REPORT ON

SUBSTANCE USE AMONG ADOLESCENTS

IN THE WESTERN HEALTH BOARD AREA

a study commissioned and funded by
the Western Health Board

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September 1995

ACKNOWLEDGEMENTS

I wish to thank the following without whose help this report could not have been completed.

Dr. Anthony Carroll, Clinical Director of St.Anne`s Centre, Galway

Dr. Leslie Daly, Lecturer in Epidemiology and Statistics, UCD

Dr. Mark Morgan, Lecturer in Education and Psychology, St.Patrick`s College, Dublin.

Maurice Keogh, Computer Programmer

Professor Cecily Kelleher, Professor of Health Promotion, UCG.

Saoirse Nic Gabhainn, Researcher and Statistician, Department of Health Promotion, UCG.

Mary Fitzpatrick, HQ Public Health Nurse, Community Care, Galway

Niamh Rice, National School Teacher, Castlebar

Jim Mansfield, Child Care Unit, WHB

John Canavan, Researcher, Department of Sociology, UCG

Neil Johnson, Croi, Galway

Liam Moroney, Roscommon Regional Youth Service

Dr. Emer Mac Hale, Community Care, Shantalla, Galway

Dr. Jerry Fogarty, Community Care, Shantalla, Galway

Alex Maclean, Community Care, Shantalla, Galway

Maura Mc Inerney, VEC, Galway

Pat Dolan and the Neighbourhood Youth Project, Westside, Galway

Dennis Barrett, Ballybane Youth Development Project, Galway

Paddy Daly, Hillside Youth at Risk Programme, Galway

Joe Traynor, Narcotics Anonymous, Galway

Galway Drug Squad

Gardai in Galway, Mayo and Roscommon

Probation Officers in Galway, Mayo and Roscommon

Juvenile Liaison Officers in Galway, Mayo and Roscommon

Social Workers in Galway, Mayo and Roscommon

Addiction Counsellors in Galway, Mayo and Roscommon

Consultant Psychiatrists in Galway, Mayo and Roscommon

General Practitioners in Galway, Mayo and Roscommon

General Practice Unit, Merlin Park, Galway

Irish College of General Practitioners

Department of Education, Statistics Section

Bohermore Community Project, Galway

Ballinfoyle Community Project, Galway

Le Cheile Community Project, Westside, Galway

Bethany Community Project, Rahoon, Galway

Youth Links 90`s Project, Shantalla, Galway
Hillside Community Project, Galway
Knocknacarra Youth Committee, Galway
Galway Diocesan Youth Service
Galway Youth Federation
Killala Diocesan Youth Service, Ballina, Mayo
Foroige
FAS
VEC

I would like to acknowledge with deep appreciation the Toxicology Department of Beaumont Hospital who carried out the toxicology screening for the pilot study without charge.

A special word of thanks goes to all the principals in the schools, and the youth workers in the training centres who kindly facilitated me in conducting the surveys and of course to the people who participated in the surveys.

Many people gave of their time during the production of this report. If I have forgotten to mention anyone, please accept my apologies and gratitude.

I would also like to single out the two former Community Care, Programme Managers with the WHB, Mr. Michael Bruton and Mr. John O`Sullivan for their help and encouragement in the preparatation and undertaking of this report.

A special acknowledgement goes to my husband Iarla Duffy, who assisted and supported me in this research from beginning to end.

In conlusion, I would like to thank the Western Health Board for the opportunity to undertake this report on their behalf, and for the funding which made the report possible.

PREFACE

The issue of drugs and young people has been increasingly prominent in the mass-media both nationally and internationally since the mid-1980`s. In the past few years there have been many reports in the local mass media in the west of Ireland regarding drug use and young people. Unfortunately many of the press stories are of a sensational nature which run the risk of glamorising drug use to the young and increasing myths and misconceptions about drug use and its consequences. This subsequently leads to increasing public and parental anxiety. One report commissioned by the Western Health Board in 1993, on a community found that one of the main worries expressed by parents regarding parenting were particular concerns in relation to alcohol and drug abuse among children (Smyth and Keenaghan, 1993). People in the Western Health Board area are therefore anxious to find out accurate information about drugs and their consequences for their children.

Another report in 1993, which also paved the way for initiating this research was prepared in accordance with Section 8 of the Child Care Act, 1991. This examined the responsibilities of the Board under the new Act, and recommmended that the extent of drug misuse in the Board`s area particularly in Galway City should be researched. The groundwork for this research was therefore laid.

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Chapter 1. INTRODUCTION

1.1 *Background information / Demography*

The Western Health Board consists of counties Galway, Mayo and Roscommon. It is quite an extensive area, for example the distance between Belmullet in the north-west of the area and Portumna in the south-east is 137 miles, 2 miles more than the distance between Galway City and Dublin. It consists of a mixed urban-rural population. The largest urban area is Galway City, which is on the western seaboard and in 1991 had a population of 50,853 (Central Statistics Office, 1993). Parts of the Western Health Board area contain some of the most sparsely populated areas in the European Union. The total population of the area was just over 340,000 in 1991, a decline on the 1986 census data of 1.6%. However this decline in the population is very uneven, with a 7.4% increase in Galway City, and a 1.5%, 4.0% and 4.1% decrease respectively in Galway county (excluding Galway city), Mayo and Roscommon. It can be seen therefore that the Western Health Board apart from Galway city is being depopulated. Galway city is the main industrial area. Outside of the city the commonest forms of employment are farming, fishing and tourism.

The number of second-level school going age children (12 - 17 years) in the Western Health Board was approximately 40,600 in 1991 (Central Statistics Office, 1993). The Department of Education statistics for the population of second-level students for 1994/1995 is 35,553.

1.2 *Importance of smoking, drinking and drug use as areas for research.*

The recent Government strategy for effective healthcare in the 1990`s identified smoking and alcohol misuse as two of the key priority areas which need to be tackled if the health of our country is to improve and our life expectancy is to increase. Smoking related disease causes over 6,000 deaths in Ireland every year and remains our chief cause of premature death. Ireland also continues to have a serious problem with alcohol misuse with nearly 25% of admissions to psychiatric hospitals being related to alcohol. Alcohol also remains a key factor in road traffic accidents. It was also noted that the degree of alcohol misuse among young people is causing growing concern (the Department of Health, 1994). The most recent study of substance use among Dublin adolescents has found a markedly increased prevalence of alcohol use over recent years in this young population (Morgan and Grube, 1994).

Although the threat posed to the public health by legal drugs such as tobacco and alcohol is currently much greater than by illicit drugs (Plant, 1989 and Jacobsen, Smith and Whitehead, 1991), the evidence suggests that use of potentially hazardous illicit drugs is increasing. While cannabis is considered a relatively innocous drug, it is associated like tobacco with cancer and respiratory problems with prolonged use. Also in this age group the effect on cannabis on short-term memory and learning can cause problems with education and impair future employment opportunities (Corrigan, 1991). Use of volatile substances or solvents is associated with sudden death, approximately two to three deaths per annum in Ireland (personal

communication with the Poisons Information Centre in Beaumont Hospital, 1995), as is use of "recreational" drugs like ecstasy.

1.3 ***Reasons for doing a scientifically based study.***

A common place weakness is the over reliance on anecdotal evidence which is frequently used instead of statistical evidence. While such anecdotal evidence is important and can give information which is not available by statistical surveys, it is neither valid nor reliable. The importance of establishing a valid statistical baseline for knowledge regarding various aspects of substance use cannot be over-stressed. Clear and detailed knowledge of this area is crucial area for establishing changes in the trends, the patterns and the factors influencing substance use. Without such data it is virtually impossible to design and evaluate effective prevention measures (Swadi, 1988).

1.4 ***Current knowledge***

Official national data on substance use can be obtained from a variety of sources, such as the annual reports of the Customs Services, the Gardai Siochana, the psychiatric hospitals and centres of treatment for drug misuse in Dublin.

Official Data

Nationally 3,833 persons were charged with drug offences in 1993, this included 39 persons in Galway West, 18 persons in Mayo and 9 persons in Roscommon / Galway East (Garda Siochana, 1994).

Admissions to Psychiatric Hospitals : The admission rate for Drug Dependence nationally was 9.3 / 100, 000 in 1992. The rate for the Western Health Board was 10.6 / 100,000, the second highest level after the Eastern Health Board, with 37 persons admitted with a diagnosis of drug dependence, who were mainly benzodiazepine dependents. Nationally 1 person under 15 years old was admitted with drug dependence as were 24 persons between the ages of 15 and 19 years (Moran and Walsh, 1994).

Unofficial data

The registers of drug addicts notified to the Director of Community Care in each area are unfortunately incomplete, but a review of these registers for 1994 shows that 28 drug addicts were notified to the Director of Community Care in Galway and 22 were notified in Mayo. No register is kept in Roscommon.

I was also granted access to the Accident and Emergency Department records of three out of the four major hospitals in the Health Board area. Over a one year period between August 1993 to July 1994 in University College Hospital Galway 13 adolescents aged between 14 to 17 years (9 boys and 4 girls) were attended to due to overdose of alcohol. One 17 year old boy was seen due to inhalation of tippex. In Mayo General

Hospital 5 adolescents aged 14 to 17 years (4 boys and 1 girl) attended for alcohol overdose. There was no record of any drug related attendence. In Roscommon, there was no record of any adolescents attending due to alcohol or drug problems.

In Galway City an increase in arrests for drug possession and in numberss of drug seizures has occured in recent years. The general impression in Galway City is that cannabis is the main illicit drug available, with some LSD, amphetamines and increasing amounts of ecstasy available. Cocaine is considered outside the price range of adolescents and heroin is not known to be available in Galway City, apart from some personal supplies, which are obtained outside the area. Outside of Galway City, cannabis appears to be the only readily available drug, with LSD, amphetamines and ecstasy being irregularly available.

All interviewed agreed that alcohol was the single most important drug of abuse which appears to be readily available to minors, followed by use of cannabis and solvents. The overall impression is that adolescents in Galway City have higher rates of drug use than other adolescents in the Western Health Board area.

General Practitioner Survey: In the general practitioner survey, a response rate of 68% was obtained with 129 of the 189 general practitioners in the Health Board replying to the postal survey. Over a one year period in the Western Health Board, 239 adolescents were reported to have been treated for alcohol abuse, and 44 adolescents for drug use. The drugs used included cannabis -17 cases, solvents - 17 cases, ecstasy -10 cases, prescribed medication - 7 cases, LSD - 3 cases, and amphetamines, cocaine and opiates, one case each.

1.5 ***Deciding the type of research to do.***

This research was commissioned specifically to look at substance use among adolescents in the Western Health Board. The easiest way to achieve maximum coverage of adolescents with the most efficient use of resources is to do a school-based survey.

However, school dropout is an accepted risk factor for increased substance use (Pirie, Murray and Luepker, 1988, Grube and Morgan, 1990a and Glynn, 1993). O`Hare and O`Brien (1992) concluded in their report that surveys of "travellers" and early school drop outs are necessary to get information on the "true" prevalence of drug taking. Recent research in the Western Health Board has identified certain localities where there are high levels of early school leaving, that is on or before 15 years of age, in both Galway City (Canavan, 1993 and Rowland, 1994) and in Connemara (Byrne, 1991). The outcome for these two populations, urban and rural, may be different, as many rural children leave school to start work farming or fishing, whereas unemployment may be likely for urban early school leavers. I felt it would be important to try to survey early school leavers from each section of the Health Board area, and for this reason I decided on a school-based survey in combination with a survey of early school leavers, including both travellers and settled adolescents. This survey should provide the most comprehensive information possible.

Based on the results, it should then be possible to make recommendations to the Western Health Board on methods to help curtail substance use among the Board`s area.

1.6 *Aims and Objectives*

1 (a). To determine the prevalence of cigarette, alcohol, and illicit drug use (including solvent abuse) among adolescents of second-level school going age, that is approximately 12 - 18 years of age in the Western Health Board.

1 (b). To compare the prevalence of substance use between the school attending population of adolescents and those adolescents both settled and travellers, who have left school early.

2. To ascertain the attitudes and beliefs regarding alcohol and illicit drug use among these groups of young people, and to describe the socio- demographic and other risk factors which may contribute to substance use among adolescents in this region.

3. To provide background information and material necessary to help develop substance use intervention strategies appropriate to this age group in the Western Health Board.

Chapter 2 SUMMARY

2.1 ***Introduction***

This report on substance use by adolescents in the Western Health Board was commissioned because of recent accounts of increasing drug use in the west of Ireland, particularly in Galway City. The Health Board wished to get accurate estimates of the extent of substance use among the adolescents in its area, and to have recommendations made, based on the results of the report on measures to prevent substance use by adolescents.

2.2 ***Background Information***

Anecdotal evidence suggested that Galway City has a regular supply of cannabis, with LSD, amphetamines, increasing amounts of ecstasy and cocaine also available. Heroin is not known to be supplied but addicts obtain their supply outside the area. Tranquillisers and pain killers are also felt to be abused by some. Cannabis is the main illicit drug available. Outside of Galway City, cannabis is reported to be the only drug with a steady supply, eratic supplies of LSD, amphetamines and ecstasy are reported throughout the Health Board area. Galway City therefore appeared to have the greatest reported illicit drug supply in the Western Health Board area. This evidence was supported by the fact that there has been an increase in arrests for drug possession and drug seizures in Galway City in recent years.

Concentrating on adolescents, alcohol was reported to be the single most important drug available to adolescents in the Western Health Board area, followed by use of cannabis and solvents. In three out of the four major hospitals in the Health Board, over a one year period, 18 teenagers aged between 14 and 17 years (13 boys and 5 girls) were treated in the Accident / Emergency Departments for alcohol overdose, and one boy was treated for inhlation of Tippex. General practitioners in the Western Health Board, over a one year period treated 239 adolescents for alcohol problems, and 44 adolescents for drug use problems. The drugs used were cannabis, 17 cases, solvents, 17 cases, ecstasy, 10 cases, prescribed medication, 7 cases, LSD, 3 cases and amphetamines, cocaine and opiates, one case each.

2.3 ***Methodology***

The study design was a descriptive survey of substance use among adolescents of second-level school going age, approximately 12 to 18 years of age. A random sample of 37 schools throughout the Western Health Board was selected, and a cluster sample of students in a selected year in each school participated in the survey. The sample was selected to have as representative a sample of the school going population as possible. The years selected in the schools were weighted to have more students from the senior cycle than the junior cyle.

There is evidence in the extant literature that the extent of substance use is higher among those who are early school leavers. For this reason the survey was also carried out among the all the training centres and community projects for early school leavers in the Western Health Board, 20 in total. The school sample was weighted in favour of the senior cycle so that comparisons could be made between the students and the early school leavers who tend to have a higher mean age than the students.

The survey instrument was an anonymous questionnaire which was based on the questionnaires used by the Economic and Social Research Institute in similar surveys of Dublin adolescents. It was translated into Irish for the Gaeltacht areas. In the majority of schools and centres the questionnaires were administered by myself. In those locations where that was not the case, it was felt that the respondents would give more honest answers if someone they trusted administered the questionnaires.

2,859 adolescents were surveyed between October to December, 1994. 2,787 of these were considered to be valid, consisting of 2,576 school students, 69 travellers, and 142 "settled" early school leavers.

Prevalence rates were determined for substance use among the sample as a whole, and factors which have been reported to be associated with increased substance use were examined. Comparisons were made for prevalence rates for substance use between Galway City, Galway County (excluding Galway City), County Mayo and County Roscommon. Comparisons were also made for prevalence rates for substance use between school students and early school leavers. As the travellers have a very different culture to the settled

community and therefore could be expected to have different prevalence rates, the travellers and the settled early school leavers were examined separately.

2.4 ***Results***

Smoking

67% of the sample had ever smoked a cigarette, the rate increasing from 40% of those aged 13 years and younger to 75% of those aged 18 years and older. 27% of the sample were regular smokers, increasing from 7% at age 13 years and younger to 42% at age 18 years and older. The mean age for the first cigarette was 12.2 years. The smoking rates are slightly higher among the boys than the girls overall, but the rates exceed those of the boys in the older age groups, so that by the age of 15 years, the lifetime smoking rates are higher among the girls than the boys.

Smoking rates, both lifetime and regular smoking, were higher among those from Galway City than those from the other areas. The difference in smoking rates was not explained by any differences in age and gender ratios among the samples.

When the students, settled early school leavers and the travellers were compared, the main points to emerge was that the settled early school leavers had extremely high smoking rates, especially the girls, and that while the smoking rates of the traveller boys were similar to the students, the rates among the girls were much higher.

Smoking rates among the adolescents in this study of the Western Health Board were found to be higher than the rates found among adolescents from Dublin, Northern Ireland, the United Kingdom and the United States.

Drinking

67% of the sample have ever had a drink, the rate increasing from 25% of those aged 13 years and younger to 86% of those aged 18 years and older. 62% of the sample are current drinkers, that is have drank in the past month, the rate increasing from 21% of those aged 13 years and younger to 82% of those aged 18 years and older. The mean age for the first drink was 13.7 years, with 10% of the sample having their first drink by 10 years of age and 60% by 14 years of age. 15% of the sample usually drink five or more drinks on any one occasion. 48% of the sample have ever felt drunk, and 17% have been drunk on more than ten occasions. The mean age of first time feeling drunk was 14.5 years. The prevalence rates for drinking were similar among the girls and the boys, but the boys continue to drink larger amounts and to be intoxicated more frequently. Beer was the preferred drink among the boys while spirits were the preferred drink among the girls.

59% of the sample reported that alcohol was easy to obtain. 56% of the current drinkers obtained alcohol from public houses, 53% obtained alcohol from night-clubs, and 28% obtained alcohol from off-licences. These data reflect the ease with which adolescents in the Western Health Board can obtain alcohol.

Factors found to be associated with increased alcohol use include ease of access to alcohol, amount of weekly income or pocket money, coming from the higher soico-economic groupings, urban location, perceived parental drinking and perceived parental approval of drinking, perceived friends drinking and perceived friends approval of drinking, favourable attitudes towards drinking on the part of the adolescent, lack of bonding to the family, religion and school and tolerance of deviance, which was measured by frequency with which the adolescents had performed other "deviant" behaviours. Those who reported receiving education in school had slightly higher rates of drinking, which emphasises the importance of carefully planning any substance use prevention programme in schools or elsewhere.

Results from the comparison of Galway City and the other areas of the Health Board, found that the rates of drinking are much higher in Galway City, especially among the girls in comparison to the other locations. The rate of current drinking was 73% in Galway City, compared to 46% in Galway County, 60% in County Mayo and 51% in County Roscommon.

Results from the comparison of school students, and settled early school leavers and travellers, found that the drinking rates and the frequency of intoxication are higher among the settled early school leavers both boys and girls than the students or the travellers. The drinking rates are especially low among the traveller girls, which was felt to reflect their culture.

This study has found that the drinking rates have increased in the Western Health Board since the study by Johnson (1990). The results of drinking rates for this study were similar to those found by Mac Hale (1994). The drinking rates found in this study are similar to those among adolescents from the rest of Ireland. There are more abstainers among Irish adolescents than in the United Kingdom, but more Irish adolescents drink than Amerian adolescents.

Drug Use

23.5% of the sample reported that they ever used any of 11 listed drugs in order to get "high". This rate was 26% among the boys and 20.5% among the girls. The prevalence of ever using any of the drugs listed increased from 8% at age 13 years and younger to 33% at age 18 years and older.The mean age of first drug use was 14.5 years.

Of those drugs listed the commonest one used was cannabis, with 15.5% of the sample stating that they had ever used it. This was closely followed by volatile solvents with just over 14% stating that they had ever used them. The other listed drugs were used much less frequently, cough syrup abuse was reported by 6%,

“magic” mushrooms by 5%, LSD by nearly 4%, ecstasy by just over 2%. The other listed drugs were used by 2% or less. The prevalence rate for most of the listed drugs increased with age, apart from volatile substances which showed a slight decrease in prevalence after the age of 16 years.

26% of the sample reported that it would be easy for them to obtain drugs. Those that used drugs were asked their ususal source of drugs. Just over 46% reported that they usually obtained drugs from their friends, 25.5% reported that they usually obtained them from drug dealers, 25% reported getting them in night-clubs, nearly 11% obtained them in private houses, and just over 7% reported obtaining them in pubs, and on or near school grounds.

Factors which were found to be associated with increased drug use were ease of access, amount of weekly income or pocket money, coming from the higher socio-economic groupings, urban location, perceived parental lack of disapproval of drug use, perceived friends drug use and perceived friends approval of drug use, lack of bonding to the family, religion and school, and tolerance of deviance, as explained earlier.

Results of the comparison of Galway City with the other areas of the Health Board found that the rates of drug use are double the drug use rates of the other areas, with 41.5% of those from Galway City reporting that they ever used drugs, compared to 20% from Galway County, 21.5% from County Mayo and 22% from County Roscommon. The difference in drug use rates among these groups is not accounted for by any differences in gender or age between the respondents from the different areas. A difference in the availablity of drugs may account for some of the differences in drug use rates. Over 50% of the sample from Galway City report that it would be easy for them to obtain drugs, this compares to rates for ease of access of bewteen 20 to 23% for the other locations. Use of the individual drugs is also much higher in Galway City than in the other locations. Cannabis use was reported by 36% of those from Galway City, volatile substances by nearly 29%, LSD by just over 11%, ecstasy by 6% and amphetamines by nearly 5%. These rates of individual drug use may reflect the supply network which is said to exist in Galway City, but not in other parts of the Health Board.

Results from the comparison of drug use between the students and the travellers and the settled early school leavers found that the rate of drug use to be much higher among the settled early school leavers, and much lower among the travellers than the school students. 33% of the settled early school leavers reported that they had ever used drugs, compared to 23% of the students and 10% of the travellers. However these differences are even more marked when the settled early school leavers are analysed according to whether they are from urban or rural areas. It was found that those settled early school leavers from urban areas had exceptionally high reported drug use, with nearly 50% of the urban settled early school leavers reporting drug use. When the rates of drug use were examined according to the gender, it was found that the rates of drug use were high among both boys and girls from the settled early school leavers group. Traveller girls had no reported drug use at all. As with drinking, this probably reflects cultural differences.

The results of this study therefore indicate that those adolescents in the Western Health Board area most at risk for drug use are the settled early school leavers from urban areas, and also those from Galway City.

The prevalence of drug use is lower than that recently reported from County Dublin, the rates being about $^{2}/_{3}$ to $^{3}/_{4}$ of the Dublin rates for the main drugs used. The rates are similar to those recently reported in a Southern Health Board study. Cannabis and volatile substances are the main drugs used by Irish adolescents. Irish drug use rates are similar to those found in various studies in the United Kingdom and the United States.

2.5 ***Recommendations***

Smoking

1. Smoking prevention programmes should be formulated by a Health Education Officer or other suitable person for use in schools, starting in the primary schools. The prevention programmes should employ the social resistence, social norms and lifeskills approach and be encorporated within the healthy lifestyles programmes. This education should be continued in second-level schools and in youth clubs and training centres for those who have left school early.

2. Server training courses for vendors of tobacco should be run by the Health Boards.

3. Targets of reduced smoking among adolescents should be set by the Health Boards and the prevalence of smoking reassessed within five years.

These preventive measures could be piloted in Galway City and extended to other areas of the Health Board if effective.

Drinking

This study found that those at particular risk for drinking are those from Galway City and the early school leavers, therefore special efforts should be made to reach these adolescents with preventive measures.

1. Server training courses for publicans, off-licence and bar staff should be introduced, as have started by the North Western Health Board.

2. Alcohol education programmes which are carefully planned should be formulated by the Health Board in conjunction with the education services. As with smoking prevention it should be started in primary schools, and be a part of the healthy lifestyles education rather than being isolated.

3. Alcohol prevention packages designed for schools, should be amended as necessary for use in training centres and youth clubs, and community and youth workers should receive support and training in using these programmes.

4. Training should be provided by the Health Board for as many health care professional staff as possible in relation to alcohol misuse among the adolescents, both in relation to identification and management of alcohol problems.

5. Training should also be provided to community and youth workers in relation to alcohol problems among adolescents.

6. Family and parent support groups have already been set up in parts of the Western Health Board. Parental behaviours affect the attitudes towards drinking and therefore future drinking of their children. Advantage should be taken of these parent support groups to educate the parents regarding alcohol.

7. Media campaigns organised by a Health Education Officer could be established using local radio and papers, to reinforce the sensible drinking messages which the school and youth centre alcohol prevention programmes portray.

8. A telephone hotline should be established by the Health Board to offer advice and counselling regarding alcohol. Ideally an alcohol counsellor or someone with such training should cover this service. The hotline should be accessible to parents, adolescents themselves, teachers, or any other interested person.

9. A protocol should be established by the Western Health Board, to be available to all health care professionals, teachers, community and youth workers and all other involved disciplines, describing the procedures to be followed for referral and management as appropriate, of alcohol problems among adolescents.

10. Targets should be set by the Health Board for alcohol use among adolescents and the effectiveness of the prevention strategies should be evaluated by repeating the survey within the next five years, and comparing the rates against the targets.

Drug Use

Adolescents from Galway City and the early school leavers from urban areas are at especially high risk for drug use and should be targeted for preventive measures.

1. Server training courses for shop-vendors should be introduced to reduce sales of volatile substances to children.

2.School-based education programmes encorporated as discussed with education for healthy lifestyles and smoking and drinking education, should be formulated by the Health Board in conjunction with the second-level education services in the area, including the VECs and FAS. The use of the Substance Abuse Prevention Programme produced by the Departments of Health and Education could be encouraged and used alternatively.

3. Drug prevention packages used in schools for adolescents should be amended as necessary for use in youth clubs, community centres and training centres, and the community and youth workers should be trained and supported by the Health Board in using these prevention programmes.

4. Training should be provided by the Health Board for as many health care professional staff as possible in relation to identification and management of drug use problems.

5. Training should also be provided as appropriate to community and youth workers in relation to drug use problems among adolescents.

6. Advantage should be taken of existing parent and family support groups within the Western Health board to educate parents of young children on drug use and its possible causes and consequences.

7. Media campaigns organised by a Health Education Officer could be established using local radio and papers, to reinforce community norms regarding drug use, and to reinforce the antidrugs messages given in schools and at youth centres and clubs.

8. The telephone hotline which was discussed in connection with alcohol should be used to provide advice and guidance regarding adolescent drug use as well. An addiction counsellor or someone with similar training should cover the service. This telephone service should give advice and counselling to parents, teachers, adolescents themselves, or indeed anyone with any queries or worries regarding drug use.

9.A Community Addiction Team, which could tackle both alcohol and drug problems should be set up initially in Galway City. These teams should consist of multidisciplinary team members, which could include general practitioners, outreach workers, social workers, public health nurses, representatives from the psychiatric or addiction counsellor services, juvenile liaison officers, etc. The role of the team would be to identify the extent of alcohol and drug misuse problem in its area of operation, to identify and establish contact with known alcohol and drug misusers and persons at risk, to establish links with the appropriate statutory and voluntary services, to refer and monitor drug misusers as appropriate, to asist local education

services in developing appropriate and relevant primary education programmes and to liaise with the prison services. If appropriate at a later date, further teams could be established in other areas of the Health Board.

10. A protocol should be established by the Western Health Board, to be available to all health care professionals, teachers, community and youth workers and all other involved disciplines, describing the procedures to be followed for referral and management as appropriate, of drug use problems among adolescents.

11. A central notification system or data-base of drug misuse should be set up by the Western Health Board, until such time as a national one is established. Notifications about possible drug addicts should be received from the general practitioners, pharmacists, the Accident / Emergency Departments, the psychiatric services, etc.

12. The Western Health Board should facilitate the establishment of a committee, similar to the Special Committee on Drug and Alcohol Abuse, which has been established by the Southern Health Board, which would consist of members of the Gardai, Customs and Excise, the education services including FAS and the VECs, the prison services, the health care services and community and youth workers. This committee could then oversee the preventive strategies and monitor and evaluate their effectiveness.

13. Targets should be set by the Western Health Board regarding drug use by adolescents and the preventive strategies monitored to ensure their effectiveness. A survey should be repeated within the next five years on drug use among adolescents in the Health Board area to this end.

Chapter 3 LITERATURE REVIEW

Prevalence of Substance Use

3.1 ***Prevalence of cigarettes among adolescents***

National surveys

In 1987 a survey on knowledge, attitudes and behaviours relevant to non-communicable diseases was carried out among 445 post-primary students aged 11 to 19 years in Co. Kilkenny as part of the Kilkenny Health Project. Lifetime prevalence for smoking was 71%, increasing from 58% of 13 year olds to 85% of 17 year olds. Current smoking prevalence was 22%, increasing from 17.7% of 13 year old boys to 47.8% of 17 year old boys, and from 4.6% of 13 year old girls to 25.5% of 17 year old girls. The prevalence of regular smoking was 11%, 14% in boys and 7% in girls. The researchers found these rates to be comparable to levels found in England, Finland, Norway and Austria, but much lower than those found in Dublin by O`Rourke, O`Byrne, Condren et al., (1983) and Grube and Morgan, (1986). There was a lower prevalence of smoking in girls at all ages. The critical age for initiation was found to be between 13 and 15 years (O`Reilly and Shelley, 1991).

Morgan and Grube (1989) compared the smoking rates in their 1984/1985 Dublin study with international rates. They found the rates to be higher than England, Norway, Finland and Austria by 3 - 5% points only. French adolescents seemed to smoke more frequently than the Irish. Compared with the United States; 18.7% of United States adolescents aged 16 years and over were regular smokers, the corresponding figure in Ireland was nearly 30% (Morgan and Grube, 1989).

A report to the European Commission in 1990 on the determinants of cigarette smoking among adolescent girls in Ireland, surveyed 1,731 girls in 6th class of primary school and 2nd year of post-primary school (corresponding to ages 11 - 13 years and 13 - 15 years respectively). Among the primary school students (mean age : 12.3 years) the lifetime prevalence of smoking was 32%. The majority were still experimenters, 23.5%, while 8.5% were occasional or regular smokers (6% occasional and 2.5% regular). Among the secondary school students (mean age : 14.2 years) lifetime prevalence was 65%. 35% were still experimenters, but 17% were occasional smokers and 13% were regular smokers (30% overall were current smokers). Initiation to smoking took place between 10.3 and 11.6 years on average (Codd, Morgan, Herity et al., 1990).

Research on smoking and drinking among primary school children in the Southern Health Board area was carried out in 1990. The results indicated that $^{2}/_{5}$ of the children had started smoking before they were 13 years old. More boys than girls smoked before the age of 16 years, but the figures equalised after 16 years. In urban and suburban schools in 5th and 6th classes, $^{1}/_{10}$ of the boys and between $^{1}/_{12}$ to $^{1}/_{15}$ of the girls were regular smokers. Research carried out by the Cork Youth Federation and the Department of Education among post-primary school students aged 15 - 17 years found that a lifetime prevalence of smoking of 72%,

and 37% were current smokers. 62% reported having their first cigarette at 14 years or younger (Southern Health Board, 1994).

Morgan and Grube (1994) surveyed 1,983 post-primary students in Dublin in 1991 and compared the rates with a 1984 survey. They found that the lifetime prevalence fell from 67.1% in 1984 to 61.1% in 1991. Lifetime prevalence in 1991 was 45.7% at 13 years and younger increasing to 69.8% at 17 years and older. Occasional smokers increased from 12.7% in 1984 to 14.9% in 1991. The occasional smoking rate increased from 7.7% at 13 years and younger to 16.9% at 17 years and older in 1991. The prevalence of regular smoking decreased from 24.4% in 1984 to 19.2% in 1991.Regular smoking rates increased from 11.2% at 13 years and younger to 29.1% at 17 years and older in 1991. This study therefore shows a decline in the number of smokers since 1984 especially in the younger age groups, and also a decline in the number of heavier smokers among those that do smoke.

Surveys in the Western Health Board area

A study done by the Roscommon Regional Youth Service in 1993 in Co. Roscommon and in part of east Co. Galway surveyed all the post-primary school students in the area on substance use. 3,088 students were surveyed. The lifetime prevalence of smoking was 58%, with male rates slightly higher than females. Occasional smoking rates were 14.4% for boys and 16.2% for girls. Regular smoking rates were 16.2% for boys and 8.5% for girls (Moroney, 1993).

Surveys in Northern Ireland on smoking

Recent surveys in Northern Ireland have found that 14% of boys and 11% of girls aged 11 - 18 years old to be regular smokers (Riddoch, Savage, Murphy et al., 1991), with the rates of lifetime smoking increasing with age from 29% at age 11 years to 70% at age 15 years, and the rates for regular smoking increasing from 2% at age 11 years to 25% at age 15 years (Craig, Francis and McWhirter, 1991). A recent study found no gender differences in the number of cigarettes usually smoked weekly (Health Promotion Agency, 1994).

International surveys on smoking

United Kingdom : Surveys in the United Kingdom have suggested that the recent recorded fall in regular smoking among adolescents has levelled off and rates especially among girls appear to be increasing (Smith, 1991). Surveys in Doncaster in England among 15 - 16 year olds showed that in 1985, 16% of 15 - 16 year olds were regular smoking, in 1988 this proportion was 12%, but in 1991 it had increased to 20%, 23% of girls and 16% of boys. Boys who smoked however smoke more than girls who smoke (Galt, Gillies and Scott 1994).

In 1990, it was estimated that at age 11 years, 1% of children are regular smokers of one or more cigarettes weekly. At age 15 years this has increased to 20%. At age 14 - 15 years girls may be more likely to be smokers than boys, but by 16 - 19 years the rates for both genders are equivalent (Jarvis, 1994).

France and Israel : A cross cultural comparison between France and Israel on the use of cigarettes, alcohol and drugs was done in the late 1970`s, among samples of adolescents aged 14 - 18 years from urban areas. The lifetime use of cigarettes was 82% in France and 44% in Israel. The prevalence of current use was 64% in France and 16% in Israel (Kandel, Adler and Sudit, 1981).

Greece : The lifetime prevalence of smoking was 70% and that of regular smoking was 22.3% among 14 - 18 year olds in Greece in 1984. Rates were higher for boys than girls (Kokkevi and Stefanis, 1991).

United States : The Teenage Attitudes and Practices Survey (TAPS) found that the prevalence of monthly and weekly smoking increased with age from 2.4% and 0.7% respectively for 12 year olds to 30.6% and 25.4% for 18 year olds. No major gender differences were found. It was noted however that the prevalence was significantly higher among school drop outs than school attenders/ graduates, 43.3% versus 17.1% (Center for Disease Control, 1991).

A school based survey, the Youth Risk Behaviour Survey was carried out in 1991. 71% had ever tried cigarettes, 24% had smoked at least one cigarette in the past month and 12% reported frequent cigarette use. Boys and girls had similar rates (Center for Disease Control,1992a).

The National Household Surveys on 12 - 17 year olds showed a decline of lifetime smoking prevalence among this age group from 49.5% in 1982, to 42.3% in 1988 to 40.2% in 1990 (Kandel, 1991).

Australia : In Australia in 1987, the prevalence of current smoking increased with age from 5% of 12 year old boys and girls, to 27% of 16 year old boys and 30% of 16 year old girls. From the age of 13 years, more girls than boys smoked. However the boys who smoked were heavier smokers, the average number of cigarettes per week for boys was 37, versus 30 for girls at age 16 years. The main period for initiation of smoking was between the ages of 12 to 15 years old. Compared to an earlier survey in 1984, the prevalence of smoking among 12 - 17 year old school children had fallen significantly (Hill, Willcox, Gardner et al., 1987 and Hill, White, Pain et al., 1990).

3.2 ***Prevalence of alcohol among adolescents***

National surveys

A Dublin-based study on adolescent drinking confirmed the tradition of the large Irish minority who do not drink alcohol, but indicated that this minority might be declining. As regards prevalence, the authors placed

Ireland in between low consumption countries like Israel, Norway and Finland, and high consumption countries like France. Rates were found to be similar to Australian and American rates (Grube and Morgan, 1990a).

A study which directly compared drinking behaviours of Irish and American adolescents was done in 1986. The study found that the Irish adolescents reported less frequent social drinking and less problematic drinking overall than the Americans. However the Irish who did drink reported more drinking related problems (Christiansen and Teahen, 1987).

The Kilkenny school survey of 13 - 17 year old post-primary school students found a lifetime prevalence of drinking of 73%. The prevalence of current drinking was 22%, 28.2% of boys and 15.8% of girls. The prevalence of current drinking increased from 8% at 13 years to 38% at 17 years, therefore drinking was found to be related to age. A large gender difference was found for rate of increase of current drinking with age. Current drinking increased from 13% of 13 year old boys to 66.7% of 17 year old boys, compared to a rise from 0% of 13 year old girls to 26.9% of 17 year old girls. 32% of boys and 19% of girls had ever been drunk. Beer was the most popular drink (O`Reilly and Shelley, 1991).

A survey of alcohol related behaviour was carried out among 294 South Dublin post-primary school students aged 14 - 17 years in 1989. The lifetime prevalence for drinking was 72%, 80% in boys and 66% in girls. The prevalence of current drinking was 59% in boys and 54% in girls. Current drinking increased with age from 40% of 14 year olds to 80% of 17 year olds. The average age of first drink was 11.7 years for boys and 12.3 years for girls. Beer was the most popular drink for boys while wine was for girls (Barry, 1993).

In 1990 Johnson carried out a survey on the drinking behaviour of a national sample of 2nd year post-primary school students. 8 urban areas throughout the country were surveyed with a sample size of 827, the target age group was 13 - 14 years old. The lifetime prevalence of drinking was 38.5%, 41% in boys and 36% in girls. The prevalence of current drinking was 30.2%, and about 55.7% of ever drinkers were drunk at least once. The average age of first drinking was 12.6 years, for boys it was 12.2 years and for girls it was 12.8 years (Johnson, 1991).

In 1990 one thousand 14 - 17 year old post-primary students were surveyed in 7 South Dublin schools. The lifetime prevalence of drinking was 86% and the weekly prevalence was 16%. The average age of first drinking was 13 years, 12.7 for boys and 13.4 for girls (Tubridy and O`Neill, 1990).

Also in 1990 O`Fathaigh surveyed 787 15 - 17 year old Cork adolescents. The lifetime prevalence was 78%, and 51% were regular-occasional drinkers. Beer was the most popular drink for both genders. More than 50% had felt drunk at least once. The period between 12 - 16 years seemed to be the most important period for initiation to drinking (O`Fathaigh, 1990).

Morgan and Grube surveyed Dublin adolescents in 1991 and concentrated on alcohol use in their report due to the dramatic increase in alcohol use, and the relative stability in other substance use (Morgan and Grube, 1994). The survey was carried out on a random sample of 13 - 17 year old post-primary school students. 1,983 students were surveyed. A similar study was carried out by the authors in California, with which the Dublin results were compared. The lifetime prevalence in 1991 was 77.9%, an increase from 65% in 1984. Lifetime prevalence increased with age from 58.4% at age 13 years to 92.7% at age 17 years and older. These rates compare with a total lifetime prevalence in the United States in 1991 of 76.9%, the prevalence at age 17 years and older being 83.9%. The prevalence of current drinking in Dublin was 51.4% compared with the American rate of 47.4%, again the rates increased with age. The average age of first drink for the Dublin sample was 12.5 years and for the American sample it was 11.8 years. While the gender differences persisted in Dublin in 1991, they were not as large as in 1984. The lifetime prevalence for boys was 83.3% and for girls was 73.9%. The prevalence of current drinking for boys was 56.6% and for girls was 46.1%. 49.8% of the Dublin sample reported ever being drunk, 55.0% of boys and 44.4% of girls. Beer was the most popular drink for both boys and girls. This report showed that on every drinking measure, the Dublin adolescent now drank more than a comparable group in California, including the number of ever drinkers. In America abstainers were now a larger group than in Ireland. It was also noted that while girls still drink less than boys, these differences are narrowing.

Surveys in the Western Health Board area

A survey was carried out on alcohol use among 1,359 post-primary students in Galway city in 1989 among 12 - 15 year olds. The prevalence of lifetime drinking was 26.05%. Current drinking rates i.e. drinking within the past month was 19.8%, 13.3% was categorised as moderate drinking and 6.5% as abusive drinking. The weekly prevalence of drinking was 7.1%. The average age of first drink was 11.96 years, 11.81 for boys and 12.25 for girls. 48.9% of lifetime drinkers had ever been drunk. Beer was the most popular drink for both genders (Johnson, 1990).

Moroney in his survey of 3,088 Roscommon and east Galway post-primary students aged 13 - 17 years found a lifetime prevalence of 53.4%. 28.8% had been drunk at least once (Moroney, 1993).

