data. Thus, the present thesis attempts to surmount some of the methodological problems associated with adolescent drinking by using both, qualitative and quantitative approaches. The logic rests on the premise that "numerous situations in the environment carry a degree of ambiguity which allows scope for variability in interpretation of the available information" (Slovik & Tversky, 1982). Hence, the marriage of two approaches is almost inevitable especially when considering the range of pragmatic issues being raised in this area of research.

There are at least four ways in which the marriage of the two approaches could be fruitful in the present study:

- a) In understanding the patterns of alcohol use or alcohol related problems.
- b) In exploring adolescents' perceptions of drinking behaviour.
- c) In recognising subgroups in the population most "at risk" in terms of their interpretation and personal account of drinking

d) In understanding the importance of certain key intervening variables.

Using simple questionnaire data and correlating traits without other means of validating reports or obtaining intrapsychic, interpersonal and developmental data on the subjects does not allow ~~to~~ access different levels of the behaviour and the factors underlying these behaviours. Only this way we can ensure that research could be closely tied to theory and not to some of the recent models and methodologies that are mechanistic and add little to our knowledge (Shore, 1990).

Therefore, qualitative methods need to be adopted because they are being sensitive to individual's own experiences seen in their own terms; in social sciences it is important for the researcher to bear in mind that "the methods are not so much valid in and of themselves but rather they will be more or less useful for particular research purposes" (Henwood & Pidgeon, 1993). Choosing between qualitative and quantitative research methods is risking evaluating research only in relation to the classical canons of reliability, validity and objectivity (Henwood & Pidgeon, 1992).

Hence, qualitative methods are being used in the current research particularly for avoiding the problem of inappropriately fixing meanings where these are variable and renegotiable in relation to their context of use.

On the other hand, quantitative methods are used for falsifying or verifying a subset of variables which allow their predictions upon the basis of observed regularities to be made. Given the fact that researching drinking behaviour in

adolescence involves several methodological problems from running the risk to be given false information to losing sight of the actual practices of young people, the employment of both methods is the most appropriate strategy to follow for answering at what age young people start drinking and what are the major factors related to the onset of it.

One can supplement the other and work for each other's benefit. As Shore (1990) suggests, large scale studies can direct us to look at certain kinds of specific areas and they can suggest many hypotheses, probably helping us to determine individuals of possible high risk (Shore, 1990) but we have also to sub-sample our large studies and develop measurements that give us a greater understanding at different levels of phenomena by using more in depth studies of small samples. For these in depth studies we need to develop new instruments which have greater sensitivity and tap attributes not previously measured. Such studies could occur either in conjunction with or independent of studies utilizing large scale survey techniques (Shore, 1990).

Even in educational research, Howe (1992) suggests that educational researchers have to learn to live with the necessary tensions resulting from accepting elements of each approach. In support of the above argument, Salomon (1991) claims that the study of how specific variables affect others and the study of the same when embedded in complex educational environments should be based on analytic and systemic paradigms that differ as do qualitative and quantitative approaches.

Although, integrating the two methods has been suggested (Bryman, 1992 cited in Brannen, 1992; Hammersley, 1992 cited in Brannen, 1992), the complexity of the task requires the involvement of a team of experienced researchers and it is beyond the ambition of the current research to undertake such a project. In the current research, "quantitative research generates quantitative data and qualitative research generates qualitative data". (Bryman, 1992 cited in Brannen, 1992). Therefore, two studies, one quantitative and the other qualitative have been carried out in parallel and complementarity has been attempted in that respect. Certainly, the issue of researcher bias needs to be addressed in setting-up the research questions and interpreting the results and great caution should be paid in making any generalizations or arriving at premature conclusions.

Finally, as Phillips (1990) concludes: "From the point of view of the new nonfoundationalist epistemology, there is little difference between qualitative and quantitative inquiry...in all types of inquiry, in so far as the goal is to reach credible conclusions, there is an underlying epistemological similarity...it turns out then that what is crucial for the objectivity of any inquiry - whether it is qualitative or quantitative - is the critical spirit in which it has been carried out". (Phillips, 1990).

SUMMARY AND REVIEW:

In the above pages we have been concerned with the explanation of drinking behaviour in adolescence, as it is presented in the current literature. The literature review suggests many ways in which drinking behaviour can be approached, but there are very few attempts to classify variables together and carry-out an investigation which will clarify areas for educational intervention. As a result most educational programmes ignore current findings and rarely implement their outcomes.

In the first chapters, we have discussed excess drinking from the medical and the cultural point of view; psychological research has to move away from the medical model in order to understand the social and psychological associates of abuse. Research has also the task of realising that educational attempts are bound to be unsuccessful to the extent that cultural images and representations promote drinking. However, culture alone is not responsible for drinking practices.

Psychosocial and familial factors, more immediate to the individual, interfere with the drinking behaviour. These factors range from the social circumstances under which one lives to interpersonal relationships and intrapersonal problems and need to be incorporated in a single model, which will clarify the interactional processes among different variables and it will pinpoint areas in which future research and intervention efforts should be directed.

Finally, we have argued that existing methods for identifying the problem are based mainly on self-report data which is more cost-effective, although at the expense of relying on people's ability to answer questions about their behaviour. Most studies seem to agree that younger adolescents drink alcohol and that many of them drink on licensed premises even though this is forbidden by law. The employment of qualitative and quantitative research methods is required for addressing a sensitive area of research. Especially qualitative techniques can help gain insight into the area of alcohol use, where they may reveal differences at each drinking level.

CHAPTER 6: THE QUANTITATIVE STUDY

Previous studies (Marsh, 1986; Sharp et. al., 1988; Plant et. al., 1985; Rhodes & Jason, 1990) present evidence on adolescents initiation into drinking before the legal age and of gender differences in the amounts of alcohol consumed (Hanson, 1982). It was thought appropriate to re-examine these hypotheses and especially the relationship between gender group membership and drinking behaviour since it is generally believed that men are heavier drinkers than women (Maney, 1990; Hanson, 1982). It was also decided to investigate whether the two gender groups differ in i) patterns of drinking and ii) the factors associated to drinking.

An initial question concerned the relationship between Drinking Behaviour and interpersonal and intrapersonal variables seen in conjunction with family systemic variables with the main aim being to re-examine a set of factors which are thought to correlate with drinking and identify the most salient ones.

For that purpose the present study was designed to assess whether differential sociopsychological characteristics between Abstainers and Drinkers would be found by a questionnaire survey which was manifestly concerned with drinking behaviour and which required the voluntary response of questionnaires.

6.1) Hypotheses.

The literature review suggests that children and adolescents likely to start drinking and even abuse alcohol before the legal age? (Dunne & Schipperheinj, 1989; Grant et. al., 1990). Also sex differences are expected to be found in adolescents' drinking patterns and subsequent behaviour? (Hanson, 1982; Murray, 1989; West et. al., 1990). Drinkers are also more likely to perceive a greater number of friends who drink than abstainers and occasional drinkers? (Plant et. al., 1985; Jahoda et. al., 1980). Several other hypotheses have been considered worth investigating via quantitative techniques, after researching the literature and considering the relevant findings in the area. These are the following:

- a) Are adolescents who drink, different from adolescents, who abstain or they simply experiment with alcohol, in a variety of characteristics, whether these are the after effects of drinking or the causes of it (Rhodes & Jason, 1988;1990)? More specifically:
 - i) are they more likely to know less about the long-term effects of alcohol on human life than the other two groups?
 - ii) are they more likely to have more positive attitudes towards drinking than the other two groups?
 - iii) are they more likely to be less assertive from experimenters and abstainers?
 - iv) are they more likely to have a lower self-esteem when compared with the rest of the groups?

v) are they more likely to make more external attributions when compared with the abstainers and the occasional drinkers? and

vi) are they less likely to resist "emotional pressure to drink", "friends' pressure to drink" and "opportunity to drink", when compared with the other two groups?

b) Are adolescents who report heavy drinking more likely to be different in their perceptions of family environment and the levels of social support they receive from significant others than abstainers and occasional drinkers? (Olson et. al., 1985; Protinky & Shilts, 1990; Power et. al., 1988; Lowe & Foxcroft, 1993). In other words:

i) are heavy drinkers more likely to perceive extreme levels of family cohesion and adaptability, when compared with abstainers and occasional drinkers?

ii) are those who report extreme levels of cohesion and adaptability more likely to report being in trouble due to drinking? (Novy & Donohue, 1985).

6.2) Methodology.

SUBJECTS: Two hundred and sixty eight, 14-17 year old boys and girls were recruited from three high schools in Islington and Camden areas, and a college of further education in Merton. The schools did not differ significantly in socioeconomic status ($F= .443$, $p= .64$), as it was measured by Botvin et. al. (1984) SES scale. At initial contact, students were told the general aim of the research, the procedures to be followed and that the completion of the questionnaires would last for about 45-60 minutes. The questionnaires were anonymous and participants were assured of confidentiality. All students agreed to participate in the study. However, from the 268 students, 20 managed to complete only the first of the four questionnaires and 10 failed to complete all the questionnaires appropriately. All of these adolescents spoke English as a second language. The final sample consisted of 124 boys and 114 girls with a mean age 15.4 years. 63 were students in a college of technical education, 60 in the first year of the high school, 52 in the second and 63 in the third. The above schools were the only mixed schools in the area of Camden and Islington and as it was suggested by the Educational Authorities they were representative of the population of boys and girls in Islington and Camden.

6.3) Assessment measures.

Life Skills Training Questionnaire (LSTQ). All subjects completed the LSTQ inventory consisting of scales designed to assess students' substance usage, substance knowledge and attitudes about substances. In addition the inventory contains several different scales designed to assess a number of cognitive variables which have been linked with adolescent substance use (Botvin et. al., 1984). The test-retest reliability of these measures ranges from .66 to .89. The properties of the scales are described in greater detail below.

The *Substance Use scale* (Botvin et. al., 1984) measures adolescent drinking behaviour, which is the dependent variable, by asking students to indicate whether they had ever used alcohol and to give the level and frequency of usage within the previous month, week and day. The test-retest reliability of the scale, when tested by Botvin et. al. (1984) over an 8 month period was $r = .75, p < .01$. Botvin et. al. (1984); it also asked students to report their current drinking frequency and level of intoxication. The test-retest reliability of the scale was $r = .81, p < .01$. The researcher added two more items in the scale, which the students had to after the end of the questionnaire and tested the scale for internal consistency; these two items had a test-retest reliability of .89 (Lawrance, 1988). Also the correlation between the dissimilar subscales in the same time period at the highest coefficients in the matrix indicates reliability for the substance use subscales (Campbell & Fisk, 1959). Since previous studies (Botvin et. al., 1984; Lawrance, 1988) report high correlations of the

same subscale at different times, there is evidence for convergent validity. Table 1 demonstrates the Pearson's correlation coefficient for each substance use subscale.

Table 1: Pearson Correlation coefficient for Substance Use Subscales

	RETROSPECTIVE USE	CURRENT USE
RETROSPECTIVE USE	.8039*	.6015*
CURRENT USE	.6043*	

* $p < .00001$

For the current population the Current use scale's Alpha= .8945, for the Retrospective Use the Alpha=.8343 and for the Current use & Intention is .8201 (Appendix 2). The Significant Others Substance Use scale is also based on Botvin et. al. (1984) scale, measuring parental drinking, parental approval of adolescent drinking and friends' drinking. The test-retest reliability of the scale over an 8 month period was .61 (Botvin et. al., 1984). The Alpha of the scale for the current population is .68. Finally, the behavioural scale, which is designed to identify troubled behaviour due to drinking has a test-retest reliability of .87 (Botvin et. al., 1984) and an alpha=.9615 for the current population.

The factor loadings of the scale are reported in the appendix together with the results of the alpha maximisation approach. In the appendix the scale is also presented in the form in which it was administered to the subjects. The Current Use & Intention Index of the Scale was administered after the end of the questionnaires, whilst the Retrospective and Current Use Scale were administered at the beginning of

the questionnaire and next to each other. The following scales were used in order to measure the effects of the independent variable, i.e. drinking behaviour.

The *Substance Attitude Scale* contained 33 questions concerning cigarettes, alcohol and marijuana. Students were asked to indicate on a 5-point scale their level of agreement. The test-retest reliability of this measure when tested over an 8 month period was .89 (Botvin et. al., 1984). The researcher kept only the items which were directly related to alcohol. An alpha maximisation was carried-out in order to ensure that the scale was reliable for the present population. In the initial analysis all ten items were processed. From this analysis it was revealed that several items needed to be dropped for the scale to be more reliable. As a result, six items remained in the scale, which maximized the Alpha at .7955(Appendix 2).

Assertiveness was measured using a shortened version of the Assertion Inventory (20-item) (Gambrill & Richey, 1975, adapted by Botvin et. al., 1984). For each item of the scale the respondent was requested to indicate a degree of Discomfort or anxiety on a five point scale which ranged from never (1) to always (5); the probability of displaying the behaviour if actually presented with the situation and the situation in which he/she would like to be more assertive. The original scale contained 40 questions and had internal consistency ranging from .87 for discomfort and .81 for response probability. Correlations with observer ratings were .47 (Gambrill & Richey, 1975; cited in Botvin et. al., 1984). In order to maximize reliability for the present population, the researcher carried-out a test for internal consistency. From the original 20 items, only 10 were kept in the scale, and the scale

was split into two subscales after factor analysis (Appendix 2). The first subscale measuring assertiveness in an actual situation had an alpha of .7371, and the second measuring assertiveness in an imaginative situation had an alpha of .5891, for the current population. From the original 20 items only 11 were used for the two subscales.

Self-esteem was measured by using the Rosenberg Self-esteem scale (1979) which contains 10 items rated on a 5-point Likert type scale. This scale has a coefficient of .87 (Rosenberg, 1979). For increasing reliability of the scale for the present population three items had to be deleted. The Alpha then was maximized at .7134 (Appendix 2).

Social Anxiety was measured by means of seven situation-specific items relating to social situations which might produce anxiety (Wells & Marwell, 1976, cited in Botvin et. al., 1984). The scale was reported to have test-retest reliability of .78. In the present study Social Anxiety was measured by all 7 items which had an internal consistency of .7836 (Appendix 2).

General influenciability was measured using five items relating to the extent to which the respondent is influenced by others to make an important decision. The scale was reported of having an internal consistency of .72 (Botvin et. al., 1984). The alpha maximisation approach revealed that it is not necessary for any of the items to be deleted since the Alpha=.7268 (Appendix 2).

Locus-of-control was measured of a 24-item Norwicki-Strickland Locus-of-control Scale for children (1973). The scale was adapted by Botvin et. al. (1984). The scale consisted of statements to which children responded "yes" or "no". The internal consistency correlations for the original scale ranged from .68 to .81 for Grades 6-12; test-retest reliability correlations over a 10 month period ranged from .63 to .71. In order to increase reliability of the scale for the present population, 15 items were extracted from alpha maximisation. Internal consistency Alpha=.5986 (Appendix 2).

Substance Knowledge scale was designed by Botvin et. al. (1984). It is a ten item scale with test-retest reliability of .66 (Botvin et. al., 1984). Only one item was dropped from the original scale in order to maximize Alpha for the present population at .7169 (Appendix 2).

With the exception of Locus-of-control all the personality variables are measured using 5-point Likert type scales. All of these items have been used in previous research and have test-retest reliabilities ranging from .66 to .78 (Rhodes & Jason, 1990). The inventory takes 30-35 minutes to complete.

Socioeconomic Status scale was measured using a modified (16-item) version of Hollingshead (1956, cited in Botvin et. al., 1984), adapted by Botvin et. al. (1984). The scale contained questions measuring demographic factors (e.g. occupation, education, age and family characteristics). The test-retest reliability of this measure, when tested by Botvin et. al. (1984) over an 8-month period was .66 ($p < .01$). The

factor loadings of all the above mentioned scales as well as the form in which the scale were administered to the subjects is given in the appendix. SES was measured in order to control for the social context in which adolescents were brought up.

Self-Efficacy scale was adapted by the researcher from the Smoking Survey (Lawrance, 1988) a 36-item questionnaire was designed to predict adolescent smoking by identifying component behaviours perceived as difficult to change and situations in which there is increased vulnerability to smoking. Students are required to rate their reactions to each situation on a 6-point scale. Factor analysis by Lawrance (1988) revealed 3 sub-scales: opportunities to smoke, emotional stress and friends' influence. The test-retest correlations for the sub-scales indicated good reliability for the self-efficacy scale. More specifically, the test-retest for the emotional stress subscale was .90, for the opportunity subscale $r = .90$ and for the friends subscale, $r = .92$ (Lawrance, 1988). For each subscale Lawrance also reports the Alpha as follows; emotional stress $\alpha = .97$; opportunity $\alpha = .95$ and friends $\alpha = .94$. The researcher modified the scale for adolescent drinking. In order to maximize internal consistency of the scale, each subscale was subjected to an Alpha maximisation. For each subscale the Alpha are as follows; i) for the Resistance to friends' pressure to drink subscale the $\alpha = .9393$, ii) for the Resistance to opportunity to drink subscale the $\alpha = .9349$ and iii) for the Resistance to emotional stress to drink subscale the $\alpha = .9529$. None of the items were dropped due to the very high internal consistency (Appendix 2). The current scale takes approximately 10 minutes to complete. Factor loadings and the actual form of the scale are given in the appendix.

Family Cohesion and Adaptability scale (Faces III). The Faces III scale by Olson et. al. (1985) is a development of the Faces I and Faces II scales and it measures cohesion and adaptability of the family. The Inventory is established for families with adolescents. It is a 20-item scale which contains 10 cohesion items and 10 adaptability items. There are two items for each of the following five concepts related to cohesion dimension: emotional bonding, supportiveness, family boundaries, time and friends and interest in recreation. There are two items for each of the following concepts related to adaptability dimension: leadership, control, and discipline; and four items for the combined concept of roles and rules. The correlation between cohesion and adaptability on Faces III is almost zero ($r = .03$), demonstrating the empirical independence of the dimensions and ensuring an independent distribution of the scores across the two scales. The internal consistency reliability is adequate for both cohesion ($r = .77$) and adaptability ($r = .62$) (Olson et. al., 1985). For maximising internal consistency of the scale for the present population, the alpha maximisation approach was followed. The Cohesion subscale found to have an $\text{Alpha} = .8284$, and the Adaptability subscale an $\text{Alpha} = .7384$. Therefore all items have to be included in the scale for a high internal consistency. It takes approximately 5-10 minutes for one to complete the scale (Appendix 2). Factor loadings of the two subscales are also given in the appendix.

Significant Others scale (SOS) (Appendix 2) measures perceived and ideal support and its the shortest version of the SOS scale developed by Power et. al. (1988). The first scale measures the Actual level of support that one obtains from one's network and the second scale measures Ideal Support. The short version of the SOS, is a 7-point scale with four functions ("ACT"= ACTUAL, "ID"= IDEAL, "PR"= PRACTICAL, "EM"= EMOTIONAL). The SOS is designed for flexible use; thus the role-relationships included in the questionnaire should be those that are most appropriate to the sample under investigation. The number of the role-relationships included in the questionnaire can of course vary according to the study in question. Test-retest reliability after 4 months follow-up is, EM=0.85, ID EM=0.76, PR= 0.84 AND ID PR= 0.69, respectively (Power et. al., 1988). The above scale was designed for the British population and it was also tested for the adolescent population. It takes approximately 10 minutes to complete the scale. A more detailed account of all the items in all scales is given in the appendix.

6.4) Issues of reliability.

Since all but one (Significant Others scale, Power et. al., 1988) scale in the present study were constructed and mostly used in American research, some cultural bias might be involved in using them, making them less reliable for the present population. Thus, it was considered necessary to cheque the internal consistency of the scales by using the Alpha maximisation approach. As a result some of the items had to be dropped and most of the scales were adapted in accordance with the demands of the present population. Since the overall aim was to maximize internal consistency, the effects of individual items were easily assessed by comparing alpha values and omitting the items reducing alpha. This criterion is not only objective, avoiding the need for conventions, it is also suitably conservative since normally one would expect the alpha to drop when the number of items falls (Youngman, 1979). The new subsets of items accepted by the method were reported above.

The only scale with a relatively low alpha was the Locus-of-control scale which indicates that the current items are not the most appropriate ones for the current population. Although the above scale is widely used, one should expect that a concept such as Locus-of-control is likely to vary to a greater extent from culture to culture, than it was originally believed. Consequently, whilst the present scale is very appropriate for the population for which it was constructed, it is not necessarily appropriate for other populations and has to be put under careful scrutiny. As a result several items of the scale had to be dropped in order to maximize consistency for the present population.

Test-retest reliabilities of the present scales were reported above. However, we would like to test the reliability for the current population. In many situations, as the present one where the questionnaires are anonymous, it is not possible to get the same people to answer the same test twice. In this case, statisticians (Youngman, 1979; DeVaus, 1986; Barber, 1976) suggest an alternative approach to test-retest reliability, which is called the Split-half. The test is divided into two halves (even vs. odd items) and these are correlated; the result is a reliability coefficient for a half test; the reliability coefficient for a whole test may be estimated by using the Spearman-Brown formula. Since test-retest reliabilities of the scales were reported by previous researchers, the Split-half method is believed to be a reasonable one for supporting further the reliability of the scales.

The Split-half for the Current Substance Use scale is .8191, for the Past Use is .6963, for Significant Others Drinking is .4731, for Getting in trouble is .9034 and for Current use and Intention is .6901. For the Attitude scale Guttman Split-half=.8309, for the Actual Assertiveness scale is .7327, for the Situational Assertiveness is .5891, for the Self-esteem scale is .7134, for the Locus-of-Control scale is .5435, for the Emotional Stress Resistance subscale the Guttman Split-half=.9389, for the Friends' Resistance it is .9139 and for the Resistance to Opportunity to drink is .9389. For the Social Anxiety it is .7689 and for General Influenciability is .5498. For the Family Cohesion it is .8037, and for the Family Adaptability is .6924. For the Substance Knowledge the Guttman Split-Half=.7117.

Finally for the Significant Others scale and its subscales it is as follows; i) Actual emotional subscale, Guttman Split-half= .9190, ii) Actual practical subscale, Guttman split-half =.9134, iii) Ideal emotional subscale, Guttman split-half=.9513 and Ideal practical subscale, Guttman split-half=.9465.

6.5) Procedure and Design.

The questionnaires were administered to all subjects between the ages of 14-17. Prior written consent was obtained from the Educational Authorities. Questionnaires were administered in the classroom, during the hour of Health Education, and all classes received identical instructions. The researcher spoke briefly about the purposes of the research and placed emphasis on how important their own account was. The researcher remained at hand while the questionnaires were completed; the teacher was requested to leave the classroom. In that way the researcher hoped to maximize confidentiality and to minimize any deliberate compliance effect. The subjects were given the questionnaires in a particular order, so that the LSTQ was given first, followed by the Significant Others, the Self-efficacy and the Faces III respectively. The order of the administration of the questionnaires was decided in terms of the amount of time required to fill them in and in terms of level of difficulty in understanding and completing them.

For the completion of the questionnaires, subjects were asked to sit individually so as to avoid interaction and be able to concentrate on answering the questions. The completion of the questionnaires varied from 45-60 minutes, from class to class, from individual to individual and from one age group to another. The researcher explained that this was not a test and introduced them in a general way as questionnaires looking at various aspects of their beliefs, opinions and behaviour. The researcher also said that each question would have written instructions but if they did not seem clear or

if at any stage the participant was not sure what to do, he or she would ask questions and the researcher would try to answer them. When participants had completed these, the researcher debriefed them and thanked them for their participation.

Given the restrictions in the present study which were imposed i) due to the applied restrictions of the educational authorities in a potentially sensitive area of research (Appendix 1) and ii) due to the anonymous questionnaires which were used for reassuring the respondents' confidentiality and for making it easier to report the drinking behaviour, the longitudinal design was abandoned for the benefits of the cross-sectional design, which in the current research was used as well retrospectively for retrieving information about the respondents' past drinking history. Although in the absence of longitudinal data it is hard to confirm causal relationships, other important implications can still be drawn from the above design.

First and foremost, many (Kerlinger, 1973; Fowler, 1982; Bryman, 1988) agree that survey research seems ideally suited to some of the large controversial issues and it is probably best adapted to obtaining personal and social facts, beliefs and attitudes. Many potentially sensitive areas such as alcohol use and family planning techniques can be studied with the use of self-administered procedures, which are thought to be the best since the respondent does not have to admit directly to the researcher a socially undesirable behaviour. This procedure has an air of impersonality which helps the individual to report negative events and behaviours (Fowler, 1982; Bryman, 1988).

In fact, this is one of the best ways for controlling for bias in adolescents responses of their drinking behaviour (Rhodes & Jason, 1988, 1990). The bias is reduced by using anonymous questionnaires which reassures the student that the responses are confidential and they will not be used against them. Also we can control for bias through the utilisation of retrospective data in the evaluation of drinking. This technique involves asking the student to answer each question twice. First, they respond in reference to how they perceive themselves to have been and then they respond to the same question again, in reference to their current perception of themselves. These tests are administered close to each other in time, increasing the likelihood that both ratings are made from the same perspective which involves the same level of inhibition and honesty (Rhodes & Jason, 1988). Additionally, the current study included similar questions to be answered by the end of the questionnaire, as well as a question of intention to be drinkers before finishing school. Due to the high consistency in all measures of drinking behaviour, the researcher believes that bias in responses was eliminated.

Although this study can neither guarantee that the causal variables have been isolated nor provide the researcher with control over the phenomena being studied, it does allow to find out whether the phenomenon is predictable from knowledge about some other variables (Carlsmith, 1976; cited in Bryman, 1988). It is also very unusual for self-administered forms not to be at least as good as other methods for eliciting responses that may be socially sensitive or embarrassing. Finally, when samples are comparable researchers have found that most survey estimates are unaffected by the mode of data collection (Fowler, 1982; Bryman, 1988).

To sum up, the present study extends the literature on the relationships between drinking behaviour and environmental variables by adopting a multifaceted view of the interaction between the individual, the environment and the behaviour and supports the strengths of quantitative survey research in socially sensitive areas, whilst it recognizes its weaknesses.

CHAPTER 7: ANALYSIS OF THE RESULTS

The results section is concerned with presenting the following: first descriptive statistics for the patterns of alcohol use/misuse, as identified in the current study; second the summary scores of the Lifes Skills Training Questionnaire, the Significant Others Scale, the FACES III Scale and the Self-efficacy scale; third, a series of regression analyses for identifying the most significant for drinking behaviour variables and fourth analysis of the results from the three drinking groups perspective which was preliminary carried out to assess the differences between occasional drinkers, drinkers and abstainers.

7.1) Demographic characteristics.

One of the research questions in the present study is related to the amount of alcohol that adolescents consume. The following pages are concerned with the presentation of the above findings, indicating drinking frequency and quantity in both sexes. 238 students were eligible to enter the study. From the 268 questionnaires administered, 88.8% were filled in appropriately whilst 11.1% were excluded from the study, since subjects failed to complete them within the one hour time-limit given in each of the four institutions. For all of the students, who did not complete the questionnaire, English was the second language and therefore a barrier in understanding the questions and responding to them within the time-limit. It would have been possible to recruit more students from each school, if the levels of absenteeism were lower. In fact one of the schools reported having drop out rates

reaching the 20% on the fourth form. Obviously the researcher would be very interested to get in touch with those who are dropping out of school, but this was not possible at the time. Future research might wish to take this into consideration.

The sample consisted of 124 males and 114 females. The age range was from 14-17 years, with a mean of 15.4 years. The majority of the students were in the fourth form of high-schools in the Inner London area and the rest from a college of technical education.

The groups did not differ significantly with respect to family status (nuclear family, single parent family) and living standards, but they differed significantly in respect to parental education. Respondents were all members of the C1 and C2 social classes. Adolescents who reported heavier drinking were also more likely than abstainers to report that their parents did not go beyond the high-school ($F= 4.8533$, $p< .008$). However, the three groups did not differ significantly in any other measure of socioeconomic status ($F= .4430$, $p= .64$).

7.2) Descriptive analysis of alcohol consumption in the present population.

A descriptive analysis of the quantitative study variables is given in the following Tables. Table 2 shows the alcohol use ratings for the current population and presents the frequency distributions and item content for the Retrospective Substance use/misuse scale (Botvin et.al., 1984).

Table 2: Frequency distributions and item content for the Retrospective Use Scale.

RETROSPECTIVE USE SCALE	YES	NO
Have you ever had a drink of alcohol?	193 (81.1%)	45 (18.9%)
Have you had a drink of alcohol in the last year?	180 (75.6%)	58 (24.4%)
Have you had a drink of alcohol in the last month?	128 (53.8%)	58 (24.4%)
Have you had a drink of alcohol in the last week?	78 (32.8%)	160 (67.2%)

Table 3 presents the frequency distribution in the Substance Use and Intention to Drink Scale. (Lawrence, 1989).

Table 3: Frequency distributions and item content for the Substance Use and Intention to Drink Scales.

PLEASE CHECK ONE	FREQUENCIES	
I never had an alcoholic drink.	45 (18.9%)	
I tried drinking alcohol but I gave up.	19 (7.9%)	
I drink alcohol sometimes but not every week.	121 (50.8%)	
I drink at least one alcoholic drink once a week.	30 (12.9%)	
I drink at least six drinks every week.	22 (9.5%)	
Do you think that you will be a drinker before finishing high school?	YES 152 (63.8%)	NO 86 (36.2%)

There are three important findings. First, almost one fifth of the adolescents in the current population reported never having an alcoholic drink, second almost one third of the current population reported having an alcoholic drink during the last week (32.8%) and third, two thirds (63.8%) reported their intention to be drinking before finishing high-school.