In 1994 a survey of 2,799 post-primary students in Co.Galway schools looked at health related behaviours of sex, drugs and alcohol. 68% of the sample reported drinking alcohol, 74% of the boys and 64% of girls. 32% of boys and 17% of girls who drink, do so weekly. Beer was found to be the most popular drink. An interesting finding was that the prevalence of drinking alcohol was higher in rural than in urban students (Mac Hale, 1994).

Surveys in Northern Ireland

A survey in Northern Ireland in 1988 found that 17% of boys and 31% of girls had never tasted alcohol. 22% of boys and 29% of girls had never had a proper drink. The prevalence of current drinking in the sample was 54% for boys and 34% for girls. The prevalence of current drinking increased with age from 20% of boys and 10% of girls at age 11 years, to 82% of boys and 66% of girls at age 17 years. Beer is the most popular drink among boys, while girls prefer spirits, wines and aperitifs (Department of Health and Social Services, 1989).

A province wide survey carried out by Craig et al., (1991) found that the lifetime prevalence increased with age from 14% amongst 11 year olds, 20% amongst boys and 9% amongst girls, to 70% at age 15 years, 88% amongst boys and 62% amongst girls. The most popular drinks were beer, lager or cider. 63% of the sample said that they were now abstainers.

In comparison with adolescents in the United Kingdom, those in Northern Ireland were less likely to have ever tasted alcohol or to be current drinkers. However, when school children in Northern Ireland do drink, they are more likely to be frequent drinkers (Department of Health and Social Services, 1989) .

The 1992 WHO survey on Health Behaviour of school children in Northern Ireland asked about prevalence of tasting alcohol rather than a full drink. The lifetime prevalence of tasting alcohol was nearly 75%, 92% for boys and 87% for girls in Form 5. At all ages the proportion of boys that drink weekly was greater than that for girls, 5% of boys and 2% of girls in Form 1, and 30% of boys versus 20% of girls in Form 5. Almost 40% of those who had ever tasted alcohol had been drunk, in Form 5 the rate of lifetime intoxication was 65% amongst boys and 50% amongst girls (Health Promotion Agency, 1994).

International surveys

United Kingdom : A survey in 1986 looked at the drinking habits of 1,586 school students aged 13 years from three areas in the United Kingdom, in Scotland, England and Wales as a preliminary survey prior to the introduction of alcohol education. The lifetime prevalence of drinking (including a taste) was 96%. The modal age for first drink was 11 - 12 years old. This first drink was most likely to have occurred with the family. Beer and cider were the most popular drinks. Boys had a higher frequency and quantity of alcohol intake than women and were more likely to have tasted alcohol earlier (Bagnall, 1988 and Bagnall, 1991).

In Swadi`s school based survey of 11 - 16 year old adolescents in London (1988), the lifetime prevalence of alcohol which increased from 45% at age 11 years, to 80% at age 16 years. 10.9% of the sample drank alcohol at least weekly. The average age of first drink was 11.6 years old. Rates among boys and girls were similar. Two years later Swadi repeated the survey on a small subsample of 2nd and 3rd years from the original survey who were then in 4th and 5th years. The prevalence of frequent alcohol use in this cohort had increased from 5 to 18% (Swadi, 1990).

A national survey on 6,244 English adolescents aged 14 - 16 years from a random selection of schools was done in 1988. The lifetime prevalence of alcohol was 96%. Heavy drinkers were defined in males as those who had drunk at least 11 units, and in females as those that had drunk at least 8 units at the last drinking occasion. Heavy male drinkers increased from 5.4% at age 14 years to 13.5% at age 16 years. Female heavy drinkers increased from 7.1% at age 14 years to 15.5% at age 16 years (Plant, Bagnall, Foster et al., 1990b).

In 1990 a national survey of 7,009 Scottish adolescents aged 14 - 16 years was carried out on drinking habits based on a random sample of schools. The lifetime prevalence of alcohol was 97%. Most of the adolescents drank only modest quantities but 18.9% of males and 10.3% of females stated that they had consumed at least 11 units on their last drinking occasion. The prevalence of heavy drinking increased from 10.6% of boys aged 14 years to 22.5% of those aged 15 years. The increase for girls was from 11.4% of 14 year olds to 22.4% of those aged 15 years. These results were compared with the earlier English national survey. It revealed that both amongst boys and girls, there was a much higher proportion of "heavy drinkers" amongst the Scottish adolescents, but Scottish adolescents were less likely to drink frequently. They concluded that while most British adolescents do drink, they drink in moderation, but there is a substantial minority who drink heavily. Their results also indicated that drinking habits amongst British adolescents had remained relatively stable over the past decade (Plant and Foster, 1991).

Ghodsian and Power found an association between drinking frequencies at ages 16 and 23 years, which was statistically significant for both males and females. They concluded in their study that while consumption in early adulthood cannot be accurately predicted from that in adolescence, the likelihood of heavier drinking at age 23 years was associated with how recently the young people had drunk at age 16 years, the amount they had drunk and the place of drinking (Ghodsian and Power, 1987).

France and Israel : In the cross cultural study of French and Israeli adolescents aged 14 - 18 years, the lifetime prevalence in France of beer was 80%, of wine was 79% and of hard liquor was 75%. The prevalence of current use (in the past month) for beer was 54%, for wine was 54% and for hard liquor was 48%. The prevalence for lifetime use in Israel for beer was 70%, for wine was 63% and for hard liquor was 52%. The prevalence for current use for beer was 27%, for wine was 27% and for hard liquor was 22%. Traditionally France has been considered a high alcohol drinking country while Israel was considered a low alcohol drinking country, and this was reflected in the prevalences of alcohol use in the adolescents (Kandel et al., 1981).

Greece : In the Greek study in 1984, the prevalence of alcohol use among the 14 - 18 year olds in the past year was 94.8%, and current use was 82.4% (Kokkevi and Stefanis, 1991).

United States : The National Household Surveys among 12 - 17 year olds found a lifetime prevalence of alcohol use of 48.2% in 1990. This had decreased from 65.2% in 1982 and 50.2% in 1988 (Kandel, 1991).

Australia : The survey of 19,166 secondary school children aged 12 - 17 years in Australia in 1987 found that the prevalence of alcohol use increased with age. At age 12 years, 12% of girls and 18% of boys were current drinkers. At age 17 years this had increased to 50% and 55% respectively. At every age the boys were heavier drinkers than the girls. Boys preferred to drink beer, while some kind of spirit was the favourite drink for girls. Compared to an earlier survey in 1984 the prevalence of alcohol use had declined among 12 - 15 year olds, but there was no significant reduction amongst the 16 - 17 year olds (Hill et al., 1987 and Hill et al., 1990).

New Zealand : Researchers studied the pattern of alcohol consumption amongst a birth cohort of children followed to the age of 15 years old. The lifetime prevalence of alcohol use was 71.6%. 6.7% of the sample reported weekly drinking. 4.9% of the sample met criteria for alcohol abuse (Fergusson, Lynskey and Horwood, 1994a).

3.3 ***Prevalence of drug use among adolescents***

National surveys

In comparison with international standards, rates of drug use in 1984 were low, especially for marijuana, for which the rate in the United States was about 10 times higher. Irish rates were also lower than England, Scotland, France, Spain and West Germany. However the use of solvents and inhalants was high by international standards (Morgan and Grube, 1989).

Research in the Southern Health Board area among 787 post-primary school students aged 15 - 17 years found that about $^{1}/_{5}$ of the students reported any drug use, 15% had tried marijuana and 19% had tried volatile solvents (Southern Health Board, 1994).

Morgan and Grube in their most recent study on substance use among Dublin post-primary students, compared use of drugs in 1991 with the prevalence in 1984. Marijuana use increased from 13.2% in 1984 to 25.1% in 1991, solvent use increased from 12.9% in 1984 to 18.9% in 1991, cocaine use increased from 1.5% to 2.2%, barbiturate use decreased from 2.7% to 2.2% and heroin use increased from 1.2% to 1.4%. Other drug categories e.g. LSD and psilocybin had been changed in the interim and could not be directly compared. Prevalence of current use of marijuana increased to 9.2% in 1991 from 5.9% in 1984. Current solvent use had fallen to 3.8% in 1991 from 5.0% in 1984.

These figures suggest that the main change in drug use since 1984 has been an increase in marijuana use (Morgan and Grube, 1994).

Surveys in the Western Health Board area

Moroney (1993) found a lifetime prevalence of drug use of just under 20% in the Roscommon / Galway study. Current prevalence of drug use was not provided in the report. Marijuana and solvents appeared to be the commonest used drugs.

In the 1994 study in Galway city and county post-primary students, the lifetime prevalence for drug use was 11%, 15% amongst boys and 7% amongst girls. Cannabis, LSD and "ecstasy" were the most commonly used drugs, with boys from city mixed gender schools having a significantly higher use of drugs. Of those who used drugs over 55% had taken them only occasionally, with 15% of boys and 11% of girls taking them at least weekly. This study had a much lower prevalence of drug use than that of Moroney (1993) in neighbouring and overlapping areas of the health board (Mac Hale, 1994).

Surveys in Northern Ireland

The 1992 WHO survey on Health Behaviour in Northern Ireland confined the questions on drug use to students from Form 5. The sample size was 805 students. 25.5% of the sample had been offered drugs. 15.8% of the sample had ever tried drugs and 5.6% of the sample were current users. Most of the current users, used drugs infrequently, less than once a month. 1% of those who had ever tried drugs, used them one or more times weekly. Most of the young people surveyed had a negative attitude to drugs including those who had ever tried them. Drugs used in order of preference were, cannabis, volatile substances, ecstasy, amyl nitrates ("poppers") and "magic" mushrooms (Health Promotion Agency, 1994).

A follow up WHO collaborative survey was completed in Northern Ireland in 1994, in which the issue of drugs was extended to all Forms. Of the sample, 23.6% had been offered drugs, this percentage increased with age to 42% for the 15 year old group. The drug which they were most likely to have been offered was cannabis. Lifetime prevalence of drug use was 13 % for the whole sample, and 26% amongst the older group. Current prevalence of drug use was 6.8% for the sample and 16.8% amongst the older group. The most popular drugs were cannabis and LSD (Health Promotion Agency, 1995).

International Surveys

United Kingdom : The lifetime prevalence of solvent and illicit drug use in London students aged 11 - 16 years in 1988 was over 20%. Prevalence increased from 13% at age 11 years to 26% at age 16 years. The prevalence of repeated use was 8.4%, increasing from 2% at age 11 years to 16% at age 16 years. Cannabis and solvents were the most widely used substances, each having been tried by $^{1}/_{9}$ of the sample. Half of those who had tried cannabis had become regular users while only 25% of the solvent users had done so. The overall prevalence of drug use was the same for boys and girls. Substance use showed a sharp increase in prevalence at age 14 years, and then a more gradual increase (Swadi, 1988). In the follow up study among the small subsample of 219 students who had been in 2nd and 3rd years and were now in 4th and 5th years, solvent and cannabis use increased from 3% for both substances to 7% and 15% respectively for this cohort. This study confirmed previous impressions that the age at which adolescents are at risk of substance is 13 - 15 years old (Swadi, 1990).

In 1989 a survey was carried out among 934 14 - 16 year old school students in Bournemouth and Southampton. The lifetime prevalence of drug use overall was 16%, for cannabis it was 10%, and for solvents it was 8%. For both these groups boys had higher prevalences than girls. Most of usage appeared to be experimental, but between 4 - 5% reported relatively frequent use of drugs (Pritchard and Cox, 1990).

In 1990, Wales participated in the WHO collaborative study of young people's health behaviour. Only the 5th year students were surveyed on drug use. The lifetime prevalence of drugs was 21.4%. The prevalence for current drug use was 10.6%. Of those who had tried drugs more than half reported using more than one drug. The most frequently used substances were marijuana, solvents and psilocybin. The only significant difference between males and females was that males reported more frequent use of psilocybin. The results supported recent work which suggests that gender differences in young people's drug use may be declining (Smith and Nutbeam, 1992).

France and Israel : The cross-cultural comparison of substance use between France and Israel among 14 - 18 year old adolescents in the late 1970`s, also looked at drug use. The lifetime prevalence of marijuana / hashish in France was 23%, while current use was 11%. The prevalences in Israel were 3% and 0% respectively. Other drug use was minimal in France and practically non existent in Israel. In both countries the prevalences increased with age (Kandel et al., 1981).

Greece : The nation wide survey of 11,058 Greek adolescents aged 14 - 18 years found a lifetime prevalence for drug use of 6%, with male rates higher than female rates (Kokkevi and Stefanis, 1991).

The Netherlands : The National Youth Health Care Survey carried out among 8,019 adolescents looked at drug use. The lifetime prevalence of any illicit drug was 16.5% at age 15 - 16 years and 23.5% at age 17 - 19 years. The lifetime prevalence for cannabis use was 10.8% at age 15 - 16 years and 17.3% at age 17 - 19 years. Current use of cannabis was 5.2% at age 15 - 16 years and 4.5% at age 17 - 19 years (Schwartz, 1992).

United States : The Youth Risk Behaviour Surveys YRBS in 1991 among senior high school students, found a lifetime prevalence of marijuana use of 26%, and prevalence for current use of 11%. Rates among males were more than among females (Center for Disease Control, 1992a).

The Monitoring the Future surveys among senior high school students has reported a dramatic decrease in drug use during the 1980`s. Lifetime prevalence of marijuana declined from 57% in 1983 to 47.2% in 1988 to 40.7% in 1990. Use of stimulants also decreased from 26.9% in 1983 to 19.8% in 1988 to 17.5% in 1990. Use of solvents decreased from 18.2% in 1982, to 16.6% in 1988, but increased to 18.5% in 1990. Use of cocaine decreased from 16.2% in 1982, to 12.1% in 1988, to 9.4% in 1990. Use of all other substances showed a similar decline, with overall use of drugs decreasing from 64% in 1982 to 47.9% in 1988. The

trends are even stronger regarding current use compared to lifetime use. Prevalence of current drug use decreased from 30.7% in 1975 to 17.5% in 1990. The rates of decline have slowed since 1988 (Kandel, 1991).

The National Household Survey among 12 - 17 year old adolescents also found a decline in substance use. Lifetime prevalence for marijuana decreased from 26.7% in 1982 to 17.4% in 1988, and to 14.8% in 1990. Prevalence of stimulants declined from 6.7% in 1982, to 4.2% in 1988 but increased to 4.5% in 1990. Prevalence of cocaine decreased from 6.5% in 1982, to 3.4% in 1988, and to 2.6% in 1990. The prevalences of hallucinogens and sedatives also declined (Kandel, 1991).

Canada : The Canadian Health Attitudes and Behaviours survey carried out among 9 - 15 year olds school students found a lifetime prevalence of cannabis use of 20% among 15 year olds, and 3.2% among 12 year olds. The prevalence was slightly higher among boys (King and Robertson, 1987).
New Zealand : Researchers in New Zealand who followed a birth cohort of Christchurch born children to age 15 years, found at age of 15 years a lifetime prevalence for cannabis use of 9.8%, and regular use for cannabis of 2.2%. Rates among boys and girls were identical (Fergusson, Lynskey and Horwood, 1993a).

3.4 *Prevalence of substance use among school "drop-outs"*

As will be seen in the section on correlates or risk factors for substance use, absenteeism and dropout rates are highest among adolescents who are greatest risk of substance use (Grube and Morgan, 1990b). This population are difficult to survey, and most references in the literature concern special populations who have developed problems such as legal or health problems due to their drug use. There are very few articles published on substance use among the general population of early school leavers or absentees.

The only survey among early school leavers in Ireland about which I am aware was a cnfidential survey carried out by the National Youth Council of Ireland. The prevalence rates of alcohol and cigarette use were very high. Of the other drugs of abuse reported by the respondents, volatile substances and cannabis were the most popular, followed by tranquillisers, with little other drug use mentioned (Forde, 1992).

Lockhart and Lennox (1983) in Northern Ireland examined the frequency of solvent abuse among adolescent juvenile delinquents compared to a non-delinquent group of adolescents. Just over 65% of the young offenders had abused volatile substances compared to 33% of the comparison group. Weekly prevalence was 42% in the young offenders and 7% in the comparison group.

Recent studies in the United States on tobacco use among adolescents have suggested that the prevalence is considerably higher among school dropouts than among high school students, being up to 70% in the dropouts versus about 20% in the school attenders (Pirie et al., 1988 and Glynn, 1993).

Data from the Youth Risk Behavior Survey, a national household survey in the United States among respondents aged 12 years and over, found that high school dropouts were significantly more likely than school attenders to be current smokers, 33.7% versus 20.4%, had a higher lifetime prevalence for cigarettes, 57.7% versus 50.9%, to have used alcohol, 62.9% versus 55.2% and marijuana, 31.4% versus 15.9%, or cocaine, 7.1% versus 2.1% (Center for Disease Control and Prevention, 1994a). Findings of higher substance use among school dropouts has been found also by other researchers (Holmberg, 1985a, Holmberg, 1985b and Smart and Patterson, 1990).

Other surveys among potential early school leavers in the United States, found that substance use was increased among this group also. In one study the rate of ever use of cigarettes, alcohol or drugs in a 4 month period prior to the study, found a prevalence of 85% in the potential school leavers, versus 60% in the others was found. Regular and frequent use of any of the substances examined were all more prevalent in the potential school leavers group (Eggert and Herting, 1993). Similar research done among a special school designed to prevent school dropouts, also found a higher level of substance use among the special school in comparison to a regular high school (Grunbaum and Basen-Engquist, 1993).

Correlates of Substance Use

Gender and age are factors that have consistently been found in the literature to be related to substance use, with substance use being higher in males and in older adolescents . In recent years though girls appear to be catching up with boys in the levels of smoking (Grube and Morgan, 1990a). Age has been considered to be one of the strongest factors associated with substance use. Changes appear to be both developmental and generational. That is they reflect changes in substances that are directly related to increasing age and maturity and to changes in substance use that are generational (O`Rourke, Gough and Wilson-Davis, 1974, Shelley, O`Rourke, O`Rourke et al., 1982 and Shelley, Wilson-Davis, O`Rourke et al., 1984).There are many other factors that are associated with substance use.

3.5 *Factors associated with cigarette smoking*

The reasons why children start smoking are quite complex. There is a transition in behaviour through a preparatory stage during which attitudes are formed, an initiation phase which involves trying it out and a softening of attitudes to smoking, an experimentation phase during which children learn how to smoke, and finally the transition to regular smoking (Holland and Fitzsimons , 1991).

Attitudes and Beliefs

An attitude may be defined as whether an individual likes or dislikes a particular behaviour and their evaluation good or bad of that behaviour. A more positive attitude is thought to lead to a more positive intention re a particular behaviour and a greater likelihood of performing that behaviour (Grube and Morgan, 1986). In both Grube and Morgans` cross-sectional (1986) and their longitudinal study (1990) they found

that not only was a favourable attitude associated with cigarette smoking but they found in their longitudinal study that it was one of the strongest predictors of both initiation and changes in cigarette smoking.

Beliefs or Expectancy-Value Beliefs as defined by Grube and Morgan (1986) consist of two components, 1) perceptions of the likelihood of personal consequences from a behaviour and 2) evaluation of these consequences. As expected in their 1986, 1989 and their 1990 studies they found that smokers thought it less likely that smoking would have negative personal consequences and more likely to have positive effects.

Codd et al., (1990) in their study of smoking among Dublin national and secondary schools found that some of the differences that most divided smokers from non-smokers were attitudes to smoking, the perception that smokers are "mature" and "grown up", and the denial of some long term consequences of smoking. Other researchers reports also confirm these findings (Robinson, Killen, Taylor et al., 1987 and Holland and Fitzsimons, 1991)

Availability

Perceived availability is the extent to which an individual believes that they have access to, resources for, and knowledge necessary for use of a particular substance including cigarettes (Grube and Morgan, 1986). Research shows that children have little difficulty in obtaining cigarettes (Codd et al., 1990, Amos 1990, Pierce and Marcus, 1992, Galt, et al., 1994 and Doorley and Hynes, 1995). This is exacerbated by shop-keepers selling single cigarettes to children (Jarvis and McNeill, 1990).

Price is also associated with rates of cigarettes use (Pekurinen, 1989). It has been argued that the price of cigarettes particularly influences the purchasing patterns of children, with a 1% increase in price leading to a 1.4% reduction in consumption amongst teenagers compared with a 0.5% reduction in adult consumption (Galt et al., 1994).

Adolescents` income or pocket money which which is one facet of availability has also been shown to be associated with smoking (Bachman, Johnston and O`Malley, 1981, Grube and Morgan, 1986 and 1990a).

Advertising

Although the tobacco industry deny that they promote cigarettes to young people, research indicates that cigarette advertising and promotional campaigns are especially appealing to teenagers and children. Industry documents released during a court trial in Canada and supporting testimony revealed that tobacco companies actively and purposefully incorporated youth-targeting into their advertising research and plans (American Public Health Association, 1993). Nearly all studies which have researched smoking and advertising have shown a link between cigarette advertising and smoking and brand preference (Chapman and Fitzgerald, 1982, Goldstein, Fischer, Richards et al., 1987, Potts, Gillies and Herbert, 1987, Armstrong, deKlerk, Shean et al., 1990, Hill et al., 1990, McAnarney, 1990a, Holland and Fitzsimons 1991 and Galt et al., 1994).

Cigarette advertising campaigns targeted at older teenagers and young adults are likely to present images which young teenagers find attractive (Aitken, Leathar and O`Hagan, 1987, Aitken, Leathar, O`Hagan et al., 1987, Chambers, Killoran and McNeill, 1991, Fischer, Schwartz, Richards et al 1991 and the Committee on Substance Abuse, American Academy of Pediatrics, 1994).

The effect of cigarette advertising was seen in the United States when in 1988 RJR Nabisco launched its Old Joe Camel campaign for Camel cigarettes featuring a cartoon camel. Since the campaign began Camel`s share of the children's market increased from 0.5% to 32.8% (DiFranza, Richards, Paulman et al., 1991 and the Committee on Substance Abuse, American Academy of Pediatrics, 1994).

Research has shown that not only does cigarette advertising reinforce underage smoking it also has predisposing effects on initiation to smoking (Aitken and Eadie, 1990, Aitken, Eadie, Hastings et al., 1991, Klitzner, Gruenewald and Bamberger, 1991, Pierce, Gilpin, Burns, et al., 1991, Botvin, Goldberg, Botvin et al., 1993 and Pierce, Lee and Gilpin, 1994).

Parental Influences

Parental influences consist of parental smoking behaviour, parental approval or disapproval and the type of parenting behaviour and parent-child relationship.

A: Parental smoking behaviour : There is a tendency for parental smoking behaviour to be associated with smoking in the literature but the effect if found is usually small and not significant (O`Rourke et al., 1983, Grube and Morgan, 1986, Mittelmark, Murray, Luepker et al., 1987, Morgan and Grube, 1989, Codd et al., 1990, McAnarney, 1990a, Reimers, Pomrehn, Becker et al.,1990, MacFarlane, 1993, Gidding and Schydlower, 1994, Jarvis, 1994). Other researchers have found that the effect of parental smoking is larger (O`Connor, 1987 and Craig et al., 1991). Green, Macintyre, West et al. (1991) reviewed the literature and found many studies which indicated that adolescents who have two parents who smoke are more that twice as likely to smoke as those whose parents don't smoke. However other studies which used multivariate analysis found no association between parent`s and children's smoking behaviour. In their own study Green et al. examined a cohort of young people and their parents in the West of Scotland and found that those adolescents whose parents smoked were more likely to smoke. Their study also showed that parental influence on children's smoking declined over the 18 month follow up of the study.

B: Parental approval or disapproval : Parental approval appears to have a stronger influence on adolescent smoking than parental smoking (Grube and Morgan, 1986, Eiser, Morgan, Gammage et al., 1989, Morgan and Grube, 1989, Codd et al., 1990, Grube and Morgan, 1990a and Cohen, Richardson and LaBree, 1994).

C: Parenting Behaviour and the Parent-Child Relationship : A longitudinal study in the United States provides evidence that parenting behaviours are significant precursors to adolescent disruptive behaviour,

vulnerability to peer pressure and subsequent substance use including smoking. They found that there were two forms of parenting behaviour that influence children's susceptibility to cigarette use. The first was *monitoring* and the second was *maintaining a positive parent-child relationship*.

(1) Monitoring is characterised by parents knowing where children are outside of school and setting curfews.

(2) A positive parent-child relationship is characterised by parents providing positive feedback through praise, encouragement and physical affection. It was also due to parents spending time with their children, having frequent communication and asking for the child's opinions. This was found to be linked to the child selecting non substance using friends. Once an adolescent selects substance using friends, parental intervention may be too late to prevent substance use (Cohen et al. 1994).

Sibling Influence:

The results from the studies which have looked at sibling smoking behaviour seem to indicate that they have an influence on smoking which is independent and additive to parental influence (Chambers et al., 1991, Jarvis, 1994). Sibling smoking has been suggested to be a stronger predictor than parental smoking (Holland and Fitzsimons, 1991 and Austoker, Sanders and Fowler, 1994). It has been shown that the more smokers there are in the family the greater the likelihood of adolescents smoking (Aaro, Wold, Kannas et al., 1987 and Craig et al., 1991)

Peer Influence

Initiation to smoking occurs usually as a peer-group based behaviour in that it occurs with peers without the parents knowledge (O`Connor, 1987).

Peer influence consists of peer smoking behaviour and peer attitude or approval. The effect of peer smoking has been shown to be one of the strongest predictors of smoking, while the influence of peer approval is relatively small (O`Rourke et al., 1983, Grube and Morgan, 1986, Morgan and Grube, 1989 and Reimer et al., 1990).

The literature is consistent in suggesting a strong relationship between smoking and peer influence. It has been suggested that this influence may be due to misperceptions and rationalisations by young smokers, resulting in their misperceiving the attitudes and behaviours of others so as to provide an illusion of support for their behaviour, or else it may be due to selective friendships, where young people seek out friends who are similar to themselves in attitude and behaviour (O`Rourke et al., 1983, Grube and Morgan, 1986 and 1990a and Morgan and Grube, 1989).

There is evidence in the literature that it is not so much peer influence which is important but rather friends and even more importantly best friends. This influence strengthens between the ages of 12 and 14 years old (Grube and Morgan, 1986, Mittlemark et al., 1987, Morgan and Grube, 1989 and Codd et al., 1990).

Social Class

The literature on the association between adult cigarette smoking and social class is consistent in showing a higher level of cigarette smoking among the lower social classes whether in manual workers or in unemployed people and that this social class gradient is widening over the years (Black, Morris, Smith et al.,1982, Marmot, Shipley and Rose, 1984, Whitehead, 1988, Smith, 1987, Smith, Bartley and Blane, 1990, Jacobson, Smith and Whitehead, 1991, Whitehead and Dahlgren, 1991, Eames, Ben-Shlomo and Marmot, 1993, North, Syme, Feeney et al., 1993 and Austoker et al., 1994). Men and women in social class V are nearly four times as likely to smoke as those from social class I (Austoker, 1994a).

This relationship is not as evident in adolescent smoking. Some studies including those done in Ireland have found no relationship between social class and adolescent smoking (O`Rourke et al., 1974, Bachman et al., 1981, Kandel, et al., 1981, Shelley et al., 1982, O`Rourke et al., 1983, Grube and Morgan, 1986, Codd et al., 1990, Grube and Morgan, 1990a and Jarvis, 1994).

In other research a small association between social class and adolescent smoking has been found (Aaro et al., 1987 and Davies and Coggans, 1991). Green et al. (1991) and Babor (1994) found a larger association between adolescent smoking and social class which was independent of parental smoking.

Social Bonding Theory

According to social bonding or social control theory, adolescents are constrained from undertaking deviant social behaviour, such as cigarette smoking, by their bonds to societal norms. As these bonds weaken adolescents may feel free from societal obligations and engage in deviant behaviour (Krohn, Massey, Skinner et al., 1983). These social bonds can be measured by the adolescents attachment to parents or family, school and the church (Grube and Morgan, 1986). I have already discussed the relationship between smoking and parents, so here the school and the church will be discussed.

School : Alienation from school as measured by the students` perception of school, their perceived academic performance and their future plans for education was strongly related to smoking amongst 15.5 year olds in 11 of 12 countries who participated in the W.H.O. cross-national study of health behaviour (Nutbeam, Smith, Moore et al., 1993). This result has also been found in Irish studies (O`Rourke et al., 1983, Grube and Morgan, 1986, Morgan and Grube, 1989, Codd et al., 1990 and Grube and Morgan, 1990a) and in other international studies (Bachman et al., 1981, Krohn et al., 1983, Aaro et al., 1987, Pierce, Fiore, Novotny et al., 1989, Davis, Tollestrup and Milham, 1990, Escobedo, Anda, Smith et al., 1990, McAnarney, 1990b, Reimers et al., 1990, Holland and Fitzsimons, 1991, Kandel, 1991, Fiore, 1992, Gidding and Schydlower, 1994 and Jarvis, 1994). Kandel (1991) found that there was also a positive relationship between education and cessation of smoking.

Church : Bonding to church which has been measured by frequency of attendance at church and the importance of religion has also consistently been found in both Irish studies (Grube and Morgan, 1986) and international studies (Bachman et al., 1981 and Kandel et al., 1981), to be associated with adolescent smoking.

Personal Characteristics

Problem Behaviour Theory: There is evidence in the literature that tolerance of deviance, a value for independence and rebelliousness have been associated with smoking in adolescents (Mittelmark et al., 1987). Tolerance of deviance was also found to be associated with smoking, but value for independence or rebelliousness was not found, in Irish studies (Grube and Morgan, 1986 and 1990a). Adolescent smoking has been associated with other problem behaviours. As already discussed it is associated with poor educational attainments. It also has been found to be associated with early and unprotected sexual activity (Davis et al., 1990 and McAnarney, 1990a).

Age at initiation: It has been shown that men and women who begin smoking at an early age under 14 years old were more likely to be heavy smokers than those who began when they were older (Taioli and Wynder, 1991, and Escobedo, Marcus, Holtzman et al., 1993). They are also less likely to give up smoking (Townsend, Wilkes, Haines et al., 1991).

In fact it is recognised that as cigarettes are among the most addictive substances there is a tendency for persistence of smoking from adolescence into adulthood which does not occur to the same extent in other substances e.g. drinking. The main factor associated with persistence of smoking is the addictive nature of it. Within no more than two or three years of starting to smoke children report experiencing withdrawal symptoms on attempting to stop smoking (McNeill, 1991 and Jarvis, 1994). There appears to be a two year gap between the age of initiation, approximately 12 years old and maintenance, 14 years old (Baugh, Hunter, Webber et al., 1982).

3.6 ***Factors associated with drinking***

Many of the same factors that are associated with adolescent smoking are also associated with adolescent drinking.

Gender

Although girls are now catching up with the lifetime prevalence of boys, boys are still to be found in the majority at the higher levels of amount and frequency of consumption (O`Connor, 1978, Grube and Morgan, 1986, Blum, 1987, Morgan and Grube, 1989, Swadi, 1993 and Morgan and Grube, 1994)

Attitudes and Beliefs

As expected in Irish surveys, favourable attitudes were strongly associated with increased alcohol consumption, being one of the strongest predictors of drinking. Beliefs were also found to be associated with drinking, i.e. drinkers were less likely than non-drinkers to believe that negative personal consequences of drinking would occur and were more likely to believe that positive consequences would occur (Grube and Morgan, 1986 and Grube and Morgan, 1990a). These results have also been found by other researchers (Howe, 1989 and Plant, Bagnall and Foster, 1990a). Morgan and Grube in their 1994 study found even more favourable beliefs than in their previous studies and felt that this may be one of the reasons for the recent increase in alcohol consumption among Dublin adolescents.

Availability

Availability as discussed in connection with smoking includes access to, resources for and knowledge re use for drinking.

Access : Johnson (1991) in his national survey of alcohol use among 13 - 14 year olds reported that 31.8% of this age group stated that they bought alcohol themselves in either pubs, off-licences, super-markets or at discos. Perceived availability of alcohol was quite significantly associated with higher levels of consumption in Morgan and Grube`s recent Dublin study (1994) and remained as an important factor in the multivariate analysis. Research done in Northern Ireland and elsewhere has also found a link between ease of access and levels of alcohol consumption (Department of Health and Social Services, 1989, Plant et al, 1990b, Hawkins, Catalano and Miller, 1992 and Swadi, 1993).

Research into the effects of the minimum drinking age in the United States has shown that age of first easy access to alcohol is related to later rates of drinking. A legal drinking age of 18 years old was associated with higher drinking rates at 21 - 25 years old compared to when the legal drinking age was raised to 21 years old (Hingson, Scotch, Mangione et al., 1983 and O`Malley and Wagenaar, 1991). However despite the raising of the legal drinking age those in their early teens were still able to obtain alcohol (Wagenaar, Finneagan, Wolfson et al., 1993 and Forster, McGovern, Wagenaar et al., 1994).

Income : Available pocket money was found to be a relatively strong predictor of drinking by Grube and Morgan (1986 and 1990a). This result was also found in the United States (Bachman et al., 1981).

Price : As shall be discussed in greater detail under prevention, the price of alcohol, especially the amount of taxation on alcohol strongly influences alcohol consumption (Hawkins et al., 1992).

Advertising

Content analysis of alcohol on British television showed that on average there was a reference to alcohol every 6 ½ minutes (Grube and Wallack, 1994) and a similar analysis of alcohol use on prime time television in the United States showed about six alcohol related events per hour and that it usually was the "good

guys" who drink (Singer, 1985). Young children aged 4 - 15 years watch on average 3 hours of television per day, therefore television is a potentially powerful medium for observational social learning and the transmission of socio-cultural norms. Several of the popular soap-operas involve pub-scenes, e.g. Glenroe, Fair City, Cheers, Coronation St and Eastenders. It has been suggested that such portrayal of drinking has the potential to (1) influence expectations regarding the use of alcohol, (2) influence attitudes concerning the acceptability or appropriateness of alcohol use and (3) motivate people to model drinking behaviour (Fossey, 1994).

Studies which looked at the impact of starting or lifting advertising bans have shown them to have only a small impact on the overall sales of alcoholic drinks (Fossey, 1994). Research has indicated however that children and teenagers may be more sensitive to alcohol advertising and that television advertising reinforces "underage drinking" (Aitken, Eadie, Leather et al., 1988 and Grube and Wallack, 1994). One study showed that awareness of television beer advertising was related to more favourable beliefs, knowledge and intentions to drink as an adult (Grube and Wallack, 1994). This information suggests that alcohol advertising does reinforce underage drinking, and while it may not per se encourage young people to drink, it influences patterns of use and preferences of alcoholic beverages.

Parental Influence

Parental influences are more important in the socialisation process in early and middle childhood, whereas peer influences become more important during adolescence, therefore peers may be more of an immediate influence during adolescence but parents may be more important in determining the long term attitudes and values of their children (Grube and Morgan, 1986 and Rogers, Harris and Jarmuskewicz, 1987).

According to Rogers et al. (1987) parental influences tend to be of four types :

1. Genetic influences.
2. Role models.
3. Parental attitudes and adolescents perception of these attitudes.
4. Parental alcohol abuse itself can lead to family instability and discord, which in itself causes emotional deprivation in children and inability to establish loving and caring relationships.

Parental drinking behaviour or role model : Parental drinking behaviour or perceived drinking behaviour has been shown to have a moderate effect on adolescent drinking (Adler and Kandel, 1981, Grube and Morgan, 1986, Morgan and Grube, 1989, Wilks, Callan and Austin, 1989, Hawkins et al., 1992 and Swadi, 1993). Howe`s review (1989) also felt that the role model of parental excess drinking led to a high-risk group of children for alcohol problems.

Parental attitudes or approval and disapproval : Biddle, Bank and Marlin (1980) examined both the setting of normative standards and modelling of behaviour. They found that parents were more likely to influence adolescent drinking through the normative standards they set, rather than the behaviour they model. Irish research confirms that parental attitude is more important than parental drinking behaviour (O`Connor, 1978, Grube and Morgan, 1986 and Morgan and Grube, 1989). In their 1994 report one of the factors which changed and may be linked to the increase in reported drinking in Dublin was a reduction of perceived parental disapproval. Plant, et al., 1990b in their English study found that adolescent heavy drinkers were less likely to report parental disapproval.

There is evidence in the literature that the relationship of parental attitudes to adolescent drinking is curvilinear. A moderate attitude is associated with more moderate adolescent drinking, while extreme attitudes, either being very permissive or equally being very restrictive are more likely to lead to problem drinking (Stacey and Davies, 1970, Grube and Morgan, 1986, Green et al., 1991 and Fossey, 1994).

For most children, though to a lesser extent in Ireland, their first experience of alcohol and socialisation to alcohol comes from parents and takes place in the home, supervised by adults. As the child grows older, in the mid teens, more drinking is done away from the home and away from adult supervision (Wilks et al., 1989, Green et al., 1991 and Swadi, 1993). It is therefore important that the child brings with him a set of controls (norms) which will enable him / her to properly regulate their drinking (Stacey and Davies, 1970). Social norms are learnt through controlled drinking in a family setting. Heavy drinkers have failed to learn norms controlling alcohol use (Budd, Eiser, Morgan et al., 1985). Drinking at home with parents is generally deemed to be a safe and secure environment in which to learn to drink in moderation. Parents who disapprove of drinking are more likely to force their children away from home which may lead to problems (Green et al., 1991).

Parental behaviours : Monitoring and maintaining a positive parent-child relationship are two aspects of parenting behaviour that are important influences on preventing problem adolescent drinking (Hawkins et al., 1992 and Cohen et al., 1994). Irish and other research also agrees with these findings. In a national study of adolescent drinking parental monitoring and lack of responsibility or reneging on it led to increased drinking (Johnson, 1991). Ghodsian and Power (1987) found that those who drank away from parental control had an increased alcohol consumption.

Fossey (1994) in a review found that there were three aspects which are considered important influences. (1) Family support e.g. cohesion, lack of conflict, affection, warmth, trust and concern, (2) family control e.g. rules, discipline, permissiveness, adaptability and (3) family structure e.g. family or parental intactness. Fossey`s review found that good family support with warm, trusting and loving parent-child relationships and intact family structure led to reduced adolescent drinking. A curvilinear relationship was found between family control and drinking with excessive permissiveness or discipline both leading to increased drinking.

Sibling drinking has also been found to be related to adolescent drinking (Hawkins, et al., 1992 and Fossey, 1994).

Peer Influence

Unlike parental influence where parental approval / disapproval was found to be a better predictor than parental drinking behaviour, with peers it is peer drinking that is the important predictor, with peer attitude or approval not being a very significant predictor (O`Connor, 1978, Grube and Morgan, 1986, Morgan and Grube, 1989, Grube and Morgan, 1990a, Hawkins et al., 1992, Fossey, 1994 and Morgan and Grube, 1994). In fact in all of Grube and Morgans` research peer drinking has been consistently been found to be one of the most important predictors of drinking behaviour.

The term "peer pressure" is really a misnomer, as the only peers that are of importance are friends especially close friends, and part of the effect of peer drinking is due to adolescents seeking out other friends who have similar behaviours and attitudes (Morgan and Grube, 1989). This ties in with the finding of other researchers who felt that peer influence had a significant effect on the development and maintenance of alcohol use, but was not as important in the initiation of alcohol use (Rogers et al., 1987). It is more useful to think of peer influence to drink alcohol as being a result of peer interaction rather than peer " pressure" (Fossey, 1994).

Older adolescent consumption levels tend to approach normal adult levels and then to stabilise. Therefore peer influence alone does not necessarily lead to the adoption of more reckless and more unsafe drinking habits (Fossey, 1994). Adolescents whose socialisation to alcohol occurs primarily within the family environment are less likely to become heavy or problem drinkers than those whose socialisation occurs primarily among peers (Fossey, 1994). Heavy drinkers are much more likely to report that their most recent drinking companions were friends rather than parents or relatives (Plant et al., 1990a and Fossey 1994), and to report drinking in pubs with their friends, rather than at home (Department of Health and Social Services, 1989 and Swadi, 1993).

O`Connor (1985) as quoted by Bagnall (1988) found that Irish adolescents are more likely to have their first drink in the company of friends and generally without the knowledge of their parents. The Northern Ireland drinking survey in 1988 also found that the students were more likely than their United Kingdom counterparts to drink away from parental controls in unspecified places and while fewer drank those who did were heavier drinkers (Department of Health and Social Services, 1989).

Cultural influences

Factors that control average alcohol consumption in a nation are economic factors (price and income elasticities), formal controls (licensing laws) and informal controls which are the customs and moral beliefs in a society that determine who should drink, where, when and how much, that is cultural factors (Gelder,

Gath and Mayou, 1986, Hawkins et al., 1992 and Conniffe and McCoy, 1993). Social tolerance for illegal consumption, poor enforcement of underage drinking laws and a culture that encourages alcohol consumption have all been linked to adolescent drinking (Novello, 1992 and Swadi, 1993).