Subjects in the current population were asked to complete The Life Skills Training Questionnaire (Botvin et.al., 1984) which consists of a series of questionnaires measuring cognitive, emotional and personality characteristics.

The scores for the above measures are summarized in Table 8; the Table displays the mean scores and standard deviations of the different scales for the current population.

Table 4: Life Skills Training Questionnaire Means and Standard Deviations.

LIFE SKILLS TRAINING QUESTIONNAIRE	MEAN	S.D.	Min.	Max.
KNOWLEDGE	12.77	2.65	9	18
ATTITUDES	11.56	4.09	6	30
LOCUS-OF-CONTROL	20.68	2.77	15	30
ACTUAL ASSERTIVENESS	17.33	5.14	6	30
SITUATIONAL ASSERTIVENESS	8.73	3.00	4	20
SELF-ESTEEM	17.58	4.55	8	40
GENERAL INFLUENCE	16.03	4.33	5	25
SOCIAL ANXIETY	22.66	5.12	7	35

Table 5 presents the Self-Efficacy Scales (Lawrance, 1989) mean and standard deviation, as well as the minimum and maximum score of each sub-scale.

Table 5: Self-efficacy scales Means and Standard Deviations.

SELF-EFFICACY SCALE	MEAN	S.D.	Min.	Max.
Resisting Opportunity	25.45	5.32	10	60
Resisting Emotional Pressure	44.03	10.77	14	84
Resisting Friend's Pressure	35.75	10.74	8	48

Another dimension researched in the current study is adolescents' perception of social support, as measured by the Social Support Scale (Power et.al., 1986). The lowest rating in this scale is 1=never and the highest is 7=always. If a relationship is not applicable, the column is left blank. The scores for each role category vary from 10 being the lowest to 70 being the highest.

The following Table 6 presents the summarized scores for the social support measure. Table 6 displays the actual scores, the ideal scores and the discrepancies between the two. The discrepancy scores calculated by taking the ideal score minus the actual score and re-coding values to zero when the actual score is higher than its equivalent ideal, according to Power et.al.(1986) instructions, suggest that the discrepancies are higher for support received and expected by the father, followed by the mother and the best friend.

Table 6: The mean ratings for the emotional and practical types of support collapsed across roles.

ROLE	ACTUAL SUPPORT	IDEAL SUPPORT	IDEAL- ACTUAL	MIN.	MAX.
Father Mean S.D.	39.497 17.454	48.120 21.265	8.623 3.811	10	70
Mother Mean S.D.	49.675 20.002	57.437 15.002	7.762 3.415	10	70
Closest Brother Mean S.D.	22.118 9.774	25.536 11.284	3.418 1.510	10	70
Closest Sister Mean S.D.	26.194 11.575	31.349 13.853	5.155 2.278	10	70
Best Friend Mean S.D.	46.476 20.538	53.156 16.801	6.680 2.939	10	70

Finally, the current study was concerned with identifying adolescent's perceptions of Family Cohesion and Adaptability; as the scores in the FACES III (Olson et.al., 1986) scale suggest, 14 out of the 16 family sub-types have been identified in the current study. These family sub-types emerge from the three basic categories of Balanced, Extreme and Middle range families.

As Table 7 suggests, the group of subjects as a whole was not equally distributed across the family types. The majority of the subjects were assigned to a middle-range family. The cutting scores for the Adaptability and Cohesion Subscales are as follows: ADAPTABILITY: 10-15 Rigid, 15-24 Structured, 24-28 Flexible and 28-50 Chaotic; COHESION: 10-35 Disengaged, 35-40 Separated, 40-45 Connected and 45-50 Enmeshed. The lowest score in each subscale is 10 and the highest is 50.

Table 7: Sixteen family types within the three dimensions.

FAMILY TYPES	N = 238
BALANCED	59
Flexibly Separated	42
Flexibly Connected	11
Structurally Separated	6
Structurally Connected	0
MIDDLE RANGE	117
Chaotically Separated	23
Chaotically Connected	17
Flexibly Disengaged	42
Flexibly Enmeshed	0
Structurally Disengaged	19
Structurally Enmeshed	3
Rigidly Separated	7
Rigidly Connected	6
EXTREME	62
Chaotically Disengaged	10
Chaotically Enmeshed	8
Rigidly Disengaged	40
Rigidly Enmeshed	4

7.3) A model for the understanding of alcohol misuse in adolescence.

Data were analyzed using multiple regression techniques to identify those variables which correlate with the drinking behaviour. Multiple regression techniques work on the principal that the more we know about a person, the more accurately we can guess other attributes of that person. In this instance, the technique was used to predict drinking behaviour, as this was measured from the Substance Use Scale (Botvin et.al., 1984), from other attributes. The stepwise method was followed in the regression equations, which is able to identify the significant predictors.

In the present study multiple regression techniques allowed the researcher to select from a pool of variables, the most significant for drinking behaviour correlates, for examining further differences between Abstainer, Drinkers and Occasional Drinkers. Sample size is also important since the method capitalizes on chance variations to such an extent that results from small samples have little general applicability. Ideally, samples should exceed 200, or at least 100 members (Youngman, 1979). For the same reason the number of predictors should be kept low.

The regression variables were selected from a pool of variables identified as the significant correlates of substance use in the current literature. From these only those, which were significantly correlated with drinking behaviour, which is the dependent variable, in the current population, were used for regression analysis.

An initial question related to the understanding of drinking behaviour, the dependent variable, was whether intrapersonal and interpersonal factors, the independent variables, were associated with drinking behaviour. Table 8 contains the correlations between each pair of variables for the entire sample.

Inspection of Table 8 indicates that reported drinking for the last 12 months, reported number of friends who drink, reported engagement in trouble, reported ability to resist friend's pressure to drink, perceived parental approval of adolescent drinking, family interactional patterns, age of the respondents, reported ability to resist emotional pressure to drink, opportunity to drink and friend's pressure to drink, attitudes towards drinking, actual assertiveness, social anxiety and locus-of-control, were all related to drinking in the expected direction. Emotional and practical support, self-esteem, general influenceability, situational assertiveness, social anxiety, knowledge measures and gender group were not correlated with the drinking measure.

Table 8: Correlation coefficients amongst sociopsychological variables and Current Drinking.

VARIABLE PAIR	CURRENT DRINKING	SIGNIFICANCE
Past Drinking	.8039	.0001
Getting in trouble	.5786	.0001
Perceived Parental Approval	.4761	.0001
Resisting Friends' Pressure	-.5708	.0001
Reported Number of Friends	.5280	.0001
Assertiveness	-.2558	.0001
Attitudes	.2239	.0001
Locus-of-Control	-.1541	.009
Resisting Opportunity	-.3630	.0001
Age group	.4818	.0001
Resisting Emotional Pressure	-.3623	.0001
Family patterns	-.1976	.001
Situational Assertiveness	-.0533	.208
Knowledge	.0734	.130
Self-esteem	-.0694	.144
Emotional support	-.0136	.431
Practical support	-.0294	.354
Gender group	.0505	.220
General Influence	.0376	.283
Social Anxiety	-.0923	.080

To examine hypothesized relationships among the factors in understanding drinking, a series of multiple regression analysis were performed. Subject gender was also included in the analysis. By including gender in the regression models, the gender effect on the drinking measure was not only examined in terms of its uniqueness in relation to the other variables, but it also allowed a determination of whether the association between another variable and drinking differed for men and women. In each analysis, the stepwise method was conducted to determine if these variables as a whole predicted a significant proportion of the variance of drinking measure and whether each individual variable uniquely accounted for a significant proportion of the variance. The results obtained are summarized in Table 9.

Collectively, the variables accounted for the 78% of the variance of the drinking measure. Significant relations were obtained for drinking in the last 12 months ($B = .44$, $t = 7.45$, $p = .00001$), indicating that adolescents in the current population who report they experience drinking over the last 12 months, were more likely to abuse alcohol at the time that the study was carried out. These adolescents were also more likely to get in trouble ($B = .24$, $t = 4.76$, $p = .001$), to report friend's drinking ($B = .12$, $t = 2.614$, $p = .009$), lower ability to resist to friend's pressure to drink ($B = -2.36$, $t = 3.51$, $p = .00006$), lower ability to resist opportunity to drink ($B = 1.58$, $t = 2.622$, $p = .009$) and more extreme family patterns ($B = .1200$, $t = 3.116$, $p = .002$) than those who did not score high on the drinking measure.

Table 9: A model for the prediction of drinking group membership.

PREDICTORS	BETA	T-TEST	SIG. T	R SQ.
Previous Drinking	.446718	7.455	.00001	.66910
Getting in Trouble	.246266	4.762	.0001	.71894
Friends Drinking	.123357	2.614	.009	.73774
Resisting Pressure	-.236092	3.510	.00006	.74921
Family Patterns	.120017	3.116	.002	.75934
Locus-of-control	-.106912	2.575	.01	.76913
Resisting Opportunity	.158031	2.622	.009	.77635
Actual Assertiveness	.107104	2.573	.01	.78581

Different analyses were carried out for the two gender groups using the select approach for analysing each group separately. The results are summarized in Tables 10 & 11. In relation to boys drinking measure, the variable accounted for 74% of the variance, whilst for girls the variance accounted for is, 82%. Significant relations were obtained for drinking over the last 12 months for both boys ($B = .555$, $t = 7.19$, $p = .00001$) and girls ($B = .4638$, $t = 6.129$, $p = .00001$), indicating that individuals who experienced drinking over the last 12 months were more likely to report heavy current drinking. Getting into trouble was also important for both boys ($B = .212$, $t = 2.175$, $p = .008$) and girls ($B = .304$, $t = 4.297$, $p = .0001$). Locus-of-control had a significant effect for boys ($B = -.197$, $t = -3.251$, $p = .001$), but not for girls, indicating that boys who report heavier drinking are also significantly more likely to assign external attributions than those who abstain. Boys who misuse alcohol are also more likely to report friend's drinking ($B = .181$, $t = 2.42$, $p = .01$). For girls, age group had a significant effect ($B = .1979$, $t = 3.894$, $p = .0002$), indicating that older girls report

more drinking than younger girls and lower ability to resist friend's pressure to drink (B= -.1690, t= -2.743, p= .007).

Table 10: A model for the prediction of boys' drinking behaviour.

PREDICTOR	BETA	T-TEST	SIG. T	R SQ.
Past Drinking	.555674	7.193	.00001	.65320
Friends' Drinking	.181337	2.422	.01	.70584
Locus-of-control	-.197054	-3.251	.001	.72696
Getting into Trouble	.212095	2.715	.008	.74712
Actual Assertiveness	.137605	2.196	.03	.76321

Table 11: A model for the prediction of girls' drinking behaviour.

PREDICTOR	BETA	T-TEST	SIG. T	R SQ.
Past Drinking	.463817	6.129	.00001	.68499
Getting in Trouble	.304376	4.297	.0001	.75454
Age group	.197975	3.894	.0002	.78803
Resisting Pressure	-.169053	-2.743	.007	.81097
Family Patterns	.106548	2.172	.03	.82202

The following pages, are concerned with the presentation of demographic characteristics, with the classification of adolescents in the drinking groups and with a more detailed presentation of several variables in an effort to search for existing differences between the three groups of abstainers, drinkers and occasional drinkers.

7.4.) Classification in Drinking groups and further analysis.

In the current study, a system of joint and alternative conditions was used for dividing the sample into Abstainers, Drinkers and Occasional Drinkers; the aim being to investigate further differences amongst the three groups on the factors that were found to be correlated to the drinking behaviour, the dependent variable, from regression analysis.

The present study involves the analysis of subgroups as a fundamental part of the design. Each subgroup is a selection of cases from the initial sample, from which the definition and extraction of valid subgroups was done in accordance with the reported drinking practices of adolescents in the present study. Thus, the first group extracted, represents the Abstainers, who have reported never having an alcoholic drink. The second group is classified as Occasional Drinkers, who report drinking at "least few times a year" and at most "few times a month", having at least two drinks per occasion and at most getting drunk. Finally, the third group are the Drinkers, who report drinking from few times a month, with more than six drinks at a time, to everyday, up to the point of getting drunk.

The above groups derived by using a system of joint and alternative conditions (from set theory), which introduces sufficient flexibility to allow virtually any conceivable subgroup to be defined and extracted. Hence, classification in groups involves two measures at once. The drinking frequency per year level might

profitably be extended so that each level is further subdivided by amount of drinks per drinking occasion, so that every member in the three groups would be identified by a double condition.

Group size is also important for further analysis. In general, statisticians recommend the use of 15 at least cases per subgroup. Subgroups in the present study have many more cases than that. Variation in group size is also important and can be tested by looking at the homogeneity of variance. Homogeneity of variance can be addressed with the Bartlett's test, which has to be non-significant for the variances to be acceptably alike. However, even if this condition is not satisfied we can proceed with subgroup analysis by obtaining a test of atypicality such as the Scheffe's. We will deal further with these issues at a later stage of analysis in which we want to ascertain that there are differences between the groups and finally to identify the nature of those differences.

Frequency analysis and crosstabulations were used in order to place individuals in different groups according to their drinking habits during the study. Of the initial 238 students, 64 were classified as abstainers, 96 as occasional drinkers and 78 as drinkers.

The classification of individuals in the drinking groups was also confirmed by the crosstabulations between the three groups and reported levels of intoxication during the last year, which suggests that all but five drinkers get drunk at least few times a month. Preliminary analysis did not reveal any significant differences between the two gender groups in relation to drinking practices (Table 12).

Table 12: Drinking patterns in adolescence by gender group.

	ABSTAINERS	OCCASIONAL	DRINKERS	TOTAL
BOYS	35	50	39	124
GIRLS	29	46	39	114
TOTAL	64	96	78	238

chi-square = .4348, 2 df, $p < .8046$

The hypothesis that adolescents begin to experiment with alcohol much before the legal age (Dunne & Schipperheinj, 1989; Grant, 1990), is confirmed in the present study. Analysis of frequency and quantity, reveals that from the 238 subjects who completed the survey, only 45 never had an alcoholic drink. The results are in line with those of other studies (Bean et. al., 1988). Many researchers argue that drinking starts at an early age. The present study reveals that such a hypothesis cannot be rejected. Further research is needed in order to show whether or not such a condition is stable. However, there is no evidence in the current study that more boys than girls are likely to report drinking.

The present analysis reveals that a large percentage of those who drink are likely to be involved in some kind of trouble. To test the hypothesis that intoxication is associated with trouble (Arnett, 1990; Murray, 1989; Chadwick et. al., 1990; West et. al., 1990), crosstabulations were used (Table 13).

Table 13: Occasional drinkers and drinkers differences in reporting getting into trouble due to drinking.

	YES	NO	TOTAL
OCCASIONAL	11	85	96
DRINKERS	34	44	78
TOTAL	45	129	174

chi-square = 170.3824 , p <.0001

Other studies (Schuchard, 1986) are directed towards young men's troubles arising from drinking, probably assuming that women are less likely to do so. This hypothesis is rejected from the present study (Table 14). As Table 14 suggests girls and boys do not differ significantly in their reports of getting into trouble due to drinking.

Table 14: Adolescents who report trouble following drinking by gender group.

	YES	NO	TOTAL
BOYS	22	67	89
GIRLS	23	62	85
TOTAL	45	129	174

Chi-square = .38, 2df, $p < .20$

The above findings are in line with current research. The hypothesis that adolescents start to experiment with alcohol before the legal age is supported by most of the studies in the area (Marsh et. al., 1986; Sharp et. al., 1988; Plant et. al., 1985). That such drinking might lead to engagement in troubled behaviour is also evident in the present and previous studies (Arnett, 1990; Murray, 1989; Chadwick et. al., 1990).

The present study did not reveal any significant gender differences in relation to drinking group membership, in contrast to other studies in the area which support the hypothesis of gender differences (Laracantu et. al., 1990; Ong Teck-Hong, 1989; Grube et. al., 1989; Wyllie et. al., 1989). For this purpose crosstabulations and chi-squares were used.

One finding attracts our interest, that gender, on one hand, is not significant in relation to consumption of alcohol confirmed also in Maney, 1990 and in Hanson, 1982) but on the other hand, the underlying factors associated with drinking might differ for the two gender groups. The two gender groups may be drinking for different reasons. Further studies have to consider this rather unexplored area of research.

In the following pages the focus of the study shifts from a description of the drinking practices to an understanding of the underlying factors associated with such practices. These factors are ranging from social to psychological and to familial interactional patterns, which seemed to be associated with drinking behaviour.

7.4) Group differences in perceptions of drinking practices by family and peers.

Several studies support the hypothesis that a network of heavy drinking peers and parents increases the probability of adolescents drinking practices (Goldman et. al., 1986; Plant et. al., 1985; Sharp et. al., 1988; Jahoda et. al., 1980; Mandelbaum, 1967). One of the claims of the present study is that there is an interaction between the social network, the formation of attitudes and the behaviour of the individual. Although there is no indication in the present study of a causal relationship going from the environment to the individual, the following findings enable us to take seriously the explanation of multiple causation in which the relationship between the individual and the environment is interactional.

Therefore, we cannot claim that adolescents drink because their friends drink, since it is possible that those who drink choose to socialize with people who accept their behaviour, but we can at least claim that such relationships reinforce a probably existing behaviour; consequently, intervention efforts should be aiming at the control of relationships within the social network.

However, drinking within the social network cannot explain in itself adolescents' drinking or abstinence from alcohol. The social network has to be studied in conjunction with other variables. In the following pages the factors will be examined separately and in conjunction, in order to arrive at an understanding of drinking practices.

The hypothesis that drinkers would be more likely than abstainers and occasional drinkers to have friends who also drink, was supported (Goldman et. al., 1986; Plant et. al., 1985; Jahoda et. al., 1980).

Referring to Table 15, it is evident that more boy drinkers than abstainers report peer drinking. Similar is the case of girl drinkers (Table 16).

Table 15: Reported No of boys' friends engaging in drinking by drinking group.

	NONE	SOME	MOST	TOTAL
ABSTAINERS	17	13	5	35
OCCASIONAL	8	31	11	50
DRINKERS	4	5	30	39
TOTAL	29	49	46	124

chi-square = 67.81912, 4 df, $p < .00001$

Table 16: Reported No of girls' friends engaging in drinking by drinking group.

	NONE	SOME	MOST	ALL
ABSTAINERS	6	16	6	28
OCCASIONAL	1	26	19	46
DRINKERS	4	8	28	40
TOTAL	11	50	53	114

chi-square = 22.38, 4df, $p < .001$

7.5) Group differences in Perceptions of Family Interactional Patterns and Intrapersonal factors.

One of the hypotheses of the study was that there are significant differences between the three groups in relation to some intrapersonal characteristics. These differences might be a consequence of drinking or a cause of it. However, it is more likely that there is an ongoing interaction between cognitive characteristics and behaviour, rather than an ad hoc causation, in which one cause has one effect.

One-way analyses of variance were carried-out for testing significant differences between the mean scores of the three groups in relation to the factors which entered the regression model. Two way analysis of variance was also used for revealing interactions between gender group and personality characteristics. There is some disagreement as to whether it is necessary to confirm overall variation between the groups before examining specific differences (Linton & Gallo, 1975; cited in Youngman, 1979), since the main problem hinges on the fact that where three groups are involved the chance of a Type I error is associated with each pairwise comparison. Ryan (1959; cited in Youngman, 1979) recommends the use of multiple comparison tests, such the Scheffe and Tukey tests, which incorporate overall variance testing. The subgroups should have acceptably alike variances, meaning that the Bartlett's test should not be significant. Should this condition not be satisfied, it may be possible to proceed with subgroup analysis if a suitable multiple comparison test is applied. Tests of this kind are ideal when the number of groups is small (less than six).

The above conditions were employed in the search for group differences in cognitive characteristics; the Scheffe test for atypicality is carried out whether or not homogeneity of variance is assured and also the harmonic condition is applied due to unequal group sizes.

The following tables present group differences and similarities for a variety of factors. The three groups differed significantly in the locus-of-control measure, with the abstainers making more internal attributions when compared to occasional drinkers, and drinkers. However these findings are relatively minor in significance when compared to other findings in the study. (Table 17).

Table 17: Drinking group differences in Locus-of-control measures.

GROUPS	MEAN	S.D.
ABSTAINERS	21.5238	3.0153
OCCASIONAL	20.1398	2.7568
DRINKERS	20.3421	2.5589

BARTLETT - F BOX = .917, P = .400
 BETWEEN = 78.4416
 WITHIN = 1754.0023
 F-RATIO = 5.1206, P = .006
 SCHEFFE = 2,3,1** , P = .05
 GENDER X LOC F = 1.393, P = .239

The groups also differed in their ability to resist friends' pressure to drink and their ability to resist opportunity to drink. Abstainers and occasional drinkers scored higher in the above measures, indicating that they are more able to demonstrate resistance when faced with the above situations. Of course, one might argue that

especially abstainers do not receive so much pressure from friends to drink, neither do they find themselves in situations where drinking is required.

Table 18: Drinking group differences in Resisting Opportunity.

GROUPS	MEAN	S.D.
ABSTAINERS	27.4783	6.0249
OCCASIONAL	26.4857	4.1310
DRINKERS	22.4030	5.8103

BARTLETT - F BOX = 5.015, P = .07

BETWEEN = 878.3374

WITHIN = 5039.0834

F-RATIO = 15.6874, P = .00001

SCHEFFE = 3*,1*, P = .05

GENDER X RESISTING OPPORTUNITY F = 6.268, P = .01 (Girls = 26.16,
Boys = 24.29).

Table 19: Drinking group differences in resisting friend's pressure.

GROUPS	MEAN	S.D.
ABSTAINERS	48.4130	10.8004
OCCASIONAL	39.4648	10.7116
DRINKERS	29.3881	10.7308

BARTLETT - F BOX = .002, P = .998

BETWEEN = 10109.0798

WITHIN = 20880.8146

F-RATIO = 43.8142, P = .00001

SCHEFFE = 3,2*,1** P = .05

GENDER X RESISTING FRIENDS' PRESSURE F = .986, P = .322

Contrary to the initial hypotheses the groups did not differ significantly in situational assertiveness, self-esteem, knowledge about alcohol, general influenceability

in decision making, social anxiety and ability to resist emotional pressure to drink, but they differed in assertiveness. One of the reasons for the lack of a significant relationship between the above factors and drinking behaviour might be the general measurement scales which are not directly associated with drinking; before any conclusion can be drawn more specific measures have to be employed in future research interested to search for significant differences in the above factors.

Knowledge about alcohol does not seem to be significantly associated with the behaviour, contrary to the principles of the informational approach to prevention. Increasing one's knowledge about the effects of substances on the human body is not one of the best ways of preventing the current behaviour.

Table 20: Drinking group differences in Assertiveness measure.

GROUPS	MEAN	S.D.
ABSTAINERS	17.2520	5.9961
OCCASIONAL	16.4479	4.7769
DRINKERS	19.5128	4.6647

BARTLETT F-BOX = 2.676, P = .06

BETWEEN = 418.8395

WITHIN = 5964.4768

F-RATIO = 8.1170, P = .0004

SCHEFFE = 2,1,3 **, P = .05

GENDER X ASSERTIVENESS F = 1.148, P = .457

Another question concerning the study is whether the three groups differ in their perception of family interactional patterns. The multiple regression model has

shown that familial patterns are important predictors of engagement in drinking behaviour for girls. The Faces III (Olson et. al., 1985) suggests a curvilinear relationship between cohesion, adaptability and family functioning. Due to this curvilinear hypothesis, the most appropriate statistics to use for analysis are chi-square which are based on frequency of distributions in the balanced types, mid-range types and extreme types.

The hypothesis that individuals in heavy drinking are more likely to perceive extreme levels of cohesion and adaptability than those in the other two groups was confirmed (chi-square = 20.894, $p < .00005$, Table 21).

Table 21: Drinking group differences in perceptions of family interactional patterns.

	BALANCED	MIDDLE	EXTREME	TOTAL
ABSTAINERS	18	31	15	64
OCCASIONAL	25	58	13	96
DRINKERS	16	28	34	78
TOTAL	59	117	62	238

chi-square = 20.894, 4 df, $p < .0005$

Finally, to test the hypothesis that individuals who get into trouble are more likely to describe their families as extreme than individuals who remain out of trouble, chi-square analysis was conducted. Once more the hypothesis was supported (chi-square= 27.14, $p < .0005$, Table 22).

Table 22: Engagement in trouble by family interactional patterns.

	BALANCED	MIDDLE	EXTREME	TOTAL
STAYING OUT OF TROUBLE	35	71	13	119
GETTING IN TROUBLE	20	11	14	45
TOTAL	55	82	27	164

chi-square = 27.14, 2df, $p < .0005$

One-way analysis of variance was also carried-out for supporting the hypothesis of significant differences between the means of the three groups and for spotting differences between occasional drinkers and drinkers. The $F = 3.221$ ($p < .03$) supports the hypothesis of significant mean differences in the perceived levels of family cohesion and adaptability. Due to the curvilinear nature of the measurement scale, the DFC (Distance from Centre Score) was used for the analysis of variance. Gender differences in perceptions of familial practices are not identified in the present study. The score was calculated according to the suggestions given by Olson et. al., (1985) and it is a function of the square root of cohesion and adaptability.

The multiple range test reveals that drinkers are significantly more likely from both occasional drinkers and abstainers to report extreme levels of interactional patterns. This findings support the initial hypothesis, according to which occasional drinkers and drinkers, have a different perception of family interactional patterns:

Table 23: Drinking group differences in perception of familial patterns.

GROUPS	MEAN	S.D.
ABSTAINERS	9.0607	4.1884
OCCASIONAL	10.5130	5.8320
DRINKERS	12.2370	7.5466

BARTLETT - F BOX = 7.634, P = .001
 BETWEEN = 255.2357
 WITHIN = 6261.5550
 F-RATIO = 3.3221, P = .03
 SCHEFFE = 1,2,3**, P = .05
 GENDER X DFC F = .034, P = .845

SUMMARY AND REVIEW

Up to now, we have looked at drinking patterns in adolescence and classified individuals into three groups, Abstainers, Occasional drinkers and Drinkers. We also tested the hypothesis of sex differences, in relation to drinking practices and drinking patterns within one's social network. The main consideration of this analysis was to look for existing differences not only between Abstainers and Drinkers, but more so between Drinkers and Occasional drinkers. The findings indicate that interpersonal differences among the three groups are present and they also point to the fact that such differences arise even between Occasional drinkers and Drinkers (Lawrence, 1988).

Specifically, the findings indicate that there is an interaction between the social network and drinking patterns in adolescence. Friends' drinking as this is perceived by adolescents is associated with drinking group membership. However, one might argue that adolescents' own drinking behaviour influences perceptions of their friends' drinking and helps them to build a distorted picture of social reality.

Looking at the gender differences in relation to intrapersonal characteristics, Table 18 reveals that the two gender groups differ significantly in the ability to resist opportunity to drink. In this scale girls score higher than boys, but probably this indicates that they have less opportunities for drinking.

As the results suggest, the hypothesis that drinkers are more likely to perceive extreme familial patterns is confirmed (Protinky & Shilts, 1990), as well as the hypothesis that extreme familial patterns are linked with getting into trouble due to drinking (Novy & Donohue, 1985). Drinking alcohol heavily might be seen as a quantitative difference between the three groups, but also as a qualitative difference that has its roots in deeper psychological processes and interpersonal interactions, worthy of further investigation.

CHAPTER 8: DISCUSSION

8.1) Understanding drinking behaviour in adolescence.

The study has considered the relative importance of the Rhodes & Jason (1990) Social Stress model of adolescent alcohol abuse and Olson's et. al. (1985) Family Cohesion and Adaptability theory in relation to the self-efficacy concept, as predictors of adolescent's alcohol taking behaviour. The results of the regression model revealed different predictive factors for the two gender groups. Two components of the Social Stress model were important predictors of current drinking behaviour for both gender groups. The first was past drinking behaviour. This agrees with Robins & Przybeck's (1990) study who also argue that the age of first use appears to be a critical variable on subsequent behaviour.

Getting in trouble was also found to be an important predictor of boys' drinking behaviour. Johnson (1986; 1988), Jessor (1987) and Kandel (1980) found that proneness to problem behaviour has been found to predict adolescent substance use. The relative importance of friend's drinking as a predictor of boys' drinking behaviour agrees with the work of Kandel (1980), where the argument is made that social settings favourable to substance use, reinforce and increase any predisposition to use as well as with the work of Kaplan (1982) and Jessor (1987), who also argue that association with drug using peers during adolescence is among the strongest predictors of adolescent drug use. With regard to adolescent boys' drinking neither the self-efficacy dimensions nor familial patterns were important predictors.

Regarding adolescent girls' drinking, age was the most important demographic variable entering the regression model with the older girls more likely to misuse alcohol. Ability to resist friend's pressure to drink as well as family interactional factors were important predictors of adolescent drinking. These factors were also apparent in a study by Patterson & McCubbin (1987), Baumrind (1990), Kandel (1980), Barnes (1984), where the findings are consistent in regard to the effects of family communication, quality and consistency of family management on children's substance use. Finally social anxiety, ability to resist emotional pressure to drink and opportunity to drink did not emerge as significant predictors of current heavy drinking.

This contrasts with the findings of Kandel (1980), Jessor (1987), Kaplan (1982). A variety of implications flow directly from these findings. Firstly the positive relationship between past drinking behaviour, getting in trouble and heavy current drinking would suggest that efforts aimed at increasing prevention about drinking and the need to start taking action to intervene at a very young age, would have a considerable affect of promoting health related behaviour, since early age of alcohol use onset appears to be the best predictor of abuse (Murray, 1989). Secondly gender differences in some of the underlying factors, predicting abuse, would suggest that such differences should be considered in health promoting campaigns to increase the likelihood of success in prevention efforts. However, there is evidence that socioenvironmental factors associated with drug use are fairly constant across gender and ethnic groups (Murray, 1989) with the exception that women may be more susceptible to peer influences than men (Jessor, 1987; Kandel, 1980).

One problem which appears in this study is that it relies exclusively in quantitative data through which plausible factors leading to drinking are not easy to identify. This would suggest that the current findings should be supplemented with the information about the nature of initiation to drinking and the need to understand abuse. In addition it would seem that efforts designed to reduce drinking must consider how adolescents start drinking and how they practice it. In view of this, prevention should ensure that adolescents, in particular younger ones, have the opportunity of developing skills and competences to face the problem.

It is also worth noting that there are some differences between the regression analysis and the chi-square in regard to the family cohesion and adaptability dimensions. Although the above dimensions are found to be significantly different for both boys and girls, in the three drinking groups when the chi-square test is used, this does not seem to be the case when Regression analysis is being used; the main reason being that Faces III scale is characterized by a curvilinear relationship where non-parametric tests are the most appropriate to use for comparisons (Olson et. al., 1985). If the scores are to be used in a parametric test, then the DFC (Distance From Centre) score is suggested, being probably less appropriate for comparisons since it does not account for the curvilinearity of the scale.

Due to the measurement scale, which is ordinal, chi-square analyses are also more appropriate to use for testing drinking group membership and perceived drinking in the social environment. Lastly the similarities found between Anova tests and the

regression analyses are deriving from the fact that only variables which entered the regression model were further examined; the properties of regression allow for the identification of the most salient variables thus protecting the researcher from testing less significant areas.

In relation to a number of psychological characteristics, knowledge, situational assertiveness, self-esteem and social support did not enter the model. However, as the results suggest, there are several factors which relate to alcohol misuse and which vary from personal to psychological and familial. Drinking group membership is conceptualized as a function of past drinking history and engagement in trouble, of drinking practices within the peer group and of family interaction patterns.

Another concern of the present study was to search for differences between occasional drinkers and drinkers. Most of the research in the area, is looking at differences between abstainers and drinkers. The current research argues that there is a fine crossing line from being an occasional drinker to becoming a drinker, which can be understood only with the comparison of the two groups. Hence, the following pages are devoted to understanding such differences at the interpersonal and intrapersonal level, at setting the limits of characterising an individual as a drinker, and in accounting for variables whose importance has been recognised in the current study.

8.2) Descriptive analysis of alcohol consumption in adolescence.

In the present study 18.9% of boys and girls, aged 16-19 years old, never had an alcoholic drink, whilst 32.8% adolescents had an alcoholic drink last week and 53.8% had it in the last month. The above figures are similar to those of other studies (Wilks et. al., 1985; Bank et. al., 1985; Adler & Kandel, 1982; Dunne & Schipperheinj, 1989). In the present study 12.9% drink at least one drink once a week and 9.5% drink at least six drinks every week. Bean's et. al. study (1988), also reports that the average number of units of alcohol drunk was 3.6 for all children in their population and 6.28, for those drinking alcohol last week. In our study 64 Ss were classified as abstainers, 96 as occasional drinkers and 78 as drinkers. There were no significant gender differences in the three groups. The classification in drinking groups was based on a combination of drinking frequency per year and amount of alcohol consumed per drinking occasion. The criteria for classification are given in the results. Researchers suggest that adolescent males are more likely to use legal and illegal substances than females (Murray, 1989).

Although most of the above studies suggest an increase in alcohol consumption which starts much before the age of 18, there is always some evidence claiming a decrease in involvement with drugs during the last twenty years. Pope et. al. (1989) conducted a study of drug use and lifestyle among college students at the same institution in 1969, 1978 and 1989. They claim that all subjects in the 1989 study reported strikingly lower frequencies of virtually all form of drug use than their

counterparts in 1969 and 1978. However, the above study does not make any exclusive reference to alcohol, which shares some commonalities with other drugs, but it also precedes them, as the stepping stone theory suggests.

Alcohol Use, according to Yamaguchi & Kandel (1984) begins early in life, with almost 20% of their population having ever used alcohol by the age of 10 and over 50% by the age of 14. Alcohol monthly male use is 90% and female use is 82% about the 19th year.

A second study by Oetting & Beauvais (1990), also suggests that adolescent drug use increased until about 1981, but since then it has steadily declined. Current data shows some drug use in the 4th and 5th grades and considerable increases from the 6th to the 9th grades. For drugs such as marijuana, cocaine and stimulants, lifetime prevalence continuous to increase through high school; for drugs such as inhalants and heroin, lifetime prevalence may decline for Grades 10, 11 and 12, suggesting that students who use these drugs early may drop out.

A study by Meilman et. al. (1990) also points to a general decrease of alcohol consumption from earlier studies. The researchers surveyed the use of alcohol in 350 undergraduates in a New England university in 1987. Results were compared with similar studies conducted on the campus in 1977 and in 1983. Daily or almost daily use of alcohol was registered by 4.7% of Ss. About 25% of Ss indicated drinking 1 drink or fewer per week, 25.5% recorded a hangover, 7.5% recorded vomiting from drinking too much, and 4.4% recorded a blackout in the last week.

What is not reported in the above studies is that drinking probably starts at an earlier age than it used to, twenty or ten years ago.

Even chronic symptoms of alcohol abuse previously found in far older heavy drinkers are becoming apparent in much younger age groups (Donovan, 1986). In our study 63.8% of adolescents report their intention to be drinkers before they finish school. Some of them drink already. Many researchers (Newcomb & Bentler, 1988; Jessor, 1987; Donovan, 1986), argue for the existence of "Chemical dependence" in adolescence, which is described in terms of risk factors such as family structure, peer group, personality and behaviour. Psychological risk factors also include low self-esteem, delinquent behaviour, need for excitement and depression. Some (Jessor, 1988; Donovan, 1986) describe adolescent "chemical dependency" in behavioural terms, as part of a syndrome of "problem behaviour". Filstead et. al. (1988) suggest that the heavy emphasis DSM-III places on the physiological indicators of tolerance and withdrawal may be misleading in the case of youths, since these indicators are less prevalent for this group.

Another feature of alcohol, is that it emerges as the "entry drug" for over 27,000 seventh to eighth grade students in the state of New York. White, Black and Hispanic students, all tend to initiate the use of drugs in the following order; alcohol, marijuana, pills and hard drugs (Yamaguchi & Kandel, 1984). The above evidence are in line with the stepping-stone theory of alcohol. Nevertheless, it is beyond the scope of this study to compare alcohol with other drugs.

i.) GENDER AND AGE DIFFERENCES IN ALCOHOL CONSUMPTION:

A finding worth commenting is the presence of significant gender differences in relation to the underlying factors associated with abuse. The first finding is in line with Khavari & Mercer (1990) study, which tested the convergence hypothesis, predicting that women's drinking levels are increasing and approaching those observed in men. The mean annual volume of beer consumed by females in 1985 showed a 33.9% increase over 1977. There is also a lack of significant gender differences in the number of boys and girls who report getting into trouble due to their drinking. Similar are the findings in a study carried out by Baumrind (1990), where she reports that 7.9% of girls are regular users as opposed to 4.2% of boys and that 7.9% of girls are heavy users as opposed to 12.7% of boys. By REGULAR user, Baumrind (1990) defines the one who drinks alone or with peers and uses alcohol as a reaction to stress, whilst by the term HEAVY user, she defines the individual who drinks more than once a week. She also suggests that the antecedents differ for boys and girls and should be examined separately.

In a survey carried out in England, Wales and Scotland (1987), it was found that 91% of boys and 90% of girls aged 15-16 years old drink alcohol, whilst 22% of boys and 17% of girls drink about once a week. Interestingly enough, 15 year old girls in England and Wales appear to drink more often than "even 16 year old boys in Scotland". In the same study 45% of boys and 43% of girls reported having an alcoholic drink "During last week", whilst 18% of boys and 13% of girls mentioned

"Yesterday". The same study reports that over 40% of the 15-16 year olds already look upon the pub as the "usual" place where they drink and this "equally true of the girls" (Hartnoll et. al., 1987).

The researchers of the above study report that "Another stereotype of Adolescent drinking" to be dismissed by the evidence of the survey concerns the girls. "They do not sit patiently while adolescent boys supply them with drink. They are, for the most part, quite as likely to buy their own or share the cost equally with friends, though some some of the older girls do seem to have generous boyfriends" (Hartnoll et. al., 1987).

The total consumption of alcohol in Standard-Units, by diary-week drinkers in England and Wales, was 7-8.5 UNITS for 10% of boys and 7% of girls, 9-9.5 UNITS for 7% of boys and 8% of girls, 11-15 UNITS for 13% of boys and 12% of girls and 15.5-25 UNITS for 16% of boys and 11% of girls (Hartnoll et. al., 1987).

Nevertheless, a study conducted by Lara-Cantu et. al. (1990), suggests that there are some gender differences still present at least in other cultures. Four gender-related trait scales and a questionnaire for assessing drinking and associated behaviour were administered to a general population sample (aged 14+ years) in Mexico. Ss with high scores in affective femininity were less approving of drinking. Men who adopted a submissive feminine role and women with high masculine aggressive scores were more characteristic among those who drank than among abstainers. Drinking among women was related to liberal attitudes toward drinking

and to aggressive masculinity. Rabow et.al. (1992) also examined overall and individual alcohol consumption patterns among male and female college students. 179 students (71% female) were categorized as either masculine/feminine/androgynous or undifferentiated. These gender orientations related to an overall quantity-frequency index of alcohol consumption and beverage type. The findings suggest that androgynous persons consume less for total beverage consumption, but not for all beverages. Undifferentiated Ss drink more than androgynous and feminine but not more than masculine Ss. Masculine females and feminine males drink more beer than the other three gender types but overall consumption is similar. The above findings are particularly interesting in researching gender roles in relation to drinking practices. Future research may wish to take this into consideration when exploring female/male patterns of drinking.

In line with the above findings, Figueira-McDonough (1992) argues that "in a time of extensive gender role changes, the ideology of gender equality affects behaviours, legitimate and illegitimate".

Drinking is bound to the culture not only geographically but also in terms of the underlying values and meanings that this culture transmits. Therefore, western values that require from men and women to be androgynous might have contributed to the observed convergence. On the other hand, the research pointed out the presence of significant differences in relation to the underlying factors leading to drinking. These differences are not fully explored by other studies and therefore can be considered as worth researching in the future.

It is worth however bearing in mind that due to cultural messages girls are more likely to under-report their drinking, a point raised by Hartnoll et. al. (1987).

"Though some of these older girls are undoubtedly under-reporting their consumption, we should discard entirely the possibility that, as a group, 16-17 year old girls are genuinely both abstemious and prudent and more so even than their younger sisters still at school" (Hartnoll et. al., 1987).

Thompson & Wilsnack (1987) also note that adolescent girls, who reject traditional femininity, are reported to "drink more, more symptomatically and with more problem consequences than more traditional-minded adolescent girls". As Gomberg (1982) also reports "there is still a gap in the percentages, and there are still more male drinkers. But the gap is smaller. The percentage of American women who drink varies by generation...".

However, in a Greek study carried out by the Psychiatric Unit of Athens University, with a representative sample of 4,290 Ss aged 12-64 years old, it was evident that during adolescence, girls drink almost as much as boys (Stefanis et. al., 1993). Sex differences were present for those aged between 18-24 years old and increased for the older ones. Young adolescents also reported that they have started drinking when they were 8 years old whilst older adolescents, reported that they started drinking when they were 10 years old. Adolescents report, more frequently than the other 2 groups, troubles due to drinking (e.g. at home, at school, with the police etc).

According to the conclusions of the above study (Stefanis et. al., 1993) "alcohol is the most widely spread drug in the Greek population". In fact, 3% of Greek adolescents drink systematically on a daily basis (Stefanis et. al., 1993).

The two sexes are found to differ in their preference for certain alcoholic drinks. Boys, tend to consume more beer than hard liquor, while girls do not show any particular preference. A study by Ford & Carr (1990), suggests that lack of social support is the best predictor of the drinking of hard alcoholic beverages. Another study by Klatsky et. al., (1990), examined the correlation of alcoholic beverage preference with persons' traits. The study suggests that Ss who preferred wine were more likely to be women, temperate, young or middle-aged, non-smokers, better educated and free of symptoms or risk of illness. Ss who preferred liquor were more likely to be men, heavier drinkers, middle-aged or older, less educated and afflicted with symptoms or risk factors for major illnesses. Ss who preferred beer were likely to be young men who were intermediate between wine and liquor preferers for most traits.

It is not the aim of the present study to compare preferences for certain types of drinks in relation to personality characteristics, but to identify such differences which can be attributed to a variety of factors, ranging from personal to environmental and cultural. Other studies might wish to concentrate on this area of research and examine current differences in relation to media messages, alcohol advertising and expectations arising from drinking.

Because the study is cross-sectional we cannot conclude that as adolescents grow older they are more likely to drink, but we can assume that this might be the case since age enters the multiple regression equation, at least for girls. However, a longitudinal study will be more preferable to ours, before such conclusions can be drawn. Evidence from other studies also suggests that as adolescents grow older, age differences are eliminated (Gonzalez, 1989).

ii.) REPORTED DRUNKENNESS AND TROUBLED BEHAVIOUR:

Given the fact that not all drinking is sensible drinking, the present study tried to identify whether adolescents get in any kind of trouble due to drinking. Drinking is associated with many and various problems and it is often used as an excuse for irrational behaviour and violence (Murray, 1989; Saunders, 1984; Marsh et. al., 1986). Alcohol related problems are manifested in different ways. In the present study, adolescents were asked to report whether they got into any kind of trouble while drinking or being drunk. The study reports that significantly more drinkers than abstainers get into trouble. Such trouble is classified as accident or injury, trouble at home, at school, with the police, and getting into a fight while under the influence of alcohol. No significant sex differences reported.

This is in line with the argument that nearly half of all deaths in the USA, among those aged 15-19, were involved in traffic accidents in which alcohol was a factor. The Arnett (1990) study of the relationship between drinking and driving, reports that those subjects (17.4 years) who had driven while drunk, were less likely to expect that drunk driving would result in an automobile accident or an arrest for driving while drunk. They also estimated the percentage of their peers who had driven while drunk as higher than abstainers.

The above findings agree with the argument that alcohol has a variety of effects, among which violence is one (Murray, 1989). Chadwick et. al. (1990),

investigated the association between solvent abuse and poor educational attainment among 105 13-16 year olds solvent-abusers and 105 matched controls. Subjects were followed up to the end of the final year of compulsory education. Examination attainments of solvent abusers were generally lower than those of control. Solvent abusers were more likely to leave school early, more likely not to enter exams, less likely to pass exams at O'Level and much less likely to obtain higher exam grades.

West et. al. (1990) administered questionnaires to 125 male and 145 female college students on their consumption levels and patterns of drinking, problem drinking and vandalism and assaults associated with drinking. 25.6% of males and 14.5% of females, reported drinking more than the safe weekly limit. 20% of males and 6% of females, admitted to having caused at least some damage to property after drinking in the past 12 months. Vandalism and assault were positively and independently associated with higher level of consumption, reasons for drinking and patterns of drinking.

Ritson & Peck (1989) report that young men show a high level of alcohol-related problems, and most reported feeling ashamed of having done something while drunk. Recent studies have found that many young women just beginning their sexual lives use alcohol prior to intercourse (Jessor, 1987). A large number appear to drink heavily prior to sex to compromise their ability to use contraceptives. For one woman in three in Flanigan's et. al. study (1990), alcohol might have been a situational influence in pregnancy risk-taking for 14 to 21 year olds.

In Watts & Wright study (1990), 40-47% of minor delinquency was accounted for by use of substances, while 59% of the variance in violent behaviour was accounted for by the use of substances. The best predictors of violent delinquency were the frequent use of illegal drugs. Frequency of alcohol use, independent of other variables, accounted for 17% of the variance in violent delinquency. In a study by Schwartz et. al. (1989), 85 adolescent girls (aged 14-18), who were in treatment for marijuana or alcohol, stated involvement in self-harming behaviours. 41 Ss said that they had deliberately cut their wrists, arms, ankles or legs on 1 or more occasions without suicidal intent. 12 of the 41 carvers stated that they had deliberately cut themselves once or twice; 15 had done so more than six times. A prior suicide attempt had been made by 24 of the carvers, and 11 of the 41 had made 3 or more suicide attempts. The above suggest that drinking can lead to self-harming behaviour, as much as it can lead to vandalism and assault.

In Hartnoll et. al. (1987) study 53% of 15-16 year old boys and 46% of the same age girls, reported being drunk at least once, during the last year, whilst 27% of boys and 27% of girls, at the same age group, reported being very drunk at least once last year. As the researchers, themselves, report among the 14 and 15 year olds, the girls seem to encounter quite as many difficulties as the boys do (counted at least in terms of more than a single incident during the year. For example, equal numbers of 14 and 15 year old girls and boys in both countries reported alcohol-related amnesia (nearly half of them in each group).

The above findings of the present study are very much in line with other studies in the area. In fact, when we look at adolescent drinking patterns identified by others and the present study, we can conclude that drinking commences much earlier than the age of 18, and it seems to progress in quantity as one grows older. The present findings also support the convergence hypothesis, through the lack of significant sex differences, and point to the need to search for age differences even within middle adolescence. The study also claims that sex differences are present within the factors associated with drinking practices. Future research can be directed to the identification of the underlying factors with the use of quantitative and qualitative methods of research. In the following pages, group differences will be examined in relation to the social network, and the specific areas in which drinkers differ from occasional drinkers will be identified.

8.3) Group differences in perceptions of Drinking practices in the social network.

Culture is also responsible for the promotion of alcohol use and misuse. At the ages of 14-16, beer adverts were seen as promoting masculinity, sociability and working class values. Neredorf (1985; cited in Bean et. al., 1988), found that heavy viewing of t.v. adverts was associated with more favourable beliefs about drinking among 10 to 14 year olds.

Even 10 year olds, said that Martini was aimed at sophisticated women. Aitken (1988) also suggests that adolescents show a preference for beer and wine probably being influenced by the promotion campaigns of several beer brands.

Within this theoretical framework, several studies support the notion that a network of heavy drinking peers and parents, increases the probability of exposure to settings where drinking is receiving normative support in the course of socialising (Goldman et. al., 1986; Plant et. al., 1985; Sharp et. al., 1988; Jahoda et. al., 1980). The present study also reports that it is significantly more likely for boys and girls who drink to have friends who also drink, than it is for boys and girls who abstain from alcohol. Even between drinkers and occasional drinkers such significant differences are present.

Ong Teck-hong (1989), also argues that peer-group influence is a strong motivation in the trigger mechanism of drug taking. In his study, he administered a

biosocial and drug use data questionnaire to 100 drug abusers aged 14-46 years. Peers were identified significantly more, by drug abusers than non-abusers, to be the person they most associated with. Friends were most often identified by drug users as the first person to introduce drugs and with whom they had their first onset of drug abuse. Peers, however, were not helpful to terminate drug abuse.

Wilks et. al. (1989) also examined 56 male and 50 female adolescents, their parents, and a same-sex best friend in actual and perceived drinking behaviour and in normative standards of alcohol use. Strongest predictors for alcohol use for males were their perceptions of their parents' drinking and their father's actual drinking. Best friends' drinking was positively related to adolescent males' perceptions of themselves as a drinker. Adolescent males' own norms predicted how much and what they drank. For adolescent females, how much they believed their best friend drank and their friends' normative standards were the strongest predictors of alcohol use. Father's drinking also influenced the drinking practices. Females' personal preferences or liking of alcohol successfully predicted most of their drinking behaviour.

Stattin et. al. (1989), also examined aspects of the peer network that are likely to reflect differential environmental influences associated with accelerating or retarding the onset of adolescent drinking. Data analyses showed that to have younger peers in one's circle of friends was related to a lower prevalence of and less frequent drunkenness in mid-adolescence, compared with the drinking behaviour of Ss who associated with only same-age peers. Ss who associated with older peers or with

working peers had a higher prevalence of and more frequent drunkenness, relative to that of Ss who associated with same-age school peers only.

Grube et. al. (1989) suggest that perceived peer drinking is the primary predictor of current alcohol use among Irish adolescents, whilst parental disapproval has a small effect. Wills (1990) also examines the role of social networks in facilitating substance abuse among adolescents. Social networks may include elements inversely related to drug use (e.g. emotional support) and elements that may be conducive to drug use (e.g. normative beliefs). He claims that adolescents are members of two social networks, family and peers, which have different effects on their behaviour. A review of studies of support and substance abuse shows that peer and family support have opposite relations to substance use and that structural and functional support make independent contributions to prediction of abuse.

A qualitative investigation of young men's drinking in New Zealand, shows that the male peer group was a priority because it offered acceptance for the 12 to 21 year olds (Wyllie et. al., 1989). This is in line with a recent survey in Wales which shows that young people form a discrete target group for alcohol related health promotion initiatives. Younger people tend to drink in groups and they are considered relatively resistant to a number of health messages in relation to alcohol (Hartnoll et. al., 1987).

Grichting & Barber (1989) also argue that past and current parental drinking exert a strong influence, of equal importance, to adolescents' drinking. Even one of

the risk factors for alcohol intoxication in adolescence included broken families and parental alcoholism (Lamminpaa & Vilska, 1990).

The findings however do not support a significant association between parental drinking and risk for adolescents' drinking, although, in more than one third of 100 studies, any sample of alcoholics had at least one parent who was alcoholic and in two thirds of the studies at least 25% of alcoholics had alcoholic fathers (Murray, 1989). Harburg et. al. (1990), examined adult offsprings'(aged 19-72 years) imitation of alcohol-related parental behaviour. Data suggests that more sensible drinking occurred among adult offspring when i) the parents had no drinking problem signs and ii) parents drank high volumes and had no problems.

Orford & Velleman (1990), also studied 170, 16-35 year old offsprings of parents with drinking problems and 80 comparison young adults. A larger number of offspring had commenced alcohol use in their early teens and had used other drugs in their late teens; more offspring than comparisons were currently using alcohol in a risky way, more were using illicit drugs and more were heavy smokers. These differences were not great.

However the present study did not include any measure of parental drinking as such but relied only on adolescents' perceptions of such drinking. Finally, as Donovan (1986) suggests, exposure to heavy drinking by peers and relatives does not necessarily lead to alcohol misuse. For a more accurate picture, the dynamic interplay of social and psychological factors must be investigated.

The findings of the current study indicate that differences exist not only between drinkers and abstainers, but also between drinkers and occasional drinkers. Recognizing the limitations of the quantitative study, a qualitative approach can be employed in understanding levels of alcohol use as a function of multiple variables, and in identifying the passage from one level to the next, either as a process of continuation in drinking or as qualitative personal development and social interaction. Beyond this, other factors need to be examined. Family relationships, perceived social support, intrapersonal as well as interpersonal factors, that might account for such a behaviour. In the following pages these factors are going to be examined in line with current research in the area. Intrapersonal differences will be examined for the three groups, in accordance with research that focuses on the individuals' skills. The findings will be contrasted with differences in the social network as well as in the family environment, which was correlated with the current behaviour.

8.4) Group differences in the perception of family cohesion and adaptability and social support.

i.) THE ROLE OF THE DYSFUNCTIONAL FAMILY TO ADOLESCENT ALCOHOL MISUSE.

Of particular interest in this study is the connection between alcohol misuse in adolescence and family interactional patterns. Examining family interactional patterns regardless of parental drinking, is enhanced by other studies in the area which claim that not all individuals who abuse alcohol are children of alcoholics (Donovan, 1986). About half of them have not been exposed to parental drinking. Consequently one has to search for other factors within the family that might be causing disturbances and subsequent involvement with drugs.

Swadi & Stoker (1990), asked 278 Ss (15-16 years old) to state how they perceive their own family relationships, previous family experiences, relationships with their fathers and mothers and their use of psychoactive drugs. Drug users were more likely than non-users to perceive their families as distant and less involved, as having poor communications and as mistrusting and punitive. Fathers were more likely to be perceived as ineffective and less significant than mothers. The present study indicates that the interaction between familial patterns and drinking is so complicated that one has to be cautious in explaining which causes which. In a study by Protinky & Shilts (1990), subjects who were using alcohol and drugs viewed their families as more disengaged.

There are two basic dimensions within the family that characterise it as functional or dysfunctional. These, have been identified from recent research (Olson et. al., 1985) as determinants of healthy interactional patterns in the family. The dimensions of cohesion and adaptability range from extreme to balanced levels, which are assumed to be the most viable for healthy family functioning. The dimensions, are better described in the literature review. Within these dimensions 16 family types are identified.

Research shows that families with adolescents function better when they are balanced on both dimensions. Wilks et. al. (1989) also suggest that adolescents have the tendency to perceive their families as being less adaptable, when compared with their parents. Olson et. al. (1985) argue, that alcoholic families tend to be more extreme compared with the non-dependent families.

There is also some evidence that children from disharmonious homes are not only exposed to increased risk and more intense delinquent pressure than other juveniles, but they must also face these risks and pressures with underdeveloped socioethical resistance, while being handicapped by emotional disturbances, caused by a lack of family support (Rodin et. al., 1984; Novy & Donohue, 1985). In accordance to the theoretical framework and other studies in the area, the following questions are being asked in the present study:

-Is it possible to identify the three dimensions and the sixteen family types suggested by Olson et. al. (1985) in the present study?

-Is there any link between adolescent drinking and family interactional patterns?

-Is there any link between adolescent engagement in troubled behaviour and family interactional patterns?

The present study identified all family types, except two, structurally-connected and flexibly-enmeshed. The number of people in each family type can be seen in the appendix. The three dimensions -balanced, middle-range and extreme-were also identified in the present study. In fact, 59 of the families were balanced, 117 middle-range and 62 extreme.

The present study also suggests that family interactional patterns are directly related to adolescent drinking. In fact, it is significantly more likely for adolescents who drink to experience extreme interactional patterns, than for adolescents who abstain from drink. Therefore, one can assume that family relationships and adolescent drinking are linked, although there is no indication of which causes which. Is it the family that makes the adolescent start drinking or is it the adolescent who drinks responsible for problems occurring within the family environment?

In relation to troubled behaviour due to drinking, the present study suggests that there is a significant association between family interactional patterns and getting into trouble. It is significantly less likely for those who remain out of trouble to experience extreme familial patterns, when compared with those who get into trouble, due to drinking. For once more we cannot conclude which causes which, since engagement of the adolescent into troubled behaviour might be responsible of his

perception of the family as extreme and vice versa. Whatever the case, research has to be directed towards a better understanding of familial relationships, in which the perceptions of the mother, the father and the rest of the family members can also be included. One question that is worth answering in future research concerns the relationship between drinking practices in adolescence, reported parental drinking and familial interactions.

Given the fact that the present data is based on adolescent's accounts of family life, with no perceptions of it by parents and siblings, we can conclude in line with other research in the area (Wilks et. al., 1989), that adolescents have a tendency to perceive their family practices as more extreme than they really are. This is based on the assumption, that adolescence is a conflicting period in one's life, where parental and personal interests do not necessarily match. This is also a period of challenging authority, during which any attempt to control or even question one's behaviour is perceived as imposing upon the individual and therefore leading in conflict.

A considerable amount of research has taken place in relation to drinking within the family. Most of this research has been carried-out with alcoholic families in which perpetuation of the alcohol related problems was a reality for both, parents and offsprings (Orford & Velleman, 1990; Jacob & Leonard, 1988; Steinglass et.al, 1988; Nordstrom et. al., 1987; Werner, 1986; Tarter, 1988; El-Guebaly, 1990; Beardslee et. al., 1986; Donovan, 1986; Berkowitz & Perkins, 1988; Daniels, 1986; Krois, 1987; Prewett et. al., 1981). Each one of the above researchers provides a different argument as to why exposure in a heavy drinking setting is causing problems

to the individual. Some argue for the genetic transmission of alcoholism (Levenson et. al., 1987) and others for the stress-victim approach, according to which the non-excessively drinking members of a family are at risk of developing a drinking problem in their effort to cope with the amount of stress they experience (Orford & Velleman, 1990). Most of the above studies have been using an alcoholic sample.

In relation to parental drinking, Fulton & Yates (1990) report that adult children of alcoholics report more specific problem-drinking behaviours as well as medical problems related to alcohol. Orford & Velleman (1990) also suggest that 16-35 year old children of parents with drinking problems score significantly higher in a scale of negative childhood experiences and that parental drinking, as alien to or integral with family life, may be a neglected variable.

Wilks et. al. (1989) argue that the strongest predictor of alcohol use for male adolescents, are their perceptions of parental drinking. However, a study by Tambs & Vaglum (1990) suggests that parental alcohol consumption does not explain much of the variance of alcohol consumption in offspring, but findings point to the fact that environmental factors shared by siblings may have a substantial effect. Glenn et. al., (1989) on the other hand, claim that positive family history of alcoholism is predictive of health problems, in both, alcoholic and non-alcoholic controls.