Social Class

Studies and reports have shown that unemployment, poverty and lower social class or manual class are related to the prevalence of heavy alcohol use among adults (Whitehead, 1988, Jacobsen et al., 1991 and North et al., 1993). As with smoking however the majority of adolescent surveys do not show a social class correlation with alcohol use (Bachman et al., 1981, Kandel et al., 1981, Grube and Morgan, 1986, Morgan and Grube, 1989, Grube and Morgan, 1990a, Hawkins et al., 1992 and Morgan and Grube, 1994). One study which did find a correlation between adolescent drinking and social class was the study by Green et al. (1991) which examined a cohort of adolescents in Scotland and the association between drinking behaviours of parents and their adolescent children and the effect of social class on this association. They found that social class was independently associated with young peoples drinking with young people from non-manual households being most likely to drink.

Social Bonding Theory

School : In Irish and international studies which have looked at alienation from school a strong association was found between alienation and drinking (Grube and Morgan, 1986, Nutbeam, et al.,1993 and Morgan and Grube, 1994). Self-reported truancy was shown to be one of the strongest links with alcohol consumption by Bachman et al. (1981). Heavy drinking has been characterised by poor academic performance (Stacy and Davies, 1970, Jessor and Jessor, 1975, Donovan, Jessor and Jessor, 1983, Barnes and Welte, 1986 Blum, 1987, Harford and Grant, 1987 and Hawkins et al., 1992).

Religion : Similarly bonding to the church or religion has been shown to have a relationship to adolescent drinking with frequent attendance at religious services associated with reduced lifetime and current drinking (Stacy and Davies, 1970, Jessor and Jessor, 1975, O`Connor, 1978, Bachman et al., 1981, Kandel et al ., 1981, Donovan et al., 1983, Grube and Morgan, 1986, Blum, 1987, Swadi, 1993 and Morgan and Grube, 1994).

Location

Research done in the States has shown that rural populations have higher rates of alcohol abuse, alcohol dependence and problem drinking than urban populations. National surveys have shown that rural high school seniors are more likely than urban students to report daily alcohol use (Kelleher, Rickert, Hardin et al., 1992). Similar findings have been found in Ireland (Mac Hale, 1994).

Personal Characteristics

Problem Behaviour Theory: Problem behaviour and tolerance of deviance have been linked with adolescent drinking. Problem behaviour is defined as behaviour that departs from the norms both social and legal of the larger society (Jessor, 1987). Research by the Jessors provided support for this theory as an explanation of drinking, problem drinking, marijuana use, general delinquent-type behaviour and premature sexual intercourse in adolescence and youth (Donovan et al., 1983).

Personality proneness to problem behaviour consists of lower value on academic achievement, higher value on independence (unconventionality), lower expectation of attaining goals, lower self-esteem, more belief in external control (luck), greater tolerance of deviance, less religiosity and greater positive versus negative beliefs about the effects of alcohol, and fewer reasons against drinking. Proneness to problem behaviour is associated with higher involvement in other problem behaviours than the one being predicted and lower involvement in conventional behaviour (social bonding theory) (Jessor, 1987).
In Irish studies Grube and Morgan found a slight link between alcohol use and tolerance of deviance but none with value for independence (1986). In another study they tested this theory and found that alcohol and drug use among the Irish students was relatively independent of a general tendency toward deviance and concluded that the general deviance theory may be culturally specific and relevant only for adolescents from the United States and similar cultural contexts (Grube and Morgan, 1990b). As stated by Stacey and Davies (1970) no straight forward relationship exists between excessive or abnormal drinking and anti-social behaviour. Whatever the relationship it is not a simple cause and effect one but excessive alcohol consumption does seem to be a manifestation of a general state characterised by anti-social behaviour.

During childhood and adolescence, drinking becomes more frequent with increasing age. Since drinking is an integral part of the lifestyle of a clear majority of adults, the drinking behaviour of youth in general may be viewed as part of an anticipatory socialisation process, and one of the normal concomitants of the transition from childhood to adulthood. Since all teenagers move from a childhood culture which is predominantly abstemious into an adult culture in which abstainers constitute a minority, it is not realistic to view the drinking behaviour of teenagers who have not reached the age of majority as being, overall deviant. Certain individuals may be so classified if their pattern of consumption is pathological and harmful (Stacy and Davies, 1970).

Age of first drink : Research by Chou and Pickering (1992) showed a clear inverse association between age of first drink and number of symptoms and lifetime related problems associated with drinking over the life course. The younger people were when they start drinking the more symptoms they develop later on. The sharpest decline in prevalence of respondents experiencing lifetime symptoms occurred at the age at first drink category of 20 - 21 years old. In other reviews it was found that those who begin to use alcohol within the critical 14 - 16 year old period are more inclined to become frequent abusers of alcohol, cigarettes and marijuana than those who begin drinking later on (Hawkins et al., 1992, Smith, 1993 and Fergusson, Lynskey and Horwood, 1994b). Those who drink at an early age are also at a higher risk of later addiction

(Gonzalez, 1989 and Swadi, 1993). First becoming drunk at an early age is also associated with heavy drinking (Barnes and Welte, 1986).

Curiosity is one of the commonest reasons given for experimenting with alcohol. Other major reasons include “To feel big, show off, look grown up (Wright and Pearl, 1990 and Wright and Pearl, 1995).

3.7 ***Reasons for increase in adolescent drinking in Ireland***

The recent study by Morgan and Grube (1994) has shown a large increase in the number of adolescent drinkers. The reasons are not clear but the large increase in drinking by girls may reflect the fact that the sex roles and related norms in Ireland have changed rapidly in recent years. Drinking simply may be more acceptable for girls now than in the past.

Accessibility of alcohol also appears to have increased in Ireland and may be partly responsible for the increase in adolescent drinking here. In the past Ireland has had some of the strictest licensing laws in Europe. Hours of sale, number of licences and off-sale availability had been strictly controlled. Recently these laws have been relaxed. It is also possible that bonding to traditional social institutions (family, church and school) has fallen in recent years among Irish youth (Grube, Chen, Madden et al., 1993).

3.8 ***Factors associated with illicit drug use***

As with alcohol drinking, gender and age are significantly associated with illicit drug use with the prevalence being much higher among boys and among the older age groups (Grube and Morgan, 1986, Blum, 1987 and Grube and Morgan, 1990a).

Attitudes and Beliefs

Attitudes and beliefs are as defined in the section on smoking. Research has shown a relationship between drug use initiation and specific attitudes and beliefs regarding drugs. Initiation into use of any substance is preceded by values favourable to its use (Hawkins et al., 1992).

Fishbein and Ajzen`s theory predicts drug use on the basis of attitudes and norms. To use or not use a drug can therefore be seen as a reasoned action based on these personal attitudes, norms and beliefs. In research on adolescent drug use, use of this theory differentiated between regular, occasional, experimental and never users. (Budd, Bleiker and Spencer, 1983). Children usually have negative drug attitudes in childhood. If these attitudes become more favourable to drug use, then they are more likely to use drugs (Zarek, Hawkins and Rogers, 1987).

Other reviews of the literature also indicate that positive attitudes and beliefs to drugs predispose toward drug use (Davies and Coggans, 1991, Berman and Noble, 1993 and McDonald and Towberman, 1993). Irish studies have tended to agree with these findings (Lockhart and Lennox, 1983, Grube and Morgan, 1986 and Grube and Morgan, 1990a).

Whatever the causal factors for drug use, they probably have a major impact by changing individuals` attitudes toward drugs and their willingness to use drugs. An example of this change in attitude in reducing drug use has occurred recently in the United States with the increased perceived harmfulness and risks associated with drug use occurring at the same time as the reduction in prevalence of adolescent drug use in the United States. Attitudes appear to be the crucial proximal determinant of drug use (Kandel, 1991 and Smith, 1993).

Availability

Adolescent drug use may be the result of an interaction between personal predisposition towards drug use e.g. beliefs, attitudes and personality) and access to drugs in the environment (Grube and Morgan, 1990a). The availability of drugs is dependent in part on the laws and norms of society. Physical availability is a separate factor. Whether or not a drug is legal, their availability will vary and has been shown to be linked to adolescent drug use (Hawkins et al., 1992, Babor, 1994 and Fossey, 1994). Because of the illicit nature of drug use it is difficult to say what the availability of the various illicit drugs are. Volatile solvents are easily available in shops, come in small easily portable packages and are cheap (McHugh, 1987).

From personal research into local availability of illicit drugs, it would appear that “recreational” drugs like cannabis, L.S.D, amphetamines, and ecstasy are relatively accessible, with cannabis being by far the most available. Drugs like heroin are not available locally and while cocaine is available it is outside the price range of the adolescents.

Amount of pocket money has been shown to have a significant and moderately large association with adolescent drug use (Bachman et al., 1981, Shelley et al., 1982, Shelley et al.,1984 and Grube and Morgan, 1986).

Parental influences

Parental drug use:

Studies which have looked at the influence of parental illicit drug use on adolescent drug use, have shown an association with adolescent drug use (Newcomb, Maddahian and Bentler, 1986, Maltzman and Schweiger, 1991, Hawkins et al., 1992 and Berman and Noble, 1993). Parental alcohol abuse has been shown to be associated with subsequent adolescent drug use including solvent use (Watson, 1980, Kandel and Raveis, 1989, Plant, Orford and Grant, 1989, Orford and Velleman, 1990, Maltzman and Schweiger, 1991, Hawkins et al., 1992, Berman and Noble, 1993 and Caputo, 1993). A history of parental pill-taking especially of medically prescribed psychoactive medication has been shown to be linked to drug use (Timms and Carney, 1977 and Kandel and Raveis, 1989).

Parental attitude or approval / disapproval :

Familial tolerance for alcohol or drug use has been linked to adolescent drug use (Blum, 1987 and Hawkins et al., 1992). In Grube and Morgan`s study (1986) they found that perceived parental disapproval had only a small effect on drug use, while in the follow up study the only predictor which was linked to the slight increase in drug use was increasing lack of parental disapproval (1990). It is felt that parental influence is exerted more by the norms that are established and is therefore a more distal influence than peer influence which appears to be more a function of modelling of drug using behaviour (Biddle et al., 1980). Peer influence is felt to be relatively immediate and transitory in comparison to parental influence (Swadi and Zeitlin, 1988). Other studies have also shown a link between parental attitudes and adolescent drug use (Pandina and Schuele, 1983).

Parenting Behaviour :

Family dysfunction is related to drug use in adolescents (Biddle et al., 1980, Davies, 1986, Blum, 1987, Hawkins et al., 1992 and Swadi, 1992a). Absence of one or other of the biological parents was found to be related to drug use especially solvent use (Biddle et al., 1980, Watson, 1980, Brookman, 1986, McHugh, 1987, Pritchard and Cox, 1990, Chadwick, 1991 and Smith and Nutbeam, 1992) though other studies did not find such a relationship (Plant, Peck and Stuart, 1984 and Bachman, Johnston and Humphrey, 1988).

Kandel (1982) concluded that perceived lack of closeness to parents was an especially strong predictor of initiation into illegal drugs (other than marijuana) and could account for 40% of the explained variance of the factors involved. Schweitzer and Lawton (1989) in their study of drug abusers found that drug abusers judged their parents as cool, indifferent, controlling and intrusive. Coldness and indifference in parents precludes the development of a sense of self-worth, and excessive intrusiveness often results in rebellion which has been shown to be a motivation for drug use.

In another study in Australia the quality of the family relationship was closely related to adolescent unhealthy or acting out behaviour. Where the family relationship was not close or loving the prevalence of substance use and of early sexual activity was twice as high as those where the family relationship was perceived as close (Reynolds and Rob, 1988). The findings in the literature are consistent with these studies (Tennant, Detels and Clark, 1975, Pandina and Schuele, 1983, MacDonald, 1984, Newcomb et al., 1986, Kandel and Raveis, 1989, Stoker and Swadi, 1990 and Hawkins et al., 1992).

Parental monitoring is associated with substance use especially at the stage of initiation for both boys and girls. Poor parental monitoring e.g. unsupervised care at home after school, or adolescents who are unsupervised outside the home, where the parents are unaware of their whereabouts and unengaged parenting style (little communication or involvement with the children) leads to increased adolescent drug use and seeking out like-minded or drug using friends (Watson, 1980, Richardson, Dwyer, McGuigan et al., 1989, Hawkins et al., 1992, Richardson, Radziszewska, Dent et al., 1993 and Steinberg, Fletcher and Darling, 1994).

Poor family management practices increase the risk that children will abuse alcohol and other drugs. Poor management includes unclear or inconsistent rules for behaviour, inconsistent reactions to children's behaviour, lax supervision or monitoring of children's behaviour, excessively severe discipline and negative communication patterns including constant criticism and an absence of praise. Poor family supervision and management weaken family bonding. In contrast positive family relationships and attachment to parents are negatively related to adolescent drug use (Zarek et al., 1987, Hawkins et al., 1992, Berman and Noble, 1993 and Wada and Fukui, 1993).

Peer influence

Adolescent drug use especially solvent use is generally considered a peer group activity (Caputo, 1993).

Peer approval: This has been shown to have a moderate relationship with adolescent drug use (Grube and Morgan, 1986).

Peer drug use : This has been shown to be one of the strongest predictors of adolescent drug use being more important than peer approval with the influence of best friend being especially important (Kandel, 1980, Pandina and Schuele, 1983, Grube and Morgan, 1986, Newcomb et al., 1986, Swadi and Zeitlin, 1988, Kandel, 1991, Hawkins et al., 1992 and Swadi, 1992a). Peer drug use is a significant predictor for both initiation and maintenance of drug use (Zarek et al., 1987,Grube and Morgan, 1990a, Berman and Noble, 1993, Cousineau, Savard and Allard, 1993 and Steinberg et al., 1994).

Initiation into drug use happens most frequently through the influence of close friends and provision of the drugs by friends rather than drug offers from strangers (Biddle et al., 1980, Watson, 1980, Robinson et al., 1987, Swadi, 1992b and Fergusson, Lynskey and Horwood, 1993a).

"Peer pressure" is generally over emphasised. Youths` perception of peer drug use is even more important than actual peer drug use (Biddle et al., 1980 and Gruge and Morgan, 1986). Adolescents see more social support for drug use than actually exists. Peers that are not close to the individual do not have an influence on drug use, therefore parents need not worry excessively about "peer pressure" causing their children to use drugs.

It is believed that the most important factor in friendship is similarity, that is where they share similar habits, attitudes, social characteristics or personal characteristics. Similarity develops through two processes ; selection (like seeks out like) and socialisation (similarities develop after association) and are the result of interpersonal influences (Swadi and Zeitlin, 1988). It is believed that selection may be the most important part (Morgan and Grube, 1989).

Susceptibility to peer influence is related to the degree of attachment to and reliance upon peers relative to parents, and as stated lack of attachment to parents is a strong predictor of initiation to drugs other than marijuana (Kaplan, Martin and Robbins, 1984).

The developmental theory refers to changes of influence due to maturation from parents to peers which occurs between the ages of 11 to 14 years. Parental influence lessens towards mid-teens and only peer influence affects initiation to drug in the late teens (Bailey and Hubbard, 1990).

Social class

Social class was not found in most studies to be a significant predictor of adolescent drug use unlike adult drug use (Bachman et al., 1981, Kandel et al., 1981, Shelley et al., 1982, Plant et al., 1984, Shelley et al., 1984, Plant, Peck and Samuel, 1985, Grube and Morgan, 1986 and 1990a, Hawkins et al., 1992 and Smith and Nutbeam, 1992).

Other school-based surveys on adolescent drug use found that social class was a factor with lower social class associated with a higher likelihood of using drugs, but the influence of this factor was slight (Robinson et al., 1987 and Davies and Coggans, 1991).

Studies of volatile solvent abuse on the other hand tend to consistently find an association between lower social class and solvent use (Brookman, 1986, Davies, 1986, Pritchard and Cox, 1990, Davies and Coggans, 1991, Dinwiddie, Reich, and Cloninger, 1991a, Caputo, 1993 and Dinwiddie, 1994). Volatile solvent abusers have been found to be significantly more likely to come from large families, with chaotic backgrounds, slightly more likely for the family to be in rented accommodation and slightly more likely to come from manual occupation or unemployment backgrounds (Chadwick, 1991 and Dinwiddie, 1994).

As already mentioned adult drug use is consistently found to be associated with lower social class (Helzer, Robins and Davis, 1975/6, Health Promotion, 1988, Bury, 1989, Jacobson et al., 1991 and O`Higgins and O`Brien, 1994). There are probably two reasons for the discrepancy in this predictor. The first is visibility. A drug problem is much more likely to come to light in a deprived area. The second reason has to do with experimentation versus becoming a drug addict. There is some evidence that a young person from a deprived background may be more likely to become a drug addict than someone from a middle-class background (Morgan and Grube, 1989).

Social bonding

Attachment to parents in connection with adolescent drug use has already been discussed.

School : As expected alienation from school as measured by attitudes toward school, truancy and academic achievements is linked to adolescent drug use (Jessor, Chase and Donovan, 1980, Kandel, 1980, Watson, 1980, Bachman et al., 1981, Brookman, 1986, Grube and Morgan, 1986, Newcomb et al., 1986, Blum, 1987, Kandel and Raveis, 1987, McHugh, 1987, Robinson et al., 1987, Zarek et al., 1987, Bachman, et al., 1988, Block, Block and Keyes, 1988, Kandel and Raveis, 1989, Chadwick, Yule and Anderson, 1990, Pritchard and Cox, 1990, Chadwick, 1991, Kandel, 1991, Hawkins et al., 1992, Swadi, 1992b, McDonald and Towberman, 1993, Smith, 1993 and Schulenberg, Bachman, O`Malley et al., 1994).

In a study in the United Kingdom comparing truants and non-truanting peers aged 14 - 16 years old, the truants had three times the level of solvent misuse (14% versus 4%), three times the soft drug misuse (19% versus 6%) and four times the involvement with hard drugs (9% versus 2%) (Pritchard, Cotton and Cox, 1992). There is an inverse relationship between education and current drug use and with persistence of use among those who ever experimented. In fact education is positively associated with cessation of use (Kandel, 1991)

Religion : Like school alienation, reduced bonding to religion has been found to be associated with adolescent drug use (Tennant et al., 1975, Jessor et al., 1980, Bachman et al., 1981, Kandel et al., 1981, Grube and Morgan, 1986, Newcomb et al., 1986, Blum, 1987, Zarek et al., 1987, Bachman et al., 1988 and Kandel and Raveis, 1989). Religion was not found to be related in other studies (Plant et al., 1984 and Bachman et al., 1988).

Cultural Factors

Cultural factors can be divided into norms promoting or prohibiting substance use, and formal legal laws (Hawkins et al., 1992 and Berman and Noble, 1993). The behaviour of users within a culture is in part determined by broader social-cultural factors and in particular the overall pervasiveness of the use of drugs in that culture. The higher the overall societal levels, the greater the involvement in drugs on the part of the users, the more persistent the use, the earlier the age of onset into the use of drugs and the greater the spread of the phenomenon throughout all groups in society, with an attenuation of intergroup differences in patterns of use (Kandel, 1991). Drug use especially solvent use has been linked to certain impoverished ethnic minority groups (Caputo, 1993 and Dinwiddie, 1994).

Urban versus Rural

Illicit drug use is less common in rural than in urban areas (Bachman, et al., 1981, Plant, 1989 and Kandel, 1991) This effect can also be seen in Ireland by comparing the rates found in Dublin in 1982 (Shelley et al., 1982) versus those found in a national study two years later (Shelley, et al., 1984), and comparing the rates found in Dublin nearly ten years later (Grube and Morgan, 1990a) with those found in Galway county (Mac Hale, 1994).

Personal characteristics

Problem behaviour theory: Problem behaviours are defined by their departure from social norms and their likeliness to elicit negative sanctions. Problem behaviour theory as proposed by the Jessors suggests that tendency to problem behaviours can be accounted for by the interaction of demographic, psychological (attitudes, beliefs, etc.,), social environmental (effects of peers and adults), and behavioural factors. Behavioural factors represent the degree of involvement in other problem behaviours and in socially approved behaviours. Substance use can be considered a single behaviour regardless of the specific substance(s) used and substance use can be considered part of a syndrome of adolescent problem behaviours (Robinson et al., 1987 and Hawkins et al., 1992).

This theory is supported by the literature which finds an association between drug use and deviant or delinquent behaviour including crime (Wills, 1971, Gordon, 1973, Helzer et al., 1975/1976, Crawford, 1978, Jessor et al., 1980, Bachman et al., 1981, Kraus, 1981, Rounsaville, Weissman, Wilber et al., 1982, Ball, Shaffer and Nurco, 1983, Benson and Holmberg, 1984, Kandel, 1984, Nurco, Ball, Shaffer et al., 1985, Kandel, Simcha-Fagan and Davies, 1986, Mott, 1986, Newcomb et al., 1986, King and Coleman, 1987, Nurco, 1987, Zarek et al., 1987, Bean and Wilkinson, 1988, Block et al., 1988, Brown, 1989, Hammersley, Forsyth and Morrison et al., 1989, Kandel and Raveis, 1989, Dinwiddie, Reich and Cloninger, 1990, Hammersley, Forsyth and Lavelle, 1990, Pritchard and Cox, 1990, Smart and Patterson, 1990, Tomas, Vlahov and Anthony, 1990, Chadwick, 1991, Farrell, Danish and Howard, 1992, Fazey, 1992, Hammersley, Lavelle and Forsyth, 1992, Swadi, 1992a, Berman and Noble, 1993, Huizinga, Loeber and Thornberry, 1993 and Wills, Vaccaro and McNamara, 1994). The vast majority of these studies have reported that the delinquent behaviour preceded or coincided with the onset of drug use, therefore the cost of the drug use is not responsible for the crimes in most cases.

Irish studies of adolescent drug use have not found such a strong link between deviant behaviour. Grube and Morgan in their 1986 study and 1990 study did find that tolerance of deviance was associated with drug use but not value for independence. They felt that the problem behaviour theory may be culturally specific for the United States or similar cultures (Grube and Morgan, 1990b).

Drug use is also associated with conduct disorders in childhood (Zarek et al., 1987, Dinwiddie, Reich and Cloninger, 1992a, Boyle, Offord, Racine et al., 1992 and Swadi, 1992c). In a study of New Zealand children, conduct disorder in childhood was associated with between a 2.1 to 2.7 times increase in the risk of early cannabis use by the age of 15 years (Fergusson, Lynskey and Horwood, 1993b).

Related with the problem behaviour theory is the relationship which is found between drug use and early sexual activity, multiple partners, not using a condom and sexually transmitted diseases (Davis et al., 1990, McAnarney, 1990a, Orr, Beiter and Ingersoll, 1991, Farrell et al, 1992, Swadi, 1992b, Blanken, 1993, Kipke,

Montgomery and MacKenzie, 1993, Smith, 1993, Lowry Holtzman, Truman et al., 1994 and MacHale, 1994).

Curiosity or boredom : These are associated with adolescent drug use and are linked to the initiation of drug use (Quinn, 1986, Dunne, 1993 and Fossey, 1994). Watson in his review of solvent use (1980) found that most experiment out of curiosity and that only $^{1}/_{5}$ become regular users.

Age at initiation : Early age of onset of drug use before 15 years old, is a predictor for heavier subsequent drug use, more persistent drug use and the abuse of harder drugs (Tennant et al., 1975, Blum, 1987, Zarek et al., 1987, Hawkins et al., 1992, Swadi, 1992b and Berman and Noble, 1993)

Other personality traits : Adolescent drug use is related to risk taking as a general personality trait (Adlaf and Smart, 1983), being disinhibited, novelty seeking, being hyperactive and emotionally labile, impulsiveness, low harm avoidance and under-control of behaviour (Blum, 1987, Block et al., 1988, Clark Sommerfeldt, Schwarz et al., 1990, Hawkins et al., 1992, Berman and Noble, 1993 and Wills et al., 1994).

A statement on drug abuse produced by the Home Office in the United Kingdom in 1985 as quoted by Fossey (1994) states - " There is no single cause of drug misuse. It is not even possible to say with any confidence what the main factors are. Many explanations have been offered : ready availability of drugs, personality defects, poor home background, peer group pressure, poor relationships, lack of self-esteem, youthful experimentation and rebellion, boredom and unemployment. All of these factors probably play some part. But there is no convincing evidence that any one - or any combination - of these factors is of greater significance than the rest."

3.9 *Relationship between substance use*

In most studies of substance use a relationship has been found between use of one substance and another. Research in Ireland has confirmed this relationship. In the Dublin post-primary school children survey of 1970 it was found that in both sexes smoking and drinking were highly correlated (O`Rourke et al., 1974, Shelley et al., 1982, O`Rourke et al., 1983 and Shelley et al., 1984. In the Kilkenny school survey, in both sexes smoking and drinking were highly correlated. Over 55% of the regular smokers were also drinkers, compared to 3% of non-smokers who were drinkers. The authors pointed out that this emphasised the need for a comprehensive approach to health education (O`Reilly and Shelley, 1991).

Research from Northern Ireland corroborates this association between smoking, drinking and drug use (Craig et al., 1991 and the Health Promotion Agency, 1995), as does international research (Jessor et al., 1980, Plant et al., 1984, Jessor, 1987, MacFarlane, McPherson, McPherson et al., 1987, Bagnall, 1988, Pritchard and Cox, 1990, Green et al., 1991, Kokkevi and Stefanis, 1991, Townsend et al., 1991, Swadi, 1992b, Gray, 1993, Fergusson et al., 1994a, Schorling, Gutesell, Klas et al, 1994 and Weill and LeBourhis, 1994).

Volatile substance use has been identified as having a stronger association than cannabis use with use of other illicit drugs including intravenous drug use than cannabis (Chadwick, 1991, Dinwiddie et al., 1991a, Dinwiddie, Reich and Cloninger 1991b, Dinwiddie, 1994 and Schutz, Chilcoat and Anthony, 1994).

Natural history of progression from licit to illicit drugs: Pioneering work on the stages of drug use has been done by Denise Kandel. In 1975 Kandel and Faust identified the usual pathway of progression for American adolescents. This entailed progressing from; beer and/or wine; cigarettes and/or hard liquor; marijuana and finally other illicit drugs (pills, hallucinogens, cocaine and then heroin). They found that 40% of the sample who were heavy users of alcohol and cigarettes moved up to marijuana, and half of these progressed to other illicit drugs. They found that progression to a higher ranked drug was directly related to the intensity of use of the drug at the prior stage (Kandel and Faust, 1975).

Further longitudinal research by Kandel both in the United States and in Europe found that this pattern of progression, with minor differences held in other developed countries and continues to the present day. This further research found that those who had not experimented with cigarettes, alcohol or drugs by the age of 20 years were unlikely to do so and that the earlier the age of onset to each step, the more likely was the progression to the next stage and ultimately to illicit drugs and the final stage identified, use of prescribed psychoactive medication. *Initiation to alcohol / cigarettes at age 14 years or younger versus initiation after the age of 16 years was especially predictive of progression to illicit drugs.* A maturational process was identified with a falling of in use of the illicit drugs as the cohort aged, but not so with the licit drugs, cigarettes and alcohol (Adler and Kandel, 1981, Kandel, 1982, Kandel and Logan, 1984, Yamaguchi and Kandel, 1984a, Yamaguchi and Kandel, 1984b, Raveis and Kandel, 1987, Kandel, 1991, Kandel, Yamaguchi and Chen, 1992 and Kandel and Yamaguchi, 1993). At all times Kandel emphasised that these stages were not obligatory or universal, in other words alcohol / cigarette use does not lead inevitably to use of marijuana, nor use of marijuana to use of other illicit substances, but that use of a drug at a higher stage is usually preceded by use of a drug earlier on in the sequence. Only a subgroup of adolescents most at risk are at risk for further progression.

Similar developmental stages have been reported by other researchers, some with minor variations (Rounsaville et al., 1982, Donavan and Jessor, 1983, Kaplan et al., 1984, Robins, 1984, Holmberg, 1985c, American Academy of Pediatrics, 1987, Blum, 1987, Pierce and Levy, 1987, Silvis and Perry, 1987, Henningfield, Clayton and Pollin, 1990, Bagnall, 1991, Blum, 1991, Dinwiddie, Reich and Cloninger, 1991b, Morrison and Plant, 1991, Blaze-Temple and Kai, 1992, Dinwiddie, Reich and Cloninger, 1992b, Hammersley et al., 1992, Glynn, Greenwald, Mills et al., 1993, Blanken, 1993, Elders, Perry, Eriksen et al., 1994 and the Center for Disease Control and Prevention, 1994b).

A recent study found that in adolescents it was not just the mere frequency or quantity of cigarettes or alcohol consumed which were risk factors for progression to illicit drugs, but that progressively increasing frequency and quantity of use was more predictive than initial heavy use (Bailey, 1992).

3.10 *Prevention*

The Ottowa Charter for Health Promotion (1986) provides a framework for preventive strategies against addictive substances recognising the need for a comprehensive approach.

1. Build a healthy public policy. It is public policy which determines the legal status of a drug. Strategies included under this heading include -
    a. Trade.
    b. Availability.
    c. Price.
    d. Minimum legal age.
    e. Advertising.
2. Develop supportive environments
3. Community action
4. Development of personal skills
5. Reorienting the health services

A combined approach to the prevention of alcohol, tobacco and drug use is recommended, which emphasises the financial and economic consequences of drug use, and seeks to strengthen or develop links with partners outside the immediate health care area (Anderson, 1994).

3.11 *Smoking Prevention*

Build a healthy public policy

Availability / Minimum legal age:

The Tobacco (Health Promotion and Protection) Act 1988 in Ireland prohibits the direct sale of tobacco products by tobacconists and other retail outlets to minors less than 16 years old, and the sale of cigarettes in packets containing less than 10 cigarettes. The Tobacco (Health Promotion and Protection) Regulations 1990, prohibit or restrict the smoking of tobacco in designated public areas (Corrigan, 1991).

Public policy such as enforcement of legislation re underage cigarette sales was one of the recommendations to reduce smoking by the Faculty of Community Medicine Ireland (now the Faculty of Public Health Medicine) in 1988. However the evidence in Ireland shows that these Acts are not being enforced. Doorley and Hynes, in November 1993 could report to the Royal College of Physicians that 81% of 130 tobacconists failed to comply with the underage legislation by selling to 12 year olds, and smoking was found in public areas of all six Dublin hospitals that were visited which showed that there was no implementation or

enforcement of the regulations (Mulcahy, 1994 and Doorley and Hynes, 1995). Many other authors also recommend that legislation regarding underage smoking should be more strictly enforced including reducing availability through vending machines as these measures have the potential to reach all youth unlike school-based approaches (Di Franza, Norwood, Garner et al., 1987, Kirn, 1987, Amos, 1990, Chambers et al., 1991, Roper, 1991a, Waxman, 1991 and Glynn et al., 1993).

Studies have shown that relying on voluntary self-regulation or compliance with minors` access laws even after merchant education programmes (which can have short-term effects) fails to stop illegal sales to children in the long term and adequate enforcement is needed with the threat of penalties or additional measures like suspension or revocation of tobacco selling licence can have an important impact on tobacco use by adolescents (Di Franza et al., 1987, Altman, Foster, Rasenick-Douss et al., 1989, Center for Disease Control, 1990, Chambers et al., 1991, Davis, 1991, Feighery, Altman and Shaffer, 1991, Foster, Hourigan and McGovern, 1991, Jason, Ji, Aneo et al., 1991, Di Franza and Brown, 1992, Forster, Hourigan and Kelder, 1992, Ward-Hinds, 1992, Chapman, King, Andrews et al., 1994 and Cummings, Pechacek and Shopland, 1994).

Smoking restrictions in public and work places and in schools contribute to a social climate in which smoking is unacceptable and is associated with reduced cigarette consumption of up to 6% in adults and 40% in adolescents (Pentz, Brannon, Charlin et al., 1989, Wasserman, Manning, Newhouse et al., 1991 and Raw and McNeill, 1994).

Price / Taxation Policy :

One of the most clearly and strongly established facts in the tobacco control field is that as tobacco prices increase, consumption decreases and with falling real prices, consumption increases (Townsend, 1993). Fiscal measures in the form of taxation and positive incentives to non-smokers such as lower life and health insurance rates were also among the measures recommended by the Faculty of Community Medicine Ireland, 1988 to achieve the target of reduced smoking as well as by other international authors (Amos, 1990, Chambers, et al., 1991, Dillner, 1991a, Maynard, 1991, Cumings et al., 1994 and Raw and McNeill, 1994).

There has been a definite inverse relationship found in Ireland also between the real price of cigarettes and total cigarette consumption. Tobacco price relative to all items increased from 1.05 in 1983 to 1.27 in 1988 and consumption decreased in the same period from 6535 million cigarettes per annum to 5598 million in the same period. Price fell slightly to 1.26 in 1989 and consumption increased subsequently to 5613 million (Townsend, 1991).

It is believed that adolescents and those from the lower socio-economic groups are more sensitive to changes in price and that an increase in price or taxation would therefore be more effective with these groups in reducing cigarette consumption (Godfrey and Maynard, 1988, Lewit, 1989 and Raw and McNeill, 1994). In

fact increases of tax in Canada are estimated to have reduced adult smoking by 35% and adolescent smoking by 62% (Roper, 1991b and Elders et al., 1994). Another important point is that unlike school based programmes tax increases affect all adolescents (Glynn et al., 1993).

There are limits to the further development of this policy in Ireland however. By 1986 Ireland had the highest tobacco prices in relation to income of the 22 Organisation for Economic Co-operation and Development countries. Average tobacco prices in the OECD would have to be raised 184% to bring them up to the 1986 Irish levels in relation to income (Laugeson and Meads, 1991). Where prices are lower in one country than their neighbouring country like Ireland and the United Kingdom the danger of cross-border smuggling increases (Raw and McNeill, 1994). European Union proposals for a single rate of duty would be expected to result in a lowering of price in Ireland with a subsequent increase in consumption (Dillner, 1991a).

Advertising :

Review of econometric data concludes that advertising bans do reduce cigarette consumption, as has been found in New Zealand, Canada, Finland and Norway (Townsend, 1992 and Raw and McNeill, 1994). A separate study which looked at the effect of the ban in Norway among 13 - 15 year olds found that the prevalence of smoking fell in this group from 17% in 1975 to 10% in 1990 (Vickers, 1992). A cross sectional study of the 22 countries in the Organisation for Economic Co-operation and Development reported a significant effect at different levels of severity of advertising restrictions. Countries were scored from 0 - 10 according to severity. In 1986, Ireland was given a score of 5.5. The study suggested that each point was associated with a 1.5% decrease in consumption. This implies that an advertising ban would reduce consumption by 6.75% in Ireland (Laugesen and Meads, 1991). Australia, Canada, New Zealand and other countries have recognised that partial bans and voluntary agreements don't work (Amos, 1990).

Time series analyses which may underestimate the effects, estimate than a total ban would result in an approximate reduction of 7.5%. The effects of the ban take some time to show its full effect. Countries which implemented a total ban reduced their annual consumption by 1.6% per year compared to countries which implemented a partial ban who reduced their annual consumption by 0.4% (Lock, 1990 and Townsend, 1992). The ban on advertising would influence all adolescents (Glynn et al., 1993).

Ireland at the present time has a partial ban in existence. Under 1978 legislation and regulations, the Minister of Health controls the content of advertising for tobacco products, and the advertising and promotion budget is subject to statutory limitations. Only a minimal form of advertising can be used, the name of the brand, representation of the product and package and a text referring to quality. Controls relate to newspapers and periodicals, as tobacco advertising is banned on television and radio (Robins, 1987). However due to our proximity to the United Kingdom we are influenced also by other countries controls.

Consumption is three times more responsive to price rises than to advertising restrictions, but reliance on both is more effective than one policy alone. It was estimated that if both promotion was banned and prices also raised in real terms by 36%, the effect would be additive and consumption would have fallen by 13.5% (Laugeson and Meads, 1991).

Increased size of health warnings and generic packaging have been recommended also (Chambers et al., 1991). However using well-accepted market research methods to examine adolescent observation of the health warnings on tobacco advertising found that the warnings were an ineffective message as far as adolescents were concerned. Only 8% of the time was spent looking at the message, and in 43.6% of cases the warning was not viewed at all (Fischer, Richard, Bermaan et al., 1989).

Supportive environments and community action

Creating a supportive environment relys mainly on the population based approach, including smoking restrictions, to try and change the social norms for smoking. A population based approach has considerable advantages over the high risk approach as the potential for reducing harm in the whole population is much greater. A high risk approach which targets the smoking behaviour of those at risk is needed to complement the population based approach, and is an important role for the health professionals (Austoker et al., 1994).

Public education about smoking is a vital element in achieving smoking reduction targets (Flay, 1987). Health education aimed at informing the population of the hazards to health from smoking and encouraging positive health behaviour with particular emphasis on women and children is one of the recommendations of the Faculty of Community Medicine Ireland (1988) to reduce the prevalence of smoking. The methods available include media campaigns such as advertising on television and radio, newspaper and magazine articles, personal or group education by health professionals, teachers or lay people. National and local media provide cost effective ways of raising awareness and motivating large numbers of people to give up smoking. Several studies suggest that with sufficient investment in media campaigns, the prevalence of smoking does fall (Flay, 1987 and Pierce, Macaskill and Hill, 1990), and can be equally effective for people with different educational achievements (Macaskill, Pierce, Simpson et al., 1992).

However the picture for public health smoking campaigns for adolescents is more confused. Studies have shown that youth oriented media programmes in conjunction with school based programmes or community programmes for adults, have resulted in reductions of over 40% in smoking prevalence (Flynn, Worden, Secker-Walker et al., 1992, Perry, Kelder and Murray, 1992, Elders et al., 1994 and Flynn, Worden, Secker-Walker et al., 1994). Other studies using similar measures have found no effect on adolescent smoking prevalences (Bauman, LaPrelle, Brown et al., 1991, Murray, Perry, Griffin et al., 1992, McKenna and Williams, 1993 and Murray, Prokhorov and Harty, 1994).

Development of personal skills

Development of personal skills relates to education which tries to teach the skills required to resist substance use. It can include public education which was dealt with in the above section and also interventions by the primary care health team which will be dealt with in the next section. The literature in this section deals with the effectiveness of school-based education programmes. There is evidence that miseducation (exaggerating the negative consequences) may in fact be counterproductive (Goodstadt, Sheppard and Chan, 1982 and Morgan, Doorley, Hynes et al., 1994). The more passive the mode of communication of the information the less impact it tends to have on variables other than knowledge and yet it continues to be the most widely used approach (Fossey, 1994).

Smoking Education

Reports on smoking prevention programmes in general tend to be rather mixed in their success. Many studies have shown some success, especially those based on social skills or social influences training, at reducing smoking smokes at least initially (Botvin, Eng and Williams, 1980, Perry, Killen, Telch et al., 1980, Aaro, Bruland, Hauknes et al., 1982, Gillies and Wilcox, 1984, Tell, Klepp, Vellar et al., 1984, Schinke, Gilchrist and Snow, 1985, Gillies, Wilcox and Reid, 1987 and Tolsma, 1987). Other studies have found results which have been modest and limited in scope (Armstrong et al., 1990, Holland nad Fitzsimons, 1991, Townsend et al., 1991, Bruvold, 1993 and Glynn, 1993), while other studies have failed to show any evidence of effectiveness of the smoking prevention programmes (Pederson, Baskerville and Lefcoe, 1981, Murray, Rona, Morris et al., 1984, Murray et al., 1992 and Nutbeam, Macaskill, Smith et al., 1993). These studies showed that even where programmes have been shown to be effective in pilot studies, when the programme is used in the reality of the normal classroom, it can lose its effectiveness.

A Dublin school based smoking prevention programme the "smokebusters club" which used elements that had previously been shown to be effective, an emphasis on short-term consequences, a focus on social skills that help withstand peer and media pressure to smoke and supportive links between the school and the community by involvement of parents and visits by Health Board personnel was implemented in two primary schools in relatively deprived areas in Dublin's north side in second and fifth classes. While the programme was very successful at changing the children's` attitudes, it had no significant effect on current smoking levels (Morgan et al., 1994).

Long-term evaluations of initially successful social influences programmes have shown decay of the benefits of the programmes over time if the programme is not reinforced (Flay, Koepke, Thomson et al., 1989, Murray, Pirie, Luepker et al., 1989 and Klepp, Tell and Vellar, 1993).

Programmes that do show effects on behaviour tend to focus on resisting social influences to smoke, teaching youth how to resist pressures to smoke and promoting social norms for nonuse. Recent research has shown that programme boosters or refreshers, involvement of parents and community organisations in education, school and local government health policy changes and use of complementary mass media

campaigns improve the effectiveness of the programmes (Worden, Flynn, Geller et al., 1988, Pentz, MacKinnon, Flay et al., 1989, Vartiainen, Fallonen, McAlister et al., 1990, Flynn et al., 1992, Perry, Kelder, Murray et al., 1992, Center for Disease Control Report, 1994b and Flynn et al., 1994).

To make programmes more effective there is a need to time the programmes before the child has started to smoke, booster sessions should be continuously given during the critical periods for smoking onset, non smoking must be the norm in the home and in the school, and in the community and use should be made of media to increase awareness of the school based programmes and to provide counter cigarette messages (Murray et al., 1989, Holland and Fitzsimons, 1991 and Tannahill and Young, 1993). The results also indicate the importance of continuous evaluations to assess the effectiveness of the programmes in order to prevent waste of time, money and effort. Cigarette education should be included with alcohol and drugs within a broader school health programme as part of a comprehensive school health education.

The U.S. Department of Health and Social Services issued guidelines in 1994 for School Health Program to Prevent Tobacco Use and Addiction (Glynn, 1993). Based on an in depth review of research of theory and current practice they recommended that all schools :

1. Develop and enforce a school policy on tobacco use.
2. Provide instruction about the short and long-term negative physiologic and social consequences of tobacco use, social influences including advertising on tobacco use, peer norms regarding tobacco use and refusal skills.
3. Provide tobacco use prevention education in Kindergarten through 12th grade as increased intensity and duration leads to a more effective programme, otherwise the effects dissipate.
4. Provide programme specific training for teachers.
5. Involve parents or families in support of the school based programmes.
6. Support cessation efforts among students and staff who smoke.
7. Assess the programme at regular intervals.

There are considerable advantages to delaying the onset of smoking even by only 2 or 3 years. There is a reduced likelihood of remaining a smoker as an adult, a reduced likelihood of becoming a heavy smoker and therefore a reduced likelihood of premature mortality from smoking related diseases (Glynn, 1993).

Reorienting the health services

General practitioner intervention

In 1979 it was shown that simple brief advice from a general practitioner with the warning of follow up prompted 5% of advised smokers to stop and remain abstinent at one year's follow up (Russell, Wilson, Taylor et al., 1979). This result has been confirmed by other researchers (Jamrozik, Vessey, Fowler et al., 1984 and Chambers et al., 1991). Doubling of this outcome has been achieved with the addition of nicotine

replacement treatments and higher rates still of up to 38% when more support was offered (Kottke, Battista, De Friese et al., 1988, Foulds, 1993 and Tang, Law and Wald, 1994).

The problem is to persuade general practitioners and other health professionals that they should give advice on smoking and this implies knowledge and skills training (Chambers et al., 1991 and Raw and McNeill, 1994). Only 3% of general practitioners believe that they are successful in helping patients stop smoking (Austoker et al., 1994). The motivation of general practitioners is important in determining their effectiveness in implementing and sustaining health promotion activities. An additional barrier to effective health promotion is a lack of knowledge among general practitioners about particular preventive activities or a poor understanding of the skills and methods required to offer health promotion and encourage changes in behaviour (Austoker, 1994a). Training is needed as helping people change addictive behaviour is radically different from clinical training. The evidence suggests that training and support, increasing motivation and the effective use of intervention and the development of short accessible training schemes for primary care staff, backed up by continuing support should be a priority for primary care facilitators and Health Promotion Departments (Austoker et al., 1994).

Unfortunately the success rate in adolescent cessation programmes tends to be quite low (Center for Disease Control, 1994b), though researchers in the United Kingdom found the results of a pilot study for general practitioner counselling of adolescents for smoking prevention quite encouraging (Townsend et al., 1991).

Multifactorial prevention strategies

Multifactorial strategies are necessary (due to the multifactorial causes) in order for the prevention of cigarettes to be successfully addressed. Environmental, social and behavioural factors must all be included as part of any strategy. No significant improvement in prevention or cessation can be made with a single factor approach. Any comprehensive tobacco use control policy should include at the very minimum, provisions for policy change, strict enforcement of underage sales, the involvement of health professionals, media strategies, comprehensive school education and involvement of the family and the community. No one of these channels should be undertaken without the other (Black et al., 1982, Flynn, Worden and Secker-Walker, 1987, Pierce, 1990, Chambers et al., 1991, Davis, 1991, Glynn, 1991, Roper, 1991b, Giovino, Eriksen and McKenna, 1992, Glynn et al., 1993, Center for Disease Control, 1994b and Satcher and Eriksen, 1994). In Canada where a comprehensive antismoking package was introduced, cigarette consumption fell by 37% between 1981 and 1992, with the biggest falls occurring in 1989 and 1990 and most importantly the greatest improvement was in smoking among adolescents which halved from 1979 to 1991 (Smith, 1993). Tobacco consumption fell by 5% in Britain between 1984 and 1989, compared to 29% in Canada in the same period (Chambers et al., 1991).

High risk adolescents

The greater the number of risk factors present in youth the greater the risk of smoking as an adult. School dropouts are often at the highest risk and often need cessation programmes rather than prevention

programmes. The Expert Advisory Panel on the Prevention and Cessation of Tobacco Use among High-Risk Youth convened by the National Cancer Institute in July 1989 made a number of initial recommendations.

* Once a high risk youth has been identified s/he should be triaged into cessation or prevention programmes.
* Similar prevention of low risk youth should be started as soon as possible.
* Teachers, counsellors, coaches and health care personnel should all be given

skills to do prevention programmes, as access to these youth is so difficult.

* Use should be made of television and radio, enforcement and extension of

existing policies in schools and in the community to restrict youth access to tobacco, in other words a multifactorial approach.

* Co-ordination between schools and the community in the delivery of smoking prevention programmes for high risk youth should be encouraged. Many of these youth drift between school and community agencies and programmes will be more effective if they provide similar multiple messages.
* Programmes should be sustained throughout the highest risk period for use.
* Programmes shouldn't be resource or financially expensive.
* Programmes should be included within other broader programmes.

<u>Suggested channels</u> included -

- parents / family
- mass media
- marketing / advertising agencies
- law enforcement agencies
- peer leaders / community leaders
- schools
- workplace
- unemployment agencies
- government agencies
- drug treatment programmes

clubs, neighbourhood centres, social service organisations, health clinics (Glynn, Anderson and Schwarz, 1991). The basic concepts of these recommendations could also be adopted for other substance use prevention programmes.

Setting Targets

The setting of national targets encourages local targets to be set, which facilitates ownership of the problem at a local level and consequently the involvement of a wider spectrum of individuals (Raw and McNeill, 1994).

In Ireland the Health Strategy (Department of Health,1994) identified 6 key areas in which risk reduction targets and action programmes would be focused, and smoking was one of the key areas. The target for smoking was to reduce the percentage of those who smoke by at least 1% point per year, so that more than 80% of the population aged 15 years and over will be non-smokers by the year 2000.

This is to be achieved by:

* Extending the environmental controls over tobacco, especially those in the workplace.
* Reducing the allowable budgets for advertising of tobacco products and sponsorship by tobacco manufacturers and distributors by 5% per annum.
* Continuing and intensifying multimedia and antitobacco campaigns and health education programmes.
* Government fiscal policies which take account of the need to discourage smoking.
* Continued action by doctors and other health professionals to encourage a decrease in smoking.

Another target proposed by the Health Strategy is to develop health promotion programmes in school, community, workplace and health service settings so as to promote health at a local level.

This is to be achieved by :

* Information and education programmes, including those on skills relating to making healthy choices in life.
* Increase the awareness of health professionals such as general practitioners and public health nurses of the need to encourage a health promotion approach.
* Use of multimedia campaigns.

The Department of Health through the Health Promotion Unit will continue to liaise with the Department of Education on the development and dissemination of suitable materials for inclusion in social and health education programmes in school, such as those currently available in the North Western and the Mid Western Health Boards.

3.12 ***Alcohol Prevention***

Healthy public policy

Availability:

In Ireland the licensing laws state when, where and to whom alcohol can be sold, but does not make the possession or drinking of alcohol by adults an offence. Other legal controls on the use of alcohol relate to drunkenness, drunken driving, and age restrictions on the sale of alcoholic drinks to young people. Licensing laws restrict the hours during which alcohol may be sold, though the 1988 Intoxicating Liquors Act extended opening hours and drinking up time. The number of outlets where alcohol is available is also controlled,

though there are increasing numbers of outlets and licence "extensions" and the 1988 Act granted special restaurant licences to serve alcohol (Corrigan, 1991 and Conniffe and McCoy, 1993).

The evidence regarding the relationship between overall alcohol consumption and the prevalence of alcohol outlets is inconclusive. In the United Kingdom recent changes in the licensing controls which increased the availability of alcohol did not have a significant impact on consumption. It was thought that this may have been because the availability of alcohol had already neared saturation point. In the past reduction in numbers of outlets and other controls of availability have had significant effects on consumption (Ritson, 1994).

Younger drivers are more likely than experienced drivers to have accidents at lower blood / alcohol levels and several countries have introduced a lower statuary limit for novice drivers and as expected reduced their accident rates. This policy has been particularly effective when combined with random breath tests (Havard, 1986).

Price:

According to the extant literature the most important determinant of alcohol consumption is affordability. As affordablity increases so does consumption and vice versa. Reducing the harm associated with alcohol may thus be more a job for politicians than health professionals (Kendell, de Roumanie and Ritson, 1983, van Iwaarden, 1989, Anderson, 1991 and Dillner, 1991b). Most studies show that increase in price or taxes of alcohol lead to a reduction in consumption, including heavy drinkers and students (Kendell et al., 1983 and Moskowitz, 1989). Studies have found that cirrhosis mortality, and motor vehicle fatalities among adolescents as well as adults can be reduced by increases in liquor or beer taxes (Nathan, 1988, Grossman, 1989 and Moskowitz, 1989). The United Kingdom Faculty of Public Health in 1991 recommended basing taxation on alcohol content (Ritson, 1994).

The potential of price rises in Ireland is limited by (1) the high alcohol taxes in existence, (2) proximity to the United Kingdom and (3) membership of the European Union.

(1) Ireland has the highest overall rate of alcohol excise taxes in the European Union, as well as having VAT at 25%, the highest in the E.U. This results in the price elasticity for total alcohol in Ireland being low at -0.4 (an increase of 10% in prices would result in a 4% reduction in consumption other things being equal), which is relatively inelastic and therefore limits the effectiveness of relying heavily on excise taxes to control the consumption of alcohol (Walsh, 1989 and Conniffe and McCoy, 1993).

(2) As Ireland has such a high tax rate, any further increase would lead to smuggling from our neighbouring countries (Conniffe and McCoy, 1993).

(3) The prospect of tax harmonisation in the European Union, also further limits any reliance on price increases as a means of control in Ireland. The approximation of indirect taxes on alcohol in the European Union would have one of the most pronounced effect in Ireland. In addition to a lower rate of VAT, the Irish

rates of excise on spirits, wine and beer would fall by 48%, 93% and 84% respectively and prices could fall by between ¼ and $^{1}/_{3}$ (Walsh, 1989).

The use of price policy in Ireland may be more effective in moving consumers towards alternative, or low alcohol drinks. This is market-based behavioural incentives to influence choice of drink through pricing policy (Conniffe and McCoy, 1993 and Ritson, 1994).

It is believed that young people are more sensitive to alcohol prices than adults, especially to beer price increases, as this is the alcoholic drink of choice for the young (Ornstein, 1980, Nathan, 1988 and Wodak, 1992). Adolescents generally have access to fewer resources than adults and may be more affected by price change. Unfortunately no studies have considered the effects of price increases on alcohol or tobacco use by Irish adolescents. However as Irish studies have shown spending money is related to smoking, drinking and other drug use (e.g. Grube and Morgan, 1986 and 1990a) it therefore would appear that price would influence these behaviours. However there is little scope in Ireland for further increases as Ireland has the highest tax rates for cigarettes and alcohol in Europe (Conniffe and McCoy, 1993).

Minimum drinking age:

Adolescent alcohol availability is limited through minimum purchase age and possession laws. There is no evidence that substitution effects occur when access to alcohol (or tobacco) is limited for young people. In fact decreases in adolescent marijuana use have been observed when the minimum drinking age has been increased (Grube and Morgan, 1990a).

Under the 1988 Intoxicating Liquor Act, Gardai may confiscate alcohol from suspected underage drinkers and fines and other penalties can be applied to adults who provide alcohol to underage youth outside of a private residence. It is an offence to give alcohol to a child under five years old. Children under 15 years are allowed into a bar during permitted hours but only if they are accompanied by a parent or guardian. It is an offence to sell alcohol to a person under 18 years old either on or off the premises.

However the law regarding sales to underage youth is ambiguous. An adult providing alcohol to a minor is considered guilty of an infraction, only if there were not “reasonable grounds” for assuming that the young person was not over 18 years old. In order for this legislation to be effective, a mechanism for verifying age must be established e.g. a national identification card used for the purpose of purchasing alcoholic drinks or tobacco products. The 1988 Act permits the Minister for Justice to make regulations concerning the issue of such an identification card to those over 18 years old (Grube and Morgan, 1990a and Corrigan, 1991). While awaiting such a national scheme many local areas have instituted their own card schemes. To date minimum age laws for purchase and possession of alcohol have been inconsistently enforced by both the Garda Siochana and retailers in Ireland (Grube and Morgan, 1990a).

A review of the literature by Moskowitz (1989) found that overall youthful beer consumption was reduced by implementing the legal drinking age. The effects of legal age on liquor consumption were not consistent across studies or across levels of drinking.

The effects of changes in the legal age on crash involvement have also been studied. These studies have been more consistent. Reduction of the legal age from 21 to 18 years in the United States was followed by an increase in crash related and in total fatal crashes among 18 - 20 year olds relative to other age groups (Moskowitz, 1989). When the legal age was subsequently increased alcohol involved crashes fell among 18 - 20 year old (Hingson et al., 1983 and Moskowitz, 1989) and 16 - 17 year olds (Smith, Hingson, Morelock et al., 1984 and Moskowitz, 1989). Similar findings have been found in other countries (Smart and Goodstadt, 1977, Vingilis and Smart, 1981 and Havard, 1986). Lowering of the legal drinking age to 18 from 21 years in Queensland in Western Australia and from 20 years in south Australia in the early 1970`s resulted in significant increases in male juvenile crime in those under 17 years by 20 - 30% (Smith and Burvill, 1986). Others have also found a reduction for various categories of violent death, including homicides among adolescents and young adolescents with increase in the legal drinking age (Jones, Pieper and Robertson, 1992). More recent studies have again confirmed the effect of higher legal drinking age on both levels of alcohol consumption, and in lower rates of alcohol related fatal crashes. The studies have shown that the lower levels of alcohol use persisted into the early 20`s, even after respondents were of legal drinking age (Williams and Lillis, 1988 and O`Malley and Wagenaar, 1991).

There does seem to be a substantial body of well designed research indicating that increasing the minimum legal drinking age to 21 years is an effective means of reducing alcohol related crashes, injuries and fatalities among the affected age group. Estimates suggested that 20% of alcohol related crashes and 13% of all fatal crashes involving young drivers could be prevented (Moskowitz, 1989).

Advertising :

In Ireland the advertising of alcoholic drinks is not as strictly controlled as the advertising of tobacco. “Voluntary” codes of practise are in operation. Spirits are not advertised on television, and advertisements must use models aged 25 years and over, and cannot be associated with sport or sporting activities. Excessive use must not be encouraged, nor can ads link drinking and driving, or drinking and sexual attractiveness (Corrigan, 1991).

Advertising is one element of social availability, that is the social norms and attitudes towards alcohol, and the media has a strong influence on how we perceive the prevalence and acceptability of alcohol. In fact most studies on social availability of alcohol have concentrated on media advertising and the portrayal of alcohol use on the media, though few have actually looked at the effects of such portrayal (Moskowitz, 1989).

Researchers have reported inconsistent findings on the effects of a ban on alcohol advertising. Conniffe and McCoy (1993) stated that the impact of restrictions on advertising for alcohol consumption is varied. They felt that it might influence the market share though and along with pricing policy be useful in influencing choice of drink and moving towards alternative or low alcoholic drinks.

The effects of the ban on adolescents does seem to be more consistent however. Countries that adopted a national health campaign and the prohibition of alcohol advertising geared towards the young, saw a reduction of alcohol use and alcohol related problems that was most marked among adolescents and young adults (Swadi, 1993). The Faculty of Community Medicine Ireland (1988) and the American Academy of Pediatrics (1987) both support a ban on advertising of alcohol that is similar to that of cigarettes.

Develop supportive environments and community action

Development of supportive environments is partly achieved by way of the legislation on the physical, economic and social availability of alcohol or the formal social controls already discussed above.

Server intervention schemes

Environmental prevention policies include "server intervention" schemes. These were designed to reduce the likelihood of patrons becoming intoxicated and to prevent intoxicated patrons from driving. The research available on server intervention appears to show promise (Moskowitz, 1989 and Ritson, 1994).

Server intervention programmes can also focus on reducing sales to underage youth. This is a means of further reducing the availability of alcohol (and tobacco) to youth and of enforcing minimum age legislation. Server intervention is a relatively new innovation in which drug specialists, local authorities and concerned local citizens work together with retailers to review and revise their policies and procedures and provide training for personnel. Motivation to use server intervention could be increased if it were required for licensing, or resulted in insurance discounts (Grube and Morgan, 1990a).

The North Western Health Board have designed a server intervention course for publicans, off-licence and bar staff which was planned to start in autumn 1994. The Alcohol Server Training course was to be organised by alcohol and addiction counsellors involved in health promotion based on United Kingdom and United States initiatives. The aim of the course is to create a supportive environment for responsible drinking.

The community is a potential site for alcohol prevention programmes about which we have relatively little knowledge about its effectiveness at the present (Moskowitz, 1989). It is well known that drinking alcohol is imbued with cultural and personal meaning that varies with age, gender, social class, ethnic groups and localities. Preventive strategies need to be sensitive to these factors and it is likely that approaches that are

mulifactorial and rooted within a specific community, are more likely to prove acceptable and effective (Ritson, 1994). Programmes for primary alcohol prevention can be used in schools, workplace or community settings that offer alcohol education to parents, workers or the general public.

Mass media

Mass media has also been used to educate the public about alcohol use or problems (Moskowitz, 1989 and Ritson, 1994). One review of three mass media campaigns found that there was no overall effect on knowledge, behaviour or attitude. It was felt that mass media campaigns may be best suited for reinforcing existing attitudes and social norms (Moskowitz, 1989). Others have found that the media campaigns are most effective in imparting knowledge, less so in changing attitudes and least effective in changing behaviours (Nathan, 1988 and Ritson, 1994). Media campaigns appear to be more effective when they are combined with other preventive strategies such as drink driving crackdowns or some type of interpersonal communication, or when they are focused on the consequences of alcohol misuse e.g. foetal alcohol syndrome (Howard, Taylor, Ganikos et al., 1988, Nathan, 1988 and Moskowitz, 1989). Information and education campaigns can be very effective in encouraging a shift in attitudes and behaviour if targeted at particular groups rather than the general public (Conniffe and McCoy, 1993).

Community prevention programmes:

It is recognised that central national control policies on alcohol are not sufficient to prevent problem drinking, but should be employed in conjunction with local "non control prevention policies". These measures are usually locally organised, calling upon community resources and participation (groups and organisations), and aimed at addressing specific drinking related problems, such as drinking and driving, city centre violence and disorder or underage drinking (Bunton, 1990).

The aim of the community prevention projects is to "empower" the community (family, religious and educational institutions, organisations and voluntary groups) to help itself and the Health Agencies to act as facilitator / clinical specialist of this by increasing community awareness of the problem, getting prevention on the agenda and orchestrating them into combined action (Giesbrecht, Krempulec and West, 1992). Researchers feel that strategies which develop out of community action are probably longer lasting than activities which are grafted on by educators and researchers from outside (Ritson, 1994), though empirical studies on local community initiatives are often equivocal in their findings (Conniffe and McCoy, 1993).

"Community development" is a more holistic approach. It emphasises the interrelatedness of an individual and the environment in which s/he lives. "Community development" is the process by which a community, identified geographically, is aided by community workers in defining the needs that it has. With the help of the community workers a dialogue is entered into with the controllers and providers of services to bring

about change. The work involves several different stages : defining the problem, identifying causes, formulating solutions and finally mobilising the resources to seek to effect the necessary change. The key is that the local people must identify the problem or need and then the health / social services become involved in helping the community deal with the problem (Black, 1987 and Watt, 1987).

Development of personal skills

Alcohol Education

Theoretically, there is strong evidence that alcohol education should be targeted at adolescents aged 12 - 13 years. At this age most of them have had their first taste of alcohol, so the education programme is not introducing a topic about which they have no relevant experience. On the other hand only a small minority have experienced any noteworthy adverse effects from drinking. So it can be argued that alcohol education is highly appropriate at this age in intervening in a behaviour which has already been initiated, but which has not yet caused any widespread problems (Bagnall, 1991 and Fossey, 1994).

Some studies show positive short-term changes in behaviour on immediate evaluation (Goodstadt et al., 1982, Botvin, Baker, Botvin et al., 1984, Bagnall, 1990, Bagnall, 1991 and Perry and Grant, 1991). Other studies showed no such benefit (Goodstadt and Sheppard, 1983, Hansen, Malotte and Fielding, 1988 and Mauss, Hopkins, Weisheit et al., 1988). Rundall and Bruvold (1988) performed a meta analysis on 29 alcohol school based intervention studies as well as 47 smoking studies. They concluded that in general smoking and alcohol interventions have equally small to modest effects on immediate behavioural outcomes. Smoking interventions have however been more successful than alcohol interventions in altering students long-term behaviour. All of the alcohol programmes improved knowledge. Only half of the alcohol studies produced desirable long term behavioural and attitude change and for reasons not understood, alcohol prevention programmes may lead to opposite effects on attitudes than those intended. Interventions such as social reinforcement, social norms and developmental behavioural models were more effective than traditional models. The authors felt that the superiority of the smoking prevention programmes may be due to the consistent anti-smoking messages in the media and the environment versus the ambiguous messages about alcohol use. They felt that there is a need to acknowledge the broader reinforcers to which adolescents are exposed.

Some feel that the programmes fail as alcohol education programme goals are too complex, the responsible use of alcohol versus the abstinence goal of smoking education (Hopkins, Mauss, Kearney, et al., 1988). Swadi (1993) in a review said that while alcohol education was the most widely used preventative approach, and it did increase knowledge, it produced less clear cut effects on attitudes and the effects on the levels of alcohol consumption were modest. The available evidence about alcohol education is indeed controversial, with some interventions apparently having no effects, others having an effect in the opposite intention to which was intended, and some having the desired effect. It was felt however that education which emphasises potent social influences as well as individual skills and substance based information was the way forward (Goodstadt, 1987 and Bagnall, 1991).

Apart from the influence of parents, it is felt that there is a need to look at the influence of peers, and a comprehensive communitywide prevention effort directed at all the major social influences and institutions that influence youth, including schools, parents, peers, the media, churches, civic clubs, local government and legislation is needed (Kendell, 1987 and Mauss, Hopkins, Weisheit et al., 1988).

Parenting skills

Some authors feel that given the influence parents have over their children during their formative years, more effort should be directed toward helping parents with child-rearing issues. Interventions should be targeted before adolescence as well as throughout adolescence. This effort should not only help parents identify and adopt promising child management techniques including monitoring, setting rules and interactive communication skills, but should also create a broad social context that enables parents to have the time and the means to develop positive family relations (Cohen et al., 1994). A review of two studies of family-oriented programmes focused on prevention of adolescent alcohol or drug problems delivered to parents of normal children. While both improved parenting skills, there was little effect on children's alcohol use (Moskowitz, 1989).

Reorienting the health service

General Practitioners:

Brief interventions by general practitioners have been shown to reduce alcohol intake by up to $^{1}/_{5}$, and are often as effective as more extensive treatment. They can also enhance the effectiveness of subsequent treatment (Bien, Miller and Tonigan, 1993). However there are barriers to implementing the available intervention, including lack of motivation, training and support (Austoker, 1994b and Ritson, 1994). The Surgeon General in the United States felt that health professionals should start to probe for alcohol misuse among young patients. They should work with parents, education and government officials and others to educate the youth. They also should assist local agencies and communities in surveying alcohol use and evaluating prevention programmes (Novello and Shosky, 1992).

A report produced by the Southern Health Board to prevent alcohol and drug abuse recommended increased links between general practitioners and alcohol counselling services. It stated that general practitioners should be trained to deal with the social aspects as well as the early recognition and diagnosis of alcohol problems (Southern Health Board, 1994).

Social workers:

Social workers likewise have an important role to play in prevention of alcohol related problems as part of a multidisciplinary team. A review of child protection cases in both Wales and Scotland found that when the social workers did not tackle the underlying alcohol problem where it existed, their interventions were almost always bound to fail (Simpson, Williams and Kendrick, 1993).

Since alcohol affects social worker caseloads in the full range of client and problem types, the report by Simpson et al. (1993) felt that there was an urgent need to instigate basic training for all social workers in assessment and intervention. In addition more advanced training for smaller numbers of workers who could then become a resource for their teams and work places might also be considered. The training of managers has also been identified as being of significance.

The alcohol counsellor:

The alcohol counsellor has a vital role to play in education in encouraging choice in the use of alcohol, as a prevention and intervention specialist in a variety of settings including the community (O`Hagan and McGovern, 1987).

Community alcohol counsellors: Simpson et al. (1993) found that the core function and service of counsellors in Scotland is of counselling, giving advice and information to self-referred clients. The techniques used are based on minimum intervention techniques such as motivational interviewing. No significant difference was found between the clients of counsellors and those attending alcohol treatment units. Counsellors appeared to be a cost effective option for people with all levels of alcohol consumption. A problem was found in rural communities with these services due to high visibility and low anonymity of small communities contributing to the stigma attached to such services, but options such as general practitioner surgeries could be used as a base for outreach work. Training of volunteer counsellors also allows alcohol services to tap into the “wealth” of local resources.

Co-ordination Committees:

The review of the Scottish social work response to the misuse of alcohol (Simpson et al., 1993), found that in Scotland at a strategic level, the co-ordination of alcohol services between health, local authority and voluntary sectors, was considerably enhanced by the establishment of Alcohol Misuse Co-ordinating Committees (AMCCs). Local committees were most effective when they involved all local interests and bodies, were not dominated by any one sector and included representation from medicine, nursing, social work, education, voluntary services, industry, district councils, the police, prisons, courts, the alcohol industries (retail and production), trade unions etc., alcohol is everyone’s concern. Although it was felt that national policies were vital, strategies which failed to tap into local resources are unlikely to succeed. Every group or organisation is regarded as having potential for prevention.

Community Addiction Teams

The Community Addiction Team can be used to prevent and treat alcohol problems in the community. In Scotland the Community Alcohol / Addiction Teams (CAT) essentially are community-based multidisciplinary teams, often involving medical, nursing and social work professionals, who normally

engage in training and supporting community workers and / or provide direct specialist counselling services to clients. It is not clear at this stage the nature of their impact (Simpson et al., 1993).

Multifactorial approach

The Faculty of Community Medicine, Ireland (1988) suggested a comprehensive approach for prevention of alcohol problems.

1. Taxation. Price of alcohol should be increased relative to disposable income, and accompanied by a relative reduction in the price of non alcoholic drinks.
2. Control of availability. There should be a review of licensing laws, restriction of the number of outlets, reduction in opening hours, restriction of the number of late extensions and stricter control of underage drinking.
3. There should be a review of the role of advertising and a phased introduction of the same type of controls as on cigarettes.
4. There should be provision of more and better recreational facilities for young people and encouragement of alternative meeting places, e.g. possible tax incentives for late night coffee bars.
5. Introduction of random breath tests.
6. Ongoing, carefully designed programmes, high-lighting the many health hazards of alcohol. This would be an important part of a "positive health" campaigns and contribute to the acceptance of the above measures.

Many other authors concur with the use of a comprehensive policy, rather than relying on any one single policy (Havard, 1986, Bunton, 1990, Moskowitz, 1989, Center for Disease Control, 1993a, Conniffe and McCoy, 1993 and Austoker, 1994b).

Setting Targets

As with smoking it is important to set targets, both nationally and locally, so that progress may be measured.

Irish targets

The four year action plan of the Department of Health's Strategy for Health (1994) identified alcohol as one of the six key target areas. The targets are ;

- To promote moderation in the consumption of alcohol, and to reduce the risks to physical, mental and family health that can arise from alcohol misuse by a national policy on alcohol which is to be launched soon.
- To ensure that within the next 4 years, 75% of the population aged 15 years and over knows and understands the recommended, sensible limits for alcohol consumption. The present consensus is 14 units per week for a woman and 21 units per week for a man. This target is to be achieved by a series of information and education campaigns and programmes which will raise awareness re sensible drinking practice. Health professionals will have a key role in this activity.

* To reduce substantially over the next 10 years the proportion of those who exceed the recommended sensible limits for alcohol consumption, to be achieved by the implementation of the national alcohol policy.

European targets

Target 17 in the Policy for Health for All in Europe states that "By the year 2000, the health damaging consumption of dependence producing substances such as alcohol, tobacco and psychoactive drugs should have been significantly reduced in all member states". Specifically for alcohol there should be a 25% reduction in alcohol consumption from 1980 to 2000, with particular attention to be paid to reducing harmful alcohol use (World Health Organisation, 1992). The European Alcohol Action Plan, which was strongly endorsed at the 1992 Regional Committee also identified priority areas that need to be tackled to prevent the health risks and the social consequences arising from alcohol use.

Drug Prevention

3.13 **Prevention of Volatile Solvent Abuse**

Build a healthy public policy

Availability and Price :

Many abusable products are readily available in shops and at home. One study suggested that the average home could contain up to 30 individual abusable products. Many products are cheap to buy or easy to steal and if one product or brand is unavailable then another can be easily substituted. For many teenagers solvents are cheaper and more easily available then alcohol (Corrigan, 1991).

Minimum legal age :

Under section 74 of the Child Care Act, 1991, in Ireland it is an offence for any person to sell offer or make available any substance to persons under 18 years which they know or have reasonable cause to believe is likely to be inhaled for the purpose of intoxication. The actual possession and abuse of these products is not an offence, however this section of the Act permits a Garda to seize any substance in the possession of a child in a public place and which the Garda has reasonable cause to believe is being abused by the child (Corrigan, 1991). As with the restrictions on alcohol it is important to enforce the law regarding the availability of solvents to underage children.

Some authors argue that legislation restricting the availability of solvents can have negative effects. In the United Kingdom prior to legislation in 1985 deaths resulted mainly from glues and solvents such as dry cleaning agents and typewriter correction fluids. These products decreased in availability and since shifted practice towards the riskier practice of "gas sniffing". The wide availability of butane gas lighter refills together with the ease with which they can be abused, means that this single product is responsible for nearly 34% of deaths from solvent use in the under 18 year olds (Esmail, Anderson, Ramsey et al., 1992).

Supportive environments and community action

Education in schools is only part of the process of educating the whole community about drugs and solvent use. Community based projects are in a strong position to influence people of whatever age. In helping solvent users, a community focused approach inevitably starts to deal with many problems faced by the community as a whole, such as lack of amenities, high local unemployment and a sense of despair (Ives, 1991a).

Community agencies :

Plant (1985) felt that what was needed to tackle both illicit drugs and solvent use was the creation of a national network of agencies to help support those who have drug problems. The aims of voluntary agencies in the community in dealing with the problem of volatile solvent abuse are,

a) To offer guidance to those with a volatile solvent abuse problem themselves.

b) To offer advice to parents or guardians of abusers.

c) To educate young people about the dangers of volatile substance use by working closely with schools and youth organisations.

d) To encourage the establishment of advice centres in areas where professional help was not available. In all cases efforts were made to liaise with professional bodies (Billington, 1989).

Other community strategies which were discussed in the section on alcohol prevention are also of relevance to solvent and illicit drug use. Examples include the server intervention programmes which can be used to educate shop owners about the dangers of solvent use, about the relevant legislation, to increase awareness of the minimum age for purchase, and to keep possible substances of abuse out of easy availability. This would be helped by the identity card system. Community action projects could also focus on solvent abuse if it is a problem in the community and measures such as boycotting shops known to sell these items to children could be adapted.

Development of personal skills

Those who use solvents for curiosity, or because the activity is condoned in their group of friends, may be amenable to primary prevention through education campaigns in the schools or the communities in combination with appropriate legislation about the sale of the chemicals. Especially since this is a fairly large population, such efforts could prevent significant numbers of deaths related to cardiac arrhythmia due to volatile solvent use. In regular users however, volatile solvent abuse maybe but one aspect of conduct difficulties with a background of familial disruption, poor academic performance and delinquency. There is evidence that this group is more likely to progress to opioids, stimulants or sedative-hypnotics in under a year. Education efforts are less likely to be effective in this group and control of supply is likely to encourage a shift to other toxic but more readily available compounds (Dinwiddie, 1994).

Reorienting the health service

Training of health professionals and others :

Social workers, general practitioners, psychologists, teachers and probation officers may all be faced with a volatile solvent abuse problem, however many professionals have very limited knowledge and even less experience (Billington, 1989). Professionals require initial training focusing on young people and their needs and their use of drugs, as well as more advanced training focusing on practise. Specialist training specifically designed for those who were working more intensively with solvent users is also desirable (Ives, 1991b).

3.14 **Illicit Drug Prevention**

Illicit drug use is controlled in Ireland at the present time mainly by the control of supply, which is regulated by the various acts and regulations governing drugs. The control of demand through education has not been fully implemented in Ireland yet, though the Department of Health and the Department of Education are currently co-operating on a substance use prevention programme.

The present Government Strategy to prevent drug misuse was published in 1991. The Strategy was based on the recommendations of the National Co-ordinating Committee on Drug Abuse and of the major international bodies in the drug misuse area. Consideration was also given to the views of the statutory and voluntary bodies involved in drug misuse in Ireland. Their recommendations deal with supply reduction (law enforcement), demand reduction (education), and increased access to treatment and rehabilitation programmes coupled with a comprehensive co-ordinated structure geared towards their effective implementation (Department of Health, 1991).

Build a healthy public policy

Legislation

Legislation involving illicit drug use is the main means of building a healthy public policy. Legislation in Ireland which controls the use of drugs in this country prohibits the use or possession of any of the illicit drugs and also controls the use of psychoactive medication.

The Acts which are concerned with the use and possession of drugs in Ireland include the 1947 Health Act, the Misuse of Drugs Acts, 1977 and 1988, and the Customs and Excise (Miscellaneous Provisions) (No.2) Act, 1988 (Corrigan, 1991). Other relevant Acts include the Criminal Justice Actt, 1984, the Customs Consolidation Act, 1876 and the Customs Act, 1956 (Department of Health, 1991).

Cost effectiveness of law enforcement

It was estimated that United States drug enforcement agencies intercepted between 14 - 20% of all cocaine shipped to the United States, and the British Customs and Excise intercepted between 9 - 19% of heroin. Doubling the interception rate for drugs would increase the price of cocaine by 2 -3% and cannabis by 12.4%. In the analysis of the effects of increasing the risks facing cannabis retailers, if the risk of arrest was doubled, and the number imprisoned were increased five-fold, the retail price of cannabis would rise by between 2 and 7% (Wagstaff, 1989 and Wodak, 1992). Gorman (1993) has commented that in the United

States, despite billions of dollars spent over the past 12 years and the increased numbers of drug seizures and drug-related arrests, the purity of heroin and cocaine sold on the streets has increased, while the price has fallen.

It would therefore appear from the literature that while law enforcement has a role to play in controlling drug use this role is limited and cannot succeed on its own. In support of deterrence and interdiction efforts however the use of illicit drugs is relatively low and the availability of these drugs is lower than that for legal substances such as tobacco and alcohol. Moreover the cost of drugs on the street are vastly higher than their production costs. Prevalence rates would probably be much higher if their availability increased. Also deterrence efforts are likely to influence the overall normative climate by conveying the message that drug use behaviours are socially unacceptable.

Develop supportive environments and community action

The "macro" approach is so called because of its focus on the entire environment in which a child is living, to create a community climate of nondrug use. One way is a public information campaign which uses the media for "coutermessages" to offset pro-drug messages that appear on the media. Another way is collaboration among parents, to form organised community concerned parents groups, so that in combination a nondrug climate is produced at school, by the media, parents and the community. These types of initiatives have not been fully evaluated (Durell and Bukoski, 1985).

Community Action

Promising prevention programmes take a comprehensive community-based approach that responds to the multiple problems in young people's lives rather than the narrower approach of combating alcohol or drug problems in isolation. The most promising programmes focus not only on alcohol or drug prevention, but also help youth respond to the multiple challenges at home, school and in the neighbourhood (Smith, 1993). Outreach efforts are conducted outside of institutional or clinical settings and involve personal interactions between an outreach worker and a client. Such outreach work is believed to be an effective way of delivering drug prevention services to persons at risk, who do not receive such services from more conventional sources (Center for Disease Control, 1993b).

The demand reduction recommendations of the Government's Strategy for Drug Prevention, 1991 include measures to increase support and training for community based groups involved in providing education and information at local level, developing outreach programmes for secondary prevention or harm reduction, as well as the development of alternative recreational facilities (Department of Health, 1991).

Family or parent dynamics

As so many aspects of parental influence are associated with drug use, such as parental substance using behaviour, attitudes and the quality of the parent-child relationship, - help or support for the family is one possible approach to adolescent drug use prevention (Strasburger, 1985 and Donoghue, 1987). Parent groups are perhaps the most common form of community action to counter substance use. Research on parent groups has shown that they can address significant aspects of the home and family, the peer group, the school and the larger community that potentially reduces the physical and social availability of substances to adolescents (Grube and Morgan, 1990a).

Media

Reviews of previous "antidrug" campaigns have suggested that these ventures have overwhelmingly failed to cut down on drug use, especially campaigns which have unrealistically exaggerated the harmful effects of drug use (Wallack, 1981, Durell and Bukoski, 1984, Plant, 1985 and Swadi and Zeitlin, 1987). Rhodes (1990) concluded that the central problem of the recent antidrug media campaigns in the United Kingdom was revealed by the evaluations : while non-users fears are "confirmed in an emotionally powerful way" there is evidence of "deflection and distancing" by drug users themselves. Drug users it seems, simply become further alienated from the educational potential of anti-drug advertising and by extension, from the government's primary objectives of changing health behaviour.

The mass media prevention campaigns therefore need to be carefully planned, with consideration of the context of the message and the target audience of the message. The campaigns should be used in conjunction with other prevention strategies, such as education programmes and community projects, in order to increase awareness and create a non-drug using climate, or else be aimed at harm reduction strategies.

Development of personal skills

Drug Education

Measures for demand reduction included in the Government's Strategy to prevent drug use included drug education programmes in schools and colleges, primary prevention, plus in service training of teachers. The strategy also recommended that each Health Board should designate a Health Education Officer, who would assist and support measures being taken in formal and informal educational settings relating to drug misuse (Department of Health, 1991).

Reviews of school drug prevention programmes found that though education was very effective in increasing students drug-related knowledge, attitudes toward drug and alcohol abuse were more resistent to change, and use was often unchanged (Institute of Studies on Drug Dependence, 1984, Swadi and Zeitlin, 1987 and Bangert-Downs, 1988). Some aspects such as decision-making skills and the improvement of self-esteem were felt to hold limited promise (Swadi and Zeitlin, 1987).

In 1988, the Scottish Drugs Forum issued a policy statement on Drugs Education. They stated that there is no one correct method.

- They recommended that school drug education should be part of a wider personal, social and health education, and based on the lifeskills approach. Teachers need in service training and the programmes need to be monitored and evaluated.
- Youth and Community workers and outreach workers in voluntary and statutory sectors are in an ideal position to reach and give the message to at risk groups. There is a need to re-examine the how and by whom the education is given and in service training of community staff is needed.
- They had reservations re public campaigns, which they felt should be orientated toward harm reduction strategies.
- Educating the educator is the first goal of any drug education programme, which includes counselling and group work skill training for any professional, whether health, social service, education or community worker.

Substance Use Prevention

Research has also evaluated the effects of programmes comprising cigarette, alcohol and drug education combined. Evaluation of the short-term effects of these programmes has shown reduction in substance use in some studies (McAlister, Perry, Killen et al., 1980, Perry, 1987, Graham, Johnson, Hansen et al., 1990, Bachman, Johnston and O`Malley, 1990 and Smart, Adlaf and Walsh, 1993). Other evaluations have shown only partial success (O`Connor and Saunders, 1992). Long-term evaluations of substance use prevention programmes after at least one year follow-up, show that generally while cigarette use was reduced, there was insignificant reduction of drug use and no effect on alcohol use. Programmes did increase knowledge, but had limited effects on attitudes and substance use behaviours (Whitehead, 1989, Ary, Biglan, Glasgow et al., 1990, Moberg and Piper, 1990, Coggans, Shewan, Henderson et al., 1991, Jacobson et al., 1991 and Ennett, Tobler, Ringwalt et al., 1994). Substance use prevention programmes show decay of any beneficial effects at long-term evaluation, when there is no enhancement of the programmes (Bell, Ellickson and Harrison, 1993, Ellickson, Bell and Harrison, 1993 and Ellickson, Bell and McGuigan, 1993).