We currently argue that within families in which life is often chaotic, unpredictable, arbitrary and inconsistent, children are neglected, disciplined inconsistently, scapegoated and given few concrete guidelines for behaviour.

Adolescent development within such families, is a source of stress, since familial practices are clearly outside the range of human experiences, usually considered to be normal (Black, 1981). However, Daniels (1986) suggests that children who experience more maternal closeness, who participate in family decisions, who experience more peer and sibling congeniality, show better psychological adjustment.

Looking more specifically at adolescent drug use, positive family relationships, involvement and attachment appear to discourage youth initiation to drug use (Jessor, 1987). Kandel (1980) found that parental influence varies with the stages of drug use she identified. Parental role modelling of alcohol use is positively associated with adolescent use of alcohol, while the quality of the family relationship is inversely related to the use of illicit drugs other than marijuana. According to Kandel, three parental factors help to predict initiation into drug use: parent drug using behaviour; parental attitudes to drinking; and parent-child interactions. To summarize, the findings are consistent regarding the effect of the quality and consistency of family management, family communication and parent role modelling on children substance use (Baumrind, 1990; Patterson & McCubbin, 1987; Stattin et. al., 1989). Given the consistency of these findings, family management, communication and role modelling represent risk factors which should not be ignored in developing theories of the aetiology of adolescent drug initiation and abuse or in prevention research.

In the present study, there is no evidence that parental drinking is done at hazardous levels, nor that it is related to adolescent drinking. However, future research might wish to investigate in what way parental drinking influences adolescent

drinking by: i) modelling of the drinking behaviour, ii) by expression of positive attitudes towards adolescent drinking, and iii) by developing unhealthy relationships with other family members. The following questions have to be asked in relation to parental drinking.

- What is the effect of parental drinking on adolescents' drinking behaviour?
- What kind of family relationships are experienced by those who report parental drinking?
- To what extent is the adolescent who experiences extreme family patterns and parental drinking simultaneously more vulnerable to abuse?

ii.) SOCIAL SUPPORT : THE LACK OF ANY SIGNIFICANT ASSOCIATION WITH ADOLESCENT DRINKING.

Another dimension researched in the present study is social support. The role of social support in the aetiology of health harming behaviours was first researched in the mid 70s. In the current study, social support was measured with the use of the Significant Others Scale (Power et. al., 1988), which identifies six important people in the individual's social network. These are: spouse, the father, the mother, the closest brother, the closest sister and the closest child. This scale was modified to exclude the spouse and the closest child from the social network and to include instead the closest friend. Social support consists of emotional and pragmatic support. The amount of the Actual support received by adolescents is seen in relation to the Ideal or Expected support and the discrepancy between the two is calculated. The social network identified in the current measurement scale as close family members and just one friend, may not represent the social network from which the adolescent will seek approval and emotional support. This brings forward the second question, which is based on the hypothesis that the greater the discrepancy between actual and ideal support, the more likely the individual is to start experimenting with alcohol or even drink regularly.

Analyses of variance reveal that it is unlikely to find such an interaction, although drinkers receive the highest average score, indicating greater discrepancy in the amount of received and expected support, when compared with abstainers and

occasional drinkers. This is in line with the Fondacaro & Heller (1983) study, which indicates that alcohol use was positively related to social network characteristics that reflect high levels of social interaction and measures of social competence but was not significantly related to measures of perceived social support.

There is also a lack of significant gender differences in the support measures. However, an interesting finding is that the greatest discrepancy scores are given for the "father", who is perceived by the majority of adolescents as providing much less emotional and practical support than other family members.

One of the reasons for failing to find a direct link with drinking group membership might be the measurement scale and the confusion associated with the definition of the term. The present measurement scale is a general one, not specifically related to health or drinking, which probably makes it more difficult to identify any kind of existing relationships.

Another argument is that emotional and pragmatic support are probably better linked with drinking and other health harming behaviours in much older adults. Research (Adesso, 1985; Kelly, 1987) suggests that social support from husband, relatives and friends promotes health; maintaining good emotional health by cultivating a strong support system seems to be the key to a healthy living.

The above suggest that social support might be very important for the well being of older adults, but not necessarily of younger adults; or that different scales

have to be constructed measuring support in older adults, in younger adults and in adolescents. This argument is based on the fact that adolescents have different needs to fulfil which might require different emotional and practical strategies in order to be achieved. However, even in the adult literature the findings are disparate. La Greca et. al. (1988) investigated the relationship between life events and alcohol behaviour among those 60 years of age and older in two retirement and two heterogeneous communities. Contrary to expectations, he found that social support networks were not significant mediators of the impact of life events on alcohol use.

Other studies in the area suggest that persons with relatively high levels of social support report fewer psychological and physical symptoms (Cassel, 1976; Cohen & Cohen, 1983; Wallston, 1991). However, these studies look at specific support in relation to the health harming behaviour. Very few studies examine the role of general support in relation to smoking cessation. In one of these studies (Caplan, 1974) the results were in the unexpected direction. Ex-smokers had the lowest levels of support compared to either current or non-smokers.

Caplan (1974), suggested that the relationship between high support and smoking might be attributable to group pressures for smoking and to social interactions acting as a stimulus for smoking as a social behaviour. As Caplan (1974) suggests, one must consider the possibility that some social contacts, rather than being assets to cessation may actually be hindrances. In particular the presence of drinkers in one's social network may influence one's ability both, to quit or to remain abstinent. A similar explanation might be attributed to our findings.

Social network drinkers may have a negative influence in several ways. First of all the number of people in one's social network who support abstinence might be limited and secondly these same people might hinder abstinence by providing models for drinking and access to alcohol.

Social support can also be derived through the family network and it can be perceived as a healthy relationship between parents and children, which fulfils the demands of the individual. In the current literature a great effort is placed on understanding the role of the family in the development of the individual. Research has found that the level of conflict, organisation, cohesion and stress in an adolescents' family is significantly related to levels of substance use (Kumpfer, 1987).

Consequently there are several definitions of social support (Cassel, 1976; Caplan, 1974; Mechanic, 1978; Lazarus & Folkman, 1984; Cutrona, 1989), but very few studies that deal specifically with the role of social support during the transactional period of adolescence. In addition, there is considerable confusion over the term, resulting in confusion in the measurement techniques. The following questions might help to clarify the matters and find the links of social support with drinking practices.

- what are the sources of social support in adolescence?
- are perceived levels of social support and reported levels of alcohol consumption related?
- how does social support jointly with other sociopsychological variables influence abstinence from alcohol?

To answer the first question we have to identify the characteristics of people who make-up the social network of the adolescent. Many argue that adolescence is a time when individuals become more oriented toward their peers and less toward their parents (Botvin et. al., 1984). Adolescents turn to peers in order to receive emotional support that parents fail to provide (Wodarski, 1990). Brown et. al. (1986) also argue that groups of peers defined by adolescents as similar in attitudes or activities, are particularly important for social support. Israel (1982), even suggests that health educators can identify social networks and specifically those networks to whom people naturally turn for advice, emotional support and tangible aid.

Others claim that within this social network parents play a significant role in shaping adolescents' self-esteem (Lackovic & Decovic, 1990). The above researchers argue that the importance of others is dependent on the degree of involvement between the participants in interaction, which can take two forms; symmetrical and asymmetrical, depending on the equality of the participants. Asymmetrical interaction in which one member possesses the power and authority to impose his or her standards on another, is typical of the parent-child interaction.

In adolescence, these asymmetrical relationships continue to exist, bringing about certain interpersonal and intrapersonal conflicts. Consequently, adolescents turn to friendship, which is based on a more symmetrical basis and which becomes more significant. The above suggest that the identification of the significant others is becoming difficult as one approaches adolescence, making it more difficult to assess the contribution of the social network in one's well-being.

The findings of the study indicate that social support, is not associated with drinking practices in adolescence (appendix 3). However, looking at it in relation to family practices we can claim that a more comprehensive measurement of them both, might illuminate further explanations of the behaviour. In future studies social support can be addressed in relation to both, family life and the specific behaviour within it and not as a general measurement of perceived and expected gains and losses.

Overall, statistical analysis reveals that family environment is a significant correlate of drinking group membership. Consequently, research on family interactional patterns appears to be very promising with the indication of several directions that research can take. Family interactional patterns can be researched in relation to parental drinking, in relation to the construct of social support which is new in the area and probably in specific relation to adolescence as a unique period in one's life.

8.5) Intrapersonal differences among the three groups.

The three groups differed significantly not only in interpersonal but also in intrapersonal characteristics. The present study argues that apart from familial and environmental characteristics, which correlate with individual's drinking behaviour, there are some personal psychological characteristics which might affect one's well-being. Several concepts which are believed to be directly linked with drinking behaviour are examined below. These vary from attitudes and knowledge towards alcohol to deeper psychological processes such as self-esteem, locus-of-control, and assertiveness.

Rhodes & Jason (1988), suggest that the individual has to have some personal skills together with other resources, that will help him to avoid harmful drinking. Such skills are locus-of-control, self-esteem, knowledge, attitudes, self-efficacy and assertiveness, in which group differences are expected to be found. The findings suggest that there are no significant differences present for attitudes, social anxiety, knowledge and self-esteem, whilst assertiveness, locus-of-control and self-efficacy did enter the regression models.

Attitudes did not enter regression probably due to their high correlation with some of the predictors of drinking behaviour. Indeed, as one can see in Appendix 3, attitudes are significantly correlated with family interaction patterns, which are good associates of heavy drinking, as well as with the ability to resist opportunity to drink.

The case for social anxiety, is similar as it correlates with ability to resist opportunity to drink. From the self-efficacy expectations, the ability to resist emotional stress did not enter the regression model. Having in mind that the above measure is significantly correlated with both, ability to resist friends' pressure to drink and ability to resist opportunity to drink, one can assume that this correlation prevented the variable from entering the final equation. Besides, attitudes, social anxiety and resistance to emotional pressure, are significantly correlated with past drinking behaviour; friends' drinking and getting into trouble. Another interesting finding is that locus-of-control and age group enter the regression equation, when we split the population into two gender groups. This probably suggests that it is much more fruitful to consider gender issues in a similar kind of research, than to ignore their significance and treat the population as a homogeneous group. Future research and practice might wish to account for such differences and become more sensitive to women's drinking practices and underlying thoughts.

The above, are in line with current research in the area (Dielman et. al., 1987; Cappuzi & Lecoq, 1983; Bonaguro, 1987, 1988; Krois, 1987; Johnson, 1988). Others (Johnson, 1986) argue that locus-of-control is a dimension of drinking behaviour that requires more careful scrutiny. For some of the personal skills (situational assertiveness, self-esteem, general influenciability and knowledge), there was no significant difference between any of the groups. The lack of such differences can be attributed to a general measurement scale for situational assertiveness, general influenciability and self-esteem, and to the relative insignificance of the knowledge scale for the behaviour to occur. Other studies (Maney, 1990; Lee, 1959; Miller et.

al., 1989) reveal that self-esteem together with other psychological variables significantly correlated with consumption of alcohol.

There is a considerable amount of research which is concerned with the relationship between locus-of-control and preventive health behaviour (Allison et. al., 1990; Rotter, 1975). However, few studies have found a relationship between personal control and health behaviour. Possible reasons are i) the use of generalised as opposed to specific measures of control and ii) the existence of other important factors which influence preventive health beliefs, such as self-efficacy.

The above suggests that future studies, which wish to include locus-of-control, might have to use a specific measurement of the construct, which is going to reveal more differences between the drinking groups. The fact that the specific to drinking self-efficacy scale revealed significant differences, and the assumption that locus-of-control is a concept closely related to self-efficacy, suggest that future measurement of internal and external control must correspond with the current measurement of self-efficacy in relation to the specific behaviour. The findings of the present study support the interaction of the above two factors with drinking. In the above pages (interpersonal processes), the influence of the subjective norm was clearly demonstrated. The results suggest, that it is significantly more likely for drinkers to live within a heavy drinking network.

In that section we have also presented the results in relation to other studies in the area and concluded that most of them support the role that significant others

play in the decision to engage into drinking. Our next concern is to look at the subjective norm in relation to attitudes, and to link both with alcohol consumption. When researchers explain health behaviour they pay much attention to the role of attitudes and to the subjective norm (Lovallo et. al., 1985; Jessor, 1987; Peele, 1987; Rosenstock, 1988).

Several researchers have utilised the concept of self-efficacy for explaining not just alcohol use, but alcohol abuse as well (Marlatt et. al., 1988). The concept of self-efficacy has been linked with smoking in adolescence (Lawrance, 1988) and it is also related to coping behaviour (Lazarus & Folkman, 1984). Analyses of variance reveal that drinkers are less likely to resist opportunity to drink and friends' pressure to drink, when compared with abstainers and occasional drinkers. Gender differences are also reported in resisting opportunity to drink, with girls scoring significantly higher than boys.

Significant differences are to be found not only between abstainers and drinkers, but also between drinkers and occasional drinkers. In accordance with these findings, we can add to the above model the self-efficacy construct and in fact, we can conclude that self-efficacy correlates with drinking behaviour in adolescence and has to be utilised in subsequent studies. In the present study, the concept of self-efficacy is useful for identifying those at risk of becoming drinkers, but it could also be used for identifying component behaviours perceived as difficult to change, or situations in which vulnerability to drinking increases.

The first aim of the study which was the conceptualization of a theoretical framework for understanding drinking practices in adolescence has been fulfilled. From these several conclusions can be drawn. In understanding boys' and girls' drinking, some factors overlap, but new factors entered the equation. Future research might wish to account for such differences and examine the extent to which they represent an actual situation and/or distinct to each gender group, factors that affect subsequent behaviour. Secondly, the models give an insight into identifying the individuals at risk. However, a percentage of the variance still remains unaccounted for since several other factors in the present study did not enter the final equation.

The above findings also agree with most of the research done in England and America. Most young people start drinking before the legal age of 18 and the social network tends to encourage this form of behaviour. Some of these adolescents report drinking at hazardous levels. Such drinking correlates with drinking approval and behaviour in the social network. Modelling of the behaviour might be quite responsible for the manifestation of drinking in adolescence.

The findings of the present study point to the existence of significant group differences, not only between abstainers and drinkers, but also between drinkers and occasional drinkers. The presence of such differences in attitudes, locus-of-control, and self-efficacy expectations reveal the area in which research and prevention efforts have to be directed. In the concepts, in which significant differences were not identified, despite evidence from other research, the general measurement scale can

be partly responsible. Therefore, future research has to take into consideration that a more significant relationship might appear with the help of specific scales that directly link drinking behaviour with the actual constructs. Psychological constructs, such as attitudes and self-esteem should not be dropped-out of research in to the explanation of the current behaviour, but rather they should be put under more careful scrutiny and in relation to the actual behaviour.

8.6) Limitations of the study.

The current study has several limitations which can be avoided in future research. One of the limitations is that it is based on exclusively quantitative data, therefore missing out the benefits of qualitative research. Quantitative data allows more generalisations, while the use of anonymous questionnaires which reassure the participant of confidentiality and allow the researcher to claim that the answers were not manipulated by the participant in order to impress. However, quantitative data can be enhanced with personal interviews and day by day observations of the subjects. In the present study the use of anonymous questionnaires together with the restrictions applied by the Educational Authorities, did not allow the researcher to trace the individuals who are reported as heavier drinkers, in order to have interviews with them. Future research might wish to take this into account, provided that the educational authorities will also allow him/her to research such a sensitive area and come in touch with parents and children.

The present study is cross-sectional, and this implies some limitations in relation to the findings. A longitudinal study might be more preferable for testing age differences and predicting drinking over time. This, will point out whether excess drinking is a matter of quantitative or qualitative differences in the population under study. However, the above requires not only more time but also adequate funding which will allow the researcher to complete the study successfully.

The current study was carried-out in London, where only mixed schools were drawn for participation. This decision was made in the light of current research (Rhodes & Jason, 1988, 1990), which suggests that urban youth live in a deprived environment that has to be considered. Therefore, the individual is seen within his immediate social context. Such considerations are useful, but do not reveal any socioeconomic differences, since most individuals shared the same more or less social experiences. Future research might wish to explore further such differences and also include a representative sample of all socioeconomic areas.

Finally, the present study is based on adolescents' account of their drinking. Future research might wish to include parents' and teachers' account of adolescent drinking, as well as an insight into the reasons and consequences of such drinking, by all interested parties. In order to tackle some of the above issues and especially to counterbalance the limitations of a quantitative design, it was thought to be appropriate to further explore some of the factors deemed to be significant in the quantitative study. This, involved several steps starting from the identification of alcohol consumption with the Substance Use Scale and the Behavioural Diary, for supporting the results and exploring the most significant variables identified in the quantitative study. From those variables, family patterns are excluded, due to the fact that such patterns can be fully explored only with the participation of the family itself. It is also thought to be appropriate to research younger individuals (14-15 years old) who are not exposed to drinking over a long period of time in order i) to be able to identify why they are led to it and ii) why they abuse it, without having a history of drinking, which overshadows the influence of most other variables.

Recognising the limitations of the quantitative study, qualitative techniques were used for bringing forward adolescents' perceptions and interpretation of drinking practices. The aim was to explore in depth prospective differences amongst Abstainers, Occasional users and Drinkers and also to search for qualitative differences even amongst members of the same drinking group. Such a task becomes possible only through the use of sensitive measurements, able to identify where variation should be found. In the following pages the hypotheses, design, methodology and findings are being discussed.

CHAPTER 9: THE QUALITATIVE APPROACH TO DRINKING BEHAVIOUR OF YOUNG ADOLESCENTS

Past studies of adolescent drinking have largely used survey research methods where conceptual models were developed to study relatively large numbers of individuals. However, these methods did not seem to be appropriate for revealing data relevant to individuals' own understanding of the situation, for gaining insight and knowledge of the different aspects of the behaviour and focusing on the interpretation of drinking behaviour from the point of view of the drinker. In the quantitative study, Botvin et. al. (1984) Life Skills Training Questionnaire was used for collecting data regarding adolescent drinking behaviour and its correlates. The individuals participating in the study did not have the opportunity to give their own account of the situation and interpret the drinking behaviour of their counterparts. Unlike this, the present design was based on the notion that individuals should present their own account of the situation, allowing therefore the researcher to gain an in-depth understanding of drinking and focus on details that might throw some light on the qualitative aspects of the behaviour.

It was thought appropriate to focus attention upon certain aspects of drinking behaviour which were derived from the findings of the quantitative study and the hypotheses based on psychological theory. The constructs that were found to be significant in the quantitative study constituted a framework of topics to be covered by the focused interview which gave freedom to explore reasons and motives and to

probe further in directions that were unanticipated. Through the focused interview, the respondent was free to express his/her line of thought, whilst at the same time the direction of the interview was in the hands of the interviewer.

Hence, the present study derived from a set of hypotheses setting forth the major areas of enquiry; by focusing on the subjective experiences of individuals demonstrating a certain pattern of behaviour the effort was to ascertain their definition of the situation. The first aim was to make questioning as open as possible, hoping to gain spontaneous responses about attitudes and actions; having identified the exact topic, the next step was to think over what was the most striking feature of drinking behaviour and examine this in relation to the particular social and cultural context in which drinking was taking place.

Since our main concern was to identify adolescents' own perceptions of drinking behaviour we have reviewed the major findings of the quantitative study and then ~~we~~ arrived at areas of interest for the qualitative study. In the quantitative study, three groups of adolescents differing in respect to their drinking behaviour were identified in order to determine the correlates of drinking. Conclusions drawn from this study are summarized below:

- a) boys and girls in the current population do not differ significantly in regard to their level of drinking, but some differences are present in the underlying drinking factors. The above findings are worth of receiving further attention.
- b) boys and girls report starting drinking and even misusing alcohol much earlier than

the law actually permits. Since self-report measures were used for collecting the data, the immediate question facing the researcher concerns the extent to which such data can be taken at face value

c) the most salient drinking factors were self-efficacy expectations, whilst some other factors such as attitudes, family interactional patterns and intrapersonal characteristics also appear to be significant. Given the fact that data collection was done via the means of a questionnaire the individual did not have the opportunity to express how he/she perceived the situation in his/her own individual terms.

Thus, qualitative techniques were thought to be worthy of consideration in illustrating the most salient areas of research. Consequently, the qualitative study made use of interview data and a self-report drinking diary for obtaining individual's own account of the situation. An overview of the current factors concerning the areas related to substance use in early adolescence assisted in identifying the major areas of enquiry for the qualitative research.

Many factors are likely to be involved in the occurrence of drinking behaviour; what follows is a brief summary of some of the most important, categorized as child, family, peer and social. The above emerge from the present research in the area as well as from study one, but are generally in need of confirmation by further research.

Several adolescent characteristics may be seen as important. In the current thesis the one which emerges as the most salient is that of self-efficacy to resist drinking evoking situations, emotions and peer pressures. Family factors are also

implicated; associations are found with extreme rather than balanced family patterns, high levels of discord in the family and a lack of clear rules about monitoring of behaviour. Adolescents growing up in such families are having drinking behaviour modelled for them with little monitoring constraints. However, such factors are more likely to be implicated in heavier drinking, which is also associated with destructive behaviour, rather than in drinking which takes place within the boundaries of the peer group where such behaviour is regarded as a training of "real life" and a necessary part of growing up.

Yet the most serious forms of drinking at least can have very negative consequences. The most severe consequence of drinking, unfortunately not absent, can be actual drinking/driving and death as a direct or indirect result of it. Additionally, the level of socio-economic stress in families, the drinking shown on t.v., the different cultural and social attitudes towards drinking are also considered to be important factors in historical and cultural variation. Therefore the following hypotheses which are based on both, the literature review and the findings of the quantitative study will be examined within a methodological framework which adds validity. The following questions will be asked:

- a) How do adolescents themselves perceive drinking? Which are the most salient correlates of drinking from the point of view of the adolescent?
- b) Are there any gender differences present in actual drinking behaviour and are there any such differences observable in the underlying drinking patterns?

In order to answer the above questions, the information obtained from the quantitative study formed the basis for designing a focused interview containing three sections of open-ended questions. The open-ended questions related to self-efficacy construct were derived ^{from the} by Lawrance (1988) Self-Efficacy scale.

9.1) Methodology.

SUBJECTS: Sixty boys and girls, aged 14-15 years old were selected from a group of 116 adolescents attending classes at a Greek Middle School, in the Greater Athens area. The school was from the public sector. Selection was made on the basis of the Substance Use Scale (Botvin et. al., 1984) which was translated into Greek and was given in a regular class session. On this basis, subjects were matched for age, sex and drinking behaviour to form 4 groups, with the help of purposive sampling techniques, used for achieving equal group sizes: 15 boys Drinkers, 15 girls-Drinkers, 15 boys Abstainers and 15 girls Abstainers. To qualify as Drinkers, Ss had to report drinking from "few times a month" with more than two drinks per occasion to "everyday". The classification in groups involved the frequency per year level subdivided by the amount of drinks per drinking occasion, so that every member in each group would be identified by a double condition. In the initial category of "Drinkers" , "Occasional Drinkers" as well as "Heavy Drinkers", as those are defined in the quantitative study, were included with the purpose to explore this category further and investigate alternative classification using Baumrind (1990) categories.

Having completed the questionnaire, the 60 Ss were given a seven day diary to fill in. They completed the diary retrospectively, starting with whichever day of the week was for them yesterday and working backwards through the previous seven days. Even those who said in the questionnaire that were not drinking, replied to the diary so as to double-check their drinking habits.

9.2) Measures.

The *Substance Use Scale* (Botvin et. al., 1984) was translated and tested for reliability in the current population. The Scale's Alpha is .7864, whilst the Retrospective Scale's Alpha is .8433. The test-retest reliability of the scale, tested by the researcher over a period of 12 months with a different sample is $r = .82$, $p < .001$.

Drinking Diary (Drink Watchers, Accept, 1986), is a self-report way for collecting Drinking data. The Drinking Diary was modified, to fit the Greek population and the Non-Drinking Subgroups, to a Behavioural Diary, in which adolescents were requested to report their behaviour any time they would encounter a Drinking Situation during the week. Drinking Situation is any situation, in which exposure to alcohol is taking place, whilst there is no external control, i.e. "alone at home", "with friends without parents" etc. Adolescents had to report the Drinking Situation and the consequent behaviour. However, there is no evidence of the validity or reliability of the scale given by Accept (1984) for the Drinking Diary. Nevertheless, those who are identified as Drinkers by the Substance Use Scale (Botvin et.al., 1984) also reported drinking in the Diary. Additionally, to provide a retrospective baseline and to initiate students to the use of the scale each subject was asked to recall their exposure to Drinking Situation and their Subsequent Behaviour over the past seven days. The method used to aid recollection begins with the previous day and continues backwards for the seven day period using cues of time, place and people. Each page was illustrated in the same way. Respondents ticked a

box to say if they had drunk alcohol that particular day. If they had, they indicated how much, what type, the place, who with, as well as thoughts and emotions.

The Interview Schedule

The Interview was designed on the basis of the responses given by adolescents on the Behavioural diary where the consequences of drinking were explored. The Interview schedule contained a number of questions in which respondents answered individually. All the questions were relevant to events experienced at the present time, as those were identified by individuals' own responses to the Behavioural Diary items. Yet the wording of certain questions required respondents to take into account situations that were generally relevant to some adolescents, but not necessarily to them, through asking, "You are at a friend's house... he/she suggests you have a couple of beers...", "you are at a party... everybody drinks...". The following are the detailed steps of the interview, as it was administered to the respondents.

In *STEP 1* two open-ended questions were used for this study to introduce respondents into the interview and explore adolescents' perceptions of the effects of alcohol on them. The questions were drawn from the Behavioural Diary items which were aiming to help respondents recall feelings and emotions following drinking.

STEP 2 introduced respondents to a series of situations in which they were requested to respond on how they would feel, think and act. The eight situations presented to the respondents were aimed to assess individuals' reactions when exposed

to situational, emotional and peer pressure to drink. The situations presented were similar to the Self-efficacy (Lawrance, 1988) items and were drawn from adolescents' own experiences as these were reported on the Behavioural diary.

STEP 3 involved ten questions requesting Ss to present their own evaluation of the drinking situation. The questions were open-ended allowing the respondent to give his/her own interpretation of the situation. This step requires adolescents to think about drinking, taking into account the consequences of drinking and other people's possible experiences. These items also derived from the Behavioural diary and the individuals own account of drinking experiences. The following pages present the exact interview schedule used in the present study.

STEP 1: The researcher begins ^{the} ~~with a~~ focused interview concerning the most salient factors and their consequences.

i) If you Drink alcohol, what things would happen to you?

-How would you feel?

-How would others respond to you?

-What you might do?

(PROBE only if necessary.)

ii) You have already mentioned some of the things that might happen to you if you drink. I would like now for you to remember the most important one and explain step by step.

STEP 2: I would like now to introduce you to a series of situations and I would like you to tell me what you would feel, think and do in these situations.

CARD 1: You are at a friend's house. He suggests you play cards and have a couple of beers, since you are all alone and have nothing better to do.

CARD 2: You are invited at a party. Music is loud, atmosphere is great, almost everybody is drinking and seems to be enjoying themselves.

CARD 3: You have just met a boy (girl) you really like. You want to look cool to impress her/him.

CARD 4: You are going out with some friends. One of them suggests buying drinks for everybody.

CARD 5: You have had a row with your boyfriend/girlfriend. You are sitting home, all alone trying to forget what happened to you.

CARD 6: You are depressed lately and you have got this invitation for tonight. You have to feel a bit better before your friends arrive. You really want to feel "high".

CARD 7: You are at a party feeling really uncomfortable 'cause you know nobody there. You have got to feel a bit more relaxed.

CARD 8: You have several problems lately that you need to forget and feel a bit better. Unfortunately you cannot share your feelings with anyone.

STEP 3: A series of questions are being asked to those who drink and those who do not drink in order to see how they interpret adolescent drinking.

- What makes other children of your age drink?
- How do you think other children at your age feel when they drink?
- Why do you think other children do not drink?
- Have you ever had any problems because of your drinking (Minor or major...)?
- What exactly happened? What did you do? Why?
- Why do you think other adolescents do not drink?

For Abstainers only:

- You mentioned before several reasons why you do not drink. Do you think that children who drink might get into some kind of trouble? What kind? Why?
- Have you ever tried alcohol? Who gave it to you? Why? How did you feel?

For Drinkers only:

- When was the first time you tried alcohol? Who gave it to you? Why? How did you feel?
- Have you ever been drunk? What did you feel?

9.3) Procedure and design.

At the initial phase the Substance Use Scale and the Retrospective Use Scale (Botvin et.al., 1984) were administered to 116 subjects aged 14-15 years old. The questionnaires were given out in the classroom, during regular class session, and all classes received identical instructions. The researcher remained on hand whilst the questionnaires were being filled-in but the teacher was requested to leave the class as in the 1st study. During the completion of the questionnaires Ss were asked to sit individually so as to avoid interaction with others. The completion of the questionnaire lasted approximately 20 minutes. Ss were told that some of them were going to be asked to participate in a further study which had as an aim the in-depth understanding of the attitudes and the behaviour of young people in relation to alcohol. However, they were not told that participation on that study would depend on their reports of Drinking Behaviour.