Possible solutions proposed by one group of researchers to deal with the decay effects of substance use prevention programmes included:

- Increased intensity and / or duration of sessions.
- That programmes should be a part of a comprehensive school education programme, or combined with a community wide health education or media campaign.
- There is a need to enhance teachers enthusiasm for the programme
- Message should include harm reduction strategies.

The authors also felt that we are expecting too much from education, when drug use has such multiple risk factors we should use multiple delivery channels (Resnicow and Botvin, 1993).

Other reviews also agree that education in the classrooms is not enough but needs to be included in a comprehensive strategy (Whitehead, 1989, Wright and Pearl, 1990, Ives, 1991a, Jacobson et al., 1991, Swadi, 1992b and Anderson, 1994). A 5 hour programme in school can hardly equip children for life to resist the social influences of smoking or other substance use (Kelleher and Dineen, 1993).

The social influences models for substance use prevention appear to produce the best results (Whitehead, 1989, Jacobson et al., 1991 and Perry and Kelder, 1992). The best programmes seem to encompass knowledge input, clarification and recognition of drug related values and norms and place an emphasis on teaching the cognitive behavioural skills necessary to avoid or minimise drug use. The effects of the programme are enhanced when the target behaviour of intervention has received societal disapproval (e.g. smoking), when multiple years of education are planned and community wide involvement or mass media campaigns complement the school-based peer led programme (Perry and Kelder, 1992). The extension of this approach through including family and community components has been shown to be useful (Pentz, Dwyer, MacKinnon et al., 1989).

Students who are most responsive to school based programmes probably are those for whom such programs are least necessary. Programmes may not be reaching those children who are at greatest risk to develop alcohol or drug problems - those with a family history of abuse, or a developmental history of antisocial behaviour, and those from ethnic minority groups, because many of these children may remain physically or psychologically beyond the reach of traditional, school based programmes (Nathan, 1988). There is therefore a need to develop programmes to reach these at risk adolescents, both in the community and in schools.

School based programme for potential school dropouts and drug abusers

Most of the research into school based education has concentrated on the normal school going population, and has not targeted the high risk group of potential school leavers, whom have already been shown to be at a higher risk of substance use than other students. One group of researchers examined the theory that an environmental or social support network which would promote bonding to school or to nondrug using peers would reduce bonding to deviance and subsequently substance use. The results of the study are limited by the short term evaluation, but it did show some promise (Eggert, Seyl and Nicholas, 1990).

Reorientation of the health services

General Practitioners

Part of the prevention of any behaviour includes knowing that someone is in fact engaging in it. Unfortunately many physicians who see adolescent patients fail to ask about their use of drugs (Strasburger, 1985).

The Government Strategy, 1991 recommends an increased role by general practitioners to prevent drug misuse. The strategy also makes reference to the limited exposure of general practitioners to the problems of drug misusers, both during training and in the course of their practice. The government therefore saw a need for enhanced formal training arrangements in the field of drug misuse. It was proposed to ask the Irish College of General Practitioners in conjunction with the Drugs Treatment Centre Board and other relevant training bodies to develop specific training arrangements to meet these requirements (Department of Health, 1991).

Health professionals and other workers

The government also recommended the training of as wide a range of health professionals as possible, including nurses, social workers and occupational therapists to the problems associated with the misuse of drugs in the community. They recommended that the health boards provide for the training of such staff as appropriate. The health board should also provide training and support for voluntary workers attached to community based groups, who have achieved a great deal in recent years in the areas of drug education and information aimed in particular at parents and young people (Department of Health, 1991).

The World Health Organisation in its manual for primary health care workers who are responding to drug and alcohol problems in the community recommended that primary health care workers should be trained in simple but effective techniques to combat drug and alcohol related problems, including mobilising community action, stimulating self-help groups, providing health education, and encouraging healthy lifestyles. They should be trained in skills such as interviewing, counselling, maintaining social support, crisis intervention, and providing guidance about the use of leisure time (Grant and Hodgson, 1991).

Community Addiction Teams

The Community Drug Teams which are being developed in Dublin as part of the recommendations of the 1991 Government Strategy (Department of Health, 1991), are established under the auspices of the Health Board in targeted areas. Membership is flexible but may include, general practitioners, outreach workers, social workers, public health nurses, treatment agencies representatives (voluntary / statutory), juvenile liaison officers or probation officers.

The role of the Community Drug Team includes ;

1. Identification of the extent of the drug misuse problem in its area of operation.
2. Identification and establishing contact with known drug misusers and persons at risk.
3. Establishing links with the appropriate statutory and voluntary treatment services.
4. Referring and monitoring drug misusers as appropriate.
5. Assisting local education services in developing appropriate and relevant primary education programme.
6. Liaising with prison services.

The support of an experienced team offers general practitioners, especially single-handed general practitioners, protection against some of the commonly feared risks of involvement with drug misusers (Mack,1989).

Co-ordinating Committees

As part of the Government Strategy to prevent drug misuse it was decided that the Health Boards should provide a mechanism for co-ordination and dialogue between the statutory and voluntary services in their areas, i.e. Gardai, Customs and Excise, the education services including FAS and the VECs, the prison services and the voluntary treatment agencies (The Department of Health, 1991).

Multifocal approach

Mounting experience suggests that no one programme component can have a significant and lasting effect on drug prevention, and that multiple components will be required, especially for young people who live in high risk settings. Combined interventions in community wide strategies may be successful, e.g. a social influence curriculum in school linked with parent involvement and training, enlistment of community leaders and health professionals, enforcement of policies regarding availability and use of mass media to reinforce messages. Drug education should also be part of a comprehensive health education programme through out the school years (Dryfoos, 1993). Kleber (1994) felt that the reduction in high school student drug use in the United States from 1980 to 1990 was due to a combination of parents groups, community efforts, improved education programmes and media activities. Hawkins et al. (1992) who wrote a detailed review of the risk factors associated with substance use, felt that the best approach to prevention was a risk-focused one, which addressed the risk factors identified with substance use. Promising risk-focused approaches that they felt should be investigated were early childhood education and early family support, parent training, school-based social and academic competence promotion. Multicomponent or comprehensive strategies, including but not limited to social influence resistance were felt to hold significant promise for preventing substance use.

As already referred to the 1991 Irish Government's Strategy to prevent drug misuse recommends a comprehensive approach involving supply reduction and demand reduction measures plus the increase of access to treatment and rehabilitation by the development of a greater role for general practitioners in treatment at community level and the development of community drug teams. They also recommended measures to increase co-ordination between voluntary and statutory organisations should be made at health board level. There also should be increased co-ordination between the various professional groups. In order to assess the effectiveness of these measures the establishment of a National Drug Database was recommended and also the development of mechanisms to evaluate present and future services (The Department of Health, 1991).

Setting targets

To date no national targets for drug prevention have been set in Ireland.

Consequences of Substance Use

3.15 *Consequences of smoking*

Short term consequences of smoking among children and adolescents

While the majority of health problems associated with adolescent tobacco use arise later in life, some serious short term consequences of cigarette smoking do occur in the respiratory and cardiovascular systems of children and adolescents who smoke. Cigarette smoking during adolescence appears to reduce the rate of lung growth and the level of maximum lung function that can be achieved. Young smokers are likely to be less physically fit than non-smokers; they are significantly more likely to experience shortness of breath, coughing spells, phlegm production, wheezing and overall diminished health (Townsend et al., 1991, American Public Health Association, 1993 and the Center for Disease Control and Prevention, 1994c). There is also evidence that smoking in childhood is associated with a greater risk for lung cancer as an adult. The earlier one begins to smoke in life, the greater the risk (Glynn, 1993 and the Center for Disease Control and Prevention, 1994b).

The acute effects of tobacco on the cardiovascular system include, tachycardia, a transient increase in blood pressure, a decreased tolerance for exercise, an increased tendency for thrombosis and coronary vasoconstriction (Committee on Substance Abuse, American Academy of Pediatrics, 1994). Smoking in adolescence is also associated with an increased risk of early atherosclerotic lesions and increased risk factors for cardiovascular disease. In studies of smoking in the age group 8 - 19 years old, smokers in this age group have significantly higher serum levels of triglycerides (+ 11.8%), of VLDL cholesterol (+ 12.4%), and of LDL cholesterol (+ 4.1%), and significantly lower levels of HDL cholesterol (- 8.5%) and total cholesterol (- 3.7%). The changes in the triglycerides, LDL and the HDL cholesterols are greater than in adults (Craig, Palomaki, Johnson et al., 1990, American Public Health Association, 1993 and the Center for Disease Control and Prevention, 1994c). Subarachnoid haemorrhage is 6 times more common in young smokers than in non-smokers (Bartecchi, MacKenzie and Schrier, 1994).

Smoking is also associated with increased numbers of days absent from school. In a United Kingdom survey of 12 - 13 year olds, regular smoking was significantly more common among those absent from school for minor ailments (Charlton and Blair, 1989). While in a United States study students who were frequent smokers experienced a 2.6 times increased risk of school absenteeism. In this study other drug use behaviours were not significantly associated with an increased risk of missing school (Alexander and Klassen, 1988).

Young people who begin to smoke at an early age are more likely than late starters to develop long term nicotine addiction. In fact most young people who smoke regularly are already addicted to nicotine (Center for Disease Control and Prevention, 1994c).

Glynn (1993) estimated that in the United States of the 3,000 youth who begin smoking daily, about 23 will be murdered, 30 will be killed in road traffic accidents, but 750 will die from a smoking related disease.

Addiction

Nicotine is now recognised to be both physically and psychologically addictive. It is estimated that between 33% and 50% of young people who try smoking even a few cigarettes become regular smokers due to the addictive nature, a process which takes on average 2 - 3 years (Elders et al., 1994).

Long term effects :

Tobacco causes more damage to health than all of the other psychoactive drugs combined (Plant, 1989). Smoking is responsible for nearly 90% of all lung cancers, contributes to a third of all cancers. It is the primary cause of over 80% of emphysema cases and nearly a ¼ of all heart disease, as well as increasing mortality, peptic ulcer disease and other chronic lung diseases such as chronic bronchitis (Glynn, 1993).

Mortality

In Ireland the Department of Health estimates that over 6,000 deaths annually are attributable to smoking. Smoking remains the chief cause of premature death in Ireland (Department of Health, 1994). Each cigarette on average shortens the life of the regular smoker by 5½ minutes (Corrigan, 1991). ¼ of all smokers will die prematurely through smoking with a reduction in life expectancy in those who die of an average 15 years (Amos, 1990). The earlier the age of initiation of smoking the higher the likelihood of dying due to smoking. In 1988 in the United States it was estimated that ½ of the tobacco related deaths were in people who started smoking by age 13 years and ¼ were in those who started by age 11 years (American Public Health Association, 1993).

Cardiovascular disease

In Ireland, cardiovascular disease, heart disease, strokes and circulatory disorders accounted for almost $^{1}/_{3}$ of all premature deaths in 1992. It is estimated internationally that smoking is the cause of about 30% of cardiovascular deaths (The Department of Health, 1994). No safe threshold for cigarette smoking has been identified, smoking just 1 - 4 cigarettes daily is associated with a twofold increase risk of coronary heart disease. Low tar cigarettes have the same risk as high tar ones (McBride, 1992).

These adverse effects start shortly after initiation of smoking. Compared with a non-smoker, a smoker under the age of 25 years has 4 times the odds of having atherosclerotic lesions on the abdominal aorta and twice the odds of having atherosclerotic lesions on the coronary arteries (Craig, Palomaki and Haddow, 1989,

PDAY Research Group, 1990, McBride, 1992 and Bartecchi et al., 1994). The risks of stroke associated with smoking are far greater in younger people, smoking increases the risk of strokes in young people by 50% (Shinton and Beevers, 1989 and Dennis and Warlow, 1991).

Cancer

Smoking is the single most important cause of cancer (Austoker et al., 1994). 43 carcinogens have been identified in cigarette smoke to date (Newcombe and Carbone, 1992). The overall death rates from cancer are twice as high among smokers as among non-smokers; heavier smokers have death rates that are 4 times greater (Newcomb and Carbone, 1992 and Bartecchi et al., 1994).

Cancer deaths in Ireland account for $^{1}/_{3}$ of all premature deaths (Department of Health, 1994). 30% of the cancer mortality in Ireland is due to smoking tobacco (Faculty of Community Medicine, 1988).

Compared with non-smokers, smokers have a 10 fold increase risk of dying from lung cancer and heavy smokers have an increase risk that is 15 - 25 fold that of non-smokers. The excess risk is directly proportional to the number of cigarettes smoked daily and the duration of smoking. *Individuals who begin smoking under 15 years old have a nearly 4 - fold greater risk of lung cancer than those who began smoking after the age of 15 years.* Low tar cigarettes appear to carry a lower risk than high tar cigarettes (Carbone, 1992, Dumas, 1992, Newcombe and Carbone, 1992, Austoker, 1994a, Austoker et al., 1994 and Bartecchi et al., 1994).

3.16 ***Consequences of Alcohol Consumption***

The Director General of the World Health Organisation recently said that of all the so-called drugs of abuse, alcohol is the most frequently abused, and alcohol remains the cause of the greatest number of health and social problems (Wodak, 1992).

Drinking that results in intoxication, a high intake long term, or dependence causes considerable harm. The harm includes various physical and psychological illnesses and a broad range of social problems (Kemm, 1993).

Consequences of alcohol consumption in adolescents

The majority of drink related problems among adolescents are associated with the acute effects of intoxication as opposed to the more chronic forms of abuse (Fossey, 1994).

Problem drinking by adolescents as defined by the American National Institute for Alcohol Abuse and Alcoholism, is drinking to the point of being drunk 6 or more times a year and / or having negative consequences from alcohol use on 2 or more times a year. Negative consequences include impaired relationships with family, peers or teachers; problems with school; problems with the police; problems with

dates; and / or driving after drinking. 19% of 14 - 17 year old children in the United States are estimated to be problem drinkers. Not all drinking by adolescents is hazardous. However, adolescents may be at increased risk of harm because of their limited experience with alcohol and their smaller body size leads to faster intoxication with smaller amounts of alcohol. They may be less able to recognise and compensate for the neuropsychiatric effects due to biologic, cognitive and psychologic immaturity (Committee on Adolescence, American Academy of Pediatrics, 1987). In a young person who is not used to drinking moderate BAC of 100 - 200 mg% may produce a coma (Lennane and Tuck, 1989).

In a survey in the United Kingdom of adolescents aged 13 - 17 years, 30% of boys and 15% of girls aged 13 years had been very drunk in the past year. Symptoms of intoxication, such as blackouts, hangovers, vomiting, falling over were reported by almost ½ of the 17 year olds. Antisocial behaviour associated with drinking was reported by many adolescents. About ¼ got involved in a fight and 1:10 were involved in vandalism or attracted the attention of the police. On follow up it was found that early age at initiation was associated with problem alcohol use later in adulthood (Swadi, 1993). Similar results were obtained by both United States and United Kingdom researchers (Fossey, 1994 and Wechsler, Davenport, Dowdall et al., 1994).

In addition to the increased morbidity and mortality associated with alcohol use during adolescence, it appears that normal developmental processes like pubertal growth, cognitive, social and moral development may also be delayed, altered or harmed because of alcohol use. Because they are in a developmental stage, adolescents do not have as many coping skills and resources available compared to adults to deal with the harmful effects and consequences, including physical, social, financial and legal problems, when experimental use turns into abuse. Problems of acute alcohol intoxication, resulting from a single session of over consumption have serious health consequences such as road traffic accidents, violence, homicide and suicide, that not surprisingly are the leading causes of adolescent morbidity and mortality (Rogers et al., 1987, Perry and Grant, 1991 and the European Alcohol Action Plan, 1992). Alcohol related trauma including child abuse, road traffic accidents, violence and drownings are the leading cause of death in those aged 1 - 19 years (American Public Health Association, 1993).

A study in the United States found that heavy drinking in high school reduced the average number of years of schooling. Because youthful drinking may lead to failure in school and distort the normal process of social maturation , the legacy of youthful alcohol abuse may be inferior career options and family problems (Cook and Moore, 1993).

Accidents

The two main causative factors in accidents that involve alcohol are impaired psychomotor function and increased risk taking behaviour (Heather, 1994).The commonest hazard from excess alcohol use is accidental injury from falling or from traffic accidents (Corrigan, 1991). In many countries including Ireland, road

traffic accidents now account for over ½ of male deaths among 15 - 19 year olds and the most important factor in these cases is alcohol (Committee on Adolescence, American Academy of Pediatrics, 1987, American Public Health Association, 1993, Center for Disease Control, 1993d, Swadi, 1993, Center for Disease Control, 1994d, and the Department of Health, 1994).

Death from drunken driving has reduced the life expectancy of those aged 15 - 24 years compared to 20 years ago (Havard, 1986). Driving skills deteriorate and the risk of road traffic accidents increase at BAC of 50mg/100ml (Moskowitz, 1989). Although alcohol use increases the risk for a road traffic accident for all drivers, for young drivers the risk begins to increase at very low levels (Conniffe and McCoy, 1993). At BACs of 80mg/100ml there is a 10 fold increased risk of an accident. A 17 year old with the same BAC has 40 times more risk of an accident than a youth who has not been drinking (Corrigan, 1991).

Traditionally data about drunken driving are common indicators of the rate of alcohol problems in industrialised countries (Van Iwaarden, 1989). In Ireland in 1993, 17,135 persons were breathalysed of which 5,422 were positive. Other convictions relating to alcohol included 4,908 convictions for drunkenness, the majority with aggression. There was 56 convictions of supplying or selling drink to under 18 year olds (proceedings were taken in 102 cases), 9 convictions of purchase of intoxicating liquor in persons under 18 (proceedings taken in 18 cases) 17 convictions (proceedings against 25) of consumption of intoxicating liquor by persons under 18 in any place other than private residence (Annual Report of the Gardai Siochana, 1993).

Sexual Behaviour

Studies show that adolescents are more likely to have casual sex and less likely to use condoms when they are under the influence of alcohol (Hingson, Strunin, Berlin et al., 1990, Swadi, 1993 and Wechsler et al., 1994). A study of United Kingdom students looked at the association between alcohol use and casual sex (McEwan, McCallum, Bhopal et al., 1992). They found that only 3.9% of non drinkers had sex with someone that they had only just met without using a condom, versus 7.1% of light drinkers, 16.3% of medium drinkers and 27.1% of heavy drinkers. Of those who were non drinkers, 8.6% had sex with someone they knew had a lot of sex partners, versus 9.0% of light drinkers, 16.3% of medium drinkers and 19.3% of heavy drinkers. Sex with three or more partners in the past year occurred amongst 13.1% of non drinkers versus 37.6% of heavy drinkers. There was also a positive relationship between smoking and casual unsafe sex. Three possible explanations were given for the relationship; 1) alcohol might disinhibit unsafe sex 2) young risk takers may also drink more and 3) drinking might be associated with unsafe sex by coincidence because sexual encounters often begin in licensed premises. One study failed to find an association between alcohol consumption and failure to use condoms (Senf and Price, 1994).

Alcoholism or alcohol addiction to alcohol is uncommon but not unknown in the young. Children of alcohol abusers are at increased risk for alcoholism (Committee on Adolescence, Academy of Pediatric, 1987). The acute withdrawal symptoms of delirium tremens, convulsions and hallucinoses are rarely seen in the adolescent alcoholic. Some older adolescents may present with non tender hepatomegaly, which is usually asymptomatic and probably a sign of early alcoholic liver disease, that is fatty liver, which is reversible. Hepatitis, cirrhosis and pancreatitis secondary to alcohol abuse are rare clinical entities in the adolescent alcoholic (Rogers et al., 1987).

Hospital admissions

Changing practises relating to the treatment of the psychological and psychiatric problems of alcohol abuse have reduced the validity of hospital admission data as an index of the trends in alcohol problems (Walsh, 1989).

Alcoholism continues to be the second main cause of admission to psychiatric hospitals in Ireland behind depression, especially in the west and the north-west. In 1992 alcoholism accounted for about 6,000 admissions, 22% of the total. Regional figures for 1992 showed that admission rates for alcoholic disorders were more than twice as high in the Western Health Board and the North-Western Health Board compared to the Southern Health Board. The Western Health Board had an admission rate for alcoholic disorders of 266.4/100,000 compared to the national rate of 171.7/100,000. The bulk of the admissions were for people aged between 25 and 55 years old. Among adolescents the rate of admission for alcoholic disorders was more than twice that for drug dependency. There were 54 adolescents aged between 15 and 19 years admitted nationally with a diagnosis of alcoholic disorder and one under the age of 15 years in 1992 (Moran and Walsh, 1994). 10 to 30% of patients in medical and surgical wards have significant alcohol related problems. The Accident and Emergency wards have a particularly high incidence of such phenomena (O`Shea and Falvey, 1988).

Social consequences

Excessive drinking is liable to cause profound social disruption particularly in the family.

While the per capita consumption of alcohol and mortality from cirrhosis is lower in Ireland than in many western European countries, the Irish have serious problems due to alcohol abuse as the drinking pattern here tends towards consumption of large volumes sporadically in contrast to wine drinking countries. The Irish pattern of drinking leads to major social problems of violence, impulsive antisocial behaviour, spouse and child abuse and family disruption (Faculty of Community Medicine, Ireland, 1988).

Ireland continues to have a serious problem with alcohol misuse and the increasing degree of alcohol misuse among young people is causing growing concern (the Department of Health, 1994).

3.17 ***Consequences of Drug Use***

Drug effects are strongly influenced by the amount taken, how much has been taken before, what the user wants and expects to happen, the surroundings in which it is taken and the reactions of other people (Institute for the Study of Drug Dependence, 1987).

Definitions

Tolerance refers to the way the body usually adapts to the repeated presence of a drug, meaning that it takes higher doses to maintain the same effect.

Withdrawal effects are the body's reaction to the sudden absence of a drug to which it has adapted.

Dependence describes a compulsion to continue taking a drug as a result of its repeated administration. If it is to avoid the physical discomfort of withdrawal, it is termed physical dependence. If the compulsion has a psychological basis then it is termed psychological dependence.

Addiction implies that a drug dependency has developed which has serious detrimental effects on the individual and on society.

Problem drug use refers to drug use resulting in social, psychological, physical or legal problems associated with dependence, intoxication or regular excessive consumption (Institute for the Study of Drug Dependence, 1987).

One paper which looks at substance use prevention defined *adolescent drug abuse* as the frequent use of alcohol or other drugs during the teenage years or the use of alcohol or other drugs in a manner that is associated with problems and dysfunctions. This definition reflects recognition that a relatively large proportion of teenagers try alcohol or other drugs without becoming involved in the frequent use of these substances or developing drug-related problems (Hawkins et al.,1992).

Consequences of cannabis use

Cannabis refers either to the hemp plant *Cannabis sativa* or any of its products. Hemp was used to make canvas material and in fact the first jeans were made from the cannabis plants.

Marijuana from the Spanish American slang for "Mary and John" refers to the dried leaves of the male and female plants and is the least potent.

Hashish is the dried resin obtained from the cannabis plant and is the commonest form of the plant available in this country.

Cannabis oil is a liquid extracted from cannabis resin, which has high potency.

Sinsemilla refers to a seedless version of the cannabis plant which is cultivated for its high potency. It is not readily available in Ireland.

The cannabis plant produces over 400 different chemicals, the most important of which are the main psychoactive compounds, the tetrahydrocannabinols (THC). In Ireland cannabis is usually rolled into cigarettes called joints and smoked. The resin and oil are usually mixed with tobacco. It can also be smoked in a pipe, brewed into a drink or put into food (Institute for the Study of Drug Dependence, 1987, Corrigan, 1991 and Thomas, 1993).

When smoked, cannabis is absorbed by the lungs rapidly. THC is highly lipid soluble and it enters the brain and some "storage tissues" quite rapidly. It is slowly released back into the blood stream. The complete elimination from the body of a single dose may take more than 30 days (Negrete, 1988).

Short term effects : The effects last up to one hour with low doses and for several hours with higher doses when smoked (Corrigan, 1991). Cannabis is a mild intoxicant. The effects depend largely on the expectations, motivations and mood of the user. The most common effects are a pleasurable state of relaxation, talkativeness, bouts of hilarity and greater appreciation of sensory experiences, including sound, colour, taste etc. (Institute for the Study of Drug Dependence, 1987, Proudfoot and Vale, 1989). There may be some anxiety even to moderate doses especially amongst inexperienced users. Tachycardia, hypotension, ataxia and conjunctival suffusion and sweating have been reported (Ashton, 1987, Proudfoot and Vale, 1989 and Swadi, 1992b). Other adverse effects which have been reported in a small percentage, include severe panic, acute toxic confusion, paranoid reactions and hallucinations. These adverse effects are usually dose dependent. These reactions although very frightening are transient and usually do not require medical attention (Smart and Adlaf, 1982, Institute for the Study of Drug Dependence, 1987 and Corrigan, 1991). Adolescents are at increased risk of adverse effects (Ashton, 1987).

Among the other adverse effects which are of particular importance in a student population is the effect of cannabis on short term memory. The effects of cannabis on memory in the intoxicated state have been well documented. Short term memory appears selectively impaired in a dose dependent fashion similar to the effects of alcohol. Recent studies have suggested that selective short term memory deficits may persist following a period of abstinence for several weeks, up to 6 weeks (Schwartz, Gruenewald, Klitzner et al., 1989, Corrigan, 1991 and Deahl, 1991).

Cannabis at social doses can seriously interfere with performance and motor co-ordination. This impairment persists for many hours after the high because the drug is slowly eliminated from the body. The impairment is worse under artificial illumination. Evidence from other countries shows that cannabis use contributes to traffic accident fatalities and injuries (Ashton, 1987, Negrete, 1988 and Corrigan, 1991).

Psychologists have shown that at higher doses cannabis impairs intellectual functioning in general; it adversely affects speed and accuracy in performance of tasks and that it interferes with the application of

acquired knowledge, with memory functions and with the capacity to learn new information, all of which are crucial for students and workers (Negrete, 1988).

One study which examined the effects of moderate doses of alcohol and / or marijuana on mood and performance, found that alcohol produced greater impairment the following day on most tasks than did marijuana (Chait and Perry, 1994).

There is evidence that adolescents who use cannabis are more likely to engage in unsafe sex. In a study of 16 - 19 year old adolescents in Massachusetts those who had used marijuana in the previous month were 1.9 times less likely to use condoms than non users (Hingson et al., 1990).

There is virtually no danger of a fatal cannabis overdose (Institute for the Study of Drug Dependence, 1987, Negrete, 1988 and Corrigan, 1991). Cannabis has also a very low rate of short term morbidity. Of all the drug related episodes seen in health care settings in the US in 1985 only 5% were due to cannabis (Negrete, 1988).

Long term effects : Studies of human cannabis users have been contradictory in their results and in many cases the evidence is inconclusive for adverse long term effects (Institute for the Study of Drug Dependence, 1987, Negrete, 1988 and Corrigan, 1991). Cannabis does not produce physical dependence, although tolerance to the effects and a mild withdrawal syndrome has been reported after cessation of heavy use. Psychological dependence though rare has been noted (Institute for the Study of Drug Dependence, 1987, Negrete, 1988 and Corrigan, 1991).

When burned, cannabis smoke contains more carcinogens and tar than tobacco smoke. It is hotter on contact with the respiratory tract than tobacco as it burns at a higher temperature. It is usually retained in the lungs longer than tobacco. It is therefore not surprising that cannabis smoking causes similar damage to the respiratory tract if not more than tobacco smoking (Ashton, 1987, Negrete, 1988, Corrigan, 1991, Blanken, 1993 and Polen, Sidney, Tekawa et al., 1993).

Consequences of Volatile Substance Abuse (VSA)

VSA is usually a group activity, with the peak age for abuse being 13 to 15 years old. The range of products which can be abused is very large. The four main categories are: *adhesives and thinners* which contain toluene and acetone, *dry cleaning fluids* which contain toluene, trichloroethylene and carbon tetrachloride, *aerosols* which contain halogenated hydrocarbons and *fuels* such as petrol, gas, butane and propane (Ashton, 1990, Corrigan, 1991 and Dinwiddie, 1994).

The physical form of the product usually determines the mode of abuse. Inhalants may be “sniffed” directly from an open container, “huffed” from a rag or clothes soaked in the substance and held to the face, sprayed

directly into the mouth or placed in a bag and inhaled (Ron, 1986, McHugh, 1987, Esmail, Meyer, Pottier et al., 1993 and Dinwiddie, 1994). Tell tale signs of VSA include the characteristic smell on the breath or on the clothes and the "glue sniffer`s facial rash" (Ron, 1986 and Proudfoot and Vale, 1989). In $^{2}/_{3}$ of cases VSA is a group activity, but solitary abuse tends to occur among those with greater social and psychological problems (Ron, 1986).

Acute intoxication and short term effects : On inhalation, the substances pass quickly into the blood from the lungs. They are preferentially absorbed into fatty stores and the brain. The first effect of inhalation is euphoria and is usually obtained very quickly within 3 - 5 minutes. Clinically, volatile substance intoxication resembles alcohol intoxication, with central nervous system stimulation and disinhibition followed by depression at higher doses. Higher doses often lead to less pleasant and more dangerous effects. Changes in perception may precede bizarre and frightening hallucinations, while ataxia (unsteady gait) and confusion may lead to accidents and injuries. Vomiting can also occur, with the risk of asphyxia from inhalation of stomach contents. Users may also experience headache, double vision, slurring of speech, tinnitus, palpitations, bronchospasm and coughing. Convulsions and status epilepticus, respiratory depression and coma may ensue if inhalation continues. Because these substances are highly flammable, thermal burns may occur. Those under the influences of volatile substances may be self destructive, antisocial and aggressive (Ron, 1986, McHugh, 1987, Proudfoot and Vale, 1989, Ashton, 1990, Corrigan, 1991, Esmail et al., 1993 and Dinwiddie, 1994). The acute effects usually last for 30 - 45 minutes after cessation of exposure and some degree of amnesia for the event is usual. Only a minority of abusers with particularly severe and persistent symptoms require admission to hospital. In such cases neurological impairment is the rule, however consciousness is quickly restored in most cases (Ron, 1986).

Only a minority of those who experiment about 10% become regular users, and only a minority of regular users are likely to experience serious problems or harm (Anonymous, 1988 and Gossop, 1993).

Deaths from VSA are rare in relation to the numbers that are believed to be actually using these products (Corrigan, 1991). In Ireland in 1990 there were 3 deaths in victims aged under 18 years old and 2 deaths in 1991. None were recorded in 1992 - 1994 (Poisons Information Centre, personal communication,1995). In the United Kingdom the number of deaths increased from 82 in 1983 (Anderson, Macnair and Ramsey, 1985) to 149 deaths recorded in 1990 (Gossop, 1993), 60% of these deaths being in adolescents under 17 years old. $^{1}/_{5}$ to $^{1}/_{3}$ of deaths occur in apparent first time users (Johns, 1991 and Esmail et al., 1993). Sudden death from VSA may result from anoxia, vagal inhibition, respiratory depression, cardiac arrhythmias or trauma. Anoxia may be caused by inhalation of vomit or placing a plastic bag over the head. Vagal inhibition occurs reflexively from laryngeal stimulation and is particularly associated with butane and aerosol propellants sprayed directly into the throat. Respiratory depression is a direct result of general depression of the central nervous system. Cardiac arrhythmias account for over half the deaths and are particularly associated with butane from lighter fluid or aerosol propellants; the mechanism is thought to be sensitisation

of the myocardium to adrenaline and sympathetic stimulation, which would occur with any sudden exercise. Once arrhythmia develops the victim is resistant to resuscitation; the risk of sudden arrhythmia remains for some hours after inhalation. Death from trauma follows accident and suicide attempts; inexplicably it accounts for half the deaths associated with toluene (mainly adhesives) but only 2-3% of deaths from other volatile substances (Anderson et al., 1985, Boon, 1987, Proudfoot and Vale, 1989, Ashton, 1990, Corrigan, 1991 and Johns, 1991). *In recent years deaths from gas fuels (butane and propane) plus aerosols have increased and now account for over half of the deaths* while deaths from toluene in adhesives has fallen reflecting the effects of legislation and the fact that adhesives and dry cleaning fluids are more easily restricted than gas fuels or aerosols (Anderson, 1990 and Ramsey, Bloor and Anderson, 1990). Butane gas lighters are responsible for 34% of deaths from VSA in the under 18`s in the United Kingdom (Esmail et al., 1992). Death from VSA is one of the leading causes of deaths in those under 18 years in the United Kingdom. At age 15 years, 10% of all deaths and 20% of deaths from accidents, violence and poisoning are due to VSA. Peak incidence of deaths is in the summer months (Esmail et al., 1993).

Long-term effects

Tolerance develops gradually and withdrawal symptoms have been described. Physical dependence is very rare while psychological dependence occurs in a minority of abusers. It is believed that these youngsters have an underlying family and personality problems and are more likely to become lone volatile substance abusers (Institute of Studies for Drug Dependence, 1987 and Proudfoot and Vale, 1989).

Neurological damage : Reported neurological sequelae of chronic abuse include both central nervous system and peripheral nervous system damage, though since most studies consist of case reports and small series studies, the true prevalence and nature of neurological damage is unknown. The evidence would seem to indicate that the risk of neurological damage is relatively small in comparison to the numbers of adolescents believed to be abusing. Evidence is more conclusive for toluene adhesives and petrol inhalation (Dinwiddie, 1994). The degree and duration of VSA required to produce chronic complications is unknown but several years of regular abuse appears to be necessary (Anonymous, 1988).

Reviews have concluded that the evidence from the various studies is not conclusive, it is possible that such deficiencies may precede and possibly contribute to inhalant use, rather than resulting from the practice, or that pre-existing deficiencies may be differentially exacerbated by exposure to inhalants (Ron, 1986, Chadwick et al., 1990 and Dinwiddie, 1994). Neuropsychological impairment in unlikely in VSA as practised by most schoolchildren (Ashton, 1990).

Other reported adverse effects of VSA include a paranoid psychosis (Byrne, Kirby, Zibin et al., 1991), muscular weakness, which may be profound (Anonymous, 1988 and Proudfoot and Vale, 1989), rhabdomyolysis or breakdown of muscle tissue (Boon, 1987 and Anonymous, 1988), kidney damage (Boon, 1987, Anonymous, 1988, Proudfoot and Vale, 1989, Ashton, 1990, Swadi, 1992b and Dinwiddie, 1994), abdominal pain, nausea, vomiting, haematemesis and hepatic necrosis (Boon, 1987, Anonymous, 1988,

Proudfoot and Vale, 1989, Ashton, 1990, McIntyre and Long, 1992, Swadi, 1992b and Dinwiddie, 1994), chronic cardiac toxicity with dilated cardiomyopathy (McLeod, Marjot, Monaghan et al., 1987, Anonymous, 1988, Proudfoot and Vale, 1989, Ashton, 1990 and Swadi, 1992b), chemical pneumonitis secondary to aspiration and emphysema secondary to chronic abuse (Ashton, 1990 and Dinwiddie, 1994), bone marrow suppression (Dinwiddie, 1994) and foetal malformations (Ashton, 1990 and Dinwiddie, 1994).

Nitrites / "poppers" are inhalants which are used as orgasm enhancers. They are smooth muscle relaxants. The giddiness and syncope induced by these agents is thought to represent cerebral ischaemia caused by vasodilatation. The major toxicities of nitrite inhalation, result primarily from vasodilatation and the formation of methhaemoglobin which can be fatal (Institute of Studies for Drug Dependence, 1987 and Proudfoot and Vale, 1989). They can also cause a haemolytic anaemia (Beaupre and Schiffman, 1994).

It appears that most users ultimately abandon the practice of VSA and thus do not develop physical complications such as neurological or renal damage. The practice is not benign however; even first time users are at risk for fatal cardiac arrhythmia and sudden death especially with butane and aerosol propellants. Users also place themselves in situations where they are at risk of accidents or assaults. Finally any history of inhalant abuse, even if the practice is soon given up, is an indication that the user is at high risk for progression to other drug use and addiction (Dinwiddie, 1994).

Consequences of hallucinogen use

LSD

LSD (Lysergic Acid Diethylamide) or "Acid" is a white powder, generally mixed with other substances and formed into tablets or capsules, or in solution the drug may also be absorbed on paper as peel off cartoon characters, gelatine sheets or sugar cubes. LSD is synthesised from medicines from Ergot, a fungus which grows on rye and wild grasses. LSD was first synthesised in 1938 in Switzerland, but the discovery of its hallucinogenic properties and the first "trip" were discovered by accident in 1943 (Institute of Studies for Drug Dependence, 1987 and Corrigan, 1991).

LSD is the most potent psychoactive drug known, however it has an extremely high safety margin. It can have effects in doses as low as 10 - 15 micro grammes and yet is not fatal at doses hundreds of times higher (Brown and Braden, 1987).

Short-term effects : A "trip" begins about ½ to 1 hour after taking the LSD, it peaks after 2 to 6 hours and fades out after about 12 hours. Strange distortions of colours, shapes, hearing and other senses occur. True hallucinations are rare as the user knows that the effects are drug related. Physical effects are slight and include increased heart rate and temperature.

Emotional reactions vary but include heightened self awareness and mystical experiences. Feelings of dissociation from the body are common. Unpleasant reactions are more likely if the user is unstable, anxious or depressed. Anxiety, depression, disorientation and sometimes short lived psychotic episodes can occur. Concentration, memory, learning and driving ability are impaired. Suicide and deaths due to LSD induced beliefs or perceptions, while they can occur are rare (Brown and Braden, 1987, Institute of Studies for Drug Dependence, 1987 and Corrigan, 1991).

Long-term effects : No physical dependence occurs though tolerance develops rapidly which may tend to reduce frequent use. A small minority become psychologically dependent. Chronic adverse reactions include flashbacks, psychosis, depressive reactions and chronic personality changes. It is not clear whether LSD causes these psychological effects or "uncovers" pre-existing problems. Flashbacks are reexperiences of the original LSD induced state, which occurs without reingestion of the drug. They may occur spontaneously for a number of weeks or months. With time flashbacks reduce in number, intensity and duration, whether they are treated or not. The mechanism of these flashbacks is unknown (Brown and Braden, 1987, Institute of Studies for Drug Dependence, 1987 and Corrigan, 1991). There is no conclusive evidence for any long term physical damage from LSD use, though there has been a case report of chronic visual disturbances in an adolescent who used LSD (Kaminer and Hrecznyj, 1991).

Magic mushrooms

The use of mushrooms and other plants for their vision inducing (hallucinogenic) effects dates back to about 500 BC in Central America. The use of mushrooms for "recreational" drug use has increased gradually since the mid 1960`s. Different types of mushroom are known to produce psilocybe the psychoactive ingredient. Psilocybin mushrooms may be eaten fresh or cooked, or brewed into a tea. They may also be preserved by freezing or drying. The Liberty Cap seems the most commonly occurring and the most used species. It fruits between September and November. The mushroom is pleasant tasting and does not generally cause potentially deterrent side effects, though species which appear similar can be fatal or cause illness.

Short term effects : The effects of psilocybin are similar to a mild LSD experience but of shorter duration. About 20 - 30 Liberty Cap mushrooms are generally required for a full hallucinogenic experience.

Unlike LSD, the effects include euphoria and hilarity with increased pulse, blood pressure and dilatation of the pupils. Effects come on quicker than LSD, starting about ½ hour after ingestion, peak at 3 hours and last for about 4 - 9 hours. At low doses (2 - 4 mushrooms) euphoria and detachment predominate; at higher doses (20 - 30 mushrooms) visual distortions and pseudohallucinations of colour and movement predominate with feelings of nausea, vomiting and abdominal pains though it is possible that the latter effects are due to ingesting poisonous mushrooms in error.

Infrequently bad trips with deep fear and anxiety can occur and develop into a psychotic episode which is transient. During intoxication there is impairment of the ability to judge distances, widths and heights which can lead to accidents. Some users may also become aggressive during periods of intoxication. Recurrent anxiety and flashbacks may occur, but usually fade in time (Brown and Braden, 1987, Institute of Studies for Drug Dependence, 1987, Proudfoot and Vale, 1989 and Corrigan, 1991).

Long term effects : As in the case of LSD, tolerance develops rapidly and it may take twice as many mushrooms the following day to achieve the same effect. There is therefore a natural discouragement to daily use. There are no significant withdrawal symptoms and no physical dependence, though some may develop psychological dependence. No serious lasting sequelae to the long term use of magic mushrooms have been reported (Institute of Studies for Drug Dependence, 1987 and Corrigan, 1991).