Two weeks later, 60 subjects (30= boys and 30= girls) who were identified as either Drinkers (Occasional and Heavy) or Abstainers, were requested to participate in the follow-up. Subjects were matched in terms of age, sex and Socioeconomic Status, as this was measured by Botvin et. al. (1984) scale. A letter was sent to all parents requesting their permission although the reason given for such an interview was not the Adolescent's Actual Drinking Behaviour. The researcher claimed that participation in the study was decided at random. Such a claim was made in order to avoid prospective influences on the answers given during the interview which was going to follow.

Parents were reassured that the Ss anonymity was going to be kept. All agreed to the participation of their children in the study. Ss were asked to come individually to an interview, which took place within a school setting and during the free-time of the Ss where the Behavioural Diary was completed. All Ss, including Abstainers, Occasional Drinkers and Drinkers were requested to recall Drinking Situations in which they were exposed during the past week, as well as their own reactions to them. Recollection started from the day prior to the interview and continued backwards. High risk Drinking Situations, Consequences of Drinking, Feelings and Thoughts prior to Drinking and Interpersonal Relationships leading to Drinking were identified. At the end of the session which lasted approximately 60-65 minutes, all Ss agreed with the researcher to make an appointment over the phone after a week's time in order to set another date for a follow-up interview.

In the instructions given during the follow-up interview it was made clear that there were no right or wrong answers. Furthermore, it was stressed that adolescents' names were going to be kept secret and therefore they could answer each question as honestly as possible. After explaining the purposes of the research and giving the instructions there was a warm-up phase in which the researcher explored attitudes of the person in relation to drinking. The focused interviews lasted approximately 60-65 minutes, varying from individual to individual. The interviews were carried out again within a school setting in a quiet room and during the respondent's free time. It was stressed that adolescents were free to express their thoughts and feelings during the interview. Interviews were recorded and later transcribed.

9.4) Results.

The current findings present drinking situations and antecedents to drinking from the perspective of the individual. In the analysis we have employed adolescent alcohol use categories constructed by Baumrind et. al. (1990); categories of adolescent alcohol use were designed to include qualitative and quantitative factors as definers in order to distinguish among types of users, since drinking conveys a deeper meaning than the number of drinks one records.

Table 23 presents classification into drinking groups according to the categories suggested by Baumrind (1990). These categories are defined as follows:

Non-User: Does not use on a regular basis, but may occasionally try alcoholic beverages with friends and family. Plans to continue such use.

Light User (family user): Drinks only in family or church setting, for ceremonial or cultural reasons. Light use only.

Light User (recreational user): Drinks with friends at parties and social events. Mostly weekend use. May also engage in ceremonial use with parents.

Regular User: Uses alcohol as a reaction to stress, or to cope with stress. Drinks alone or with peers or family on a regular basis. More than party or ceremonial use.

Heavy User: Habituated, addicted or abuser. Uses alcohol alone or with peers on a regular basis, more than once a week. Some school or work use.

We have applied these categories on the analysis of the Behavioural diary in accordance to which five items were taken into consideration before classifying a

respondent; these cover the amount (i.e. number of drinks per drinking occasion) and frequency of drinking (i.e. everyday, every weekend), the drinking companion (e.g. alone, with friends), the drinking setting (e.g. at a party, at home), reasons for drinking (e.g. with friends, nothing better to do) and the thoughts and emotions following drinking (e.g. relaxed, depressed).

In order to identify the different drinking categories, we counted the number of times a respondent reported drinking in each day or the average number of drinks he/she had last week and also counted the number of entries under each code category for the 60 individuals. For instance, an individual who reported drinking mostly at weekends, when going out with friends was classified as a recreational user. This method has the advantage of ease and reliability in coding and letting the reader know precisely how drinking was measured. Additionally, two coders were used for analysis of the data including classification in drinking groups.

Table 24: Classification into drinking groups for each gender group according to Baumrind (1990) categories.

CLASSIFICATION	BOYS	GIRLS	TOTAL
Non - User	8	7	15
Light - User			
a.) Family User	5	4	9
b.) Recreational User	8	6	14
Regular - User	4	7	11
Heavy - User	5	6	11
TOTAL	30	30	60

One finding that is particularly important from the analysis of the drinking groups in accordance with Baumrind (1990) classification, relates to the distribution of the current group into the different categories. For instance, a respondent classified as Abstainer on the basis of the frequency and quantity of his/her drinking, as Botvin et.al.(1984) suggest, when using Baumrind categories can be possibly classified as a Light Family User who consumes alcohol in a church or ceremonial setting. In addition, a respondent who drinks at parties and social events is classified as a Light Recreational User when Baumrind (1990) categories are employed for classification and as Occasional Drinker when classification is based on purely quantitative terms. To be classified as a Regular User, Baumrind (1990) suggests that the respondent should report use of alcohol as a reaction to stress.

Consequently, whilst in the initial classification of drinking groups 30 Abstainers and 30 Occasional Drinkers and Drinkers were identified by the Substance Use Scale (Botvin et.al., 1984) when using Baumrind (1990) classification the distribution of the respondents across the different categories varied since qualitative aspects of their drinking were also taken into consideration (Table 24) and classification on the basis of frequency and quantity of alcohol consumed was altogether abandoned.

i.) Content Analysis

From a methodological point of view, the most important feature of this study was to attempt to systematically reconstruct via individual focused interviews an accurate picture of adolescents' perceptual factors leading to drinking but it was also critical that the data from these interviews be subjected to systematic analysis if a reliable judgment about the quality of adolescents' drinking was to be made. Thus, a detailed coding procedure was developed and applied to the data deriving from the Behavioural Diary and the focused interview, with the purpose to obtain information on the following specific areas: adolescent's perceptual understanding of the effects of alcohol on their feelings, thoughts and actions; adolescents' interpretation of the aetiology of drinking for that particular age group, adolescents' perceptions of situations which promote drinking and their own reaction to them.

Content Analysis was used as a Supplementary technique for analysing the Behavioural Diary and identifying situations, emotions, thoughts and beliefs that are associated with Adolescent Drinking. In the analysis of the results an open-ended indexing system, through which labels were generated to describe concepts, was used. These include: coding of instances until no new examples of variation are found; writing definitions of categories that have achieved saturation; linking categories together; constantly seeking similarities and differences which exist between instances and cases to ensure that the full diversity and complexity of data is fully explored. A problem to be faced was that of validity and reliability.

Therefore the steps below have been followed to keep close to the data:

- a) comprehensive definitions summarising why phenomena have been labelled in a certain way, were used (these definitions are given below),
- b) the researcher has been cautious of taking respondent's accounts wholly at face value
- c) the researcher has been cautious not to generalize the findings beyond the current population and
- d) the researcher acknowledged the fact of being influenced by her personal biases simply by the fact that she was the sole experimenter carrying out both studies, the quantitative and the qualitative. Future research might wish to take into consideration that at least two different researchers should be involved in avoiding prospective influences in the analysis and interpretation of the findings.

Operational definitions regarding concepts related to drinking derived from the analysis of the Behavioural Diary. These definitions are given below.

Operational Definitions regarding concepts related to drinking:

High-Risk Situation: Is any situation in which alcohol is freely available to the individual and where no external control is present.

Interpersonal Drinking: Is any situation in which the individual can enjoy drinking with friends or siblings.

Positive feelings following drinking: Is any feeling which relates to the psychological or physical well-being and is identified as positive by the individual him/herself.

Negative feelings following drinking: Is any feeling related to psychological or physical imbalance and is identified as negative by the individual him/herself.

High Dependency statements: Is any kind of statement that demonstrates alcohol as mediator of tension reduction, sexual arousal, social communication and leisure.

Low Dependency statements: Is any kind of statement that clearly indicates that alcohol is being used in the course of socializing only.

Initial Exposure: Refers to the individual introducing the respondent into drinking.

Secondary Exposure: Refers to the reasons for which the individual him/herself decided to start drinking.

Positive Attitude: Is any statement in which alcohol is being described as enhancing the personal, social and psychological characteristics of the individual.

Negative Attitude: Is any statement in which alcohol is being described as a mediator of "correcting" negative personal, social and psychological images.

Self-efficacy: Is the individual's ability to resist drinking despite the emotional, situational or other pressure to drink.

A unit of Analysis was concerned with the classification of High-Risk situations. The quantitative analysis revealed that certain situations are regarded by respondents as difficult to resist drinking. For identifying such situations, the Behavioural Diary was asking respondents to report where and who with they had their drink. In the analysis, all instances reported by the respondents, were coded, until no new examples of variation were found. In 90% of the cases the two coders agreed on whether a particular situation was High-Risk involving interpersonal drinking as well. The analysis reveals that adolescents are more likely to report drinking when adults and especially their parents are not around. Such drinking often takes place with

friends and siblings and especially when a boyfriend/girlfriend is also involved.

Below, some examples of how situations were classified as High-Risk involving as well Interpersonal drinking, are given.

HIGH RISK SITUATIONS	INTERPERSONAL DRINKING
"At a friend's house"	"Friends are drinking"
"Home alone"	"Boyfriend/girlfriend is drinking"
"Home with friends, no parents around"	"Brother/sister is drinking"
"At a bar/club with friends"	

A similar technique was used for classifying the feelings following drinking as Positive or Negative and for identifying Dependency statements. Drinking involves certain feelings and thoughts that precede or follow the behaviour; it also has some physical affect making the experience pleasurable or less so. These are considered worthy of investigation since the behaviour has to be seen from a holistic perspective, as in certain instances having experienced negative physical symptoms does not necessarily prevent individuals from drinking again.

In 78% of the instances the two coders agreed on whether a particular feeling or statement was Positive or Negative. An example of classification into Positive and Negative feelings and High and Low Dependency statements summarizing moods and thoughts as reported by the respondents, is given below.

FEELINGS FOLLOWING DRINKING

POSITIVE

NEGATIVE

"Relief"

"Depression"

"Happiness"

"Dizziness"

"Pleasure"

"Emptiness"

"Warmth"

"Headache"

"Disinhibition"

"Arousal"

DEPENDENCY STATEMENTS

HIGH

LOW

"I drink to overcome inhibition"

"I don't drink to forget my problems"

"I drink to have more fun"

"It doesn't help me relax"

"I drink to relax"

"It doesn't help me express my feelings"

"I drink to join friends"

"I wouldn't be left out if I don't drink"

"I drink to forget my problems"

"I doesn't arouse me sexually"

"I drink to approach someone I like"

"I don't need it to approach someone I

like"

A final unit of analysis was concerned with Initial Exposure to Drinking and Expectations that are being formed even prior to it. In identifying the setting of the first drinking experience and the second attempt to drink alcohol the individuals' responses were analyzed using Content Analysis which reveals that most adolescents when they are asked how they started Drinking report either that they were given a

drink by some family member or that they got it themselves out of curiosity. Below are some examples of respondents' answers. In 95% of the cases the two coders agreed. Respondents answers to the interview questions are reported verbatim with no syntax corrections.

I. When did you first try alcohol?

R."I was going to the primary school... my father gave it to me... the second time my best friend gave it to me. She was drinking BACARDI and I wanted to try it... I liked it so I had a Drink".

Girl, 16 years old.

"The 1st time my father offered it to me I drunk it out of curiosity... the older we get the more we drink, all of us... it is not really a problem".

Boy, 16 years old.

"I was around 12, a friend gave it to me, I've tried it 'cause I wanted to find out how it tastes".

Girl, 14 years old.

"The first time I've tried it, I was at a party... I don't remember exactly why I did it... It was a spontaneous reaction, I didn't even think about it".

Boy, 15 years old.

"I was around 13 when I started drinking. Nobody offered it to me, I saw the others drinking and so I said, why not, I'll try one".

Girl, 15 years old.

"I was around 12, a friend offered it to me, I wanted to find out how it tastes and I also wanted to have a good time".

Girl, 14 years old.

"I was around 12, I had to order something, I was ashamed to order juice...".

Boy, 15 years old.

"I was 10 years old, I was curious, I wanted to try, everybody else was trying, so why not me".

Boy, 14 years old.

Most respondents claimed that initial exposure to Drinking was done very early, some argue at around the age of 10; on the other hand secondary exposure followed only a few years later at around the age of 12-13 years. Also in secondary exposure most agreed that they took the initiative to drink whilst in initial exposure they were more likely to be offered a drink by someone else.

Respondents' statements reveal that expectations about drinking are being formed before individuals even try alcohol. They also reveal that exposure to Drinking clusters around some typical situations which seem to be shared by most

individuals, although such a claim requires further exploration. Below, the Content Analysis categories are summarized.

FIRST DRINKING EXPERIENCE/INITIAL EXPOSURE

"My father gave it to me"

"A friend of mine..."

"I took it by myself..."

SECONDARY EXPOSURE

Curiosity : "I wanted to taste what was like..."

External Pressure : "Everybody was drinking...I didn't even think about it"

Individual decision: "I took it by myself..."

ii.) Background Attitudes and Habits:

Background Attitudes to drinking were explored. Respondents who drink, report that drinking gives them pleasure. It helps relieve stress and gives relaxation. It also offers relief from boredom. Drinking gives confidence; respondents claimed that when feeling anxious, nervous, threatened or indecisive they would instinctively reach for a drink. Drinking also gave peer group acceptance and a sense of sharing and belonging.

"You drink to be part of the company and just for enjoyment".

Girl, 14 years old.

"I enjoy it. I like the taste, it relaxes me, it gives me something to do".

Girl, 15 years old.

Drinking was described as a habit; for some adolescents it was a habit which they thought they could control but for many, drinking was simply an accepted part of life and part of the day to day routine. It is often described as necessity.

"Drinking is like smoking, it becomes a habit, it relaxes you".

Boy, 15 years old.

"People like drinking, however you should be in control for your drinking habit".

Boy, 16 years old.

The choice of drink depends upon a variety of factors, drink imagery or user imagery are obviously important. Again peer pressure is a factor in choice. Taste and feel of the drink on the throat is important and there are claims that it is extremely difficult to switch to a different type of drink since the system becomes used to a particular type.

Health concerns rarely influence drinking. The only issue is to avoid arriving home drunk and that is why switching drinks is not recommended. Many argue that it does not really matter how much you drink as long as you don't switch drinks.

"You can drink as much as you like. If you don't switch drinks you are OK".

Boy, 16 years old.

The issue of type of drink depends very much on what their friends drink. Cocktails and Hard drinks are not very popular among young people since they represent what an older person does. Young people in Greece prefer mostly what they call 'shots' which are highly popular, are drunk at once and they are normally consumed more than 2 or 3 at a time. In many instances 'shots' are not being seen as "alcohol".

"I'm trying to drink less that's why I prefer 'shots'... There are not really heavy like whisky or vodka".

Girl, 15 years old.

"The other night I had 1 alcoholic drink and 3 'shots'".

Boy, 15 years old.

There are various ways in which adolescents drink. These can relate very directly to the type of drink; one of the most obvious ways which recurs frequently is that of light vs. heavy drinks. All types of drink have a place along this dimension and for most that positioning is very clearly defined. There are also other types of segmentation relating directly to the drink. One example mentioned is that of 'shots' as opposed to beer. Beer is associated with being drunk and lowering one's image. Some examples are given below.

"The main way to separate amongst drinks is occasion".

Boy, 14 years old.

"When I'm at a party, I drink 'shots'. I can't drink beer 'cause the girls look at me, it affects my image, they will think I'm a drunk and you know which drinks you should drink".

Boy, 16 years old.

"The type of drink you consume often depends on what your friends drink".

Girl, 16 years old.

Types of drinks are also defined and segmented in terms of image and two of the key dimensions are those which are considered traditional and those which are considered modern.

"Some you just think are old and not interesting to us".

Boys, 14 years old.

User imagery is also important, when adolescents find drinks difficult to define in terms of image they can often form a mental picture of the typical user; key aspects mentioned are young vs. old and image unconscious vs. image conscious.

"Wine is for family reunions, whisky is for macho guys, beer is for everybody, cocktails are for girls only, 'shots' are for men".

Boy, 15 years old.

"It's a matter of style; some drink 'shots' to have a certain style".

Girl, 15 years old.

"From a certain age upwards most older men drink Greek wine because they are used to it".

Girl, 15 years old.

Certainly 'shots' are high profile nowadays and their appearance is seen almost as a natural part of alcohol evolution. 'Shots' tend to be seen as unisex and can also

be considered modern. They also have associations with very young drinkers who have not yet graduated onto heavier drinks.

"Usually everybody drinks 'shots' but not loud female students who are involved in politics,they prefer Greek wine".

Boy, 14 years old.

" 'Shots' are not only drunk by men".

Girl, 15 years old.

There are various factors which differentiate Heavy users from Light users and Non-users. The immediate health issue is the key one in this respect. Drinks are considered damaging to health and are thought to be unacceptable for those who have concerns over health. They imply that the user is unaware of the health risks associated with drinking and is not making an effort to tackle the problem.

Users also express the belief that switching drinks affects seriously your health only at the time you are doing this, whilst they believe that only drinks such as Whisky, Vodka, Rum or the so-called 'hard' drinks are health damaging in the long run. Light, Regular and Heavy users also perceive Non-users, as being antisocial, although the latter do not seem to share the same thought.

"Those who don't drink are completely antisocial... I don't understand what kind of people they are? Boring...".

Girl, 16 years old.

"Those who think about their health, they don't drink... I prefer to go to the gym...".

Boy, 15 years old.

Of course, in some cases Users do not enjoy the drinking experience.

"You feel the difference the day after. Your mouth is dry, you feel dizzy, you want to throw up".

Boy, 14 years old.

"After a party I was so dizzy, I wanted to throw-up... I started crying... not for any particular reason... I didn't want to cry before I drunk... I don't think so".

Girl, 15 years old.

In spite of the negative effects of heavy drinking there are many factors which mitigate against abstaining from drinking heavily. There are claims that if you do not consume a certain amount of alcohol, nothing happens to you, you do not enjoy a real drink and the experience is that of "drinking water".

"Getting drunk gives satisfaction, is more male".

Boy, 15 years old.

"When you drink, it is just like drinking water, you try to ease your thirst".

Boys, 14 years old.

There is also some denial of the health benefits of cutting down drinking. The logic therefore is that if someone is drinking he may as well enjoy it.

"I don't know why people seem to think that drinks are harmful... yes, if you are old and you drink for many years... otherwise everybody else drinks".

Girl, 15 years old.

The reaction seems to be a defensive one as the Heavy users are negative about those who abstain.

"Young people who haven't really decided about their lives, only listening to what mummy & daddy says".

Boys, 15 years old.

A summary of attitudes as reported by the the drinking groups in the current study, is given below. The summary presents a series of items which express attitudes in different areas, whilst each item is classified as either positive or negative. A Positive Attitude is described as such when the Individual perceives it as such, i.e. when it adds a positive connotation to the item. A Negative Attitude is given by the respondents anytime they perceive the item in a negative light.

Description of reported Attitudes:

<i>Attitudes:</i>	<i>Positive</i>	<i>Negative</i>
Enjoyment :	" Alcohol lets you have more fun"	"People who drink try to look happy"
Attractiveness :	"Boys prefer girls who drink"	"They try to look attractive"
Image :	"Drinking has got a certain style"	"They think they look more grown-up"
Personal/Psychological:	"Drinking relaxes you"	"They look so aggressive"
Social :	"Those who don't drink are antisocial"	"Those who drink are antisocial"
Health :	"It doesn't really affect my health"	"If you want to stay healthy you shouldn't drink"
Acceptance by friends :	"It depends on what my friends do"	"They do what other people tell them to do"

Overall, 119 times positive attitudes and 121 times negative attitudes were expressed by respondents in the current study. More specifically, 47 times versus 13 times positive attitudes were expressed in relation to Attractiveness/image; 28 times positive against 32 times positive attitudes were expressed in relation to Personal/Psychological reasons for drinking and 14 times against 46 times, positive attitudes were put forward in relation to Health issues; finally, 30 times versus 30 times positive and negative attitudes were reported to relate with Social factors and Friends pressure to drink. 27 times Light, Regular and Heavy users expressed negative attitudes to drinking in contrast to 94 times that negative attitudes were

expressed by Non-Users. The interesting finding was that some negative attitudes were actually expressed from members of the drinking group. Given the fact that the sample was small, the frequency with which positive or negative attitudes appeared in each drinking sub-group was not explored further. However, exploration of attitudes within each sub-group might yield interesting findings worthy of consideration in future research.

iii.) Self Efficacy:

In the self-efficacy concept, eight situations were explored through the focused interview. Analysis of these situations in the quantitative study reveals that Abstainers and even Occasional Drinkers are more likely than Drinkers to resist emotion, opportunity and peer pressure to drink. In the qualitative study what interests the analysis is the identification of thoughts that characterise each drinking group prior to action; these give a much better understanding of the reasons behind adolescent drinking and go beyond the simple categorization of how many times each adolescent is likely to drink when exposed to similar situations.

Most drinkers, being either Regular or Heavy, have already experienced exposure to similar situations and they did not find it difficult to admit that they will drink; Non-users or even Light users were resistant to drinking for their own reasons, which however do not disqualify them from consuming alcohol in the near future. What follows is a description of the different responses that individual gave to a set of situations in which they were requested to expand on their thoughts and reasoning preceding their behaviour. The analysis that follows gives an insight to drinking settings by focusing on thoughts and feelings that confront the individual any time he/she is exposed in occasions where drinking can take place. Whenever summaries of the main findings are presented the aim is more to give an overall account of the different thoughts and emotions that exposure to drinking evoke to individuals classified in the different drinking groups rather than to compare the drinking groups on a numerical basis.

Interestingly enough, the analysis reveals that even amongst members of the same drinking group the thoughts and emotions preceding the decision to drink or abstain, may vary. Especially, differences or similarities amongst the three drinking groups might provide the answer as to why some remain always Light users whilst others cross the line from regular use to abuse. The nature of such variations cannot be identified in a quantitative study.

Thus, the main concern of this analysis is to identify the qualitative differences that characterize members of the different drinking groups and even members of the same drinking group and furthermore to uncover these aspects of the behaviour that quantitative approaches fail to bring forward.

CARD 1:

In the 1st card a situation was described in which respondents had to report what they would do in case that a friend offers them a drink, especially when there is no threat that an adult will see them. All were requested to go through their feeling thoughts and actions.

The responses that individuals in the drinking groups gave, varied from accepting happily the offer to experiencing negative thoughts about the friend offering the drink. Although it doesn't come as a surprise that most Heavy and Regular users agreed that they would consider drinking as something appropriate and they will be

pleased to accept it, interestingly enough most Light users suggested that they would drink only if they were in the right mood.

"I would think that my friend has a good idea... that's what adults do anyway".

Boy, 15 years old.

"I would drink as well, if I felt like drinking ... up to a certain point, to feel nice... if I felt like drinking".

Girl, 16 years old.

On the other hand, although most Non-users respondent that their reaction to the offer would be to deny drinking and confront their friend with suspicion, few said that they would regard the offer as a challenge made from their friend.

"If he says something like that probably he means to try just a bit... he would never really suggest it, unless he is feeling really bad, then I would talk to him, find out what's going on".

Boy, 14 years old.

"I wouldn't mind to try a bit... but I wouldn't really drink, a glass or anything".

Girl, 15 years old.

"I don't know, I'm not sure".

Boy, 15 years old.

Card one summarizes the main thoughts and the action reported to be taken by members of the drinking groups.

Summary of Respondents' main Thoughts and Action in Card 1 by drinking group:

THOUGHTS	NON- USERS	LIGHT	REGULAR	HEAVY
Very Appropriate	-	3	8	10
Depends on mood	-	18	3	1
Negative Thoughts about friend	11	-	-	-
Challenge by friend	3	-	-	-
Confused	1	-	-	-
ACTION				
Pleased to accept	-	2	9	10
Refuse to accept	12	-	-	-
Accept if in right mood	-	21	1	1
Indecisive	1	-	1	-
Curious to try	2	-	-	-

CARD 2:

The second card exposes the individual to a party situation in which drinks are freely available. The responses that this card provoked varied from denying drinking out of fear of losing control over the situation to regarding the whole setting as familial and having no hesitation to drinking.

Although most Non-users suggested that drinking alcohol at parties is expected they also said that they would prefer to consume only soft drinks mostly because of their fear of losing control; few said that they would probably go along and drink a bit. However, some Non-users reported that they regard the situation as really uncomfortable and that they would not know how to react to it.

"There are real show-offs. They think they are really so important, holding a glass... smoking...".

Girl, 15 years old.

"I wouldn't know what to do...".

Boy, 16 years old.

"Why not, I would try a bit...".

Boy, 15 years old.

All Heavy and Regular users reported that drinking is expected to take place so that the party can get start going. " Party with no drinks is not a party" according

to most drinkers. On the other hand, most Light Users suggested that drinking in these setting depends on their mood.

"I would drink... I don't know how much or what type, it depends... I mean I don't know right now... it depends on that moment. Personally, it's a matter of mood on that moment".

Girl, 15 years old.

" It's expected to drink... why not, if you want to get on the right mood".

Boy, 15 years old.

Summary of Respondents' main Thoughts and Action in Card 2 by drinking group:

THOUGHTS	NON-USERS	LIGHT	REGULAR	HEAVY
Fear of losing control	8	2	-	-
Uncomfortable	4	-	-	-
Rather natural	3	16	9	11
Depends on mood	-	5	2	-
ACTION				-
Soft drinks	8	-	-	-
Indecisive	4	4	-	-
Trial of Drink	3	19	11	11

CARD 3:

The 3rd card raised a lot of controversy among the respondents. This card presents the individual with a situation in which he has got to take the initiative to approach someone whilst he needs to be clearer about the situation.

There were no obvious differences in thoughts and feelings experienced by members in all groups but such differences became obvious amongst boys and girls. Girls, (88%) irrespective of Drinking Behaviour argued that they would not dare to approach a boy directly but they would do something to show their indirect preference. Some (44%) mentioned that they would probably light a cigarette and have a drink not only because they "want to look cool" but also because they would probably feel nervous. Few (12%) claimed that they would not experience any difficulty in approaching the person.

" I wouldn't know what to do with my hands, I would probably light a cigarette and then get a drink".

Girl, 14 years old.

"Boys, like girls who drink, they look more grown-up, more experienced".

Girl, 16 years old.

On the other hand most boys Heavy users argued that they would have a drink to feel more relaxed and approach the person. Characteristically, they have said that not only "you look cool" but also "you feel cool" after drinking.

"The first thing I would do is to grasp a drink...".

Boy, 15 years old.

Some (29%) said that they would not have any problem to approach the person directly but they would drink anyway whilst few (15%) claimed that they never approach anybody like that.

Most Non-users said that they wouldn't think of approaching someone like that, but in any case they wouldn't drink. On the other hand, Light, Regular and Heavy users mentioned that they would use drinking as a way of relaxing in that particular situation, but nevertheless some Light Users reported that they would probably be unable to decide what course of action to follow.

Summary of Respondents' main Thoughts and Action in Card 3 by Drinking group:

THOUGHTS	NON-USER	LIGHT	REGULAR	HEAVY
No Thought of approach	10	2	2	3
Indirect Approach	-	-	-	-
A way of relaxing	2	18	8	8
No problems to approach	3	3	1	-
ACTION				
Drink	-	17	8	11
Indecisive	3	6	3	-
Abstain	12	-	-	-

CARD 4:

In this card the individual is faced with a difficult situation in which he has been offered a drink by a friend within the group setting. Thus, peer pressure to accept it is at a high level. Most Regular and most Heavy users agreed that in this situation they will have to accept the drink in order to prove to their counterparts that they are "real" drinkers, whilst Light users were mainly worried that if a situation like this emerges they would not like to refuse the drink, in fear of offending the person.

Most Non-users claimed that they are rarely exposed to similar situations and especially by their own friends. They said that if such a case emerges, which they regard as "weird" they would simply refuse to drink. When drinkers, regardless of the group in which they belong, reported that they might have to deny drinking, also implied that they would use a health excuse for avoiding the situation. On the other hand, Non-users reported that they would probably refuse by simply stating that they do not like alcohol.

"This is a common situation for me and my friends".

Girl, 15 years old.

"I would be happy to accept it...".

Boy, 16 years old.

"If I didn't want to drink?... I don't think that this is ever gonna happen to me".

Boy, 15 years old.

"I would have to give them an excuse, maybe a health problem... in case they insisted I would have to have at least one drink... just to keep them company".

Boy, 16 years old.

"I would kindly explain that I don't drink".

Girl, 15 years old.

The above answers are highly indicative of the views and feelings expressed by the different age groups.

Summary of Respondents' main Thoughts and Action in Card 4 by Drinking group:

THOUGHTS	NON-USER	LIGHT	REGULAR	HEAVY
Proof of being "real" drinker	-	1	5	7
Fear of offending	-	22	6	4
Weird situation	14	-	-	-
Confusion	1	-	-	-
ACTION				
Drink	-	18	9	10
Health excuse	-	2	2	1
Refuse	14	3	-	-
Unsure	1	-	-	-

CARD 5:

In the fifth card the individual faces a strong emotional problem after arguing with his/her boy/girlfriend. This is a situation that most adolescents experience although in different frequencies and intensities. Almost all (96%) adolescents regardless of the group in which they belong agreed that they will be upset and probably depressed. More specifically, Regular and Heavy users said that they would have just a couple of drinks and some cigarettes to relieve their anxiety. They were all aware that this does not solve the actual problem but they also claimed that it helps them at least to forget even for a short while. Some also mentioned that drinking is often the best way to release their feelings since it makes them less inhibited to cry or yell. On the other hand, most Light users reported uncertain of what to do, mentioning that anything is possible.

"I know it doesn't really help you to forget your problems, it actually makes you even more upset... but it's away of releasing energy".

Boy, 15 years old.

"Once I had a similar problem... I went home and drunk... I was almost drunk... then I started to cry... it was the drink I thing that made me cry...".

Girl, 14 years old.

Although most Non-users claimed to be equally desperate, they nevertheless insisted that they would abstain; surprisingly enough few considered drinking as a possibility.

"I would cry, scream... drink? does it really help?"

Girl, 16 years old.

"If I was really desperate, maybe, but right now I don't think so".

Boy, 15 years old.

Summary of Respondents' main Thoughts and Action in Card 5 by Drinking group:

THOUGHTS	NON-USER	LIGHT	REGULAR	HEAVY
Upset & Depressed	13	20	9	9
Release feelings	2	3	2	2
ACTION				
Drink and smoke	2	6	8	7
Drink and cry	-	4	1	3
Unsure what to do	-	13	2	1
Abstain	13	-	-	-

CARD 6:

Card 6 is presenting a situation in which the person has to face negative emotions and yet he / she is under pressure to feel better. This situation, although common provokes at the same time unique feelings to every individual. Partly because it is considered distinct and different for each one, it is also believed to be addiction oriented. In some cases this goes far beyond claims of feeling more relaxed to a belief that nothing else can be tolerated.

"It's very hard not to drink in cases like this".

Girl, 15 years old.

"When you start drinking it's really difficult to stop, it has its own way to attract you. There is something special in every drink to make you a regular drinker... it really makes you feel high".

Boy, 14 years old.

Therefore, most users, regardless in which group they belong, regarded drinking as a way-out, especially when it takes place under the above mentioned circumstances. Although, some acknowledge that they might get more depressed than high, they also report that they would drink; others argued that since overall nothing can make them feel better, drinking will very much depend on availability.

Most Non-users on the other hand suggested alternatives for releasing their emotions and feeling better, such as listening to music, going out, reading a book or

even trying to reason what happened; the rest claimed that they would not do anything special since nothing makes them feel good.

Summary of Respondents' main Thoughts and Action in Card 6 by Drinking group:

THOUGHTS AND FEELINGS	NON-USER	LIGHT	REGULAR	HEAVY
A "way-out"	-	15	7	7
Depression after drinking	-	4	3	4
Nothing changes mood	3	4	1	-
Alternative to drinking	12	-	-	-
ACTION				
Drink	-	16	10	11
Depends on availability	-	7	1	-
Abstain	15	-	-	-

CARD 7:

This card exposes the individual in an uncomfortable situation in which relaxation is needed. Most Regular and Heavy users said that they will go for a drink to feel more relaxed and comfortable. Few mentioned that nothing will help them to overcome uneasiness. Light users were divided in their decision to drink, half claiming that they would drink to relieve uneasiness and the other half were claiming to drink irrespective of such feelings. Most Non-users claimed that they rarely feel uneasy and in any case they would abstain.

"I would definitely go for a drink..."

Girl, 15 years old.

"I would surely have a drink... What else is there to do?"

Boy, 16 years old.

"I'm always relaxed at parties..."

Boy, 15 years old.

CARD 8:

In this card the person is exposed to a situation in which emotional pressure is present. At the same time there is no possibility of sharing one's emotions with anyone. Regular and Heavy users reported their intention to drink although being fully aware that alcohol does not help in forgetting ones' problems. Light users were divided as to whether they would drink or abstain with the purpose of forgetting their difficulties. Non-users strongly denied drinking even as a possibility. One expressed difficulty in discussing it.

"No, I don't believe that by drinking I can forget my problems... but at that moment I felt a bit better, later on I was feeling even worst".

Boy, 14 years old.

"Yes, when I have an existential problem, some things which I see as being wrong... yet I know it isn't really helping me".

Boy, 14 years old.

"It happened to me once or twice half a year ago".

Girl, 15 years old.

Summary of Respondents' main Thoughts and Action in Card 8 by Drinking Group:

THOUGHTS AND FEELINGS	NON-USER	LIGHT	REGULAR	HEAVY
Can't forget even when drinking	-	4	2	5
Forget for a while	-	10	9	6
Drinking as denied solution	14	9	-	-
Difficulty to discuss it	1	-	-	-
ACTION				
Drink	-	11	10	11
Abstain	15	12	1	-

Overall, the responses the Non-Users, Light users, Regular and Heavy users gave in the self-efficacy cards, indicate that understanding drinking involves understanding a set of thoughts, emotions and beliefs that precede the behaviour; furthermore identifying who is meant to cross from light to heavy use requires to uncover the qualitative differences that exist even amongst members of the same group.

iv.) Adolescents' own interpretation of drinking:

Adolescents own interpretation of drinking and its consequences were explored via a series of ten major questions. The results give potentially useful insight into why some adolescents drink and also on how adolescents perceive drinking of their counterparts. The descriptive interpretation gives an overview of adolescents opinions and it can serve as a stepping stone upon which further exploration of attitudes can be based.

Question 1: What makes adolescents of your age drink?

A summary of Adolescents' responses to this question are shown below. The most common reason given by Light, Regular and Heavy users was that their friends drink because they enjoy drinking; however some Light Users reported that some adolescents drink to satisfy their curiosity and some simply for having fun. Most Non-users, on the other hand, indicated their belief that some adolescents drinking is due to other people influences, whilst for others showing-off or handling personal problems is the reason.

"They see others drinking, that's why... they are influenced by others".

Girl, 15 years old.

"Some of the people have many problems at home... their parents are drinking".

Boy, 16 years old.

"They are show-offs".

Girl, 14 years old.

Summary of Responses in Q.1 by Drinking group:

RESPONSES	NON-USER	LIGHT	REGULAR	HEAVY
Pleasure	-	10	7	7
Curiosity	-	5	-	-
Having fun	-	5	2	-
Influenced by others	10	3	1	-
Show-offs	3	-	-	-
Personal problems	2	-	1	4

Question 2: How do you think other adolescents of your age feel when they drink?

One of the most common responses to this question was that drinkers felt high, joyful and relaxed. Even one third of the Non-Users had the same opinion about drinking. However, some Light users claimed that feelings depend on amount of drinks consumed and few implied that drinking has no effect on how they feel. The rest of the Non-Users claimed that they would not know how other people feel, since they never had this experience themselves but one argued that drinkers must be feeling awful.

"You get high, at least in the beginning, that is what I do".

Girl, 14 years old.

"There must be feeling awful but try to hide it ...".

Girl, 15 years old.

Summary of Responses in Q.2 by Drinking group:

RESPONSES	NON-USER	LIGHT	REGULAR	HEAVY
Feelings depend on drinking	-	5	1	-
Nothing	-	4	1	-
Awful	1	-	-	-
Don't know	9	-	-	-
High	5	14	9	10

Question 3: Have you ever been drunk? What did you feel?

The majority of Regular and Heavy users gave a positive answer to this question. All of them admitted that the effects experienced due to their drinking were anything but positive. However, some also agreed that this did not put them off from becoming drunk again. They also differentiated between being "really drunk" or being "slightly drunk".

"If we talk about being really drunk, "wildly drunk" then I felt awful,... awful from every aspect of it... I cannot describe it".

Boy, 15 years old.

"Yes, I have been drunk... I felt really high in the beginning but after a while I fainted".

Girl, 14 years old.

"I felt really strange... I have lost contact with reality... I had nice and sad thoughts at the same time... after a while I started crying... my boyfriend was living the following day but it was only for a day... I think it was the alcohol that made me cry... After that I did not had a drink for a couple of weeks... I had stomach aches, headaches and I did not want to drink again. After a while I overcame this problem...".

Girl, 15 years old.

Interestingly enough, half of the Heavy users and half of the Light users claimed that they always control their drinking.

Summary of Responses in Q.3 by Drinking group:

FEELINGS	LIGHT	REGULAR	HEAVY
Negative but drunk again	3	6	3
Never drunk	15	-	-
Always in control	5	5	8

Question 4: Have you ever had any problems because of your drinking?

In this question most Regular and Heavy users and even some Light users, responded that their major problem was somatic, ranging from dizziness to feeling like throwing-up and being unable to function the following day. Some Heavy users and some Light users mentioned that they never experienced any problems since they never drink to the point of being drunk, whilst some Regular users claimed that they had some family problems when their parents found out they were drunk. Below are some indicative responses to the above question.

"What really..., I have tried to get drunk several times but I stop myself from doing this... I stop when I get out of control and I say to myself, that's it".

Girl, 16 years old.

"I felt really awful I cannot describe how I felt... I felt so stupid because there were other people there... I did not mind about the headache... I did not have such problems... emotionally I was a wreck".

Boy, 16 years old.

"I was in a strange situation, I was laughing and crying, I was doing crazy things, I did not feel high. Then I felt dizzy, I had some stomach aches and felt like throwing up".

Boy, 15 years old.

"They did not say anything at that moment, they tried to soothe me... but the following day was like hell, my father started screaming at me and my mother was asking all these questions... I just wanted to be left alone".

Girl, 15 years old.

Summary of Responses in Q.4 by Drinking group:

PROBLEMS	LIGHT	REGULAR	HEAVY
Somatic	2	4	6
Family	-	5	3
None	21	2	2

Overall, the general feeling was that it is difficult not to get into some kind of trouble.

Question 5: When was the first time you tried alcohol?

(Who gave it to you? Why? How did you feel?)

The most common response to this question was that the individual took the drink her/himself out of curiosity or that it has been offered the drink by a family member. Whatever the case respondents saw drinking as a normal part of social life. In fact, some Light users reported being offered the drink by a family member, whilst Heavy users are divided in half in their responses .

"The first time I was around 10... I was curious to find out how it tastes... nobody offered it to me, I asked for it... I saw the others drinking, so I thought, why should not I have one... I started drinking systematically at 14. I was together with some friends and decided to have a couple of drinks... it does not really matter if you have a couple a drinks".

Girl, 15 years old.

"I was really young, you know, drinking wine with dad... I have had it again a bit later... the older we get the more we drink, all of us, it is not really a problem".

Boy, 16 years old.

"I have tried alcohol 4 years ago... a friend offered it to me... it has not been long since I have tried again... I was together with friends".

Boy, 15 years old.

Summary of Responses in Q.5 by Drinking group:

RESPONSES	LIGHT	REGULAR	HEAVY
Family member	16	6	5
Alone	-	-	3
Friends	7	5	3

Question 6: Do you think that some adolescents who drink might get into some kind of trouble? What kind? Why? (Non-users only).

This question was addressed to Non-users only; the aim was to measure their perceptions of the consequences of drinking. 13 out of 15 Non-users perceived that drinking is bound to lead to a variety of problems ranging from psychosomatic symptoms to family, school & social problems. Probably, the awareness of such consequences is a partial explanation of the abstinence.

"You are bound to get in trouble, with your family first of all and then at school".

Girl, 15 years old.

"People who drink they are doing really badly at school... they do not have time to study".

Boy, 14 years old.

"Some of them are involved with drugs also".

Boy, 15 years old.

"They all go to the same places... the police might arrest them for drinking".

Girl, 16 years old.

However, it was difficult for them to perceive any long term problems. Most of their considerations were clustering around their current relationship with others.

One claimed that this was dependent on how clever the individual was in avoiding trouble.

Summary of Non-Users Responses in Q.6:

RESPONSES	NON-USERS
Variety of problems	13
Depends on individual	2

Question 7: Have you tried alcohol? Who gave it to you? How did you feel?
(Non-users only)

This question was addressed to Non-users only. Four out of 15 Non-users mentioned that they tried alcohol but gave it up instantly mostly because they disliked the taste of it or because they experienced negative somatic symptoms which they could not tolerate. The rest said that they never felt the need to have a drink.

"He said let's try... I've tried once out of curiosity... it tasted awful, I don't know how people can stand it... it's so stiff...".

Girl, 15 years old.

"My friend gave it to me. I wanted to see what will happen to me... everybody saying that it makes you feel high... after a while I started feeling that my cheeks were blushing... my head was aching".

Boy, 16 years old.

"I don't think it's worth it... most drink to impress others... the way you feel is most likely to put you off from trying again".

Boy, 15 years old.

Summary of Non-Users Responses in Q.7:

RESPONSES	NON-USERS
Tried by gave it up	4
Never felt like it	11

Question 8: Why do you think other adolescents do not drink?

This question was asked in all groups. Most Non-users claimed that abstinence was due to health reasons as much in the long run as in the short. So, they claimed that anybody who is healthy, exercising and trying to keep in a good shape should not be drinking, in the same way that they should not be smoking. At the same time, they brought examples of mostly older people who suffer from liver cirrhosis or ulcer. Four out of 15 Non-users went to other factors such as family & personal control systems, saying that people who drink lose their control and become ridicules and that is why they personally avoid drinking. One argued that it was mostly a personal decision, influenced probably by family patterns.

"I wouldn't like to lose control and look ridiculous".

Girl, 16 years old.

"If you care about your body you don't drink, otherwise you end up looking horrible".

Boy, 15 years old.

Some Light and Regular Users on the other hand were pretty certain that abstainers are weird and so attached to their families up to the point of being pathetic. Two Heavy users out of 15 claimed that adolescents who do not drink are mostly females whilst one suggested that there are not people who do not drink and if they say so they are lying. Finally, most Non-users argued that drinking is a personal decision.

"I've never heard of anybody who doesn't drink".

Boy, 15 years old.

"It's only some girls who don't drink, everybody else does".

Boy, 16 years old.

"Maybe they are just doing what their parents tell them to do".

Girl, 16 years old.

Summary of Responses in Q.8 by Drinking group:

RESPONSES	NON-USER	LIGHT	REGULAR	HEAVY
Health conscious	10	2	1	-
Family/personal	4	5	2	-
Personal decision	1	15	6	8
Mostly females	-	1	1	2
No such people exist	-	-	1	1

Many of this data, although purely descriptive, in relation with others provides an inside understanding of the correlates of drinking behaviour. Especially, it draws attention to qualitative differences in the responses given by members of the population under study. Such responses varied not only amongst members of the different groups but also amongst members of the same group, making this area of enquiry particularly interesting for future research.

CHAPTER 10: DISCUSSION

10.1) Comments on the qualitative study.

In the qualitative study we have been trying to consider adolescents' own perspective on drinking behaviour and consequently to identify factors that relate to drinking. In the following pages, we are going to examine first, the processes relating to adolescent drinking as those are presented by the findings of the current study and then address issues of research methodology for that type of investigation. In analyzing the results, we have been attempting to categorize Ss according to Baumrind's (1990) coding of adolescent drug use and adopt this classification for subsequent analysis. The above classification goes beyond frequency and quantity of drinking taking into consideration qualitative aspects of the behaviour. Additionally, the term "drinker" is replaced by the term "user" which is more appropriate for characterizing drinking behavioural patterns in adolescence.

Analysis of the results revealed that the qualitative and the quantitative studies share some common findings. Such a finding is that boys and girls exhibit similar patterns of drinking. The age at which adolescents start experimenting with alcohol was also researched. Most adolescents in the qualitative study reported that they had their first drinking experience at around the age of ten.

Usually, a family member or a friend was the person most likely to introduce them to drinking. The majority, also reported that after 2-3 years, they have started more regular drinking either out of curiosity or because of external pressure to imitate what others did.

The study was also interested in establishing situations in which adolescents are more exposed to drinking. Content analyses revealed that most adolescents reported the company of their peers and siblings, either at someone else's house or even at a bar/ club as appropriate situations for drinking whilst some perceived being alone at home as the most appropriate time for drinking. Feelings that followed drinking, as these were identified by adolescents themselves, were also explored in the current study. Boys and girls, reported a variety of feelings ranging from pleasure and warmth to dizziness and depression. In addition, reported reasons for drinking, ranged from trying to have more fun to drinking for forgetting one's own problems.

Hence, the current study revealed that Heavy and Regular users are more likely than Light users and Non-Users to report drinking in situations which evoke drinking, they are more likely to report that they submit to peer pressure to drink; in addition Light, Regular and Heavy users report more often than Non-users positive expectations and attitudes towards drinking, although possible differences amongst Light, Regular and Heavy users were not explored in-depth in the current study. Regarding adolescents' own attitudes to drinking, participants in the qualitative study reveal that they regard drinking

behaviour as enjoyable, social, acceptable and relaxing whilst they also claim to have certain benefits from drinking such as enhancement of sexual attractiveness, relief of general anxiety and opportunity for socializing. In attempting to explain drinking behaviour, Non-users as well as users, of all groups, report that adolescent drinking depends on peer influence but while some members of the drinking groups argue that mostly curiosity and a need to have fun make others drink, Non-users argue that personal problems and the wish to impress seem to be more significant. On the other hand, when adolescents are asked to imagine how other children feel when drinking, Non-users have a tendency to express the view that the feelings experienced must be negative.

When respondents were asked to state why other adolescents get drunk there was a general consensus amongst members of the current population, regardless to which group they belong, that "personal weakness" is a major factor. "Personal weakness" was defined by the respondents as a characteristic of the individual which relates to his/her inability to resist pressure to drink. Thus, respondents come to adopt a similar to the Self-Efficacy one, conceptualization of the problem. When asked, which they thought were the problems associated with drinking, most Non-users argued that there is a whole range of problems, starting from social to personal/familial and psychosomatic; on the other hand, Users of all groups reported mostly the psychosomatic ones.

Most Heavy users also said that, despite their having experienced negative feelings, they got drunk again; few Heavy users and most Light users claimed being always in control of their drinking. When asked, why they got drunk again, since they have had negative experiences from drinking, most claimed that it was only the last drink which they

should have avoided drinking; they also claimed that this would have helped them to stay out of trouble. Most Regular and Light users also said that a family member gave them a drink at around the age of 10 whilst almost half of the Heavy users claimed that they took it by themselves.

When Non-users were asked if they ever tried alcohol, most claimed that they did not feel like it, whilst few said that they tried but gave it up. In the question of "why do you think others do not drink", Non-users argued that it is mostly because they are health conscious whilst Regular and Heavy users characterised such people as being attached to family rules and regulations, more than they should. One Heavy user did not believe in the existence of actual Abstainers, claiming that those who say they abstain are probably lying.

The Self Efficacy cards were perceived in a different light by Non-users and Light users than by Regular and Heavy users. Overall, the feeling was that no matter in which situation the individual was exposed, most Regular and Heavy users reported that they would be more likely to drink. The real difference between them and Non-users was in the underlying thoughts preceding drinking. Thus, in difficult social situations Non-users as opposed to users, said they would not think of drinking as a way to relax and avoid pressure. Their mind, they said, will be more set on trying to deal with the situation as such, rather than on finding substitutes to possible solutions. Non-users also perceived peer pressure situations as rather uncomfortable; they claimed that they would start questioning the intentions underlying their friends' behaviour but some also expressed the fear of losing control by drinking.

When emotional pressure was discussed, the underlying feelings experienced by all were similar but only few Non-users and some Light users claimed that they might drink. Most argued that drinking certainly does not help. Therefore, Non-users, Light and Regular users expressed an overall disagreement in both thoughts and actions as compared with Heavy users. Overall, although Non-users, Light, Regular and Heavy users differed at times in their explanation of drinking behaviour, they gave a variety of reasons for why same age peers drink. All of these explanations given by adolescents themselves, are worth exploring further in future research. Given the fact that the sample was small, qualitative differences amongst Light, Regular and Heavy users need also to be further researched.

Summarizing the findings of the above data so far, we suggest the following:

First, Non-users, Light, Regular and Heavy users have different perceptions and interpretations to offer in relation to drinking behaviour. What requires further exploration is the perceptual understanding that Light and Heavy users have about the drinking setting.

Second, gender differences should be further explored. The similarities which the current study suggests that exist between boys and girls require further investigation and should be treated with cautiousness; even more so because of the small sample size, the lack of a representative sample and researcher's own bias in interpreting the results.

Third, efficacy expectations appear to be strongly related to adolescent alcohol use. Certainly more exploration is needed before any conclusive comments can be made.

Fourth, alcohol use is often seen as part of socializing and belonging to a particular culture of peers; according to adolescents' perspectives, drinking is seen as enhancing sociability and therefore is appreciated for its social nature. It is also seen as rather acceptable by society at large. Evidence came from adolescents claiming that they have been introduced to drinking, early in life. Thus, research is needed to address the setting at which drinking derives at an early age.

Fifth, there is a different meaning attached to drinking by Non-users and Light users as opposed to Regular and Heavy users. This relates to attitudes, feelings, perceptions and reactions to drinking situations. These imply that in future, research could consider adolescents' own explanation about a particular situation.

Finally research has yet to attempt to explain the relationship between early onset of alcohol use and subsequent behaviour. Our hypothesis is that the earlier one starts drinking the more likely, he/she is to be introduced into alcohol abuse by forming the perception on one hand that drinking is socially acceptable and by using alcohol on the other, for escaping undesirable thoughts, feelings and emotions. However, this is only a speculation requiring in-depth investigation and a longitudinal study.

We would like now to turn to the methodological issues accompanying this type of research. One, of the most important issues, that the current study also has to confront, is that of bias in researchers. As Tizard (1990) argues, there is a kind of bias which is unavoidable and this derives from the fact that all knowledge is framed within a particular intellectual paradigm which indicates what is relevant to observe and what is taken for

granted: "Since we must inevitably work within a paradigmatic framework, the built-in bias that this gives rise to, in terms of the questions asked, the selection of some variables for study and not others, is inevitable. In this sense, all researchers are biased" (Tizard, 1990).

In the current research the same investigator designed both studies and analysed the data carrying therefore personal biases that have probably affected interpretation of the results. To avoid such bias in the future at least two investigators need to be involved in a given research.

As Tizard (1990), further argues, it is also important to consider even negative evidence: "Indeed, it would be very foolish not to do so, because it is often through a consideration of the implications of negative or inconsistent evidence that advances in knowledge are made" (Tizard, 1990). However, when a sole researcher carries out an investigation the tendency is to avoid confronting inconsistent or negative evidence, although in the current study an inconsistent to other research finding relates to gender differences in the patterns of drinking.

Additionally a new argument is raised about whether it is fruitful to categorize young people as Drinkers and Abstainers or even to talk about Light and Heavy Drinkers. By referring to Drinkers and Abstainers there is an underlying assumption that these represent personality types. The implication then, is that the individual is the one to blame and criticize for his/her behaviour.

However, as Drinkers could become Abstainers and vice versa, it might be more useful to talk about behavioural patterns which are changeable. Such an approach is more objective and flexible in the conceptualization of the given behaviour, especially amongst the young.

Another matter is the way of assessing the Drinking Patterns. Given the sensitivity of the issue, the means of assessing the problem is an important one. In the quantitative and the qualitative study two different methods were used. One measure, was the Substance Use Scale (Botvin et. al., 1984) which asks adolescents to report drinking behaviour over the last year, month, week, as well as asking explicitly about current drinking. The Questionnaire is Anonymous and this is stressed when it is administered usually on a class basis. Another measure was the Drinking Diary modified in slight ways; this is a self-report measure of Drinking Behaviour. The Behavioural Diary might be useful in the reporting of the associated feelings prior to or following Drinking Behaviour. While, the most valid way of assessing drinking episodes would be to observe them directly, this is very difficult to attempt for obvious practical reasons. Consequently, it is hard to conclude whether the best method for establishing incidence is the anonymous questionnaire, although our confidence in the anonymous questionnaire is enhanced by the general consistency adolescents show in answering the separate questions.

Interviews, on the other hand are not necessarily suitable for studying the above problems; they led in some instances to defensive answers. However, in the case of students willing to talk about their experiences, they can give a rich insight. Certainly, self-monitoring techniques such as a Drinking diary, are suggested for increasing validity of

self-reports, especially of alcohol reported behaviour (Robins & Przybeck et. al., 1990). Several studies have found that individuals who are trained in self-monitoring procedures produce more accurate self-reports than those who are not (Nelson et.al., 1980; Shapiro et. al., 1980).

Behaviour ratings completed by parents and teachers could be another source of information concerning adolescent behaviour relevant to drinking. However, teachers and parents are frequently unaware of adolescent alcohol use as they have not be trained to recognise the signs of drinking and drug taking. Peers have also been found to be relatively accurate, reliable raters of behaviour (Hopes & Lewin, 1984). Peer rating may be a source of useful data concerning levels of alcohol use, although this involves the danger of characterising individuals in socially undesirable terms. Before any conclusive comments can be made, further investigation is needed in order to verify the existence of such patterns across different cultures. Subsequent studies should make use of rigorous methodological tools respecting cultural diversity.

The following pages present the findings of the qualitative study vis-a-vis those of the quantitative followed by a conclusive comment on methodological issues and future research directions.

10.2) Comments on the overall study.

In the present study our main concern was the impact of early adolescent experiences on adolescents' initiation of drinking and subsequent alcohol use. First we reviewed the literature in an attempt to identify the most salient of drinking experiences and within this framework we have presented findings on adolescent drinking behaviour and its related factors.

Two conclusions were drawn from the literature review:

- a) that most studies depend on quantitative data for establishing the alcohol related variables in adolescence and that
- b) very few attempts (Rhodes & Jason, 1988) have been made to incorporate different variables into a single model explaining alcohol use in adolescence.

In the first chapters we have been concerned with presenting the current findings in the area of adolescent drinking and in putting forward the major theories that are concerned with the explanation of the above behaviour. The aim was to demonstrate, on one hand, that consuming alcohol is common practice in adolescence, despite the fact that the law does not permit drinking before the age of 18, and that such patterns are common amongst different cultures, as this is reported by different researchers.

On the other hand, we have been concerned with pointing out that the study of drinking has been approached by several researchers but most attempts have been interested in

presenting the matter from different perspectives, placing emphasis either on the individual, his/her family or the peer group. Motivated by the biopsychosocial approach which deals with the explanation of alcoholism in adulthood, the main aim was to adopt a similar line of research where social, familial and psychological variables could be incorporated in the study of alcohol use in adolescence.

The model, which appeared to cover broadly the social and psychological aspects of drinking, was the one presented by Rhodes & Jason (1988). In their model, the researchers adopted a socioenvironmental approach to understanding drinking, a comprehensive approach, covering the factors that have been identified, by other studies, as the most significant predictors of drinking behaviour. However, in their approach Rhodes & Jason (1988) have not examined the role that familial relationships play in the adoption of a maladaptive behaviour. They are most concerned with adolescent perceptions of parental drinking, therefore diminishing the role of the family to modelling of a given behaviour.

Therefore, it was thought appropriate to introduce in the current study Olson's Family Cohesion and Adaptability theory (1986) with the purpose to research further family interactional patterns and their relationship to adolescent drinking. This integration of the two perspectives assumed that social, familial and personal factors are involved in the decision to drink or abstain from alcohol.

The hypothesis is that the individual is influenced in his/her decision to adopt a particular behaviour by a range of different factors that vary from the experiences he/she has in the family and the peer group to the interpretation he/she gives to these experiences and to his/her personal resources and abilities to address the issues he/she confronts.

Therefore, a constant interaction is taking place and is likely to affect the adoption of a particular behaviour. Certainly some aspects are more important than others and these are the ones that need to be identified and determined in current and future research. In addition we have added the construct of self-efficacy, since it helps to identify component situations, emotions and pressures which the individual is called to resist. The notion of social support was also researched with the purpose of examining the quality and quantity of the interactions taking place at the individual's immediate environment.

With these presuppositions in mind, our concern became to approach the study of adolescent alcohol use from two divergent, yet complementary perspectives; that is the qualitative and the quantitative methods for revealing information and to incorporate, into a single framework, different experiences related to drinking, as reported by adolescents themselves. This would probably lead to some general suggestions that school focused preventive efforts might wish to take into consideration.

In the quantitative study, we began our analyses by attempting to identify the drinking groups with the use of Botvin et. al. (1984), Substance use scale. The Botvin et. al. (1984) scale is designed to measure Retrospective and Current Substance Use,

Substance Knowledge, Attitudes, and a series of socio-psychological variables such as perceived Significant others drinking and approval of adolescent drinking, Locus-of-control, self-esteem, social anxiety, assertiveness, general influenciability and socio-economic status. In addition, Lawrance (1986) self-efficacy scale, Family Cohesion and Adaptability Scale (Faces III) by Olson et. al. (1985) and Power et. al. (1986) Significant Others Scale were used.

Using Botvin et. al. (1984) Substance Use scale, we have been successful in placing individuals into three groups; each individual was assigned to a group on the basis of a double condition, where frequency per year level was seen in combination with number of drinks per drinking occasion. With the help of this system of joint and alternative condition, the three groups were identified: the Abstainers, the Occasional Drinkers and the Drinkers. Only 26.5% of the sample were identified as Abstainers, 40.3% of the sample were identified as Occasional Drinkers and 33.2% as Drinkers. More specifically, 14.7% of boys and 11.8% of girls were Abstainers, 21% of boys and 19.3% of girls were Occasional Drinkers and 16.6% of the boys and 16.6% of the girls were Drinkers. A phenomenon applicable to this sample is that boys and girls report similar amounts of drinking.

We then computed stepwise regression analyses for both sexes together and since the sample size permitted it, for each sex separately. In stepwise regressions, the variable with the highest correlation is entered first, then the correlations with the effect of this variable removed are examined and any remaining significant partial correlations are then entered and so on. Regression analysis was used to identify the most significant correlates

with drinking behaviour and then subject them into further analysis by examining prospective differences amongst the three groups of Abstainers, Drinkers and Occasional Drinkers. Regression analysis was also carried out for each gender group so as to identify the variables that seemed to be more important for one gender rather than the other in drinking behaviour.