Consequences of amphetamine use

Amphetamines were first synthesised in 1887, but were not widely used until the 1920`s. Medically they were used as antidepressants and to treat narcolepsy and asthma. During World War II amphetamines were distributed to British, American and Japanese troops in order to raise morale and improve fighting ability. The first reported epidemic of amphetamine abuse occurred in Japan after the war when military supplies were dumped onto the open market. The non-medial use of amphetamines and methylamphetamines (MA) was very popular among adolescents in the 1960`s and the 1970`s. Amphetamines may be taken by mouth, dissolved in water and injected, sniffed up the nose, or smoked (Institute of Studies for Drug Dependence, 1987, Corrigan, 1991 and Pickering and Stimson, 1994).

Short term effects : Amphetamines arouse and activate the user much as the body's natural adrenaline does. Breathing and pulse rate increase, pupils widen and the appetite is suppressed. The user feels more alert, energetic, confident and cheerful and less bored or tired. With higher doses there is intense exhilaration, rapid flow of ideas, increased libido and aggressiveness, and feelings of greatly increased physical and mental capacity are common.

Acute complications of amphetamine use are rare among users of low doses, but become more common with increasing doses (Gawin and Ellinwood, 1988). With some people and especially as the body's energy stores become seriously depleted, the predominant feelings may be anxiety, irritability and restlessness. High doses especially if repeated over a few days can produce delirium, panic, hallucinations and feelings of persecution (amphetamine psychosis) which gradually disappear as the drug is eliminated from the body. The effect of a single dose can last about 3 - 4 hours, and leave the user feeling tired, it can take a couple of days for the body to fully recover (Institute of Studies for Drug Dependence, 1987, King and Coleman, 1987, Corrigan, 1991, and Iwanami, Sugiyama, Kuroki et al., 1994).

Death may occur from fatal poisoning which leads to convulsions, coma and subsequent death. Hyperthermia leading to rhabdomyolysis is also a recognised complication of amphetamine poisoning. Amphetamines cause increased cardiac output, hypertension and induction of cardiac arrhythmias which are a recognised mechanism in amphetamine related deaths (Dowling, McDonough and Bost, 1987, King and Coleman, 1987, Proudfoot and Vale, 1989 and Callaway and Clark, 1994). Very few deaths have resulted from amphetamine use and the deaths which occur are usually due to violence rather than toxicity (Corrigan, 1991).

Long term effects : Amphetamines are extremely psychologically addictive and physical dependence may also occur. Tolerance develops to the stimulant effects, so the dosage is increased, with subsequent increase in the development of toxic effects including delusions, hallucinations and feelings of paranoia, with a danger of violence. In most the symptoms abate gradually after drug taking is stopped. In a few cases a psychotic state develops from which it may take several months to recover fully. This may be more likely with methamphetamine (Institute of Studies for Drug Dependence, 1987, King and Coleman, 1987, Corrigan, 1991 and Iwanami et al., 1994).

Ecstasy

Ecstasy or 3,4-methylenedioxymethamphetamine (MDMA) and Eve (MDEA) or 3,4-methylenedioxyethamphetamine are drugs which are chemically related to the amphetamines. Ecstasy was first developed as an appetite suppressant in Germany in 1914 but was never marketed. In the early 1970`s a small number of psychiatrists began using it as an adjunct to psychotherapy, as it appeared to facilitate therapeutic communication, and increase patient self-esteem. Since the 1980`s ecstasy has become a popular recreational drug, especially among college students (Dowling et al., 1987).

Ecstasy was banned in the United Kingdom in 1977 (Henry, 1992) and in Ireland was classed as a Schedule 1 drug with high potential for abuse and without accepted medical use in July 1985 (Cregg and Tracey, 1993).

Ecstasy is taken orally in the form of tablets or capsules. It is used as a dance drug in Ireland and in the United Kingdom, while in the United States it tends to be taken more often alone or at parties (Henry, 1992 and Cregg and Tracey, 1993), though the “rave” scene is starting in the United States also.

Short term effects : MDMA and MDEA have a rapid onset of action, with effects starting in under 30 minutes, reach their peak in 1½ hours and then subside in 3 - 6 hours. There are said to be three stages of action; an initial period of disorientation, followed by a rush during which the user experiences tingling and finally a period of “happy sociability”. The effects of the drug are usually euphorigenic. It produces a heightened sense of self awareness, enhanced sociability, benevolence and sustained energy (Dowling et al., 1987, Corrigan, 1991 and Cregg and Tracey, 1993).

Ecstasy is reported to share the properties of both amphetamines and hallucinogens in the nature of its side effects and residual effects (Solowij, Hall and Lee, 1992). The effects of ecstasy can be unpredictable and confusion, depression, panic and anxiety have been reported after a single dose (Dowling et al., 1987, Whitaker-Azmitia and Aronson, 1989 and Corrigan, 1991). Case reports of severe depression with suicidal ideation, flashbacks and recurrent psychosis and a case report of prolonged psychosis after recreational use have been recorded in the literature, although the number of such recorded adverse effects are relatively small in comparison to the number of young people believed to be using ecstasy (Benazzi and Mazzoli, 1991, Creighton, Black and Hyde, 1991 and Williams, Meagher and Galligan, 1993).

The most common complaints reported in Ireland after use of ecstasy were agitation, excitement, hallucinations, palpitations and psychiatric symptoms. The most common findings were dilated pupils, tachycardia, hypertension, CNS depression and incontinence (Cregg and Tracey, 1993). Other reported symptoms include muscle stiffness, involuntary clenching of the teeth and sweating. These milder symptoms usually resolve within 48 hours (Henry, 1992 and Henry, Jeffreys and Dowling, 1992).

Ecstasy can cause sudden death by inducing cardiac arrhythmias usually in individuals with underlying cardiac disease, seizures and CNS depression (Dowling et al., 1987, Henry et al., 1992 and Cregg and Tracey, 1993). There have also been deaths resulting from stroke in ecstasy users (deSilva and Harries, 1992). It has been noted that there is a different pattern of serious adverse effects of ecstasy use, including deaths, on the two sides of the Atlantic Ocean. Prior to the "rave" scene the deaths which occurred were due to cardiac arrhythmias or death due to bizarre drug induced behaviour following ecstasy use. Since ecstasy has become a "dance" drug however there have been several reports in the literature of an increase in the number of serious adverse effects and deaths. Malignant hyperthermia, rhabdomyolysis (breakdown of the muscle tissues), DIC (disseminated intravascular coagulation), thrombocyopenia (low platelets) and acute renal failure followed in some cases by death have been increasingly recorded following raves or night clubs; deaths similar in nature to heat stroke (Brown and Osterloh, 1987, Henry, 1992, Henry et al., 1992, Screaton, Singer, Cairns, et al., 1992 and Cregg and Tracey, 1993). Ecstasy was the recorded cause of death in 15 young people in the United Kingdom between 1990 to 1992. In most cases a recreational dose had been taken at raves in clubs or parties. Deaths of this nature were unrecorded in the United States during this time (Henry et al., 1992). The mechanism by which ecstasy increases body temperature is unknown, though it is believed to involve interference with serotonin metabolism in the brain and thereby the thermoregulatory centre. The circumstances of use are believed to compound this effect by use in warm ambient temperatures, vigorous physical exercise and inadequate fluid replacement (Henry, 1992, Henry et al., 1992, Screaton et al., 1992 and Cregg and Tracey, 1993). The unusually high temperatures during the summer of 1995 in Ireland have resulted in increased adverse effects from ecstasy, including death. In a study by the Poisons Centre in Dublin in 1993, two deaths had been reported secondary to ecstasy use, one was in 17 year old who died from cardiac failure and the other was in a 19 year old who died from malignant hyperthermia (Cregg and Tracey, 1993).

Long term effects : The long term effects of ecstasy use are not fully known yet. Tolerance occurs; some users increase the dose over weeks or months of use to as many as 10 or more tablets in the course of the evening. The drug does not seem to be physically addictive (Henry, 1992).

Hepatic damage secondary to ecstasy use has also been recorded with idiosyncratic hepatitis and hepatic necrosis. It is thought that it is reversible after prolonged abstinence (Gorard, Davies and Clark, 1992, Shearman, Chapman, Satsangi et al., 1992, Cregg and Tracey, 1993 and Oranje, von Pol. Wurff et al., 1994). There have been case reports of chronic paranoid psychosis induced by heavy misuse of ecstasy (McGuire and Fahy, 1991 and Schifano, 1991). There is no evidence that it causes permanent brain damage (Henry, 1992).

Consequences of cocaine use

Cocaine is a power stimulant, similar in its effects to the amphetamines. It is extracted from the leaves of the coca bush which grows wild in many South and Central American countries. Coca leaves have been chewed for over a thousand years by the native South American Indians. Cocaine was first extracted in 1855 and it became widely used as a local anaesthetic and was incorporated into numerous elixirs, tonics and wines. Coca Cola ® contained cocaine until 1904, but now decocainised leaves are used to flavour the drink. Medical use of cocaine includes use as an anaesthetic in eye, ear, nose and throat surgery, and in the Brompton Cocktail a mixture of cocaine, morphine or heroin, alcohol and syrup, used to relieve the pain of terminal cancer (Institute of Studies for Drug Dependence, 1987, Tarr and Macklin, 1987 and Corrigan, 1991). Due to the expense of use cocaine is usually considered a rich man's drug (Institute of Studies for Drug Dependence, 1987 and Corrigan, 1991).

Cocaine powder is usually snorted into the nostrils, or "free-base" cocaine or crack, which is not readily available in Ireland, can be smoked, and it can also be injected, mixed with heroin, "snowballing" (Institute of Studies for Drug Dependence, 1987, Proudfoot and Vale, 1989 and Corrigan, 1991).

Short term effects : The neurochemical and clinical effects of cocaine and the amphetamines are quite similar and differ only in the duration of action which is much shorter for cocaine (Institute of Studies for Drug Dependence, 1987, Gawin and Ellinwood, 1988, Proudfoot and Vale, 1989 and Corrigan, 1991). The effects of intranasal cocaine start very rapidly after about 3 minutes and last for about 20 minutes (Corrigan, 1991). Cocaine produces an intense euphoria and a magnification of the pleasure experienced in most activities. It produces alertness and a sense of well-being, it lowers anxiety and social inhibitions, and heightens energy, self-esteem, sexuality and the emotions aroused by interpersonal experiences. It usually does not distort perception and hallucinations are usually absent. Because of the intense pleasurable effects and the short duration of action, there is a desire to repeat the experience (Gawin and Ellinwood, 1988).

Acute complications of cocaine are rare among users of low doses, but common in those who use higher doses and "binge" users (Gawin and Ellinwood, 1988 and Corrigan, 1991). Stimulant effects are exaggerated in high doses to produce disinhibition, impaired judgement, grandiosity, impulsiveness, hypersexuality, hypervigilance, compulsively repeated actions and extreme psychomotor activation. These may result in accidents, illegal acts or atypical sexual behaviour. With bingeing, anxiety, hyperactivity, irritability and severe transient panic may develop as can a paranoid psychosis. Stimulant induced delusions usually remit within hours (Gawin and Ellinwood, 1988). With the exception of alcohol no other drug of abuse is so closely linked to violent premature death. The way in which cocaine causes an increased risk for both intentional and unintentional injuries and deaths is not fully understood (Marzuk, Tardiff, Leon et al., 1990 and Marzuk, Tardiff, Smyth et al., 1992).

Other short term effects of cocaine use include grand-mal convulsions, cerebral haemorrhages, hyperthermia and respiratory paralysis. Ventricular tachycardia and fibrillation may also occur as may myocardial infarctions. Sinus tachycardia and elevation of the blood pressure are the usual physiologic responses to cocaine use (Tarr and Macklin, 1987, Proudfoot and Vale, 1989, Kaku and Lowenstein, 1990 and Blanken, 1993). Most medical complications of cocaine use are short lived and appear to be related to cocaine's hyperadrenergic effect. Treatment is not usually necessary and acute morbidity and mortality rates from cocaine use in patients presenting to hospital are very low (Brody, Slovis and Wrenn, 1990).

Cocaine does not result in tolerance or in physical dependence but it is believed to be the most psychologically addictive drug known (Institute of Studies for Drug Dependence, 1987, Tarr and Macklin, 1987 and Corrigan, 1991).

Consequences of sedative and minor tranquillisers use

These drugs which are mainly benzodiazepines are used to control anxiety and tension, and at higher doses to help induce sleep. They include drugs such as Valium®, Librium®, Ativan® and Mogadon®. They are among the most commonly prescribed medications (Institute of Studies for Drug Dependence, 1987 and Corrigan, 1991). The usual form of use is by tablet or capsule ingestion, though Ireland is reporting an increasing problem with injecting among drug addicts in Dublin.

Short term effects : These drugs relieve tension and anxiety and induce feelings of calmness and relaxation. The most commonly reported adverse effects include a reduction in mental activity, drowsiness, forgetfulness and a decrease in the ability to carry out complicated tasks such as driving. It has been suggested that medical doses may double the risk of a road traffic accident (Institute of Studies for Drug Dependence, 1987 and Corrigan, 199). The use of alcohol with these drugs greatly increases the risk for impaired co-ordination and subsequent accidents. Use of benzodiazepines may cause confusion and disinhition in some users leading to a loss of self control, recklessness and even violence (Corrigan, 1991).

The benzodiazepines are safe in the sense that lethal doses are very large, though when combined with alcohol a fatal dose can be reached at much lower doses. Death is due to CNS and respiratory depression (Corrigan, 1991).

Consequences of opiate use

Heroin and other opiates are narcotic analgesics (sleep inducing painkillers) derived from the opium poppy. Opium is the dried milk which contains morphine and codeine. Heroin is then easily made from morphine. Both morphine and codeine have medical uses, morphine is used as a painkiller for severe pain, while codeine is used as a cough suppressant and anti-diarrhoea medication, as well as a painkiller for less severe pain. While heroin is the strongest painkiller known to mankind it is not used as such in Ireland due to its addictive nature. Methadone is an oral opiate usually used in treatment of heroin addicts. Two newer opiates which are painkillers and which have also been abused are dihydrocodeine (DF118 ®) and buprenorphine (Temgesic ®). Ireland has one of the highest prevalence of abuse of morphine sulphate tablets "MSTs" or "Napps". Opiates can be swallowed or dissolved in water and injected, heroin can be injected, sniffed up the nose or smoked ("Chasing the Dragon") (Institute of Studies for Drug Dependence, 1987 and Corrigan, 1991).

Short term effects : Moderate doses of pure opiates produce a range of physical effects, such as analgesia, suppression of coughing, depression of bowel activity leading to constipation, depression of respiration with bradycardia, and meiosis. There is also dilatation of the blood vessels which gives a feeling of warmth. When heroin is injected it produces a rapid "rush" lasting less than a minute, and involving warm flushing of the skin and sexual excitement. This initial rush is followed by a pleasant, dreamlike state of peacefulness and contentment, pain is reduced, as are aggressive tendencies and sexual drives. The first experience with heroin is usually unpleasant with nausea and vomiting (Institute of Studies for Drug Dependence, 1987, Corrigan, 1991 and Swadi, 1992b).

Acute toxicity can produce profound CNS depression with respiratory depression, cold clammy skin, hypothermia, bradycardia and flaccid skeletal muscles. Apnoea, circulatory collapse, cardiopulmonary arrest and death may result. Overdoses of this nature are more likely to occur following loss of tolerance after a period of abstinence (Institute of Studies for Drug Dependence, 1987, King and Coleman, 1987, Proudfoot and Vale, 1989 and Corrigan, 1991).

Long term effects : Tolerance develops rapidly to the effects of opiates. The dosage is therefore increased, to obtain the required effects. Physical dependence is not as strong as the psychological and social dependence developed by some long term users. Dependence of any kind is not inevitable and some people use heroin on an occasional basis (Institute of Studies for Drug Dependence, 1987, King and Coleman, 1987, Corrigan, 1991 and Robins, 1993).

Opiate use has been associated with increasing crime in recent times in Dublin and elsewhere in Ireland. Traditionally the young heroin addict is usually impulsive and involved in criminal activities, mainly crimes against properties rather than against the person (King and Coleman, 1987).

The physical damage from heroin use, including hepatitis and AIDS, results mainly from the way that the drug is used, from poor hygiene and adulterants (Institute of Studies for Drug Dependence, 1987 and Corrigan, 1991).

In Ireland the intravenous route for heroin has been favoured probably because of the poor quality of the heroin imported into Ireland. The most recent records indicate that 60% of those attending Drug Treatment Centres in Dublin in 1992 and 1993 have injected at some stage and $^{1}/_{5}$ of these were currently sharing equipment (O`Higgins and O`Brien, 1994). Extensive intravenous or subcutaneous injections has resulted in widespread HIV in this population (Bury, 1989). AIDS and HIV surveillance, has clearly identified intravenous drug misuse as the main source of transmission of the HIV virus in Ireland. This surveillance has also identified that the area most affected by HIV is Dublin, particularly the inner city area (Department of Health, 1991).

Chapter 4 METHOD AND MATERIALS

4.1 *Study Design*

The study design is a descriptive study of substance use by adolescents in the Western Health Board, which assesses the prevalence of substance use, and also looks at socio-demographic facors associated with substance use. A comparison was also made between the prevalence of substance use among second - level school attenders aged 12 - 18 years, and among those adolescents who have left school early.

There is considerable difficulty in gaining access to the early school leaver population, which probably explains why so few studies have been done on this population. There are services for early school leavers funded by the V.E.C., FAS and the Health Board in the area. These include community training workshops for both travellers and settled adolescents, Youth Reach and Youth Skills training centres and the Neighbourhood Youth Project based in Westside, a disadvantaged area of Galway City. At the time of this study, there were 20 such centres in the Western Health Board, the majority of which, 17, were based in Co. Galway, 3 in Co Mayo and none in Co .Roscommon. These centres have a list of people enrolled on these training courses. The numbers attending the courses fluctuates considerably, at the time of the study, there were about 200 registered. Adolescents attending these centres were surveyed to represent the early school leavers.

The survey instrument was an anonymous questionnaire. The questionnaires (which were translated into Irish for the Gaeltacht areas) were administered by myself in all but two centres, where the youth workers kindly distributed the questionnaires. The reason that these two centres were not surveyed personally by myself was due to the possibility of distrust of outsiders by the adolescents, and as the youth workers had established a good rapport with the adolescents, it was felt to be more appropriate for the youth workers to distribute the questionnaires. The Irish and English versions of the questionnaires were piloted initially. The co-operation of each school principal and each director of the training centres etc., was sought prior to the survey, and each centre and school surveyed was guaranteed anonymity.

The instructions in the Gaeltacht areas were given by the teachers or the youth workers, as was the case in the two centres discussed above. Otherwise the instuctions were given by myself. Written and verbal instructions assured the respondents of the confidentiality and anonymity of the survey. In training centres where the level of literacy was not high, and in the youngest school years that were surveyed, the questions were read out to the respondents using an overhead projector. Otherwise the respondents went through the questionnaire at their own pace. The questionnaire took between 40 minutes to one hour to complete.

4.2 ***Study Population***

The 1991 census estimated that there were 40,621 adolescents in the relevant age groups in the Western Health Board area, 15,937 in Galway County, 5,398 in Galway City, 13,319 in County Mayo and 5,967 in County Roscommon. This is the target population.

a. School attenders: According to the Department of Education list of schools, there are 92 second-level schools in the Western Health Board, with 35,553 students registered in the 1994 / 1995 school year. It is from this group of students that the school attenders were selected.

b. Early school-leavers: As described above it would have proved unfeasible in this study to survey the general population of early school leavers. The study was therefore confined to the 20 training centres in the Western Health Board area. Five of these centres were specifically for the travelling community.

4.3 ***Sample Selection***

a. *School Attenders.*

The Department of Education provided a list of schools and the numbers of pupils in each year per school. There are 92 second-level schools in the area. Schools for special education and schools with fewer than 70 pupils were excluded from the survey. There were 87 schools suitable for inclusion in the study. These schools were used as the sampling frame for school attenders. The sample was selected by stratified cluster sampling. The schools were stratified by location (county), type of school, that is whether they were secondary, or "other" (vocational, community or comprehensive schools), by gender into single sex or mixed gender schools and finally by size into schools that have over 400, and under 400 students registered. A representative sample of schools was taken from each strata. In each school a cluster sample of one school year (First, Second, Third Year and so on) was randomly selected and each student in that year was eligible for inclusion. As most of the adolescents in the early school leavers group are aged between about 15 to 17 years of age, the sample of school attenders was weighted to have three times more students in the senior cycle versus the junior cycle. 37 schools were selected to participate in the survey. One of the schools selected to participate in the survey refused to partake, and was replaced by another nearby school of similar size and gender.

b. *Early School Leavers.*

Due to the small numbers of people registered on the various courses etc., which comes to about 200, a census of all this group was done.

4.4 ***Sample Size***

a. *School Attenders.*

A sample size of 8% of the school going population should give a representative picture of this population. 37 schools were selected at random to participate in the survey, with one year in each school being surveyed. The sample size was therefore selected to be about 2,844 students aged between 12 to 18 years of age.

b. *Early School Leavers.*
The total number of adolescents registered in the training centres, amounting to about 200 adolescents were surveyed.

4.5 ***Survey Instrument***
A modified version of the questionnaires used by Morgan and Grube in their research on behalf of the E.S.R.I. was used (Grube and Morgan, 1986 and 1990a). Permission was granted to use this questionnaire by Mark Morgan. It was decided to use this questionnaire in order to help make comparisons between the Western Health Board and the Dublin area easier, when the same survey instrument was used, and as their questionnaires have been found to be reliable and valid. The modifications which were made are hoped to make the questionnaire more relevant to the survey population.

4.6 ***Pilot Study***
The questionnaire was piloted in one class in each of five schools and in one training centre. Both the Irish and English questionnaires were piloted. Apart from some slight changes in the format for ease of completion, no changes were made to the wording of the English version. The Irish questionnaire, while not changing the meaning of the questions was changed slightly to make the phrases used of more relevance to the Connemara Gaeltacht area.

Toxicology screening was carried out on samples of urine in one of the schools as part of a pilot validation study. The survey was carried out as usual in the school, then when the students had completed the survey, they were informed that the survey would be redone at a future date, and that a sample of urine would be taken in order to validate the self-reports. Parental and student permission was sought prior to the repeat survey. Unfortunately it was not possible to do the survey on a Monday morning, and it was done on a Tuesday one week later. 25% of the original sample refused to participate in the validation process, despite assurances of confidentiality and anonymity and only 24 samples were obtained. The screening of the samples of urine was done by the Toxicology Department of Beaumont Hospital. The technique used in the screening of the urine samples for drugs of abuse apart from LSD was Enzyme Immunoassay, while for LSD the technique used was RadioImmuno Assay (RIA). For screening for cotinine, the technique used was fluorescent polarisation assay (FPIA) and finally for detection of alcohol gas chromatography was used. The average detection time for the various drugs are as follows. Benzodiazepines, 1-7 days, depending on the type taken, Barbituates 4-30 days, depending on the type taken, Cannabis, 3-30 days, depending on the duration and intensity of use, Opiates, 2-3 days, Amphetamines, 3-5 days, Ecstasy (MDMA) 1 day, (appears as an amphetamine), LSD 1-5 days, Alcohol, 1 day and finally cotinine 3-5 days.

In the results no drugs of abuse or alcohol were detected in the urine samples, while 5 of the 24 samples were positive for cotinine, that is a positive rate of 20.8%. In the questionnaires which were linked to the samples of urine, none of those that participated in the second survey reported taking drugs in the past month, while 5 (20.8%) had reported lifetime use of drugs, cannabis in all cases, with one of the 5 also reporting ever use of solvents and magic mushrooms in addition to cannabis. In the survey 14 or 58.3% of the sample reported alcohol use within the past month. Due to the short detection time for alcohol, any alcohol use over the week-end would no longer be detectable in the urine samples.The 5 samples which tested positive for cotinine were matched with the corresponding surveys, and in all cases the respondents reported that they were current smokers. In 2 other cases or 8.3%, respondents had reported themselves to be current smokers and no cotinine was detected in their urine. Light smokers, those who smoke only one to two daily would not have detectable cotinine in their urine, unless they had recently smoked.

It can be seen from the short detection times of many of the drugs, that in order to get a more accurate picture of substance use among this population of adolescents who would be more likely to use drugs on a weekend, that the best time to take the urine samples would be early on a Sunday morning, which obviously is not possible.

4.7 ***Elimination Of Bias***

A. *Study design:*

The study is a descriptive study of the prevalence of substance use, knowledge, attitudes and behaviours among second-level school students and among adolescents attending training centres in the Western Health Board area, and a comparison of prevalences of substance use between the two groups.

In the school sample bias was reduced by the stratification process. Stratification by location would help reduce bias due to different prevalence rates in urban versus rural areas. Staratification by gender helps reduce bias due to different prevalence rates between the sexes. Stratification by size helps prevent the results being skewed due to large school sizes. The final stratification was by age as prevalence rates increase with age. The early school leavers are not a random sample, but a census of those adolescents who attend the training centres, therefore bias could not be controlled for in this group.

B. *Sample selection*

The sample of students was selected by a random process, and as such should result in a sample which is representative of the school going population. This in fact turned out to be the case as will be seen in the chapter on the results. However as the early school leavers were not a randon sample, this resulted in uneven balance of socio-demographic factors in the groups. The effect this had on the results is examined in the discussion.

C. *Data collection*

(i) Accuracy.

There are several influences on the accuracy of data collection.

a. Subject variation:

Survey data may be biased due to *selective non-response*. The response rates are typically well below 100% in most studies. It is well known that heavy users are over represented among non-respondents and this kind of bias pulls in the direction of under estimation of substance use (Skog, 1992). In the present study the highest non-response rate for any of the smoking prevalence items was 1.0% and for any of the alcohol prevalence items was 12.9% for lifetime use of cider. In the case of drugs, the highest non-response rate was for lifetime use of "other" drugs, which was15.9%. The next highest was for the fictitious drug "Norenol" at 9.7%, followed by 9.6% for lifetime use of cocaine.

Recall or differential memory bias is a well known bias that affects surveys of substance use. In this study as in many studies the question of age of first use of substances is asked. While this question produces a reliable answer, it is not a valid measure due to differential memory bias. Several studies, especially those which cover a wide age range, have identified the effects of this bias. Differential memory bias is where older respondents tend to recall an older age for first experience. This highlights the importance of comparing findings only within the same age groups (Bagnall, 1988, Bagnall, 1991, Davies and Coggans, 1991, Stanton and Silva, 1993 and Fossey, 1994).

b. Observer variation.

Because more than one individual administered the questionnaires, there is the possiblity of between-observer variation. One of the advantages of the questionnaire over the interview technique is overcoming the reluctance of adolescents to admit criminal or socially disapproved of behaviour. A second advantage is that it reduces interviewer or between-observer bias (Bagnall, 1988). The use of a predesigned questionnaire will help reduce within-observer variation and also reduce the third influence on data accuracy, c. Instrument variation.

(ii) Data reliability and validity.

Data reliability and validity have been recognised as being among the major methodological problems in research into self-reported substance. Grube and Morgan`s questionnaires upon which the questionnaire used in this study was based have been thoroughly tested as regards both reliability and validity.

The *reliability* or repeatability of the questionnaire may be tested by internal consistency. This refers to the extent that related items within the questionnaire agree with one another, e.g. the consistency between lifetime report of drug use and current use questions (Codd et al., 1990). The inconsistencies in the present

study for smoking was 0%, for alcohol use was 0.2% and for drug use was 0.9%, which indicates a high level of internal consistency overall. These respondents were not included in the analyses. Another test for reliability is test-retest consistency, which was not possible in the present study due to time limitations. However in Grube and Morgan`s study in 1986 this measure of reliability was also found to be high.

The *validity* of the questionnaire is concerned with the question of whether it is measuring what it is meant to be measuring, in terms of precision and bias. There are two possible threats to the validity of this study. One is under-reporting of substance use due to the sensitive nature of the questions being asked. The other is due to over-reporting of substance use for reasons which may include wanting to look grown up, and not taking the questionnaire seriously. The extent of under-reporting in surveys is reduced by assuring the participants that their answers will be completely confidential and anonymous (Grube and Morgan, 1986, Barnea, Rahav and Teichman, 1987, Codd et al., 1990, Grube and Morgan, 1990, Skog, 1992 and Morgan and Gruge, 1994). The extent of over-reporting can be assessed by including a fictitious drug. Grube and Morgan included the fictitious drug "Norenol" in their 1990 survey, and this fictitious drug was also included in the present study. 1.6% of respondents indicated that they had used "Norenol", which is a low rate of over-reporting. Those repondents who stated that they had used "Norenol" were not included in the analyses.

It is generally felt that under and over-reporting tend to balance each other out (Grube and Morgan, 1986). A review of the reliability and validity of self-reported substance use, concluded that in the case of common drugs, errors may not be dramatic, and do tend to counteract each other. For rare drugs however, false positives or over-reporting may have a much larger effect than false negatives or under-reporting, even if the former error occurs much less often than the latter. It was felt therefore that surveys tend to over estimate the prevalence of drugs that are not very common. Biased samples due to selective non-response may tend to counteract this effect, but it is difficult to know if the tendency is strong enough to balance the effect of false responses. It is therefore necessary to be cautious in interpreting the results of uncommon drugs (Skog, 1992).

It has generally been shown that there is good agreement between self-reports of substance use and the other measures. Validation studies for smoking which have used the physiological test cotinine, as an independent validation method have found good concordance with self-reports of smoking (Williams, Eng, Botvin et al., 1979 and Craig et al., 1991). In the present study 2 of the 24 respondents in the pilot study or 8.3% had no detectable cotinine in their urine, when they claimed that they were smokers. This may be due to either over-reporting or may be because they were light smokers and therefore would not have detectable cotinine, or the time which had elapsed since their last cigarette. Every urine sample which was positive for cotinine corresponded to a self-report of current smoking. Overall this shows a good level of concordance. The good concordance found in the present study indicates that the results are valid.

Laboratory tests are appeaing in the sense that they give the appearance of an objective measure or "gold standard". They are believed to be more accurate than self-reports. However problems arise with the variation between people`s different rates of metabolism, the question of sensitivity and specificity of the tests, the temporal issue re the short duration for which the test can accurately detect alcohol and finally the expensiveness and intrusiveness of the tests which can lead to increased refusal to participate (Midanik, 1982, Grube and Morgan, 1986 and Midanik, 1988). In the present study both the temporal issue and the increased refusal rate of 25% means that no conclusion can be reached from the non detection of alcohol in the urine samples.

The most credible method for establishing validity of self-reports of drug use is probably by comparison with physiological tests (Grube and Morgan, 1986, Barnea et al., 1987 and Swadi, 1988). There are also limitations to the use of these physiological tests, (1) the costs are prohibitive on large samples, (2) the reliability and validity of biochemical analysis has been questioned due to problems in collecting and storing usable samples and the limitation in the technical sophistication of procedures used to analyse samples, (3) the short period of detection of most drugs, and finally (4) the increase in refusal rates due to the inconvenience of the tests (Grube and Morgan, 1986, Werch, Gorman, Marty et al., 1987, Swadi, 1988 and Adelekan, Gowers and Singh 1994). In the present study the high rate of refusal to participate despite assurances of confidentiality and anonymity, 25%, in the pilot validation study may well account for no respondents claiming to use drugs, and no drugs being detected in the urine analysis.

Unfortunately, prevalence data on smoking, alcohol use, and drug taking cannot realistically be obtained at the present time other than by asking questions and carrying out surveys. When viewing prevalence data it is important to be always aware that the method is less than perfect. When large numbers of people report behaving in a particular way, it can nevertheless be concluded that it is probably a common behaviour. Self-reported surveys completed anonymously and in confidence, are considered the best way to assess the extent of substance use in large samples.

D. *Statistical analysis and interpretation*

It is important to remember in the analysis and the interpretation of the results that the sample of early school leavers is not a random sample of all school leavers in the Western Health Board area, but is a census of early school leavers who are attending training centres for this group of young people. This means that the results of this survey can only be applied to this group, and cannot be generalised to the larger group of early school leavers.

4.8 ***Analysis***

The data was analysed using a computer based programme Epi Info version 6.0. Analysis included determining means and frequencies of the various variables. The F statistic for comparison of means, the chi-square, with or without Yates correction and the Mantel-Haenszel chi-square test for stratified analysis, were

used as appropriate for the comparison of proportions. Stratified analysis was done on the various factors, such as age groups and gender. Kruskal-Wallis H test, the non-parametric test, which is equivalent to chi-square test, was used for the analysis of likert scales.

The pilot study was completed in September 1994 and the actual study itself was carried out between October to December 1994. In all 2,859 adolescents were surveyed, of which 2,787 were valid. The valid sample of 2,787 consisted of 2,576 school students, 142 "settled" early school leavers and 69 travellers.

Chapter 5 RESULTS

In this chapter on results, the data are presented both in numbers and percentages. It will be noted that while the sample size of the whole survey was 2,787, not all of these answered every question. Therefore the total numbers presented do not add up to 2,787 but to the total that answered the question. Also the percentages presented are the percentages of those that answered the question, and are not percentages of the entire sample.

5.1 ***Sample Characteristics***

The first tables give the demographic breakdown of the sample. The first table shows the breakdown for the whole sample, and is followed by the tables representing school students, travellers, the settled early school leavers, Galway City, Galway County (excluding Galway City), County Mayo and finally County Roscommon. The socio-economic groupings of the Central Statistics Office was used to determine the groupings, with the extra group social class 8, being created to account for those who were in long-term unemployment.

Table 1 : *Sample characteristics ; All Sample*

	Sample Breakdown	
	N	*Per cent*
	Gender	
Male	1,482	53.7%
Female	1,280	46.3%
	Age group	
13 years or younger	302	10.9%
14 years	320	11.5%
15 years	509	18.3%
16 years	781	28.1%
17 years	631	22.7%
18 years and over	237	8.5%
	Father`s socio-economic group	
S.C.1 (Higher professional/managerial or farmers with over 200 acres)	279	10.6%
S.C.2 (Lower professional/managerial or farmers with 100-199 acres)	605	22.9%
S.C.3 (Non-manual and farmers with 50-99 acres)	431	16.3%
S.C.4 (Skilled manual and farmers with 30 -49 acres)	697	26.4%
S.C.5 (Semi-skilled and farmers with under 30 acres)	237	9.0%
S.C.6 (Unskilled manual)	55	2.1%
S.C.7 (gainfully employed but occupation unknown)	236	8.9%
S.C.8 (long-term unemployment)	100	3.8%

Table 1 shows the breakdown of the characteristics for the sample as a whole. It can be seen that 53.7% of the sample are male and 46.3% are female. The study design was weighted to have an excess in the older age categories and this can be seen from the table. The mean age for the sample is 15.63 years. The most prevalent socio-economic groupings for the whole sample are social classes 4 and 2. 8.9% of the sample are classified as social class 7, where the father is gainfully employed but the occupation is unknown. In the majority of these cases the father`s occupation is listed as a farmer, but the acreage is not reported.

Table 2 : *Sample characteristics ; School Students*

	Sample Breakdown	
	N	*Per cent*
	Gender	
Male	1,335	52.3%
Female	1,219	47.7%
	Age group	
13 years or younger	299	11.7%
14 years	314	12.2%
15 years	465	18.1%
16 years	736	28.6%
17 years	570	22.2%
18 years and over	189	7.3%
	Father`s socio-economic group	
S.C.1 (Higher professional/managerial or farmers with over 200 acres)	276	11.2%
S.C.2 (Lower professional/managerial or farmers with 100-199 acres)	592	24.1%
S.C.3 (Non-manual and farmers with 50-99 acres)	417	17.0%
S.C.4 (Skilled manual and farmers with 30 -49 acres)	657	26.7%
S.C.5 (Semi-skilled and farmers with under 30 acres)	218	8.9%
S.C.6 (Unskilled manual)	46	1.9%
S.C.7 (gainfully employed but occupation unknown)	227	9.2%
S.C.8 (long-term unemployment)	27	1.1%
	Class in school	
First Year	245	9.4%
Second Year	276	10.8%
Junior Cert	321	12.5%
Fifth Year	891	34.5%
Senior Cert	843	32.7%
	Type of School	
Girl`s Secondary	527	20.4%
Boy`s Secondary	664	25.7%
Mixed Sex Secondary	722	28.1%
Comprehensive / Community / Vocational	663	25.7%

It can be seen from Table 2, that the students are fairly evenly divided between boys (52.3%) and girls (47.7%), with a slight excess of boys. The mean age for the school students is 15.6 years. As regards the

father`s socio-economic group, there is a larger percentage in social classes 4 and 2 compared to the other groups. Due to the weighting given to the older respondents, there is a preponderance of students in the senior cyle years relative to the junior cycle with a ratio of approximately two to one. Finally about three-quarters of the students are from secondary schools, and the rest from community, comprehensive and vocational schools. The mixed gender schools account for the largest group by a small percentage.

Table 3 : *Sample characteristics ; Travellers*

	Sample Breakdown	
	N	*Per cent*
	Gender	
Male	47	69.1%
Female	21	30.9%
	Age group	
13 years or younger	2	3.0%
14 years	3	4.5%
15 years	20	30.3%
16 years	19	28.8%
17 years	15	22.7%
18 years and over	7	10.6%
	Father`s socio-economic group	
S.C.1 (Higher professional/managerial or farmers with over 200 acres)	-	0%
S.C.2 (Lower professional/managerial or farmers with 100-199 acres)	-	0%
S.C.3 (Non-manual and farmers with 50-99 acres)	-	0%
S.C.4 (Skilled manual and farmers with 30 -49 acres)	5	8.6%
S.C.5 (Semi-skilled and farmers with under 30 acres)	3	5.2%
S.C.6 (Unskilled manual)	2	3.4%
S.C.7 (gainfully employed but occupation unknown)	-	0%
S.C.8 (long-term unemployment)	48	82.8%

From Table 3, it can be seen that there is a preponderance of boys to girls in the sample of travellers, 69.1% boys versus 30.9% girls. As was expected, there are more respondents in the older age groups, with most of the sample being between the ages of 15 years to 17 years. The mean age for this group of respondents is 15.9 years. The vast majority of this group (82.8%) have stated that their father is in long-term unemployment, with those that are working being placed in the manual categories.

As with the travellers, it can be seen from Table 4, that the number of boys in the group of "settled" early school leavers, outweigh the girls, 71.4% among boys versus 28.6% among girls. The proportion of respondents in the older age groups is also higher, with the majority of respondents in this group being aged between 15 years and 18 years and over.

Table 4 : *Sample characteristics ; Early School Leavers : Settled*

	Sample Breakdown	
	N	*Per cent*
	Gender	
Male	100	71.4%
Female	40	28.6%
	Age group	
13 years or younger	1	0.7%
14 years	3	2.1%
15 years	24	17.0%
16 years	26	18.4%
17 years	46	32.6%
18 years and over	41	29.0%
	Father`s socio-economic group	
S.C.1 (Higher professional/managerial or farmers with over 200 acres)	3	2.5%
S.C.2 (Lower professional/managerial or farmers with 100-199 acres)	13	10.7%
S.C.3 (Non-manual and farmers with 50-99 acres)	14	11.5%
S.C.4 (Skilled manual and farmers with 30 -49 acres)	35	28.7%
S.C.5 (Semi-skilled and farmers with under 30 acres)	16	13.1%
S.C.6 (Unskilled manual)	7	5.7%
S.C.7 (gainfully employed but occupation unknown)	9	7.4%
S.C.8 (long-term unemployment)	25	20.5%

The mean age for this group of early school leavers is 16.7 years. 28.7% of the sample stated that their father was in social class 4, and 20.5% that their father was in social class 8, i.e. long term unemployment. The area of residence of the settled early school leavers was also examined, though not shown in Table 4. The category of urban or rural was determined by asking the respondents the question of whether they lived in a city, a town, a village or in the countryside. Those who stated that they lived in the city or in a town were then classified as urban, while those who stated either a village or in the countryside were classified as rural. 51.8% (72) of the early school leavers live in an urban area, and 48.2% (67) live in a rural area..

Analysis of variance for a difference between the mean ages of the three comparison groups, travellers, settled early school leavers and the school students, shows that the F Statistic = 39.84, $p < 0.001$. The early school leavers have the oldest mean age at 16.71 years, the travellers are next with a mean age of 15.92 years and the school students have a mean age of 15.56 years. There is also a significant difference in the distribution of percentages of gender between the three comparison groups, with 71.4% males in the early school leaver group, 69.1% males in the travellers group and 52.3% males in the student group. Chi-square = 26.18 (2 d.f. degrees of freedom), $p < 0.0001$.

Table 5 : *Sample characteristics ; Galway City*

	Sample Breakdown	
	N	*Per cent*
	Gender	
Male	184	61.7%
Female	114	38.3%
	Age group	
13 years or younger	1	0.3%
14 years	29	9.7%
15 years	75	25.2%
16 years	115	38.6%
17 years	62	20.8%
18 years and over	16	5.4%
	Father`s socio-economic group	
S.C.1 (Higher professional/managerial or farmers with over 200 acres)	57	20.0%
S.C.2 (Lower professional/managerial or farmers with 100-199 acres)	69	24.2%
S.C.3 (Non-manual and farmers with 50-99 acres)	33	11.6%
S.C.4 (Skilled manual and farmers with 30 -49 acres)	65	22.8%
S.C.5 (Semi-skilled and farmers with under 30 acres)	19	6.7%
S.C.6 (Unskilled manual)	6	2.1%
S.C.7 (gainfully employed but occupation unknown)	12	4.2%
S.C.8 (long-term unemployment)	24	8.4%

Table 5 shows the characteristics of the respondents from Galway City. It can be seen that 61.7% of the group are male and 38.3% are female. The age breakdown is as shown, with the mean age of the group being 15.87 years. The most prevalent social classes listed for this group are social class 2, 4 and 1, with 24.2%, 22.8% and 20.0% respectively.

A breakdown of the respondents from Galway City as regards their school or training centre status, shows that 7.0% (21) of the sample are travellers, 6.6% (20) are settled early school leavers, and 86.3% (259) are school students.

Table 6 shows the breakdown of characteristics for Galway County excluding Galway City. 50.5% of this group are male and 49.5% are female. The age groups are as shown and the mean age for this group is 15.43 years. 26.8% of the sample are in social class 4 and 23.5% are in social class 2. A look at the breakdown of this sample by school or training centre shows that 3.0% (32) of the sample are travellers, 7.4% (84) of them are settled early school leavers and 89.6% (1,021) of them are school students.

Table 6 : *Sample characteristics ; Galway County*

	Sample Breakdown	
	N	*Per cent*
	Gender	
Male	573	50.5%
Female	561	49.5%
	Age group	
13 years or younger	156	13.8%
14 years	170	15.0%
15 years	207	18.3%
16 years	297	26.2%
17 years	213	18.8%
18 years and over	91	8.0%
	Father`s socio-economic group	
S.C.1 (Higher professional/managerial or farmers with over 200 acres)	100	9.1%
S.C.2 (Lower professional/managerial or farmers with 100-199 acres)	257	23.5%
S.C.3 (Non-manual and farmers with 50-99 acres)	180	16.5%
S.C.4 (Skilled manual and farmers with 30 -49 acres)	293	26.8%
S.C.5 (Semi-skilled and farmers with under 30 acres)	102	9.3%
S.C.6 (Unskilled manual)	23	2.1%
S.C.7 (gainfully employed but occupation unknown)	91	8.3%
S.C.8 (long-term unemployment)	47	4.3%

Table 7 shows the breakdown of the characteristics for County Mayo. It can be seen that 54.7% of this group are male and 45.3% are female. The age breakdown is as shown and the mean age of the group is 15.90 years. The breakdown of the socio-economic groupings shows that 27.6% of the sample are in social class 4 and 21.0% in social class 2. A breakdown of the sample according to school or training centre status shows that 1.6% (14) of the sample are travellers, 3.8% (33) are settled early school leavers and 94.6% (831) are school students.

Table 7 : *Sample characteristics ; County Mayo*

	Sample Breakdown	
	N	*Per cent*
	Gender	
Male	472	54.7%
Female	391	45.3%
	Age group	
13 years or younger	44	5.0%
14 years	101	11.5%
15 years	169	19.3%
16 years	235	26.9%
17 years	231	26.4%
18 years and over	95	10.9%
	Father`s socio-economic group	
S.C.1 (Higher professional/managerial or farmers with over 200 acres)	72	8.7%
S.C.2 (Lower professional/managerial or farmers with 100-199 acres)	173	21.0
S.C.3 (Non-manual and farmers with 50-99 acres)	139	16.9%
S.C.4 (Skilled manual and farmers with 30 -49 acres)	227	27.6%
S.C.5 (Semi-skilled and farmers with under 30 acres)	83	10.1%
S.C.6 (Unskilled manual)	16	1.9%
S.C.7 (gainfully employed but occupation unknown)	86	10.4%
S.C.8 (long-term unemployment)	27	3.3%

Table 8 shows the breakdown of the characteristics for County Roscommon. 49.7% of the group are male and 50.3% are female. The breakdown of the age groups are as shown, with the mean age for the sample being 15.30 years. The most prevalent social classes listed are social class 4, at 26.2% and 2, at 24.1%. There are no travellers or settled early school leavers in the sample from County Roscommon.

There is a significant difference between the mean ages of the four "county" groups with County Mayo having the oldest mean age at 15.90 years, and County Roscommon having the youngest at 15.30 years. Analysis of variance indicates that the F statistic for a difference between the four means = 24.69, $p < 0.001$. There is also a significant difference in the distribution of gender between the four "county" groups, with Galway City having 61.7% males, Galway County having 50.5% males, County Mayo having 54.7% males and County Roscommon having 49.7% males. Chi-square for the difference in gender = 14.60 (3 d.f.), $p < 0.01$.

Table 8 : *Sample characteristics ; County Roscommon*

	Sample Breakdown	
	N	*Per cent*
	Gender	
Male	196	49.7%
Female	198	50.3%
	Age group	
13 years or younger	98	24.7%
14 years	15	3.8%
15 years	51	12.9%
16 years	113	28.5%
17 years	94	23.7%
18 years and over	25	6.3%
	Father`s socio-economic group	
S.C.1 (Higher professional/managerial or farmers with over 200 acres)	37	9.7%
S.C.2 (Lower professional/managerial or farmers with 100-199 acres)	92	24.1%
S.C.3 (Non-manual and farmers with 50-99 acres)	71	18.6%
S.C.4 (Skilled manual and farmers with 30 -49 acres)	100	26.2%
S.C.5 (Semi-skilled and farmers with under 30 acres)	25	6.6%
S.C.6 (Unskilled manual)	9	2.4%
S.C.7 (gainfully employed but occupation unknown)	45	11.8%
S.C.8 (long-term unemployment)	2	0.5%

5.2 ***Smoking***

This section will describe the prevalence of smoking for the sample as a whole, and also present univariate analysis of the differences between smokers and non-smokers in terms of background characteristics such as age, gender, area of residence, father`s socio-economic grouping and amount of weekly pocket money or income available. Comparison will then be made between the school students and the early school leavers.

Lifetime Prevalence

Table 9 shows the lifetime smoking prevalence for the whole sample. As can be seen the majority of the sample, 67.3% have tried a cigarette at least once during their life. The prevalence of smoking increases with age, chi-square (5 d.f) = 140.90, $p < 0.001$. The lifetime prevalence increases from 39.5% at age 13 years and younger, to 74.5% at age 18 years and older. It can be seen that the greatest increase in prevalence occurs between the age of 13 and 14 years. In response to the question of age of first cigarette, the mean age was 12.2 years and the median age was 12 years. Over 70% of the respondents indicated that they had tried their first cigarette before the age of 13 years.

Table 9 *: Lifetime Smoking Rates by Agegroup*

	Ever Smoked	
Age Group	*No*	*Yes*
13 years or younger	181 (60.5%)	118 (39.5%)
14 years	110 (34.6%)	208 (65.4%)
15 years	167 (33.3%)	335 (66.7%)
16 years	241 (31.1%)	534 (68.9%)
17 years	143 (22.7%)	487 (77.3%)
18 years and over	60 (25.5%)	175 (74.5%)
All age groups	902 (32.7%)	1,857 (67.3%)

The smokers were also asked with whom they had their first cigarette. 72.4% responded that they were with a friend, 18% said that they were alone, 9.8% were with a sibling, 6.2% were with "others", while only 2.7% reported that they were with their parents.

Current Prevalence

The respondents were divided into three categories of smokers based on the amount of cigarettes that they had smoked in the last month. For ease of comparison the same criteria were used to define these groups as Grube and Morgan used in their 1986 and 1990 study. *Regular smokers* were defined as those who reported smoking at least one cigarette daily, *occasional smokers* as those who smoked during the previous month, but not daily, and *non-smokers* as those who had not smoked at all in the previous month. The numbers and percentages of respondents in each category are shown in Table 10.

Table 10. *Current Smoking Status by Age Group*

	Smoking Category		
Age Group	*Non-smoker*	*Occasional smoker*	*Regular smoker*
13 years or younger	246 (81.5%)	35 (11.6%)	21 (7.0%)
14 years	215 (67.2%)	43 (13.4%)	62 (19.4%)
15 years	302 (59.3%)	84 (16.5%)	123 (24.2%)
16 years	473 (60.6%)	95 (12.2%)	213 (27.3%)
17 years	333 (52.8%)	65 (10.3%)	233 (36.9%)
18 years or older	122 (50.0%)	19 (7.8%)	103 (42.2%)
Total	1,691 (60.7%)	341 (12.2%)	755 (27.1%)

As with the lifetime prevalence, current smoking rates increase significantly with age, chi-square (10 d.f.) = 145.88, $p < .001$. At age 13 years and younger 81.5% of the sample are current non-smokers, but this percentage falls to 67.2% at age 14, and 59.3% at age 15 years, after which the percentage remains fairly

stable. The percentage of regular smokers, on the other hand increases from 7.0% at age 13 years and younger to 19.4% at age 14 years and increases steadily after this. The rate for occasional smokers increases from 11.6% at age 13 years and younger to 16.5% at age 15 years, and subsequently decreases, to 7.8% at age 18 years and older.

Background Characteristics

Gender

Table 11 shows the lifetime smoking rates by age for boys and girls. Overall the percentage of boys who had ever smoked was 69.3%, while for girls it was 65.1%. The age related increase in lifetime smoking rates is higher in girls than boys, chi-square (5 d.f.) = 41.97, $p < 0.001$ for boys, while for girls, chi-square (5d.f.) = 102.10, $p < 0.001$.

For both boys and girls the greatest increase in smoking rates occurs between 13 years and younger, and 14 years. The increase in boys is from 43.6% at age 13 years and younger to 68.6% at age 14 years, and remains fairly constant therafter. The increase in lifetime smoking rates for girls is from 37.4% at age 13 years and younger, to 61.7% at age 14 years. In girls however the rate continues to increase, and by passes the boys rate at age 15 years, when it is 70.3%, and apart from the 16 year old age group, continues to exceed the boys rate.

Table 11: *Lifetime Smoking Rates by Age and Gender*

Age Group	*Boys*	*Girls*
13 years or younger	41 (43.6%)	76 (37.4%)
14 years	116 (68.6%)	92 (61.7%)
15 years	176 (64.2%)	154 (70.3%)
16 years	261 (71.3%)	270 (66.5%)
17 years	304 (75.8%)	180 (79.6%)
18 years and over	119 (72.6%)	56 (82.4%)
All age groups	1,017 (69.3%)	828 (65.1%)

Table 12 shows the breakdown of current smoking categories by age and gender. It can be seen that the overall prevalence of regular smokers is higher among boys than girls, 30.0% amongst boys, versus 23.3% amongst girls. The overall percentage of non-smokers is roughly equal in both boys and girls, 59.5% in boys and 62.3% in girls, while the overall percentage of occasional smokers is 10.5% in boys, and 14.4% in girls.

Table 12 : *Current Smoking by Age and Gender*

	Boys
	Smoking Category

Age Group	*Non-smoker*	*Occasional smoker*	*Regular smoker*
13 years or younger	77 (80.2%)	9 (9.4%)	10 (10.4%)
14 years	113 (66.5%)	17 (10.0%)	40 (23.5%)
15 years	165 (58.9%)	42 (15.0%)	73 (26.1%)
16 years	220 (59.6%)	40 (10.8%)	109 (29.5%)
17 years	223 (55.5%)	34 (8.5%)	145 (36.1%)
18 years or older	84 (50.9%)	13 (7.9%)	68 (41.2%)
Total	882 (59.5%)	155 (10.5%)	445 (30.0%)

As with the lifetime prevalence the age-related increase in current smoking rates is higher among girls than boys, chi-square (10 d.f.) = 47.70, $p < 0.001$ for boys, and chi-square (10 d.f.) = 95.06, $p < 0.001$ for girls. The year between 13 years and 14 years shows the largest increase in regular smoking prevalence for boys, increasing from 10.4% at age 13 years to 23.5% at age 14 years, and increasing steadily after this age to 41.2% at age 18 years and older. The increase in regular smokers is more progressive for girls, from 5.4% at age 13 years to 42.3% at age 18 years and older. By the age of 17 years, the prevalence of regular smokers is higher among girls than boys.

Table 12 continued : *Girls*

	Smoking Category		
Age Group	*Non-smoker*	*Occasional smoker*	*Regular smoker*
13 years or younger	168 (82.4%)	25 (12.3%)	11 (5.4%)
14 years	102 (68.0%)	26 (17.3%)	22 (14.7%)
15 years	132 (60.0%)	42 (19.1%)	46 (20.9%)
16 years	251 (61.4%)	54 (13.2%)	104 (25.4%)
17 years	110 (48.7%)	31 (13.7%)	85 (37.6%)
18 years or older	35 (49.3%)	6 (8.5%)	30 (42.3%)
Total	798 (62.3%)	184 (14.4%)	298 (23.3%)

Father`s Socio-economic Status

Table 13 shows the prevalence of current smoking categories by father`s socio-economic status.

Table 13 : *Current Smoking by Father`s Socio-economic Status*

	Smoking Category		
Father`s Socio-economic Status	*Non-smoker*	*Occasional smoker*	*Regular smoker*

S.C.1 (Higher professional / managerial or farmers over 220 acres)	171 (61.3%)	37 (13.3%)	71 (25.4%)
S.C.2 (Lower professional / managerial or farmers with 100-199 acres)	363 (60.0%)	70 (11.6%)	172 (28.4%)
S.C.3 (Non-manual and farmers with 50-99 acres)	272 (63.1%)	69 (16.0%)	90 (20.9%)
S.C.4 (Skilled manual and farmers with 30-49 acres)	421 (60.4%)	93 (13.3%)	183 (26.3%)
S.C.5 (Semi-skilled and farmers with under 30 acres)	168 (70.9%)	15 (6.3%)	54 (22.8%)
S.C.6 (Unskilled manual)	32 (58.2%)	8 (14.5%)	15 (27.3%)
S.C.8 (long-term unemployment)	59 (59.0%)	10 (10.0%)	31 (31.0%)

Mother`s Working Status

Table 14 shows the prevalence of the current smoking categories according to whether the mother is employed outside the home or works exclusively in the home. It can be seen that there is no significant relationship to current smoking status, and the working status of the mother, chi-square (2 d.f.) = 3.01, $p > 0.5$ ($p = 0.22$).

Table 14 : *Current Smoking by Mother`s Work Status*

	Smoking Category		
Mother`s Work	*Non-smoker*	*Occasional smoker*	*Regular smoker*
In the home only	845 (62.3%)	152 (11.2%)	360 (26.5%)
Employed outside the home	800 (60.6%)	177 (13.4%)	344 (26.0%)

Income / Pocket Money

Table 15 shows the current smoking categories according to the weekly pocket money or income. There is a strong statistical relationship between the amount of weekly pocket money or income and current smoking status, chi-square (12 d.f.) = 272.79, $p < 0.001$.

Table 15 : *Current Smoking by Income*

	Smoking Category		
Weekly Income	*Non-smoker*	*Occasional smoker*	*Regular smoker*

Less than £1	127 (70.6%)	18 (10.0%)	35 (19.4%)
£1 to £5	979 (71.7%)	168 (12.3%)	218 (16.0%)
£6 to £10	280 (51.1%)	73 (13.3%)	195 (35.6%)
£11 to £20	121 (43.4%)	30 (10.8%)	128 (45.9%)
£21 to £30	34 (33.0%)	11 (16.7%)	58 (56.3%)
£31 to £50	23 (34.8%)	11 (16.7%)	32 (48.5%)
More than £50	12 (27.9%)	2 (4.7%)	29 (67.4%)

County of Residence

Location

The prevalence of lifetime smoking is shown separately for Galway City, Galway County (excluding Galway City), County Mayo and County Roscommon in Table 16. It can be seen that lifetime prevalence is higher in Galway City, at 73.4% than in the other areas, the next highest being County Mayo at 68.2%. The difference in the lifetime prevalence rate for smoking between the "county" groups is significant, chi-square = 9.38 (3 d.f.), $p < 0.05$. Table 17 shows the breakdown of lifetime smoking rates for boys and girls. It can be seen that the lifetime prevalences of smoking among the boys for Galway City, Galway County, County Mayo and County Roscommon respectively are 74.0%, 65.5%, 69.4% and 73.0%. Among the girls the lifetime prevalences are 72.8%, 63.5%. 66.5% and 61.9% respectively. The significance of the differences in the lifetime prevalence rates for smoking between the county groups by gender was for boys,chi-square (3 d.f.) = 6.75, $p > 0.05$ ($p = 0.08$) and chi-square for the girls (3 d.f.) = 3.51, $p > 0.05$ ($p = 0.320$).

Table 16 : *Lifetime Smoking Rates by County*

	Ever Smoked	
County of residence	*No*	*Yes*
Galway City	79 (26.6%)	218 (73.4%)
Galway County	407 (35.5%)	741 (64.5%)
County Mayo	278 (31.8%)	595 (68.2%)
County Roscommon	130 (32.9%)	265 (67.1%)

Table 17 : *Lifetime Smoking Rates by County and Gender*

Age Group	*Boys*	*Girls*
Galway City	134 (74.0%)	83 (72.8%)
Galway County	371 (65.5%)	353 (63.5%)

County Mayo	326 (69.4%)	258 (66.5%)
County Roscommon	143 (73.0%)	122 (61.9%)

Table 18 : *Current Smoking Status by County*

	Smoking Category		
County of Residence	*Non-smoker*	*Occasional smoker*	*Regular smoker*
Galway City	159 (53.2%)	37 (12.4%)	103 (34.4%)
Galway County	725 (63.9%)	152 (13.4%)	257 (22.7%)
County Mayo	523 (59.8%)	85 (9.7%)	267 (30.5%)
County Roscommon	252 (63.6%)	54 (13.6%)	90 (22.7%)

The prevalence of the current smoking categories can be seen in Table 18. As with the lifetime prevalence, the prevalence of regular smoking is highest in Galway City, at 34.4%, followed by County Mayo with a prevalence of regular smokers of 30.5%. The highest prevalence of non-smokers is in County Roscommon at 63.6%, followed closely by Galway County (excluding Galway City) at 63.9%.Chi-square for the difference between the "county" groups for current prevalence of regular smoking $(3 \text{ d.f.}) = 27.42$, $p < 0.001$.

Table 19: *Current Smoking by Age ; Galway City*

	Smoking Category		
Age Group	*Non-smoker*	*Occasional smoker*	*Regular smoker*
13 years or younger	1 (100.0%)	0 (0.0%)	0 (0.0%)
14 years	21 (72.4%)	2 (6.9%)	6 (20.7%)
15 years	37 (49.3%)	12 (16.0%)	26 (34.7%)
16 years	65 (56.5%)	15 (13.0%)	35 (30.4%)
17 years	26 (41.9%)	5 (8.1%)	31 (50.0%)
18 years or older	9 (52.9%)	3 (17.6%)	5 (29.4%)
Total	159 (53.2%)	3 (12.4%)	5 (34.4%)

Table 20: *Current Smoking by Age ; Galway County*

	Smoking Category		
Age Group	*Non-smoker*	*Occasional smoker*	*Regular smoker*
13 years or younger	131 (84.0%)	13 (8.3%)	12 (7.7%)

14 years	115 (67.6%)	31 (18.2%)	24 (14.1%)
15 years	131 (63.3%)	41 (19.8%)	35 (16.9%)
16 years	189 (63.6%)	34 (11.4%)	74 (24.9%)
17 years	114 (53.5%)	27 (12.7%)	72 (33.8%)
18 years or older	45 (49.5%)	6 (6.6%)	40 (44.0%)
Total	725 (63.9%)	152 (13.4%)	257 (22.7%)

Tables 19 to 22 show the prevalences of current smoking by age group for each of the "county" groups. Chi-square was calculated for each of the age groups to detect significant differences between the "county" groups by age. It was not possible to calculate chi-square for the age groups 13 years and younger and 14 years due to the small numbers. The only age group for which chi-square was significant was 15 years, chi-square (3 d.f.) = 11.27, $p < 0.05$. Chi-square for 16 years (3 d.f.) = 1.50, $p > 0.05$ ($p = 0.68$), chi-square for 17 years (3 d.f.) = 0.64, $p > 0.05$ ($p = 0.89$) and chi-square for 18 years (3 d.f.) = 1.27, $p > 0.05$ ($p = 0.74$).

The respondents from the four county groups also answered the question on age of first cigarette. The mean age of first cigarette in Galway City was 11.57 years, in Galway County was 12.24, in County Mayo was 12.38 and in County Roscommon was 11.95. There was a significant difference between the four groups for the mean age of first cigarette, the F statistic = 7.53, $p < 0.001$.

Table 21: *Current Smoking by Age ; County Mayo*

	Smoking Category		
Age Group	*Non-smoker*	*Occasional smoker*	*Regular smoker*
13 years or younger	36 (81.8%)	5 (11.4%)	3 (6.8%)
14 years	54 (63.4%)	9 (8.9%)	28 (27.7%)
15 years	101 (60.5%)	20 (12.0%)	46 (27.5%)
16 years	143 (61.1%)	20 (12.0%)	46 (27.5%)
17 years	128 (55.7%)	20 (8.7%)	82 (35.7%)
18 years or older	50 (53.2%)	5 (5.3%)	39 (41.5%)
Total	522 (60.0%)	85 (9.8%)	263 (30.2%)

Table 22: *Current Smoking by Age ; County Roscommon*

	Smoking Category		
Age Group	*Non-smoker*	*Occasional smoker*	*Regular smoker*
13 years or younger	78 (79.6%)	16 (16.3%)	4 (4.1%)

14 years	10 (66.7%)	1 (6.7%)	4 (26.7%)
15 years	29 (56.9%)	10 (19.6%)	12 (23.5%)
16 years	69 (61.1%)	15 (13.3%)	29 (25.7%)
17 years	53 (56.4%)	10 (10.6%)	31 (33.0%)
18 years or older	13 (52.0%)	2 (8.0%)	10 (40.0%)
Total	252 (63.6%)	54 (13.6%)	90 (22.7%)

While not shown here the prevalence of current smoking was examined according to the socio-economic groupings. For each social class group the prevalence of regular smoking was several percentage points higher in Galway City compared to the rest of the Health Board area.

Table 23 shows the breakdown of current smoking prevalences by gender for the four "county" groups. It can be seen that the prevalence of current regular smoking in Galway City, Galway County, County Mayo and County Roscommon among boys is 34.8%, 26.9%, 31.9% and 25.0% respectively, and among the girls is 34.2%, 18.4%, 27.6% and 20.2% respectively. Chi-square for the differences in the current regular smoking prevalences among the boys (3 d.f.) = 20.19, $p < 0.001$, and among the girls (3 d.f.) = 7.60, $p > 0.05$ ($p = 0.055$).

Table 23 : *Current Smoking Status by Gender and County*

		Smoking Category		
County of Residence		*Non-smoker*	*Occasional smoker*	*Regular smoker*
Galway City	Boys	97 (52.7%)	23 (12.5%)	64 (34.8%)
	Girls	61 (53.5%)	14 (12.3%)	39 (34.2%)
Galway County	Boys	355 (62.0%)	64 (11.2%)	154 (26.9%)
	Girls	368 (65.8%)	88 (15.7%)	103 (18.4%)
County Mayo	Boys	279 (59.4%)	41 (8.7%)	150 (31.9%)
	Girls	238 (61.3%)	43 (11.1%)	107 (27.6%)
County Roscommon	Boys	130 (66.3%)	17 (8.7%)	49 (25.0%)
	Girls	121 (61.1%)	37 (18.7%)	40 (20.2%)

Urban / Rural Location

Lifetime prevalence of smoking is presented for urban / rural location in Table 24 and that of current smoking status by urban / rural location is shown in Table 25. It can be seen that both the lifetime prevalence rate and the prevalence rate for regular smoking is higher in the urban locations than in the rural locations.

Table 24 : *Lifetime Smoking Rates by Urban / Rural Location*

	Ever Smoked	
Area of residence	*No*	*Yes*
City and Towns	290 (30.2%)	669 (69.8%)
Villages and Countryside	593 (66.0%)	1,150 (66.0%)

Table 25 : *Current Smoking Status by Urban / Rural Location*

	Smoking Category		
Area of residence	*Non-smoker*	*Occasional smoker*	*Regular smoker*
City and Towns	557 (58.0%)	107 (11.1%)	296 (30.8%)
Villages and Countryside	1,103 (62.8%)	224 (12.7%)	430 (24.5%)

Comparison Between The School Students And The Early School Leavers

Lifetime prevalence

The lifetime prevalence of smoking for school students, traveller early school leavers and settled early school leavers is shown in Table 26. For simplicity the categories will be named students, travellers and early school leavers. It can be seen that the prevalence is highest among the early school leavers, at 78.7%, with the prevalence being 66.8% among the students, and 65.2% among the travellers. There is a significant difference between the three comparison groups for lifetime smoking rates, chi-square (2 d.f.) = 8.81, $p < 0.05$.

Table 26 : *Lifetime Smoking Rates*

	Ever Smoked	
Comparison groups	*No*	*Yes*
Students	949 (33.2%)	1,707 (66.8%)
Travellers	24 (34.8%)	45 (65.2%)
Early school leavers	30 (21.3%)	111 (78.7%)

Current Smoking

The prevalence of the current smoking categories for the different comparison groups is shown in Table 27.

Table 27 : *Current Smoking Status*

	Smoking Category		
Comparison groups	*Non-smoker*	*Occasional smoker*	*Regular smoker*
Students	1,599 (62.1%)	328 (12.7%)	646 (25.1%)
Travellers	40 (60.6%)	4 (6.1%)	22 (33.3%)
Early school leavers	50 (35.5%)	9 (6.4%)	82 (58.2%)

It can be seen that the prevalence of regular smoking is highest among the early school leavers group at 58.2%, with the prevalence among travellers being 33.3% and among students being 25.1%. There is a significant difference between the three comparison groups for the prevalence of current regular smoking, chi-square (2 d.f.) = 75.50, $p < 0.001$. Overall the prevalence of non-smokers is highest among the students at 62.1%, followed closely by the rate among the travellers, 60.6%, with the lowest rate of non-smokers being among the early school leavers.

Age and Gender

Table 28 shows the lifetime prevalence rates for smoking among the three comparison groups by gender. The lifetime prevalence for smoking among the student boys was 68.8%, while among the girls it was 64.6%. The respective prevalence rates among the travellers were 68.1% and 57.9%, and among the settled early school leavers was 75.8% and 85.0%. The difference between the lifetime prevalence rates between the threee comparison groups do not remain significant for boys when the genders are examined separately. For boys, chi-square (2 d.f.) = 2.11, $p > 0.05$ ($p = 0.349$), while for the girls chi-square (2 d.f.) = 7.54, $p < 0.05$.

Lifetime prevalence among the students increases in boys from 42.9% at age 13 years and younger to 71.6% at age 18 years and older. The highest rate is at 17 years with a prevalence of 75.4%. The lifetime prevalence among the student girls is lower than that for boys initially, being 37.4% at age 13 years and younger, but by the age of 15 years the rate among the girls has caught up and overtaken the lifetime rate of the boys, being 70.0% at age 15 years, compared to 64.3% among boys at age 15 years. The lifetime prevalence for smoking increases among the girls to 86.3% at age 18 years and over. The numbers in each age category are too small to comment on age related trends in lifetime smoking rates among the travellers or the settled early school leavers, or to calculate the significance of age related differences between the three groups.

Table 28 *Lifetime Smoking Rates by Gender : Comparison Groups*

Comparison Group	*Boys*	*Girls*
Students	910 (68.8%)	783 (64.6%)
Travellers	32 (68.1%)	11 (57.9%)
Early school leavers	75 (75.8%)	34 (85.0%)

Current smoking among the three comparison groups is shown in Table 29. The prevalence of regular smoking among the student boys is 28.2%, and among the student girls is 21.6%. The prevalence rates for

regular smoking among the traveller boys is 29.8% and among the traveller girls is 42.1%, and the rates among the settled early school leavers are 55.0% and 65.0% respectively. Chi-square for the difference between the three comparison groups as regards the rates for current regular smoking remain significant when analysed by gender. For boys, chi-square (2 d.f.) = 31.89, $p < 0.001$ and for girls chi-square (2 d.f.) = 44.79, $p < 0.001$.

Table 29 : *Current Smoking by Gender Among the Comparison Groups*

		Smoking Category		
Comparison Groups		*Non-smoker*	*Occasional smoker*	*Regular smoker*
School Students	Boys	813 (60.9%)	146 (10.9%)	376 (28.2%)
	Girls	776 (63.7%)	180 (14.8%)	263 (21.6%)
Travellers	Boys	29 (61.7%)	4 (8.5%)	14 (29.8%)
	Girls	11 (57.9%)	0 (0.0%)	8 (42.1%)
Early school leavers	Boys	40 (40.0%)	5 (5.0%)	55 (55.0%)
	Girls	10 (25.0%)	4 (10.0%)	26 (65.0%)

Among the school students the prevalence of regular smoking for the boys increases from 10.8% at age 13 years and younger to 39.6% at age 18 years and older. The year between 13 and 14 years sees the largest increase in prevalence. The prevalence of occasional smoking remains fairly stable at about 10% throughout, except for age 15 years, when it inceased to 15.8%, before decreasing again. The prevalence for non-smoking among boys decreased from 79.6% at age 13 years and younger, to 51.5% at age 18 years and older. Among the girls the prevalence of regular smoking increased from 5.4% at age 13 years and younger to 38.5% at age 18 years and older. The year between 13 years and 14 years shows the largest increase in regular smoking rate, increasing from 5.4% at age 13 years and younger to 14.8% at age 14 years. The prevalence thereafter rises steadily. The overall prevalence of non-smoking among the girls was 63.7%. The prevalence decreased from 82.4% at age 13 years and younger, to 53.8% at age 18 years and older. The largest decrease in the rate for non-smoking is between the ages of 13 years and younger, and 14 years, the prevalence falling from 82.4% to 67.8%. The overall prevalence of occasional smoking was 14.8% among the girls. It increased from 12.3% at age 13 years and younger, to 19.6% at age 15 years, and then decreased again to 7.7% at age 18 years and older.

As with the lifetime prevalence rates for smoking the numbers of respondents in each age category are too small for both the travellers and the settled early school leavers to comment on age related trends or to calculate significance tests on differences in prevalence rates for age categories.

Mean age of first cigarette

The mean age of the first cigarette among the school students was 12.1 years, among the travellers was also 12.1 years and among the "settled" early school leavers was 12.3 years. There is no significant difference

between the three comparison groups as regards the mean age of having the first cigarette, the F statistic = 0.12, $p > 0.05$ ($p = 0.89$).

5.3 ***Drinking***

Prevalence of Drinking

Lifetime prevalence

Table 30 shows the percentages of the sample in each age group who reported that they *ever* had a whole drink of alcohol. It can be seen from the table that nearly 67% of the group as a whole report having had a whole drink of alcohol at some stage in their life. The lifetime prevalence of drinking alcohol increases with age, chi square (5d.f.) = 430.63, $p < .001$. The lifetime prevalence increases from 24.8% at age 13 years and younger, to 85.6% at age 18 years and older. The years between 13 years and younger and 15 years shows the largest increase in prevalence.

Table 30 *: Lifetime Drinking Rates by Agegroup*

	Ever Drank	
Age Group	*No*	*Yes*
13 years or younger	227 (75.2%)	75 (24.8%)
14 years	172 (54.4%)	144 (45.6%)
15 years	153 (30.2%)	353 (69.8%)
16 years	225 (29.1%)	549 (70.9%)
17 years	103 (16.4%)	526 (83.6%)
18 years and over	34 (14.4%)	202 (85.6%)
All age groups	914 (33.1%)	1,849 (66.9%)

The respondents who reported ever having an alcoholic drink were asked at what age they had their first drink, the average age of first drink was 13.7 years, and the median age was 14 years. By age 10 years 9.4% of those that ever had a drink, had had their first drink. This increased to 36.3% at age 13 years, 57.2% at age 14 years and 81.2% at age 15 years. The respondents who ever had an alcoholic drink were asked with whom they had their first drink. 73.3% were with a friend when they had their first drink, 13.2% were with their parents, 9.2% were with a sib. 7.4% of those that ever had a drink reported that they were alone when they had the first drink and 9.4% stated that they were with others.

Table 31 *: Frequency of Having Felt Drunk by Age Group*

	Number of Times Drunk						
Age Group	*Never*	*1-2 times*	*3-4 times*	*5-6 times*	*7-8 times*	*9-10 times*	*More than 10*
13 years or younger	274 (91.0%)	19 (6.3%)	2 (0.7%)	3 (1.0%)	0 (0.0%)	0 (0.0%)	3 (1.0%)
14 years	235	37	17	7	4	3	14

	(74.1%)	(11.7%)	(5.4%)	(2.2%)	(1.3%)	(0.9%)	(4.4%)
15 years	283	88	47	23	8	7	49
	(56.0%)	(17.4%)	(9.3%)	(4.6%)	(1.6%)	(1.4%)	(9.7%)
16 years	383	113	77	38	23	13	124
	(49.7%)	(14.7%)	(10.0%)	(4.9%)	(3.0%)	(1.7%)	(16.1%)
17 years	193	95	60	50	30	14	185
	(30.8%)	(15.2%)	(9.6%)	(8.0%)	(4.8%)	(2.2%)	(29.5%)
18 years and over	72	27	18	18	11	7	82
	(30.6%)	(11.5%)	(7.7%)	(7.7%)	(4.7%)	(3.0%)	(34.9%)
All age groups	1,440	379	221	139	76	44	457
	(52.2%)	(13.8%)	(8.0%)	(5.0%)	(2.8%)	(1.6%)	(16.6%)

Table 31 shows the percentages of respondents at each age group who reported ever having felt drunk, and the number of times in their life that they had felt drunk. Overall 47.8% of the sample report that they have ever felt drunk. 13.8% report having felt drunk only once or twice, while 16.6% report that they have been drunk more than ten times. The frequency of having felt drunk increases with age, chi-square (30 d.f.) = 507.24, $p < 0.001$. The frequency of ever having felt drunk increases from 9.0% at age 13 years and younger to 69.4% at age 18 years and older.

The respondents who reported having ever felt drunk were asked the age that they had first felt drunk. The average age reported was 14.5 years and the median age was 15 years.

Both the lifetime prevalence rates and the prevalence rates for the specific beverages, cider, beer (lager, stout and ale), wine and spirits in the previous month are shown in Table 32. Beer was the most prevalently consumed alcoholic beverage with an overall lifetime prevalence of 56.0% and a prevlance rate for the previous month of 41.3%. Spirits were the next popular with prevalence rates respectively of 48.9% and 30.8%. This was closely followed by cider with prevalence rates of 48.6% and 28.6%. Wine was the least popular drink with prevalence rates of 41.2% and 14.5% respectively.

Table 32 *: Prevalence Rates for Specific Alcoholic Beverages*

	Cider		*Beer*		*Wine*		*Spirits*	
Age Group	*Ever*	*Previous month*	*Ever*	*Previous month*	*Ever*	*Previous month*	*Ever*	*Previous month*
13 years or younger	26 9.1%	9 3.1%	42 14.7%	25 8.5%	44 15.3%	17 5.8%	25 8.9%	14 4.9%
14 years	82 27.3%	49 16%	104 34.6%	65 21.2%	71 24.7%	35 11.8%	87 29.6%	52 17.1%
15 years	216 47.0%	139 29.3%	266 56.0%	175 36.4%	182 41.7%	69 15.1%	192 43.1%	118 25.2%

16 years	395	246	422	297	300	104	373	245
	54.6%	34.5%	57.7%	40.4%	43.7%	15.2%	52.4%	34.3%
17 years	387	210	454	373	290	96	412	254
	66.0%	33.7%	75.8%	62.4%	54.1%	18.1%	69.9%	44.8%
18 years	137	74	175	150	111	31	149	102
and over	67.2%	38.1%	78.8%	68.4%	58.1%	17.2%	71.6%	51.0%
All age	1,243	727	1,463	1,085	998	352	1,238	785
groups	48.6%	28.6%	56.0%	41.3%	41.2%	14.5%	48.9%	30.8%

Drinkers were asked how many drinks of each beverage they usually consumed on any one occasion. 12.7% of the drinkers reported that they usually drank 5 or more drinks of cider on any one occasion. This rate increased with age from 3.4% of those 13 years and younger to 13.8% of those aged 18 years and older. 24.4% of the drinkers reported that they usually drank 5 or more drinks of beer on any one occasion. This rate increased with age from 3.4% of those aged 13 years and younger to 44.9% of those aged 18 years and older. 2.4% of the drinkers reported that they usually drank 5 or more drinks of wine on any one occasion. This rate was fairly stable throughout the age groups. 9.4% of the drinkers reported that they usually drank 5 or more drinks of spirits on any one occasion. This rate increased from 3.5% of those aged 13 years and younger to 10.2% of those aged 18 years and older.

Current Prevalence

Respondents were categorised into current non-drinkers and current drinkers according to their drinking behaviour of the previous month. Those that had not taken any alcoholic beverages in the previous month were categorised as current non-drinkers, and those that had a whole alcoholic drink in the previous month were categorised as current drinkers.

Table 33 shows the prevalence of current drinking for each age group. The overall rate of current drinkers was 61.7% for the sample as a whole. This prevalence increased with age from 21.1% at age 13 years and younger to 82.2% of those aged 18 years and older. This increase in current drinking prevalence with increasing age is significant, chi-square (5 d.f.) = 369.99, $p < 0.001$.

The relationship between ease of access to alcohol and the current drinking status was examined. There was a significant relationship between those who reported that they had easy access to alcohol and current drinking status, chi-square (2 d.f.) = 263.58, $p < 0.001$. The prevalence of current drinking was 73.8% aomng those who had easy access to alcohol, compared to 28.7% among those who claimed that access to alcohol would be vey difficult. 59.3% (1,400) of the sample stated that they would have easy access to alcohol. Current drinkers were also asked from where they usually obtained their alcohol. The respondents were allowed to indicate more than one answer. 55.7% of the current drinkers usually obtain alcohol in a public house, 53.1% in a night-club, 27.8% in an off-licence, 22.2% from friends, 14.5% in a private house, and 12.5% in a shop.

Table 33 *: Current Drinking by Age Group*

	Drinking Category	
Age Group	*Current Non-Drinkers*	*Current Drinkers*
13 years or younger	225 (78.9%)	60 (21.1%)
14 years	175 (59.7%)	118 (40.3%)
15 years	153 (34.7%)	288 (65.3%)
16 years	222 (33.3%)	444 (66.7%)
17 years	103 (20.0%)	413 (80.0%)
18 years and over	31 (17.8%)	143 (82.2%)
All age groups	909 (38.3%)	1,466 (61.7%)

Background Characteristics

Gender

Table 34 shows the lifetime prevalence rates of drinking for boys and girls. The overall prevalence of drinking among boys was 74.6%, while among the girls it was 58.1%. This difference is significant, chi-square = 84.44, $p < 0.001$. The lifetime prevalence for drinking among the boys increases from 41.7% at age 13 years and younger to 87.8% at age 18 years and older. The years between 13 years and younger, and 15 years show the largest increases in prevalence. The lifetime prevalence of drinking increases among the girls from 16.2% at age 13 years and younger to 84.1% at age 18 years and older. The years between 13 years and younger and 15 years are also the years among the girls with the largest increases in lifetime prevalence. After performing stratified analysis on the lifetime drinking rates by age and gender, the difference between the genders remains significant, the Mantel-Haenszel Summary chi-square (corrected) = 36.93, $p < 0.001$.

Table 34 *: Lifetime Drinking Rates by Age and Gender*

Age Group	*Boys*	*Girls*
13 years or younger	40 (41.7%)	33 (16.2%)
14 years	95 (56.5%)	49 (33.1%)
15 years	207 (74.2%)	142 (65.1%)
16 years	269 (73.5%)	277 (68.4%)
17 years	345 (86.0%)	178 (79.1%)
18 years and over	144 (87.8%)	58 (84.1%)
All age groups	1,100 (74.6%)	737 (58.1%)

Table 35 shows the prevalence rates for the frequency of having felt drunk for both boys and girls by age group. Overall the prevlaence of ever having felt drunk was 55.8% among the boys and 38.5% among the girls. This difference is significant, chi-square = 81.38, $p < 0.001$, with Yates correction = 80.69, $p < 0.001$.