For both sexes combined the simple correlations that were significant are; past drinking ($B = .44$), getting in trouble ($B = .15$) and actual assertiveness ($B = .10$). The above accounted overall for 78% of the variance. For boys, the significant correlates were past drinking ($B = .18$), locus-of-control ($B = -.19$), getting in trouble ($B = .21$) and actual assertiveness ($B = .13$) which accounted overall for 76% of the variance. For girls the significant correlates that accounted overall for 82% of the variance, were past drinking ($B = .46$), getting in trouble ($B = .19$), ability to resist friend's pressure to drink ($B = -.16$) and family interactional patterns ($B = .16$). The potential for problems is greater for those who begin use early in life, than for those who begin later; therefore age of first use appears to be a critical variable (Robins et. al., 1990). In sum, the predictors of alcohol use in the current sample are somewhat different for boys and girls.

In fact, regression analyses pointed out that past drinking and getting in trouble were important correlates of drinking for both gender groups, but family interactional patterns and ability to resist friends pressure to drink were significant for girls only, whilst locus-of-control and actual assertiveness were significant for boys only.

When the significant factors were subjected to further analysis in which the three groups were compared, the findings were as follows:

- there were no significant gender differences in relation to drinking practices reported by the two gender groups

- girls are as likely as boys to find themselves in trouble as a consequence of drinking.

- girl drinkers are as likely as boy drinkers to report drinking habits amongst their peer as girl and boy abstainers.

- Drinkers differed significantly from Abstainers and Occasional Drinkers in the locus-of-control measure, the assertiveness measure, their ability to resist friends' pressure and opportunity to drink, measures.

- Drinkers were significantly more likely to perceive extreme levels of cohesion and adaptability in the family. In addition, individuals who get in trouble are more likely to describe their families as extreme than individuals who remain out of trouble.

- Contrary to the initial hypotheses the groups did not differ significantly in situational assertiveness, self-esteem, knowledge about alcohol, general influenciability, social anxiety and ability to resist emotional pressure to drink.

The findings are interesting in focusing on the fact that Drinkers differ significantly in a variety of measures from Occasional Drinkers and not just from Abstainers. Future research might wish to consider whether such differences account for different levels of alcohol misuse.

In the qualitative study we used Baumrind et. al. (1990) adolescent alcohol use codes, which were designed to include qualitative as well as quantitative factors as definers in order to distinguish among types of users. Interview data was analysed to reveal adolescents own point of view of the drinking situation. In general the analysis revealed that:

- a) no significant difference in relation to drinking is reported amongst boys and girls
- b) that efficacy expectations are associated with adolescent drinking
- c) that peer drinking is associated with adolescent drinking
- d) that different meanings are attached to drinking by Non-users, Light, Regular and Heavy users and that
- e) the age at which individuals are initiated into drinking might be significant for subsequent behaviour by generating in the individual the feeling that drinking is part of the culture and the socialization process.

The qualitative study was meant to be independent and yet complementary to the quantitative, aiming to demonstrate areas which a strictly quantitative approach cannot identify.

More specifically the qualitative study suggested that:

- Regular and Heavy users are more likely to submit to peer pressure to drink than Light and Non-users, whilst they generally attribute qualities to drinking and expect the consequences of drinking to be more positive than negative.
- Regular and Heavy users report that peer drinking and inability to resist pressure to drink are amongst the most commonly identified factors of drinking.
- Non-users, Light, Regular and Heavy users are as likely to report that adolescents drink because they are influenced by their friends
- Regular and Heavy users are likely to explain abstinence from alcohol as being submissive to adult rules and regulations, whilst abstainers attribute such a decision to being health conscious
- Non-users and Light users are likely to report that drinking does not help resolve emotional pressure whilst Regular and Heavy users regard it as a means of relaxation
- Non-users suggest that they rarely experience peer pressure to drink by comparison with drinkers. However, when they are experiencing such pressure they report being more likely to feel uncomfortable than accept it, whilst drinkers rather welcome it or at least are not being threatened by it.
- Boys and girls are reporting similar drinking patterns.

The above findings are in line with Carey's (1993) research where situational determinants of heavy drinking among college students were explored. According to Carey's (1993) study, heavy drinkers were more likely than Light and Moderate drinkers to report excessive drinking in situations involving social pressure to drink, in pleasant times with others, in pleasant emotion and in physical discomfort.

The quantitative study has certain advantages and one of them is that honesty and frankness in answering the questionnaire may be encouraged simply by the fact that the subject is anonymous. However, many people cannot express themselves adequately, given the fact that when closed items are used the range of answers one can actually give is by definition limited and there is where the benefits of the qualitative study become obvious.

Besides, the same question may have different meaning for different people and therefore generate an ambiguous answer. Given the nature of the administration of the questionnaires, it is probable that such misunderstandings cannot be foreseen or prevented by the researcher or the research tools. Also the interview has the advantage of allowing people to express themselves and give their interpretation to the situation without being restricted by the researcher. Especially when the researchers objective is to go beyond the classification of the respondent and include the discovery of his/her reasons for behaving and feeling as he/she does the open -ended interview is probably the best way of approaching the matter.

i.) FUTURE RESEARCH:

With the above analysis in mind, what seems to be of particular interest for future research are the following: First, it is worth considering the findings related to gender group similarities in drinking patterns. Since, the measurement of drinking behaviour was based upon self-report data and on behavioural diaries, it would be unwise to dismiss the finding as an artifact of the current study. Future research could clarify the patterns of drinking for both sexes and probably reveal more similarities than differences in the actual levels of alcohol consumption.

In a similar line, researchers might consider the presupposition that different experiences might lead to drinking for boys and girls. Sex differences could be found at a deeper level of psychological functioning per se rather than in the manifestation of the behaviour.

Second, it is commonly accepted that the age at which individuals are initiated into drinking is lowering. In that respect, it might be worth considering in future research how individuals are being introduced to drinking and explore the precedents of drinking at around that time.

Third, alcohol use in the peer group can predict drinking; however, more exploration is needed of that area which could be based on individual's own account of the situation. Most studies recognise the significance of the finding but the internal processes that characterize interactions within the peer group are not well explained or understood.

Fourth, in this type of research more than one methodological approaches should be used for revealing on one hand, the patterns of the particular behaviour and for understanding, on the other, the underlying meanings and values that such a behaviour conveys. Future research might wish to combine qualitative and quantitative methods to the study of alcohol and drug use.

Fifth, at least two researchers should be involved in studying socially sensitive phenomena and interpreting the results; the aim is to eliminate researcher bias which the current study was unable to avoid.

Lastly, general theoretical formulations of the problem already exist (Rhodes & Jason, 1988). What seems to be missing is an in-depth understanding of the problem, as presented from the individual him/herself. This would add validity to the theoretical grounding and emphasize areas in which preventive efforts could prove useful.

ii.) SOME METHODOLOGICAL CONSIDERATIONS

Several problems face the researcher who wishes to pursue research on the field of alcohol use in adolescence. These can be pragmatic, as well as methodological. Starting from the pragmatic difficulties which the individual researcher is called to confront, one has to mention fiscal and resource limitations; these inevitably affect the reliability and validity of the findings.

Often research with adolescents depends on the availability of subjects, especially when such research addresses socially sensitive issues. Therefore, it is often difficult to ensure an adequate and even more so representative sample size. Thus, one needs to be extremely careful in generalizing the findings beyond the given population. The population structure and particular characteristics, as well as the content of the research design, often define the kind of measurement tools that can be used effectively in research.

Certain limitations are imposed on the researcher, disqualifying him/her from re-testing the situation, with the same sample and via the use of alternative techniques; they even disqualify them from carrying out in depth interviews. Reasons for this range from limitations in time to gaining approval from the teacher and parents in order to carry-out the research. Consequently, relying on questionnaire data and missing out the benefits of the qualitative data is a rather common and often unavoidable practice.

Exclusive reliance on one method, rather than another, may bias or distort the researcher's picture of the particular slice of reality which he/she is investigating. The use of contrasting methods, reduces considerably the chances that any consistent findings are attributable to the method. Similarly the involvement of more than one researchers in designing the study, collecting the data and analyzing the results is suggested for avoiding bias.

As Campbell & Fiske (1959) argue, the between methods approach embraces the notion of convergence between independent measures of the same objective. The current study benefits from the qualitative and quantitative approaches which allow on one hand, to narrow down the areas of research and on the other, to expand on these areas and gain a broader understanding.

CONCLUSION

The current study had as an aim to identify variables which help understand drinking in adolescence, to identify drinking practices in middle adolescence, to search for gender differences in such practices as well as in the underlying factors associated with drinking and to compare abstainers, occasional drinkers and drinkers. In order to achieve the above goals, two main studies, one quantitative and the other qualitative have been carried out with adolescents younger than 18 years old.

In the quantitative study adolescents were recruited from three middle schools and a college of technical education in England and were asked to answer a series of questions in relation to their drinking habits and a variety of sociopsychological factors suggested by current research as the best correlates of drinking.

On the basis of evidence deriving from the quantitative study, the qualitative study, done in Greece, run for researching further some of the most salient factors found to be associated with drinking, but also for fleshing out the findings via the use of sensitive to the individuals' perspective, qualitative techniques. As it has been argued in chapter 5, p.131, in the current research a qualitative and a quantitative study run in parallel; since the same researcher carried-out both studies it was pointed out (chapter 5, p.138; chapter 10, p.322) that caution should be paid in interpreting the results.

Initiation to drinking was also explored and the reasons given by adolescents seem to support the view that exposure and curiosity are the major factors for an initial trial at a very early age, but beyond this peer pressure is the key variable affecting levels and patterns of use. Abuse, at the level of being drunk, also seemed to be affected by peer pressure and by an inability to resist certain emotions and opportunities associated with drinking. This was a consistent finding across these studies and suggests that educational interventions could be directed mostly in that area.

Although, culturally different populations were used for the studies more similarities than differences came to the surface. Whatever differences occurred were mostly related to the manifestation of drinking patterns rather than to the underlying factors, relating to them. Overall, it has been argued that it is more appropriate to talk about patterns of behaviour rather than personality types of this age group at least. This differentiation allows on one hand more effective intervention strategies and it lessens, on the other prejudices towards individuals.

Literature review of the 1992-94 published studies has been carried-out in the American Psychological Abstracts, the Eric-DBase, the International Journal of Adolescence, the Health Education Journal, the Health Research Journal, the Adolescence Journal and the Journal of Youth and Adolescence; the review revealed that a.) current research (Isralowitz et.al., 1993; Gross, 1993; Rabowe et.al., 1992) in relation to drinking practices exercised by the two gender groups supports the argument that illegal under age

drinking by men and women occurs at high rate and one research (Isralowitz et.al., 1993) demonstrates that women report slightly more drinking than men, b.) social pressure to drink (Carey, 1993) affects significantly more the heavy drinkers and c.) family interactional patterns, family conflict and parental involvement (Smith & Rivers, 1992; Barnes & Farrell, 1992) relate significantly to adolescent drinking behaviour. However, more in-depth research is needed on the social context in which drinking is taking place and also more is needed in exploring the relationship between family life and the drinking setting before any conclusive comments can be drawn.

In conclusion we can argue that in the present study most adolescents aged 14-17 years old have reported drinking. It needs to be recognised however, that these adolescents may not be typical of the adolescent population and certainly a larger and more representative sample will always be more helpful in future research.

In addition the fact that the same researcher carried-out both studies implies that a certain degree of bias is inherent in the current research (chapter 9, p.253). The quantitative and qualitative data presented in this thesis suggest that in future research of socially sensitive areas a combination of different methodological approaches is worth adopting, in order to extract the relevant to the individual information.

Finally, adopting a psycho-socio-environmental approach and regarding the individual as part of an active system where interactions and exchanges are constantly taking place, might prove to be more useful for future research than examining the effects of isolated variables on the individual decision to drink or abstain. These are the areas in which the contribution of the current thesis was made and which deserve further attention and exploration by future research.

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APPENDICES

APPENDIX 1:

- a.) Sample Letter to the Educational Authorities.
- b.) Draft of the Conditions governing the use of school facilities by external research workers.
- c.) Questionnaires.

APPENDIX 2:

- a.) Internal consistency of the scales.
- b.) Factor loadings.

APPENDIX 3:

- a.) Results.

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The Head Teacher - Miss Janet Wallace - telephone (071) 267 0975 - Mixed Comp
Haverstock School
Crogsland Road
NW1 8AS

27 November 1990

Dear Miss Wallace,

Ms Jill Morris, the Health Education Coordinator in Camden, has given permission for us to seek your help for one of our research students, Ms Anna Tsiboukli. Dr. John Rust of our Department of EPSEN is her tutor and Ms Tsiboukli is looking at alcohol abuse in adolescents and trying to identify those most vulnerable.

Ms Tsiboukli has carried out her pilot study in two schools but now needs two or three more schools to complete her research. She has three questionnaires & A Life Skills Questionnaire, A Drinking Survey and an Advertisement questionnaire which Ms Morris has seen and is quite happy for her to use provided you are in agreement.

Ms Tsiboukli is Greek but she has taught in England for several years and already has an MA in Psychology of Education. Clearly this is a sensitive area for research but I know that she will handle it diplomatically and do hope you will be able to help her.

We have asked Anna to contact the school direct to arrange to come in and talk to an appropriate member of staff about what she wants to do. We hope this is acceptable but if there are any problems please contact me.

Yours sincerely,

Gillian Hinson (Mrs)
School Relations Officer

ISLINGTON EDUCATION SERVICE - RESEARCH AND STATISTICS

POLICY ON EXTERNAL RESEARCH APPLICATIONS

1. All research which requires access to Islington schools, colleges and teachers must first be cleared by the Islington Education Service Education Policy team. The reasons for this are:
 - a) to protect Islington schools and their pupils from invasion of privacy, from unwarranted and excessive demands on their time by external research workers and to prevent particular schools from being unduly used for research;
 - b) to aid the researcher by giving advice and, if necessary, by approaching schools on their behalf.
2. When receiving a request for research facilities, the Education Policy team must ensure that:
 - a) sufficient information about the research is available to enable an informed decision about it to be taken;
 - b) the research is worthwhile, i.e., that the subject is one worth investigating and that the methods used will enable valid conclusions to be drawn;
 - c) the researcher has proposed adequate safeguards to ensure confidentiality and obtained parental consent if relevant.

Some projects will be dealt with independently, others will require consultation with other Islington Education Service officers, e.g., Medical Adviser and Inspectors.
3. It is therefore very important that researchers provide full information about what they wish to do, if delays in the clearance procedure are to be avoided. Generally, researchers should complete an Islington Education Service research application form as this will ensure that all the necessary information is provided. In the case of students, it is essential that they discuss all the details of their project with their supervisor/tutor before submitting their proposal. Copies of any questionnaires, tests or interview schedules together with a copy of the parental consent letter, if relevant, should be submitted along with the application form.
4. The content of research projects submitted to the Islington Education Service should be in line with the Islington Education Service's anti-racist and anti-sexist policies. In particular, research projects should not use materials which reinforce racist or sexist stereotypes. It is recognised that in order to arrive at meaningful conclusions, many projects require data on sex, social class and ethnicity to be collected. Having given a sound justification for the inclusion of such data, they should ALWAYS be obtained directly from the pupils, if appropriate, or

their parents/guardians. Such data should never be recorded by indirect means *e.g.*, on appearance or by asking the teacher.

5. Parental consent is generally required if the researcher wishes to:
 - a) question parents at home or in school;
 - b) question pupils about their parents or home circumstances (this includes any questions about parental occupation, nationality or ethnic group);
 - c) question teachers about pupils' parents or home circumstances;
 - d) carry out any medical testing of pupils;
 - e) take selected pupils out of class for individual testing.

Parental consent is obtained by sending a letter to the parents through the school. It should be written in simple, clear language. For some projects, it may be worthwhile translating it into relevant languages. It should generally be positive consent. This can be achieved by attaching a tear-off portion saying "I do/do not give permission.....". However, parents should not be required to write if they have any concerns or objections regarding the project. Simply informing the class teacher by any means is sufficient.

It should be noted that good practice requires consent to be obtained from pupils too, especially if the project involves intrusive questions regarding their private lives

6. With certain types of research, it is necessary for elected Members of the Islington Education Committee to approve projects. Studies are submitted to Committee for approval when:
 - a) the subject concerns the Members' own position or a political aspect of education;
 - b) the subject of the research could cause controversy (*e.g.*, sexual behaviour, drug taking, violence, ethnic differences);
 - c) it is a medical project;
 - d) parents are to be interviewed or information about parents or home circumstances is sought;
 - e) the researcher seeks access to confidential information. (Access to pupil records has never been granted and medical records are the property of the NHS.)

If a project falls into any of the above categories, considerable delay in obtaining clearance may be experienced. It is probably advisable for students on short courses, or researchers with a limited amount of time available to avoid this type of research project altogether.

DRAFT

ISLINGTON EDUCATION SERVICE

CONDITIONS GOVERNING THE USE OF SCHOOL FACILITIES BY EXTERNAL RESEARCH WORKERS

1. That no liability falls on the Authority or its employees, and the applicant shall be required to sign an Indemnity in a form to be settled by the Authority's Solicitor and, if required by the Chief Education Officer, to insure and keep insured to the satisfaction of the Education against all liabilities arising out of the said Indemnity.
2. That the Headmaster or Headmistress and staff of the school consent to the exercise and use of the permission and facilities granted.
3. That the Headmaster or Headmistress, the Chief Education Officer or the Medical Adviser to the Authority may withdraw the permission and facilities at any point if it is considered necessary to do so.
4. That the work of the school(s) is disturbed as little as possible.
5. That no question shall be put to a pupil under the age of sixteen years about his or her parents, guardians, address, or home circumstances, unless and until written consent of the Chief Education Officer is obtained, and if such further consent is also considered by him to be necessary unless and until the written consents of the parents' or guardians and Headmaster or headmistress are obtained.
6. That no pupil is to be taken out of class for individual questioning, testing or observation, or taken off the school premises, or given medical tests, or otherwise used for or involved in the purposes in respect of which the permission is granted, unless and until the written consent thereto of his or her parent or guardian has been obtained by the Chief Education Officer if such consent is considered by him to be necessary.
7. That the address of a parent or guardian shall be neither supplied to nor used by the applicant in any way unless and until the written consent thereto of the parent or guardian has been obtained by the Chief Education Officer.
8. That no publicity is given to the work for the purposes of which the permission is granted either during or after such work is in progress without the consent of the Authority.
9. That on completion of the work a written report of the findings be submitted to the Authority.

10. That the delivery of any lecture or the publication of any book, article, letter, document, record, film, list, statistics, compilation, or other work whatsoever arising out of or in connection with the proposes of the applicant in respect of which the permission is granted, shall be subject to the prior consent of the Authority, which consent may only be withheld by reason of a reference therein to the Authority or a breach of any of these conditions and for this purpose the applicant shall within a reasonable time before the publication of any such item as aforesaid, submit it to the Authority. If any such item as aforesaid is not for publication a summary of its findings, together with details of access to the complete work, shall be sent to the Authority.

11. That no indication is given in any publicity or interview or lecture or published book, article, letter, document, record, film, list, statistics, compilation, or other work whatsoever arising out of or in connection with the purposes of the applicant in respect of which the permission is granted, of the identity of the pupils, parents, staff or school and, unless the consent of the Authority is obtained, that no indication is given of the identity of the district in which the school is situated.

LIFE SKILLS STUDENT TRAINING QUESTIONNAIRE

This is not a test. **DO NOT PUT YOUR NAME ON THIS SURVEY.** The number on the top of this page will allow us to keep your name *secret*. We want to know what you really think, so please answer all the questions honestly.

1. I am a: 1 boy 2 girl

3. FORM: _____

PART I

Please answer the following questions. *Circle your answer.* Remember, everything you say is **SECRET**. Nobody will find out what you say.

1. Have you ever had a drink of alcohol?

1 Yes 2 No

2. Have you had a drink of alcohol in the last year?

1 Yes 2 No

3. Have you had a drink of alcohol in the last month?

1 Yes 2 No

4. Have you had a drink of alcohol in the last week?

1 Yes 2 No

5. How often do you drink alcohol?

1 Never

2 A few drinks a year

3 A few drinks a month

4 A few drinks a week

5 Everyday

If you **DON'T DRINK** skip 6-9; go to question 10.

6. How much do you drink when you drink?

- (1) 1 drink
- (2) 2 drinks
- (3) 3-6 drinks
- (4) more than 6 drinks
- (5) until I get 'high' or drunk

7. If you drink what do you usually drink?

- 1 wine
- 2 beer
- 3 mixed drinks
- 4 hard liquor
- 5 don't drink

8. How often do you get drunk?

- 1 Never
- 2 Once or twice a year
- 3 Once or twice a month
- 4 Once or twice a week
- 5 Several times a week
- 6 Almost every day

9. Have any of these things happened to you while you were drinking or being drunk?

	Yes	No
a. gotten into trouble at home	1	2
b. gotten into a fight	1	2
c. had an accident or injury	1	2
d. gotten into trouble at school	1	2
e. gotten into trouble with the police	1	2

PART II (KNOWLEDGE)

Please read the following statements and decide whether each statement is true or false. If the statement is true circle "1" and if it is false circle "2".

	True	False
1. Switching drinks will make you drunker than staying with the same kind of alcoholic beverage.	1	2
2. Alcohol makes you feel "high"	1	2
3. Beer and wine both contain the same amount of alcohol	1	2
4. Alcohol is the most widely abused drug	1	2
5. A pregnant woman's drinking can affect the health of her baby	1	2
6. Alcohol is the cause of the majority of fatal car accidents	1	2
7. After the effects of alcohol waer off, you are likely to be more nervous than before drinking	1	2
8. Drinking helps people get a more restful night's sleep	1	2
9. Most adults drink alcohol every day	1	2

PART III (ASSERTIVENESS)

Indicate on a scale of 1 to 5 how often you generally do the things listed below. Circle "1" for Never, "2" for Almost Never, "3" for Sometimes, "4" for Almost Always, and "5" for Always.

	Never	Almost Never	Sometimes	Almost Always	Always
How often do you:					
1. Say "no" when someone trys to get you to smoke	1	2	3	4	5
2. Say "no" when someone trys to get you to drink	1	2	3	4	5
3. Complain when someone gets ahead of you in line	1	2	3	4	5
4. Complain when someone gives you less change than you are supposed to get	1	2	3	4	5
5. Say "no" when someone wants to copy your homework	1	2	3	4	5
6. Express an opinion even though others may disagree with you	1	2	3	4	5
7. Tell people when you think they have done something that is unfair	1	2	3	4	5
8. Ask for directions if you don't know where you are	1	2	3	4	5
9. Ask a teacher to explain something you don't understand	1	2	3	4	5
10. Ask a person who is annoying you in a public situation to stop	1	2	3	4	5

PART IV (ATTITUDES)

Below are some things that other kids have said about alcohol. You may agree or disagree with these statements. After reading each sentence circle the number under the column that comes the closest to how you feel. For example if you strongly agree, circle the number in the column that says STRONGLY AGREE. If you disagree, but not very much, circle the number in the column that says DISAGREE. Remember, this is not a test. We just want to know what you think. READ EACH SENTENCE CAREFULLY BEFORE GIVING YOUR ANSWER.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. If kids drink alcohol, it proves they're tough	1	2	3	4	5
2. Drinking alcohol lets you have more fun	1	2	3	4	5
3. Kids who drink alcohol have more friends	1	2	3	4	5
4. If a girl drinks alcohol boys will like her more	1	2	3	4	5
5. If a boy drinks alcohol, girls will like him more	1	2	3	4	5
6. Kids who drink are more grown up	1	2	3	4	5

PART V (SELF-ESTEEM & SOCIAL ANXIETY)

Read each of these statements and indicate on a scale of 1 to 5 how much you agree or disagree with each statement. *Circle your answer.*

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. I generally feel that I am					
a. smart	1	2	3	4	5
b. good-looking	1	2	3	4	5
c. likeable	1	2	3	4	5
d. good at sports	1	2	3	4	5
e. satisfied with myself	1	2	3	4	5
f. popular	1	2	3	4	5
g. truthful or honest	1	2	3	4	5
2. I generally feel comfortable					
a. Introducing myself to someone of the opposite sex	1	2	3	4	5
b. making "small talk" with someone I just met	1	2	3	4	5
c. giving compliments	1	2	3	4	5
d. receiving compliments	1	2	3	4	5
e. expressing my feelings	1	2	3	4	5
f. asking someone out for a date	1	2	3	4	5
g. starting conversation with a stranger	1	2	3	4	5

(GENERAL INFLUENCIABILITY)**3. When making an important decision
I am usually influenced by**

a. friends	1	2	3	4	5
b. family members	1	2	3	4	5
c. teachers	1	2	3	4	5
d. newspapers, magazines, books	1	2	3	4	5
e. TV, radio, movies	1	2	3	4	5

PART VI (LOCUS-OF-CONTROL)

Answer the following questions by circling "1" for YES and "2" for NO.

	YES	NO
1. Do you believe that most problems will solve themselves if you just don't fool with them?	1	2
2. Are some kids just born lucky?	1	2
3. Do you feel that most of the time it doesn't pay to try hard because things never turn out right anyway?	1	2
4. Do you believe that wishing can make good things happen?	1	2
5. Most of the time do you find it hard to change a friend's (mind) opinion?	1	2
6. Do you feel that when you do something wrong there is very little you can do to make it right?	1	2
7. Do you believe that most kids are just born good at sports?	1	2
8. Are most of the other kids your age stronger than you are?	1	2
9. Do you feel that one of the best ways to handle most problems is just not to think about them?	1	2
10. Do you feel that you have a lot of choice in deciding who your friends are?	1	2
11. Do you often feel that whether you do your homework has much to do with what kinds of grades you get?	1	2
12. Do you feel that when a kid your age decides to hit you, there's little you can do to stop him or her?	1	2
13. Do you believe that whether or not people like you depends on how you act?	1	2
14. Have you felt that when people were mean to you it was usually for no reason at all?	1	2
15. Most of the time do you feel that you can change what might happen tomorrow by what you do today?	1	2
16. Do you believe that when bad things are going to happen they just are going to happen no matter what you try to do to stop them?	1	2

PART VII

1. Which of your parents do you live with? (circle one)

- 1 Mother and Father 2 Mother only
3 Father only 4 Neither

2. How far did your father go in school? (circle one)

- 1 High School or less 2 College
3 Graduate or Professional School 4 Not Sure

3. How far did your mother go in school? (circle one)

- 1 High School or less 2 College
3 Graduate or Professional School 4 Not Sure

4. How many *bedrooms* are in your house?

- 0 1 2 3 4 5 6 or more

5. How many cars does your family have?

- 0 1 2 3 or more

6. How often does your father drink alcohol?

- 1 Never
2 A few times a year
3 A few times a month
4 A few times a week
5 Everyday

7. How often does your mother drink alcohol?

- 1 Never
- 2 A few times a year
- 3 A few times a month
- 4 A few times a week
- 5 Every day

8. How many of your friends drink?

- 1 None
- 2 A few
- 3 Some
- 4 Most
- 5 All

9. How would your parents feel if they found out you drank alcohol?

- 1 Not angry at all
 - 2 Sort of angry
 - 3 Really angry
-

FACES III

David H. Olson, Joyce Portner, and Yoav Lavee

1 ALMOST NEVER	2 ONCE IN AWHILE	3 SOMETIMES	4 FREQUENTLY	5 ALMOST ALWAYS
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DESCRIBE YOUR FAMILY NOW:

- ___ 1. Family members ask each other for help.
- ___ 2. In solving problems, the children's suggestions are followed.
- ___ 3. We approve of each other's friends.
- ___ 4. Children have a say in their discipline.
- ___ 5. We like to do things with just our immediate family.
- ___ 6. Different persons act as leaders in our family.
- ___ 7. Family members feel closer to other family members than to people outside the family.
- ___ 8. Our family changes its way of handling tasks.
- ___ 9. Family members like to spend free time with each other.
- ___ 10. Parent(s) and children discuss punishment together.
- ___ 11. Family members feel very close to each other.
- ___ 12. The children make the decisions in our family.
- ___ 13. When our family gets together for activities, everybody is present.
- ___ 14. Rules change in our family.
- ___ 15. We can easily think of things to do together as a family.
- ___ 16. We shift household responsibilities from person to person.
- ___ 17. Family members consult other family members on their decisions.
- ___ 18. It is hard to identify the leader(s) in our family.
- ___ 19. Family togetherness is very important.
- ___ 20. It is hard to tell who does which household chores.



FAMILY SOCIAL SCIENCE, 290 McNeal Hall, University of Minnesota, St. Paul, MN 55108

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SELF-EFFICACY SCALE:

The following items ask you to describe your ability to handle drinking situations. Your answers will be kept secret, not even your teacher or parents will see them. You do not need to write your name on the paper. Please try to answer as honestly as you can.

1. My age is.....years.
2. I am (please circle one) Boy Girl
3. I am in theform at school.

The following pages contain a list of situations in which young people may find themselves drinking. Sometimes it is easier to resist drinking than at other times. In the column at the right, place the number from 1 to 6 using the scale below, to show how much you could resist drinking in each case.

1	2	3	4	5	6
I am very	I most	I probably	I probably	I most	I am very
sure I	likely	would	would	likely	sure I
would	would	drink	NOT drink	would	would
drink	drink			NOT drink	NOT
drink					

Example

HOW SURE ARE YOU THAT YOU COULD RESIST DRINKING ALCOHOL

When your best friend is drinking.....2

If you think that you would most likely drink too, then you would put number 2 in the right hand space.

1	2	3	4	5	6
I am very	I most	I probably	I probably	I most	I am very
sure I	likely	would	would	likely	sure I
would	would	drink	NOT drink	would	would
drink	drink			NOT drink	NOT drink

HOW SURE ARE YOU THAT YOU COULD RESIST DRINKING ALCOHOL

1. When you are at a friend's house, no adults at home..... _____
2. When you are playing video-games..... _____
3. When you are at the shopping centre with friends..... _____
4. When you are watching t.v..... _____
5. When you see others drinking..... _____

HOW SURE ARE YOU THAT YOU COULD RESIST DRINKING ALCOHOL

6. When you are uptight..... _____
7. When you are angry..... _____
8. When you are at a party..... _____
9. After school..... _____

HOW SURE ARE YOU THAT YOU COULD RESIST DRINKING ALCOHOL

10. When someone offers you a drink..... _____
11. When you want to look cool..... _____
12. When you want to feel more grown-up..... _____
13. When you are bored..... _____
14. When you want to look better..... _____
15. When you want to take a break from studying..... _____

1	2	3	4	5	6
I am very	I most	I probably	I probably	I most	I am very
sure I	likely	would	would	likely	sure I
would	would	drink	NOT drink	would	would
drink	drink			NOT drink	NOT drink

HOW SURE ARE YOU THAT YOU COULD RESIST DRINKING ALCOHOL

16. When you feel ashamed..... _____
17. When you are waiting to go into the movies..... _____
18. When you are waiting for someone..... _____
19. When you feel restless..... _____
20. When you feel frustrated..... _____

HOW SURE ARE YOU THAT YOU COULD RESIST DRINKING ALCOHOL

21. When you want to feel more accepted by friends..... _____
22. When you are worried..... _____
23. When you feel upset..... _____
24. When you feel down..... _____

HOW SURE ARE YOU THAT YOU COULD RESIST DRINKING ALCOHOL

25. When you feel nervous..... _____
26. When you are on the way home from school..... _____
27. When you feel sad..... _____
28. When your best friend is drinknig..... _____
29. When you are listening to rock music..... _____
30. When your friends are drinking..... _____
31. When you are by yourself..... _____
32. When your brother or sister is drinking..... _____

PLEASE CHECK ONE OF:

- I have never had an alcoholic drink
- I tried drinking alcohol but I gave up
- I drink alcohol sometimes but not every week
- I drink at least one alcoholic drink once a week
- I drink at least 6 alcoholic drinks every week

Do you think that you will a drinker by the time you finish high school?

-----YES

-----NO

APPENDIX 2: INTERNAL CONSISTENCY OF THE SCALES FOR THE PRESENT POPULATIONS:

SUBSTANCE USE SCALE:

ALPHA IF ITEM DELETED

RETROSPECTIVE USE INDEX:

US 1. Have you ever had a drink of alcohol	.7846
US 2. Have you had a drink of alcohol in the last year	.7548
US 3. Have you had a drink of alcohol in the last month	.7592
US 4. Have you had a drink of alcohol in the last week	.8343

CURRENT USE INDEX:

US 5. How often do you drink alcohol (never-everyday)	.7752
US 6. How much do you drink when you drink (one-drunk)	.7042
US 8. How often do you get drunk (never-everyday)	.7235

CURRENT USE INDEX AND INTENTION TO DRINK:

EFIC 33. Please check one (never-6dr.per week)	.7683
EFIC 34. Do you think that you will be a drinker before you finish high school(yes-no)	.8703

BEHAVIORAL INDEX:

Have any of these things happened to you while you were drinking or being drunk?

a. gotten into trouble at home (Yes-No)	.9480
b. gotten into a fight (Yes-No)	.9399
c. had an accident or injury (Yes-No)	.9446
d. gotten into trouble at school (Yes-No)	.9385
e. gotten into trouble with the police (Yes-No)	.9392

SIGNIFICANT OTHER'S INDEX:

	ALPHA IF ITEM DELETED
How often does your father drink alcohol? (never-everyday)	.5964
How often does your mother drink alcohol? (never-everyday)	.4976
How many of your friends drink alcohol? (none-all)	.6516
How would your parents feel if they found out you drank alcohol? (not angry at all- sort of angry- really angry)	.5395

SUBSTANCE ATTITUDES SCALE:

	ALPHA IF ITEM DELETED
ATT1. Children who drink alcohol are tough	.7990
ATT2. Drinking alcohol lets you have more fun	.7937
ATT3. Children who drink alcohol have more friends	.7369
ATT5. If a girl drinks alcohol boys will like her more	.7378
ATT6. If a boy drinks alcohol girls will like him more	.7368
ATT9. Children who drink are more grown-up	.7720

ACTUAL ASSERTIVENESS SCALE:

	ALPHA IF ITEM DELETED
1. Say "no" when someone gets you to smoke	.5869
2. Say "no" when someone gets you to drink	.6162
3. Complain when someone gets ahead of you in line	.6480
4. Complain when someone gives you less change	.6196
5. Say "no" when someone wants to copy your homework	.6719
6. Stop someone who is annoying you in a public situation	.6290

SITUATIONAL ASSERTIVENESS

	ALPHA IF ITEM DELETED
1. Express an opinion even when you know that other may disagree	.5853
2. Point out unfairness	.6174
3. Ask for directions	.5586
4. Ask the teacher to explain something you don't understand	.6717

SELF-ESTEEM SCALE:

I generally feel that I am	ALPHA IF ITEM DELETED
SELF1. smart	.7020
SELF2. good-looking	.6553
SELF3. likeable	.6684
SELF4. good at sports	.6849
SELF5. satisfied with myself	.6678
SELF6. popular	.6629
SELF8. truthful or honest	.7189

SOCIAL ANXIETY:

	ALPHA IF ITEM DELETED
I generally feel comfortable:	
SELF24. Introducing myself to someone of the opposite sex	.7472
SELF25. making small talk with someone I just met	.7476
SELF26. giving compliments	.7676
SELF27. receiving compliments	.7587
SELF28. expressing my feelings	.7637
SELF29. asking someone out for a date	.7654
SELF30. starting conversation with a stranger	.7717

GENERAL INFLUENCIABILITY SCALE:

	ALPHA IF ITEM DELETED
When I am making an important decision I am influenced by	
SELF31. friends	.7127
SELF32. family members	.7426
SELF33. teachers	.6390
SELF34. the press	.6380
SELF35. tv.,radio, movies	.6550

LOCUS-OF-CONTROL SCALE:

	ALPHA IF ITEM DELETED
LOC2. Most problems solve themselves	.6019
LOC3. Are some children just born lucky	.5845
LOC6. No need to try, since things never turn right	.5782
LOC8. Wishing can make things happen	.5803
LOC9. Find it hard to change a friend' mind	.5778
LOC11. When you do wrong you can't change it	.5474
LOC12. Most children are good at sports	.5978
LOC13. Most children your age are stronger than you	.5769
LOC14. The best way to handle problems is not to think about them	.5756
LOC15. Choice in friends	.5835
LOC17. Effort in homework affects grades	.5965
LOC18. You can't stop a child your age from hitting you	.5687
LOC21. People are mean to you for no reason	.5840
LOC22. Change tommorrow by today	.6062
LOC23. You can't stop bad things from happening	.5629

SUBSTANCE KNOWLEDGE SCALE

	ALPHA IF ITEM DELETED
KN1. Switching drinks makes you drunker	.6954
KN2. Alcohol makes you feel high	.7029
KN3. Beer and wine contain the same amount of alcohol	.6864
KN4. Alcohol is the most widely abused drug	.6959
KN5. A pregnant woman's drinking can affect the health of the baby	.6889
KN6. Alcohol is the cause of the majority of accidents	.6934
KN7. More nervous after drinking	.6889
KN8. Drinking helps most people to sleep better	.6998
KN9. People who drink the same amount of alcohol will act the same	.6972

RESISTANCE TO OPPORTUNITY TO DRINK (SELF-EFFICACY)

	ALPHA IF ITEM DELETED
EFIC 2. When you are playing video-games	.9266
EFIC 3. When you are at the shopping center	.9264
EFIC 4. When you are watching t.v.	.9220
EFIC 9. After school	.9408
EFIC 15. When you take a break from studying	.9267
EFIC 17. When you are waiting to get into the movies	.9232
EFIC 18. When you are waiting someone	.9261
EFIC 26. On the way home	.9320
Efic 29. When you are listening to rock music	.9316
EFIC 31. When you are by yourself	.9287

RESISTING FRIENDS' PRESSURE TO DRINK (SELF-EFFICACY)

ALPHA IF ITEM DELETED

EFIC 1. When you are at a friend's house	.9290
EFIC 5. When you see others drinking	.9274
EFIC 8. When you are at a party	.9666
EFIC 10. When someone offers you a drink	.9288
EFIC 21. When you want to feel accepted by friends	.9342
EFIC 28. When your best friend drinks	.9255
EFIC 30. When your friends drink	.9307
EFIC 32. When your brother or sister drinks	.9371

RESISTING EMOTIONAL STRESS TO DRINK (SELF-EFFICACY)

ALPHA IF ITEM DELETED

EFIC 6. When you are uptight	.9316
EFIC 7. When you are angry	.9475
EFIC 11. When you want to look cool	.9346
EFIC 12. When you want to feel grown-up	.9371
EFIC 13. When you are being bored	.9321
EFIC 14. When you want to look better	.9427
EFIC 16. When you feel ashamed	.9444
EFIC 19. When you are feeling restless	.9469
EFIC 20. When you feel frustrated	.9470
EFIC 22. When you are being worried	.9432
EFIC 23. When you feel upset	.9426
EFIC 24. When you feel down	.9416
EFIC 25. When you feel nervous	.9453
EFIC 27. When you are feeling sad	.9444

FAMILY COHESION SUBSCALE (FACES III SCALE)

	ALPHA IF ITEM DELETED
F 1. Ask each other for help	.8442
F 3. Approve each other's friends	.8248
F 5. Doing things together	.8114
F 7. Share feelings	.8258
F 9. Enjoying free time together	.8123
F 11. Feeling close to each other	.7952
F 13. Being all present in family activities	.8141
F 15. Doing things together	.7991
F 17. Consult each other in decision making	.8229
F 19. Togetherness is very important	.8031

FAMILY ADAPTABILITY SUBSCALE (FACES III-SCALE)

	ALPHA IF ITEM DELETED
F 2. Children have a saying in problem solving	.7226
F 4. Children have a saying in discipline	.7059
F 6. Different leaders in the family	.7409
F 8. Changeability	.7243
F 10. We discuss punishment together	.7171
F 12. Children act as decision makers	.7123
F 14. Rules change in the family	.7042
F 16. Shift of household responsibilities	.7098
F 18. Difficult to tell who is the leader	.7128
F 20. Hard to distribute household chores	.7233

SCALES FOR THE PRESENT POPULATIONS:SUBSTANCE USE SCALE:

FACTOR LOADINGS

RETROSPECTIVE USE INDEX:

US 1. Have you ever had a drink of alcohol	.83669
US 2. Have you had a drink of alcohol in the last year	.87754
US 3. Have you had a drink of alcohol in the last month	.84298
US 4. Have you had a drink of alcohol in the last week	.70230

CURRENT USE INDEX:

US 5. How often do you drink alcohol (never-everyday)	.89870
US 6. How much do you drink when you drink(one-drunk)	.92636
US 7. If you drink what do you usually drink? (beer-hard)	.73693
US 8. How often do you get drunk?(never-everyday)	.93643

CURRENT USE AND INTENTION TO DRINK INDEX:

EFIC 33. Please check one (never-6dr.a week)	.67015
EFIC 34. Do you think that you will be a drinker by the time you finish high school? (yes-no).	.78299

BEHAVIORAL INDEX:

Have any of these things happened to you while you were drinking or being drunk?

a. gotten into trouble at home	.89621
b. gotten into a fight	.92731
c. had an accident or injury	.90907
d. gotten into trouble at school	.94051
e. gotten into trouble with the police	.92931

SIGNIFICANT OTHER'S INDEX:

How often does your father drink alcohol? (never-everyday)	.68751
How often does your mother drink alcohol? (never-everyday)	.78974
How many of your friends drink alcohol? (none-all)	.60124
How would your parents feel if they found out you drank alcohol? (not angry at all- sort of angry-really angry)	.5395

SUBSTANCE ATTITUDES SCALE:

1. If children drink alcohol , it proves they are tough	.81717
2. Drinking alcohol lets you have more fun	.80576
3. Children who drink alcohol have more friends	.79411
4. If a girl drinks alcohol boys will like her more	.67364
5. If a boy drinks alcohol girls will like him more	.60657
6. Children who drink are more grown-up	.52131

ACTUAL ASSERTIVENESS SCALE:

	FACTOR LOADINGS
1. Say "no" when someone gets you to smoke	.73438
2. Say "no" when someone gets you to drink	.79599
3. Complain when someone gets ahead of you in line	.76466
4. Complain when someone gives you less change	.54996
5. Say "no" when someone wants to copy your homework	.50482
6. Stop someone who is annoying you in a public situation	.55440

SITUATIONAL ASSERTIVENESS

1. Express an opinion even when you know that other may disagree	.70341
2. Point out unfairness	.66266
3. Ask for directions	.77800
4. Ask the teacher to explain something you don't understand	.57901

SELF-ESTEEM SCALE:

I generally feel that I am	FACTOR LOADINGS
SELF1. smart	.63198
SELF2. good-looking	.64943
SELF3. likeable	.71962
SELF4. good at sports	.54750
SELF5. satisfied with myself	.76368
SELF6. popular	.58188
SELF8. truthful or honest	.61069

SOCIAL ANXIETY:

I generally feel comfortable:	FACTOR LOADINGS
SELF24. Introducing myself to someone of the opposite sex	.68502
SELF25. making small talk with someone I just met	.67111
SELF26. giving compliments	.73934
SELF27. receiving compliments	.54773
SELF28. expressing my feelings	.61284
SELF29. asking someone out for a date	.56220
SELF30. starting conversation with a stranger	.74830

GENERAL INFLUENCIABILITY SCALE:

FACTOR LOADINGS

When I am making an important decision I am influenced by

SELF31. friends	.76628
SELF32. family members	.78392
SELF33. teachers	.65164
SELF34. the press	.90604
SELF35. tv.,radio, movies	.89904

LOCUS-OF-CONTROL SCALE:

FACTOR LOADINGS

LOC2. Most problems solve themselves	.31393
LOC3. Are some children just born lucky	.31250
LOC6. No need to try, since things never turn right	.40082
LOC8. Wishing can make things happen	.35386
LOC9. Find it hard to change a friend' mind	.37367
LOC11. When you do wrong you can't change it	.63447
LOC12. Most children are good at sports	.31024
LOC13. Most children your age are stronger than you	.49667
LOC14. The best way to handle problems is not to think about them	.46576
LOC15. Choice in friends	.42262
LOC17. Effort in homework affects grades	.33194
LOC18. You can't stop a child your age from hitting you	.57573
LOC21. People are mean to you for no reason	.42450
LOC22. Change tommorrow by today	.34899
LOC23. You can't stop bad things from happening	.53816

SUBSTANCE KNOWLEDGE SCALE

	ALPHA IF ITEM DELETED
KN1. Switching drinks makes you drunker	.77294
KN2. Alcohol makes you feel high	.62685
KN3. Beer and wine contain the same amount of alcohol	.57693
KN4. Alcohol is the most widely abused drug	.73895
KN5. A pregnant woman's drinking can affect the health of the baby	.73992
KN6. Alcohol is the cause of the majority of accidents	.53575
KN7. More nervous after drinking	.57837
KN8. Drinking helps most people to sleep better	.57177
KN9. People who drink the same amount of alcohol will act the same	.53280

RESISTANCE TO OPPORTUNITY TO DRINK (SELF-EFFICACY)

	FACTOR LOADINGS
EFIC 2. When you are playing video-games	.69428
EFIC 3. When you are at the shopping center	.70789
EFIC 4. When you are watching t.v.	.50957
EFIC 9. After school	.70180
EFIC 15. When you take a break from studying	.59864
EFIC 17. When you are waiting to get into the movies	.68846
EFIC 18. When you are waiting someone	.68117
EFIC 26. On the way home	.81152
Efic 29. When you are listening to rock music	.55395
EFIC 31. When you are by yourself	.56550

RESISTING FRIENDS' PRESSURE TO DRINK (SELF-EFFICACY)

	FACTOR LOADINGS
EFIC 1. When you are at a friend's house	.75936
EFIC 5. When you see others drinking	.74235
EFIC 8. When you are at a party	.81548
EFIC 10. When someone offers you a drink	.78722
EFIC 21. When you want to feel accepted by friends	.65578
EFIC 28. When your best friend drinks	.81305
EFIC 30. When your friends drink	.83054
EFIC 32. When your brother or sister drinks	.50859

RESISTING EMOTIONAL STRESS TO DRINK (SELF-EFFICACY)

	ALPHA IF ITEM DELETED
EFIC 6. When you are uptight	.53250
EFIC 7. When you are angry	.64663
EFIC 11. When you want to look cool	.68882
EFIC 12. When you want to feel grown-up	.70310
EFIC 13. When you are being bored	.50341
EFIC 14. When you want to look better	.73281
EFIC 16. When you feel ashamed	.62953
EFIC 19. When you are feeling restless	.64710
EFIC 20. When you feel frustrated	.59555
EFIC 22. When you are being worried	.74929
EFIC 23. When you feel upset	.79661
EFIC 24. When you feel down	.79768
EFIC 25. When you feel nervous	.66233
EFIC 27. When you are feeling sad	.72198

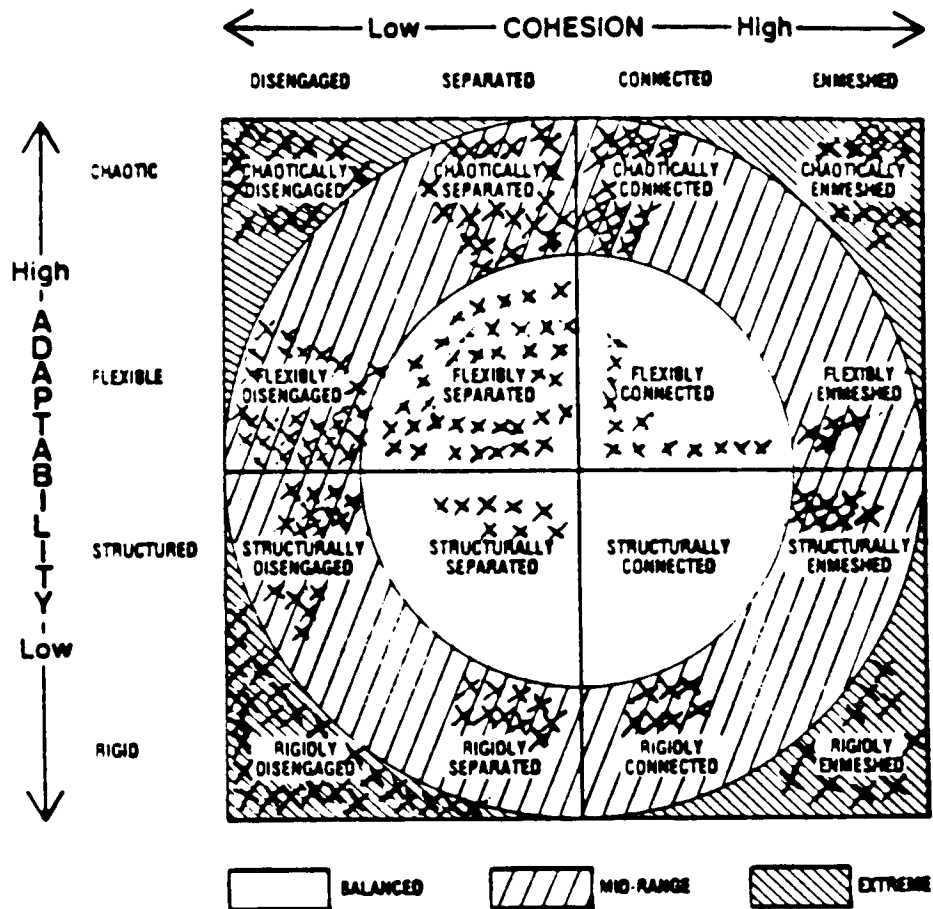
FAMILY COHESION SUBSCALE (FACES III SCALE)

	FACTOR LOADINGS
F 1. Ask each other for help	.56711
F 3. Approve each other's friends	.48520
F 5. Doing things together	.63710
F 7. Share feelings	.52178
F 9. Enjoying free time together	.64303
F 11. Feeling close to each other	.78929
F 13. Being all present in family activities	.62069
F 15. Doing things together	.75004
F 17. Consult each other in decision making	.52766
F 19. Togetherness is very important	.72074

FAMILY ADAPTABILITY SUBSCALE (FACES III-SCALE)

	FACTOR LOADINGS
F 2. Children have a saying in problem solving	.50563
F 4. Children have a saying in discipline	.63135
F 6. Different leaders in the family	.46168
F 8. Changeability	.49660
F 10. We discuss punishment together	.54807
F 12. Children act as decision makers	.58321
F 14. Rules change in the family	.63938
F 16. Shift of household responsibilities	.58603
F 18. Difficult to tell who is the leader	.58086
F 20. Hard to distribute household chores	.52681

FIGURE 1: CIRCUMPLEX MODEL: SIXTEEN TYPES OF MARITAL AND FAMILY SYSTEMS



APPENDIX 3: RESULTS

Table 1: Drinking patterns in adolescence:

	ABSTAINERS	OCCASIONAL	DRINKERS	TOTAL
BOYS	35	50	39	124
GIRLS	29	46	39	114
TOTAL	64	96	78	238

chi-square = 0.4348, 2 df, $p < .8046$

Table 2: Gender differences in relation to preference for certain types of alcoholic drinks:

	WINE & BEER	HARD	TOTAL
BOYS	66	30	96
GIRLS	43	46	89
TOTAL	109	76	174

chi-square = 9.4, 2 df, $p < .02$

Table 3: Parent's feelings towards their offspring drinking as perceived and reported by boys by drinking group membership.

	ABSTAINERS	OCCASIONAL	DRINKERS	TOTAL
REALLY MAD	26	9	6	41
SORT OF MAD	5	11	9	25
NOT AT ALL	4	30	24	58
TOTAL	35	50	39	124

chi-square = 47.64332, 4 df, $p < .00001$

Table 4: Parent's feelings towards their offspring drinking as perceived and reported by girls by drinking group membership.

	ABSTAINERS	OCCASIONAL	DRINKERS	TOTAL
REALLY MAD	19	5	4	28
SORT OF MAD	6	15	18	39
NOT AT ALL	3	26	18	47
TOTAL	28	46	40	114

chi-square = 42.44331, 4 df, $p < .00001$

Table 5: Drinking group scores in Knowledge Scale:

DRINKING GROUPS	MEAN	S.D.
ABSTAINER	12.5313	3.2561
OCCASIONAL	12.7813	2.0734
DRINKER	13.0256	2.5886

BARTLETT - F BOX = 7.891, P = .0001
 BETWEEN = 8.6193
 WITHIN = 1592.2925
 F-RATIO = .6360, P = .53
 SCHEFFE = NOT SIGNIFICANT
 GENDER X KNOWLEDGE F= .063, P = .802

Table 6: Drinking group scores in General Influence Scale:

DRINKING GROUP	MEAN	S.D.
ABSTAINERS	15.8750	4.3370
OCCASIONAL	15.8511	3.7872
DRINKERS	16.3766	3.9968

BARTLETT - F BOX = .697, P = .498
 BETWEEN = 13.7987
 WITHIN = 3732.9928
 F-RATIO = .4288, P = .6518
 SCHEFFE = NOT SIGNIFICANT
 GENDER X GENERAL INFLUENCE F = 5.634, P = .109 (GIRLS = 15.42, BOYS = 16.64)

Table 7: Drinking group scores in Self-Esteem Scale:

DRINKING GROUP	MEAN	S.D.
ABSTAINERS	18.0645	4.4826
OCCASIONAL	17.4167	4.1818
DRINKERS	17.2821	4.0062

BARTLETT F-BOX = .436, P = .647
 BETWEEN = 23.07061
 WITHIN = 4122.8701
 F-RATIO = .6699, P = .5128
 SCHEFFE = NOT SIGNIFICANT
 GENDER X SELF-ESTEEM F= 9.747, P = .322 (GIRLS = 18.41, BOYS = 16.74).

Table 8: Drinking group scores in Situational Assertiveness Scale:

DRINKING GROUP	MEAN	S.D.
ABSTAINERS	9.1148	3.0501
OCCASIONAL	8.4479	2.9411
DRINKERS	8.6538	3.0316

BARTLETT - F BOX = .062, P = .940

BETWEEN = 16.7333

WITHIN = 2087.5902

F-RATIO = .9289, P = .3961

SCHEFFE = NOT SIGNIFICANT

GENDER X SITUATIONAL ASSERTIVENESS F = .555, P = .457

Table 9: PEARSON CORRELATION COEFFICIENTS FOR RETROSPECTIVE DRINKING

	RETROSPECTIVE DRINKING
CURRENT DRINKING	.8039, P = .0001
GETTING IN TROUBLE	.5362, P = .0001
GETTING DRUNK	.6964, P = .0001
INTENTION TO DRINK	-.1875, P = .002
PERCEIVED PARENTAL APPROVAL	.5153, P = .0001
PERCEIVED FRIENDS DRINKING	.5119, P = .0001
ABILITY TO RESIST FRIENDS' PRESSURE	-.6090, P = .0001
PERCEIVED PARENTAL DRINKING	.4538, P = .0001
SOCIOECONOMIC STATUS	.1352, P = .019
ATTITUDES	.1838, P = .002
FACTUAL KNOWLEDGE	.0369, P = .286
ASSERTIVENESS	-.0625, P = .170
SELF-ESTEEM	-.0625, P = .169
GENERAL INFLUENCE	.0263, P = .344
SOCIAL ANXIETY	-.2254, P = .0001
LOCUS-OF-CONTROL	-.1592, P = .008
ABILITY TO RESIST EMOTIONAL PRESSURE	-.4414, P = .0001
ABILITY TO RESIST OPPORTUNITY	-.4481, P = .0001
FAMILY COHESION/ADAPTABILITY	.1353, P = .041
DISCREPANCY EMOTIONAL SUPPORT	-.0217, P = .391
DISCREPANCY PRACTICAL SUPPORT	-.0033, P = .483

Table 10: PEARSON CORRELATION COEFFICIENTS FOR CURRENT DRINKING

	CURRENT DRINKING
GETTING IN TROUBLE	.5786, P = .0001
GETTING DRUNK	.7744, P = .0001
INTENTION TO DRINK	-.2178, P = .0001
PERCEIVED PARENTAL APPROVAL	.4761, P = .0001
PERCEIVED FRIEND'S DRINKING	.5280, P = .0001
RESISTING FRIEND'S PRESSURE	-.5708, P = .0001
PERCEIVED PARENTAL DRINKING	.3796, P = .0001
SOCIOECONOMIC STATUS	.1372, P = .017
ATTITUDES	.2239, P = .0001
FACTUAL KNOWLEDGE	.0734, P = .130
ASSERTIVENESS	-.0533, P = .208
SELF-ESTEEM	-.0694, P = .144
GENERAL INFLUENCE	.0505, P = .220
SOCIAL ANXIETY	-.2558, P = .0001
LOCUS-OF-CONTROL	-.1541, P = .009
ABILITY TO RESIST EMOTIONAL PRESSURE	-.3630, P = .0001
ABILITY TO RESIST OPPORTUNITY	-.3623, P = .0001
FAMILY COHESION/ADAPTABILITY	.1976, P = .005
DISCREPANCY EMOTIONAL SUPPORT	-.0136, P = .431
DISCREPANCY PRACTICAL SUPPORT	-.0294, P = .354

SIGNIFICANT PEARSON CORRELATION COEFFICIENTS FOR OTHER VARIABLE PAIRS

	Getting into Trouble
Getting drunk	.5867, p = .0001
Perceived parental drinking	.3780, p = .0001
Perceived friends' drinking	.3562, p = .0001
Ability to resist friends' pressure	-.4666, p = .0001
Perceived parental drinking	.2230, p = .2230
Socioeconomic status	.2456, p = .0001
Attitudes	.2223, p = .0001
Social Anxiety	-.2128, p = .001
Ability to Resist Emotional Pressure	-.2493, p = .0001
Ability to Resist Opportunity	-.3686, p = .0001
	Getting Drunk
Perceived parental drinking	.3976, p = .0001
Ability to resist friends' pressure	-.6171, p = .0001
Perceived friends' drinking	.5517, p = .0001
Perceived parental drinking	.3465, p = .0001
Attitudes	.3682, p = .0001
	Attitudes
Social Anxiety	-.2194, p = .0001
Locus-of-control	.2244, p = .0001
Ability to resist emotional pressure	-.3220, p = .0001
Ability to resist opportunity	-.3393, p = .0001
Ability to resist friends' pressure	-.3339, p = .0001
Perceived friends' drinking	.2173, p = .0001
	Assertiveness
Social Anxiety	.2116, p = .001
Locus-of-control	.1984, p = .001
Discrepancy emotional support	.2336, p = .001
	Social Anxiety
Self-esteem	.5507, p = .0001
Ability to resist emotional pressure	.2473, p = .0001
Ability to resist opportunity	.2872, p = .0001