Among the boys the rate of ever having felt drunk increased with age from 19.8% at age 13 years and younger to 75.6% at age 18 years and older. The largest increase was between 16 years and 17 years, increasing from 55.2% at age 16 years to 71.4% at age 17 years. Among the girls the prevalence of ever having felt drunk increased from 3.9% at age 13 years and younger to 57.4% at age 18 years and older. The prevalence was 17.4% at age 14 years, 38.5% at age 15 years, 45.8% at age 16 years and 64.9% at age 17 years.

Table 35 *: Frequency of Having Felt Drunk by Age Group and Gender*

Boys

	Number of Times Drunk						
Age Group	*Never*	*1-2 times*	*3-4 times*	*5-6 times*	*7-8 times*	*9-10 times*	*More than 10*
13 years or younger	77 (80.2%)	14 (14.6%)	1 (1.0%)	2 (2.1%)	0 (0.0%)	0 (0.0%)	2 (2.1%)
14 years	112 (66.7%)	24 (14.3%)	11 (6.5%)	5 (3.0%)	4 (2.4%)	2 (1.2%)	10 (6.0%)
15 years	144 (51.6%)	48 (17.2%)	31 (11.1%)	16 (5.7%)	5 (1.8%)	3 (1.1%)	32 (11.5%)
16 years	164 (44.8%)	49 (13.4%)	33 (9.0%)	24 (6.6%)	15 (4.1%)	8 (2.2%)	73 (19.9%)
17 years	114 (28.6%)	57 (14.3%)	35 (8.8%)	31 (7.8%)	19 (4.8%)	6 (1.5%)	137 (34.3%)
18 years and over	40 (24.4%)	17 (10.4%)	10 (6.1%)	11 (6.7%)	10 (6.1%)	5 (3.0%)	71 (43.3%)
All age groups	651 (44.2%)	209 (14.2%)	121 (8.2%)	89 (6.0%)	53 (3.6%)	24 (1.6%)	325 (22.1%)

Girls

	Number of Times Drunk						
Age Group	*Never*	*1-2 times*	*3-4 times*	*5-6 times*	*7-8 times*	*9-10 times*	*More than 10*
13 years or younger	195 (96.1%)	5 (2.5%)	1 (0.5%)	1 (0.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
14 years	123 (82.6%)	13 (8.7%)	6 (4.0%)	2 (1.3%)	0 (0.0%)	1 (0.7%)	4 (2.7%)
15 years	134 (61.5%)	40 (18.3%)	16 (7.3%)	5 (2.3%)	3 (1.4%)	4 (1.8%)	16 (7.3%)
16 years	218 (54.2%)	63 (15.7%)	44 (10.9%)	13 (3.2%)	8 (2.0%)	5 (1.2%)	51 (12.7%)
17 years	79	37	24	19	10	8	48

	(35.1%)	(16.4%)	(10.7%)	(8.4%)	(4.4%)	(3.6%)	(21.3%)
18 years and over	29 (42.6%)	10 (14.7%)	8 (11.8%)	7 (10.3%)	1 (1.5%)	2 (2.9%)	12 (16.2%)
All age groups	778 (61.5%)	168 (13.3%)	99 (7.8%)	47 (3.7%)	22 (1.7%)	20 (1.6%)	131 (10.4%)

Table 36 shows the lifetime prevalence rates for the specific alcoholic beverages among both boys and girls. It can be seen that for each category of alcoholic beverage the rates among the boys are statistically higher than among the girls, the greatest difference being for beer, and the least for wine. Among the boys, beer is the preferred beverage, with a lifetime prevalence of 65.9%. Next in prevalence is cider with a lifetime prevalence of 50.2%, followed closely by spirits with a prevalence rate of 48.9%. Wine has the lowest lifetime prevalence among the boys at 38.1%. Among the girls spirits has the highest lifetime prevalence rate at 39.8%. Cider is next with a prevalence of 38.7%, then beer with a prevalence of 37.5%. Wine has the lowest lifetime prevalence rate among the girls with a rate of 33.2%.

Table 36 *: Lifetime Prevalence Rates for Specific Alcoholic Beverages by Gender*

Beverage	*Gender*		*chi-square*
	Boys	*Girls*	
Cider	744 (50.2%)	495 (38.7%)	36.45^{***}
Beer	976 (65.9%)	480 (37.5%)	220.43^{***}
Wine	565 (38.1%)	425 (33.2%)	7.02^{**}
Spirits	724 (48.9%)	510 (39.8%)	22.19^{***}

Note : Test statistic is chi-square with Yates correction. $^{**}p < 0.01$, $^{***}p < 0.001$.

Table 37 shows the current drinking status of boys and girls in each age group. The overall prevalence of current drinkers among the boys is 69.5% and among the girls is 53.4%. The prevalence among the boys is significantly higher than the girls, chi-square with Yates correction = 63.81, $p < 0.001$. The prevalence of current drinking among the boys increases with age from 33.3% at age 13 years and younger to 83.7% at age 18 years and older. The prevalence of current drinking among the girls increases from 15.1% at age 13 years and younger to 80.0% at age 18 years and older. While among the boys the years between 13 years and younger and 15 years have the largest increase in current drinking prevalence, among the girls the year between 14 years and 15 years has the largest increase from 28.2% at age 14 years to 61.2% at age 15 years.

Table 37 *: Current Drinking by Age Group; Boys*

Age Group	*Drinking Category*	
	Current Non-Drinkers	*Current Drinkers*
13 years or younger	56 (66.7%)	28 (33.3%)
14 years	73 (48.3%)	78 (51.7%)

15 years	72 (30.4%)	165 (69.6%)
16 years	96 (31.5%)	209 (68.5%)
17 years	56 (17.3%)	267 (82.7%)
18 years and over	20 (16.3%)	103 (83.7%)
All age groups	373 (30.5%)	850 (69.5%)

Current Drinking by Age Group ; Girls

	Drinking Category	
Age Group	*Current Non-Drinkers*	*Current Drinkers*
13 years or younger	169 (84.9%)	30 (15.1%)
14 years	102 (71.8%)	40 (28.2%)
15 years	76 (38.8%)	120 (61.2%)
16 years	126 (35.0%)	234 (65.0%)
17 years	47 (24.6%)	144 (75.4%)
18 years and over	10 (20.0%)	40 (80.0%)
All age groups	530 (46.6%)	608 (53.4%)

Father`s Socio-economic Status

Table 38 shows the current drinking prevalence of the sample by the father`s socio-economic groupings. There is a significant association between current drinking and father`s socio-economic status, with those whose fathers are in social class 1 or 2 having the higher prevalence of current drinking. Chi-square for the association is 24.07, $p < 0.001$. When social class 7 (by definition occupation unknown) is included in the calculation of chi-square, the result remains significant, chi-square (7 d.f.) = 26.31, $p < 0.001$.

Mother`s Working Status

Table 39 shows the breakdown of the current drinking prevalence according to whether the mother works outside the home or not. There is no significant association between current drinking prevalence and mother`s work status, chi-square, with Yates correction = 3.13, $p > 0.05$ ($p = 0.08$).

Table 38 *: Current Drinking by Father`s Socio-ecnomic Status*

	Drinking Category	
Father`s Socio-economic Group	*Current Non-Drinkers*	*Current Drinkers*
S.C.1 (Higher professional / managerial or farmers over 200 acres)	80 (32.7%)	165 (67.3%)
S.C.2 (Lower professional / managerial or farmers with 100-199 acres)	167 (31.3%)	367 (68.7%)
S.C.3 (Non-manual and farmers with 50-99 acres)	150 (40.5%)	220 (59.5%)
S.C.4 (Skilled manual and farmers with 30-49 acres)	249 (42.6%)	335 (57.4%)
S.C.5 (Semi-skilled and farmers with under 30 acres)	89 (45.2%)	108 (54.8%)

S.C.6 (Unskilled manual)	18 (38.3%)	29 (61.7%)
S.C.8 (long-term unemployment)	35 (40.7%)	51 (59.3%)

Table 39 *: Current Drinking by Mother`s Work Status*

	Drinking Category	
Mother`s Work	*Current Non-Drinkers*	*Current Drinkers*
In the home only	465 (40.5%)	683 (59.5%)
Employed outside the home	425 (36.8%)	729 (63.2%)

Income / Pocket Money

The breakdown of the current drinking categories according to the weekly income or pocket money can be seen in Table 40. There is an association between the amount of weekly income or pocket money and the likelihood of being a current drinker, chi-square = 160.47, $p < 0.001$. The prevalence of current drinking increases from 56.3% among those with less than £1 income or pocket money per week to 89.8% among those with £31 - £50 weekly income or pocket money and then decreases to 66.7% among those with over £51 weekly income or pocket money.

Table 40 *: Current Drinking by Weekly Income or Pocket Money*

	Drinking Category	
Weekly Pocket Money	*Current Non-Drinkers*	*Current Drinkers*
Less than £1	66 (43.7%)	85 (56.3%)
£1 to £5	602 (48.3%)	644 (51.7%)
£6 to £10	115 (26.0%)	328 (74.0%)
£11 to £20	40 (17.4%)	190 (82.6%)
£21 to £30	14 (16.3%)	72 (83.7%)
£31 to £50	5 (10.2%)	44 (89.8%)
More than £50	11 (33.3%)	22 (66.7%)

Education

The respondents were asked whether they had ever received any alcohol education. Of those who stated that they had 63.6% were current drinkers. Of those that replied that they had received no alcohol education, 59.1% were current drinkers. There is a significant association between receiving education and being a current drinker, chi-square, with Yate`s correction = 4.35, $p < 0.05$.

Location

County of Residence

Table 41 shows the prevalence of lifetime drinking according to whether the respondent lives in Galway City, Galway County (excluding Galway City), County Mayo or County Roscommon. It can be seen that the lifetime prevalence for drinking alcohol is highest in Galway City at 78.6%, with a prevalence of 69.7%, 62.8% and 62.2% respectively for County Mayo, County Roscommon and Galway County (excluding Galway City). There is a significant difference between the four "county" groups as regards lifetime prevalence rates for drinking, chi-square (3 d.f.) = 35.67, $p < 0.001$.

Table 41 : *Lifetime Drinking Rates by County*

	Ever Drank	
County of residence	*No*	*Yes*
Galway City	64 (21.4%)	235 (78.6%)
Galway County	426 (37.8%)	700 (62.2%)
County Mayo	265 (30.3%)	609 (69.7%)
County Roscommon	147 (37.2%)	248 (62.8%)

Table 42 looks at the lifetime prevalence rates for drinking according to gender. It can be seen among the boys that the prevalence of lifetime drinking is highest in Galway City at 79.3%, followed by County Mayo at 74.0%, Galway County at 73.8% and finally County Roscommon at 70.8%. Chi-square for the difference between the lifetime prevalence rate among the boys (3 d.f.) = 3.80, $p > 0.05$ ($p = 0.28$). Among the girls the lifetime prevalence of drinking is 77.9% in Galway City, 64.5% in Couny Mayo, 55.1% in County Roscommon and 50.3% in Galway County. Chi-square for the girls (3 d.f.) = 39.42, $p < 0.001$. The significance of the difference between the four "county" groups was also examined by age groups. Due to small numbers it was not possible to calculate chi-square for the age groups 13 years and younger and 18 years and older. Chi-square was not significant for the age groups except for the age group 15 years, when chi-square (3 d.f.) = 12.55, $p < 0.01$.

Table 42 *: Lifetime Drinking Rates by Gender*

Age Group	*Boys*	*Girls*
Galway City	146 (79.3%)	88 (77.9%)
Galway County	419 (73.8%)	279 (50.3%)

County Mayo	348 (74.0%)	251 (64.5%)
County Roscommon	138 (70.8%)	109 (55.1%)

The respondents who had ever taken a whole alcoholic drink were asked their age the first time they ever had an alcoholic drink. The respective mean ages for Galway City, Galway County, County Mayo and County Roscommon were 13.24 years, 13.62 years, 14.10 years and 13.45 years. There was a significant difference between the four groups regarding the mean age of first drink, F statistic = 10.78, $p < 0.001$.

Tables 43 to 46 shows the breakdown of lifetime drinking rates by age and gender for the four groups. Due to the small numbers involved in some of the cells it is not possible to calculate chi-square for the significance of the difference in the rates for the four groups by age and gender, but in general it can be seen that for each gender and age group, the rates are somewhat higher for Galway City than the other three areas, especially among the girls.

Table 43 *: Lifetime Drinking Rates by Age and Gender; Galway City*

Age Group	*Boys*	*Girls*
13 years or younger	0 (0.0%)	0 (0.0%)
14 years	14 (60.9%)	3 (50.0%)
15 years	51 (86.4%)	13 (81.3%)
16 years	50 (80.6%)	40 (75.5%)
17 years	22 (81.5%)	28 (82.4%)
18 years and over	9 (75.0%)	4 (100.0%)
All age groups	146 (79.3%)	88 (77.9%)

Table 44 *: Lifetime Drinking Rates by Age and Gender; Galway County*

Age Group	*Boys*	*Girls*
13 years or younger	14 (46.7%)	22 (17.5%)
14 years	42 (56.8%)	32 (34.4%)
15 years	76 (71.0%)	60 (61.9%)
16 years	102 (72.3%)	99 (66.0%)
17 years	132 (86.3%)	45 (76.3%)
18 years and over	53 (84.1%)	20 (71.4%)
All age groups	53 (84.1%)	278 (50.3%)

Table 45 *: Lifetime Drinking Rates by Age and Gender; County Mayo*

Age Group	*Boys*	*Girls*
13 years or younger	7 (36.8%)	2 (8.0%)
14 years	34 (58.6%)	12 (28.6%)
15 years	65 (68.4%)	39 (60.0%)
16 years	81 (71.1%)	80 (67.2%)
17 years	109 (85.8%)	85 (83.3%)
18 years and over	52 (91.2%)	33 (91.7%)
All age groups	348 (74.0%)	251 (64.5%)

Table 46 *: Lifetime Drinking Rates by Age and Gender; County Roscommon*

Age Group	*Boys*	*Girls*
13 years or younger	17 (38.6%)	9 (17.0%)
14 years	4 (40.0%)	2 (40.0%)
15 years	9 (75.0%)	29 (74.4%)
16 years	25 (65.8%)	52 (70.3%)
17 years	60 (88.2%)	16 (61.5%)
18 years and over	23 (100.0%)	1 (100.0%)
All age groups	138 (70.8%)	109 (55.1%)

Table 47 shows the breakdown of current drinking categories according to the above categories of location. Again the highest prevalence for current drinking is in Galway City with a prevalence of 75.2%. The prevalences of current drinking in County Mayo, County Roscommon and in Galway County (excluding Galway City) are 63.9%, 58.1% and 57.0% respectively. Chi-square for the difference in current drinking rates between the four groups (3 d.f.) = 32.43, $p < 0.001$.

Table 47 *: Current Drinking Rates by County of Residence*

	Drinking Category	
County of residence	*Current Non-Drinkers*	*Current Drinkers*
Galway City	64 (24.8%)	194 (75.2%)
Galway County	423 (43.0%)	560 (57.0%)
County Mayo	264 (36.1%)	468 (63.9%)
County Roscommon	145 (41.9%)	201 (58.1%)

Tables 48 to 51 show the prevalence rates of current drinking by age and gender for the four groups. The overall prevalence rates for current drinking among the boys for Galway City, Galway County, County Mayo and County Roscommon are 77.0%, 68.9%, 67.3% and 65.7% respectively. Chi-square for the difference between the current prevalence rates among the boys is not significant, chi-square (3 d.f.) = 6.27,

$p > 0.05$ ($p = 0.10$). Among the girls the respective current drinking rates for the four groups are 72.8%, 45.7%, 60.5% and 50.8%. Chi-square (3 d.f.) = 33.48, $p < 0.001$.

Table 48 *: Current Drinking Rates by Age and Gender; Galway City*

Age Group	*Boys*	*Girls*
13 years or younger	0 (0.0%)	0 (0.0%)
14 years	12 (57.1%)	2 (40.0%)
15 years	45 (84.9%)	13 (81.3%)
16 years	44 (78.6%)	31 (70.5%)
17 years	20 (80.0%)	20 (76.9%)
18 years and over	6 (66.7%)	1 (100.0%)
All age groups	127 (77.0%)	67 (72.8%)

Table 49 *: Current Drinking Rates by Age and Gender; Galway County*

Age Group	*Boys*	*Girls*
13 years or younger	9 (36.0%)	20 (16.3%)
14 years	39 (54.9%)	26 (29.2%)
15 years	57 (64.8%)	53 (58.9%)
16 years	81 (67.5%)	84 (63.2%)
17 years	105 (83.3%)	34 (70.8%)
18 years and over	39 (79.6%)	13 (65.0%)
All age groups	330 (68.9%)	230 (45.7%)

Table 50 *: Current Drinking Rates by Age and Gender; County Mayo*

Age Group	*Boys*	*Girls*
13 years or younger	5 (29.4%)	2 (8.0%)
14 years	23 (48.9%)	10 (24.4%)
15 years	51 (63.0%)	33 (55.9%)
16 years	55 (63.2%)	68 (63.6%)
17 years	76 (80.9%)	75 (81.5%)
18 years and over	39 (88.6%)	25 (89.3%)
All age groups	249 (67.3%)	213 (60.5%)

Examining the significance of the differences in current drinking rates between the four groups according to the age groups, as with lifetime prevalence rates, the only age group for which there is a significant difference is age 15 years, chi-square (3 d.f.) = 14.18, $p < 0.005$. It can be seen from Tables 48 to 51 that the rates of current drinking are generally higher among Galway City respondents than the other three groups, especially among the girls.

Table 51 *: Current Drinking Rates by Age and Gender; County Roscommon*

Age Group	*Boys*	*Girls*
13 years or younger	12 (30.8%)	8 (15.7%)
14 years	4 (40.0%)	2 (40.0%)
15 years	6 (66.7%)	20 (66.7%)
16 years	23 (63.9%)	46 (67.6%)
17 years	48 (85.7%)	14 (58.3%)
18 years and over	16 (100.0%)	1 (100.0%)
All age groups	109 (65.7%)	91 (50.8%)

While not show here the prevalence of current drinking was examined according to the socio-economic groupings. Apart from social class 6 (unskilled manual) and social class 8 (long-term unemployment) where the prevalence of current drinking was lower in Galway City, the prevalence rate for current drinking was between 10 to 20% higher in Galway City than the rest of the Health Board areas for each social class grouping.

Performing the various analyses on Galway City students, without the travellers or the “settled” early school leavers did not change the overall prevalence rates for drinking or the significance of the difference between the four groups.

Urban / Rural Location

Table 52 shows the prevalence of lifetime drinking according to whether the respondent lives in either a urban area (city or town) or in a rural area (village or the countryside. It can be seen in the table that the lifetime prevalence of drinking is higher among those who live in an urban area compared to those that live in a rural area, 72.0% versus 64.0%.

The prevalence of current drinking among urban / rural location is shown in Table 53. It can be seen that the prevalence of current drinking is 68.3% among those who live in an urban area, and 58.0% among those who live in a rural area.

Table 52 : *Lifetime Drinking Rates by Urban / Rural Location*

	Ever Drank	
Area of residence	*No*	*Yes*
City and Towns	268 (28.0%)	688 (72.0%)
Villages and Countryside	629 (36.0%)	1,119 (64.0%)

Table 53 *: Current Drinking Rates by Urban / Rural Location*

	Drinking Category	
Area of residence	*Current Non-Drinkers*	*Current Drinkers*
City and Towns	263 (31.7%)	567 (68.3%)
Villages and Countryside	629 (42.0%)	870 (58.0%)

Perceived Parental and Peer Drinking, and Perceived Parental and Peer Approval

Perceived Parental and Peer Drinking

In this section the relationship of current drinking to perceived parental and peer drinking or normative beliefs is considered. It is the "perceived" drinking of the parents and peers that is examined, and not their actual drinking, in other words, what the respondent believes that these people drink.

Table 54 shows the breakdown of current drinking according to the perceived drinking of the parents. 72.3% of those who report that only their mothers drink are current drinkers. 65.4% of those who report that both parents drink and 62.4% of those who report that only their fathers drink are current drinkers, while 49.5% of those who report that neither parent drinks are current drinkers. There is a significant relationship between the current drinking status and perceived parental drinking , chi-square for the association between parents` drinking and current drinking status (1 d.f.) = 33.48, $p < 0.001$.

Table 54 *: Current Drinking by Perceived Parental Drinking*

	Drinking Category

Perceived Parental Drinking	*Current Non-Drinker*	*Current Drinker*
Neither parent drinks	213 (50.5%)	209 (49.5%)
Mother only drinks	51 (27.7%)	133 (72.3%)
Father only drinks	163 (37.6%)	271 (62.4%)
Both parents drink	429 (34.6%)	811 (65.4%)

Table 55 shows the association between the perceived drinking of friends and the prevalence of current drinking. The highest prevalence of current drinking, 80.7%, is among those who report that all their friends drink. The prevalence of current drinking is 50.7% among those who report that only their best friend drinks, and is 48.6% among those who report that only their other friends drink. The lowest prevalence of current drinking, 28.0%, is among those who report that none of their friends drink. There is a very strong association between the perceived drinking of friends, and current drinking status, chi-square (1 d.f.) = 457.90, $p < 0.001$.

Table 55 *: Current Drinking by Perceived Peer Drinking*

	Drinking Category	
Perceived Peer Drinking	*Current Non-Drinker*	*Current Drinker*
No friends drink	371 (72.0%)	144 (28.0%)
Best friend only drinks	33 (49.3%)	34 (50.7%)
Other friends only drink	196 (51.4%)	185 (48.6%)
All friends drink	254 (19.3%)	1,062 (80.7%)

Perceived Parental and Peer Disapproval

This section considers the prevalence of current drinking according to the perceived approval or disapproval of the respondent`s drinking by parents and friends. Perceived disapproval was measured using a 5 point likert scale with the degree of disapproval ranging from "disapprove extremely" to "would not disapprove". Table 56 shows the prevalence of current drinking according to the perceived disapproval of parents and friends. The prevalence of current drinking increases with decreasing mother`s disapproval from 48.9% among those whose mothers would disapprove extremely to 87.4% among those whose mothers would not disapprove. The association is significant, Kruskal-Wallis H test (equivalent to the chi-square test, and used with non-parametric data) (4 d.f.) = 250.09, $p < 0.001$. Similarily the prevalence of current drinking increases with decreasing father`s disapproval from 48.2% when the father disapproves extremely to 89.8% when the father does not disapprove. This association is again significant, Kruskal-Wallis H (4 d.f.) = 242.97, $p < 0.001$. In the case of best friend`s disapproval the prevalence of current drinking increases from 14.1% when the best friend disapproves extremely to 78.7% when the best friend does not disapprove. There is a very strongly significant relationship with best friend`s disapproval, Kruskal-Wallis H (4 d.f.) = 575.48, $p < 0.001$. As with best friend, there is a strong statistical relationship between other friends` disapproval and current

Table 56 *: Current Drinking By Percieved Parental and Peer Disapproval*

	Drinking Category	
Perceived Mother`s Disapproval	*Current Non-Drinker*	*Current Drinker*
Disapprove extremely	656 (51.1%)	627 (48.9%)
Disapprove very much	122 (36.1%)	216 (63.9%)
Disapprove	68 (21.7%)	245 (78.3%)
Disapprove slightly	31 (11.2%)	245 (88.8%)
Would not disapprove	17 (12.6%)	118 (87.4%)

	Drinking Category	
Perceived Father`s Disapproval	*Current Non-Drinker*	*Current Drinker*
Disapprove extremely	616 (51.8%)	574 (48.2%)
Disapprove very much	126 (35.7%)	227 (64.3%)
Disapprove	75 (23.3%)	247 (76.7%)
Disapprove slightly	44 (15.8%)	235 (84.2%)
Would not disapprove	18 (10.2%)	159 (89.8%)

	Drinking Category	
Perceived Best Friend`s Disapproval	*Current Non-Drinker*	*Current Drinker*
Disapprove extremely	170 (85.9%)	28 (14.1%)
Disapprove very much	96 (82.8%)	20 (17.2%)
Disapprove	131 (68.9%)	59 (31.1%)
Disapprove slightly	146 (52.0%)	135 (48.0%)
Would not disapprove	329 (21.3%)	1,212 (78.7%)

	Drinking Category	
Perceived Other Friends` Disapproval	*Current Non-Drinker*	*Current Drinker*
Disapprove extremely	123 (87.2%)	18 (12.8%)
Disapprove very much	76 (86.4%)	12 (0.8%)
Disapprove	120 (75.0%)	40 (2.8%)
Disapprove slightly	137 (53.3%)	120 (8.3%)
Would not disapprove	415 (24.7%)	1,262 (75.3%)

drinking, Kruskal-Wallis H (4 d.f.) = 478.05, $p < 0.001$. The prevalence of current drinking increases from 12.8% when other friends disapprove to 75.3% when other friends do not disapprove.

Expectancy-Value Beliefs

These were tested by asking the respondents to indicate how likely they thought it was that a specific list of potential consequences would occur to them as a result of drinking alcohol. The possible responses were placed on a 5 point Likert scale, "Yes, I am certain it would", "Yes, I think it would", "Unsure", "No, I think it would not" and finally "No, I am certain it would not". Table 57 shows the statistical association between the potential consequences and the prevalence of current drinking. It can be seen that for each possible consequence there was a significant relationship between the belief by the respondent that the consequence would occur, and the status of current drinking.

Table 57 *: Statistical Association between current drinking and the potential consequences*

Consequence	*Kruskal-Wallis H*	*p value*
Harm health	246.29 (4 d.f.)	$p < 0.001$
Make me feel good	458.63 (4 d.f.)	$p < 0.001$
Make me feel sick	248.39 (4 d.f.)	$p < 0.001$
Help forget troubles	40.63 (4 d.f.)	$p < 0.001$
Get me in trouble	17.75 (4 d.f.)	$p < 0.001$
Be exciting	102.82 (4 d.f.)	$p < 0.001$
Become an alcoholic	371.94 (4 d.f.)	$p < 0.001$
Look tough	40.91 (4d.f.)	$p < 0.001$

Attitude

Attitude towards drinking was determined by asking the respondents how pleasant or unpleasant they thought drinking would be, and how much they thought that they would like

Table 58 *: Statistical Association between current drinking and attitudes towards drinking*

Attitude Item	*Kruskal-Wallis H*	*p value*
Pleasant-Unpleasant	672.32 (4 d.f.)	$p < 0.001$
Like-Dislike	980.53 (4 d.f.)	$p < 0.001$

or dislike it. The responses were placed on a likert scale, pleasant-unpleasant and like-dislike. Table 58 shows the relationship between these attitudes towards drinking and the current drinking status.

Social Bonding

The degree of social bonding to school or the training centre, parents, friends and religion was determined by asking the respondents how well they got on with them, and how important this relationship was to them. Table 59 shows the statistical relationships between the social bonding items and current drinking status. In the analysis of the degree of bonding to parents, school or training centre, and religion, and the importance of these items to the respondent there is a significant negative relationship, with the greater the degree of

bonding being associated with higher levels of non-drinking. The association between drinking and relationship with friends was not significant.

Table 59 : *Statistical Association between current drinking and the social bonding items*

Social Bonding Item	*Kruskal-Wallis H*	*p value*
Self-rated school or training centre performance	26.29 (5 d.f.)	$p < 0.001$
Importance of school or training centre achievement	18.43 (4 d.f.)	$p < 0.05$
Perceived relationship with mother	105.22 (4 d.f.)	$p < 0.001$
Importance of mother relationship	58.31 (4 d.f.)	$p < 0.001$
Perceived relationship with father	130.63 (4 d.f.)	$p < 0.001$
Importance of relationship with father	71.85 (4 d.f.)	$p < 0.001$
Relationship with best friend	0.92 (4 d.f.)	$p = 0.92$
Importance of relationship with best friend	8.96 (4 d.f.)	$p = 0.06$
Relationship with other friend	6.30 (4 d.f.)	$p = 0.18$
Importance of relationship with other friends	6.423 (4 d.f.)	$p = 0.17$
Frequency of praying	156.10 (5 d.f.)	$p < 0.001$
Importance of religion	189.53 (4 d.f)	$p < 0.001$

Personality and Values

Tolerance of Deviance

Tolerance of deviance was measured by asking the respondents about the frequency of certain behaviours in their lives. Table 60 shows the statistical relationships between each of these behaviours and current drinking.

Table 60 *: Statistical Association between Current Drinking and Frequency of Deviant Behaviours*

Behaviour	*Kruskal-Wallis H*	*p value*
Sworn or cursed	251.81(4 d.f.)	$p < 0.001$
Lied to parents	182.60 (4 d.f.)	$p < 0.001$
Lied to teachers	254.34 (4 d.f.)	$p < 0.001$
Damaged property	119.69 (4 d.f.)	$p < 0.001$
Stolen things	136.75 (4 d.f.)	$p < 0.001$

Comparison Between School Students and Early School Leavers

Lifetime prevalence of drinking

Table 61 shows the overall lifetime prevalence of drinking among the three comparison groups. It can be seen that the greatest prevalence of ever drinkers is among the "settled" early school leavers with a prevalence of 76.8%, compared to 66.7% among the students and 56.5% among the traveller early school leavers. There is a significant difference between the three comparison groups regarding the lifetime drinking prevalence rates, chi-square (2 d.f.) = 9.52, $p < 0.01$.

Table 61 : *Lifetime Drinking Rates among the Comparison Groups*

	Ever Drank	
Comparison Groups	*No*	*Yes*
School students	852 (33.3%)	1,707 (66.7%)
Travellers	30 (43.5%)	39 (56.5%)
Early school leavers	33 (23.2%)	109 (76.8%)

Table 62 shows the lifetime prevalence of drinking among boys and girls among the comparison groups. It can be seen that among the students the overall lifetime prevalence of drinking among the boys is 74.3% and among the girls is 58.4%. Among the settled early school leavers the prevalence of lifetime drinking among the boys is 79.0% and among the girls is 70.0%. Among the travellers the corresponding rates are 74.5% among the boys and 14.3% among the girls. Chi-square testing the significance of the difference in the lifetime prevalence rates among the boys (2 d.f.) = 1.08, $p > 0.05$ ($p = 0.58$), and among the girls, chi-square (2 d.f.) = 18.94, $p < 0.001$.

Table 62 : *Lifetime Drinking Rates by gender among the Comparison Groups*

Comparison Groups	*Boys*	*Girls*
School students	986 (74.3%)	707 (58.4%)
Travellers	35 (74.5%)	3 (14.3%)
Early school leavers	79 (79.0%)	28 (70.0%)

When chi-square was recalculated excluding the traveller girls, there was no longer a significant difference between the girls for lifetime drinking rates, chi-square (1 d.f.) = 2.18, $p > 0.05$ ($p = 0.14$).

Among the students the lifetime prevalence of drinking for boys increases from 40.9% at age 13 years and younger to 91.0% at age 18 years and older. For girls the lifetime prevalence increases from 16.2% at age 13 years and younger to 90.4% at age 18 years and older.

Among the travellers there are only two boys in the age groups 13 years and younger and 14 years. The lifetime prevalence for boys does not appear to increase with age but remains around the overall rate of 74.5% for the age groups 15 to 17 years. There are no girls in the age group 13 years and younger among the travellers and only one in the 14 years age group. There is a very low lifetime prevalence of drinking among the girls in this group, being 0.0% in all age groups apart from 16 years when the prevalence is 16.7%.

Among the settled early school leavers the lifetime prevalence of drinking is high among the boys for all age groups (there are no boys in the 13 years and younger age group), with the prevalence being 66.7% at age 14 years, 84.2% at age 15 years, 73.7% at age 16 years, 81.8% at age 17 years and 80.0% at age 18 years and older. There are no girls in the age groups 13 years and younger and 14 years among the early school leavers.

The lifetime prevalence of drinking for girls is 60.0% at age 15 years, 85.7% at age 16 years, 66.7% at age 17 years and 68.8% at age 18 years and older.

Age of First Drink

The mean age of first drink among the school students was 13.7, median age was 14 years. The mean age of first drink among the travellers was 13.4 years, median age was 14 years. The mean age of first drink among the settled early school leavers was13.8 years, the median age was 14 years. There was no significant difference between the three comparison groups for the mean age of first drink, F statistic = 0.43, $p > 0.05$ ($p = 0.65$).

Current drinking

Table 63 shows the overall prevalence of current drinking among the comparison groups. It can be seen that the prevalence is highest among the settled early school leavers with a prevalence of 70.6%. The prevlaence of current drinking is 61.6% among the school students and 52.5% among the travellers. Chi-square testing the significance of the difference in current drinking rates between the three comparison groups (2 d.f.) = 5.62, $p > 0.05$ ($p = 0.06$).

Table 64 shows the prevalence of current drinking among boys and girls in each of the comparison groups. The prevalence of current drinking among school students is 69.2% among the boys and 53.9% among the girls. The prevalence is 72.6% and 64.3% respectively for boys and girls among the early school leavers and is 71.4% and 10.5% respectively for boys and girls among the travellers. Chi-square (2 d.f.) for the boys testing the significnance of the difference between the three comparison groups = 0.45, $p > 0.05$ ($p = 0.80$), and for the girls = 29.84, $p < 0.001$. When chi-square was recalculated excluding the traveller girls, chi-square (1 d.f.) = 1.19, $p > 0.05$ ($p = 0.28$).

Table 63 *: Current Drinking among the Comparison Groups*

	Drinking Category	
Comparison Groups	*Current Non-Drinker*	*Current Drinker*
School students	850 (38.4%)	1,362 (61.6%)
Travellers	29 (47.5%)	32 (52.5%)
Early school leavers	30 (29.4%)	72 (70.6%)

Table 64 *: Current Drinking among the Comparison Groups for Boys and Girls*

	Current Drinking	
Comparison Groups	*Boys*	*Girls*
School students	767 (69.2%)	588 (53.9%)

Travellers	30 (71.4%)	(2 (10.5%)
Early school leavers	53 (72.6%)	18 (64.3%)

Among the school students the current prevalence of drinking for boys increases with age from 32.9% at age 13 years and younger to 87.8% at age 18 years and older. The current prevalence among the girls increases with age from 15.1% at age 13 years and younger to 87.2% at age 18 years and older.

There is only one boy in the age group 13 years and younger and two in the age group 14 years among the travellers. The current prevalence of drinking among the traveller boys is 76.9% at age 15 years, 63.6% at age 16 years, 80.0% at age 17 years and 40.0% at age 18 years and older. There are no girls in the age group 13 years and younger and only one in the age group 14 years. The current prevalence of drinking among the girls is 0.0% for all age groups apart from 16 years, when the prevalence is 16.7%.

There is only one boy in the age groups 13 years and younger and 14 years among the settled early school leavers. The current prevalence of drinking among the boys is 81.3% at age 15 years, 66.7% at age 16 years, 73.9% at age 17 years and 75.0% at age 18 years and older. Among the girls there are no girls in the age groups 13 years and younger and 14 years. The current prevalence of drinking is 50.0% at age 15 years, 100.0% at age 16 years and 60.0% at ages 17 years and 18 years and older.

Prevalence Rates for Specific Alcoholic Beverages

It can be seen from Table 65 that the most popular alcoholic beverage among the school students is beer, with 55.7% ever having had a drink of beer, followed by spirits at 49.2%, then cider at 48.0% and lastly wine at 41.6%. For the travellers the most popular alcoholic

Table 65 *: Prevalence Rates for Specific Alcoholic Beverages*

	Cider		*Beer*		*Wine*		*Spirits*	
Group	*Ever*	*Previous month*	*Ever*	*Previous month*	*Ever*	*Previous month*	*Ever*	*Previous month*
Students	1,140 48.0%	666 28.2%	1,353 55.7%	997 40.8%	938 41.6%	303 14.4%	1,161 49.2%	729 30.8%
Travellers	23 39.0%	12 18.8%	29 45.3%	13 20.3%	4 7.1%	0 0.0%	11 19.0%	3 4.8%
Early school leavers	80 63.5%	49 40.7%	81 66.9%	75 61.1%	56 50.0%	27 25.2%	66 60.0%	53 46.1%

beverage is beer with 45.3% of the group ever having a drink of beer, followed by cider at 39.0%, then spirits at 19.0% and lastly wine at 7.1%. For the settled early school leavers the most popular alcoholic beverage is beer with 66.9% of the group ever having a drink of beer. Lifetime prevalence of cider is next with 63.5% of the group ever having a whole drink of cider and then spirits with a lifetime prevalence of 60.0%.

Frequency of Having Felt Drunk

Table 66 shows the breakdown of the comparison groups by gender according to the number of times the respondents reported feeling drunk in their lifetime. Among the students 45.4% of the boys and 61.6% of the girls report never having felt drunk. 32.5% of the boys and 17.5% of the girls report that they have been drunk on five or more occasions in their lives. Among the travellers 41.3% of the boys and 94.7% of the girls report that they have never felt drunk. 30.5% of the boys and 0.0% of the girls report that they have felt drunk on five or more occasions. Among the settled early school leavers 30.3% of the boys and 41.0% of the girls report that they have never felt drunk. 47.5% of the boys and 25.6% of the girls report that they have felt drunk on five or more occasions in their lives.

Table 66 *: Frequency of Having Felt Drunk by Gender*

	Number of Times Drunk						
Group	*Never*	*1-2 times*	*3-4 times*	*5-6 times*	*7-8 times*	*9-10 times*	*More than 10*
School Students	602	183	112	71	48	18	293
Boys	45.4%	13.8%	8.4%	5.4%	3.6%	1.4%	22.1%
School students	744	159	94	46	20	19	125
Girls	61.6%	13.2%	7.8%	3.8%	1.7%	1.6%	10.4%
Travellers	19	8	5	5	1	1	7
Boys	41.3%	17.4%	10.9%	10.9%	2.2%	2.2%	15.2%
Travellers	18	1	0	0	0	0	0
Girls	94.7%	5.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Early school leavers	30	18	4	13	4	5	25
Boys	30.3%	18.2%	4.0%	13.1%	4.0%	5.1%	25.3%
Early school leavers	16	8	5	1	2	1	6
Girls	41.0%	20.5%	12.8%	2.6%	5.1%	2.6%	15.4%

Age of First Feeling Drunk

The mean age of first feeling drunk among the students is 14.48 years, median age is 15 years. Among the travellers the average of first feeling drunk is 13.67 years, median age is 14 years. The mean of first feeling drunk among the settled early school leavers is 14.56 years and median age is 15 years. There is no significant difference between the three comparison groups for the mean age of first feeling drunk, F statistic = 2.69, $p > 0.05$ ($p = 0.07$).

Early School Leavers and Location

The settled early school leavers was also examined according to their location, that is whether they were urban or rural. The lifetime prevalence rate of drinking was 79.17% among the 72 who were classified as urban, and 73.13% among the 67 classified as rural. There was no significant difference in the lifetime prevalence of drinking, chi-square (1 d.f.) = 0.70, $p > 0.05$ ($p = 0.40$). The prevalence of current drinking was 74.55% among the 55 urban, and 64.44% among the 45 rural early school leavers. Chi-square (1 d.f.) = 1.20, $p > 0.05$ ($p = 0.27$).

5.4 ***Drug Use***

Prevalence of Drug Use

Lifetime Prevalence

The lifetime prevalence of drug use was determined by asking the respondents if they had ever used each of 11 categories of drugs in order to get "high". Table 67 shows the percentages of the respondents in each age group who reported using any of these drugs. 23.5% of the sample reported that they have ever used drugs. The lifetime prevalence increases with age from 7.9% of those aged 13 years and younger to 33.2% of those age 18 years and older. This association between ever drug use and age is significant, chi-square (5 d.f.) = 66.98, $p < 0.001$. The year between 13 years and younger and 14 years has the largest increase in prevalence, the rate increasing from 7.9% at age 13 years and older to 19.4% at age 14 years. The mean age of first drug use reported is 14.49 years, the median age is 15 years.

Table 67 *: Lifetime Drug Use Rates by Agegroup*

	Ever Used Drugs	
Age Group	*No*	*Yes*
13 years or younger	246 (92.1%)	21 (7.9%)
14 years	216 (80.6%)	52 (19.4%)
15 years	363 (78.6%)	99 (21.4%)
16 years	544 (76.4%)	168 (23.6%)
17 years	389 (69.3%)	172 (30.7%)
18 years and over	141 (66.8%)	70 (33.2%)
All age groups	1,899 (76.5%)	585 (23.5%)

Current Prevalence

The current prevalence of drugs was measured by asking the respondents if they had used any of the 11 drugs listed in order to get "high" in the previous month. Table 68 shows the percentages for lifetime and current drug use for the specific drugs. The drug with the highest lifetime and current prevalence is cannabis with a lifetime prevalence of 15.5% and a current prevalence of 8.8%. Volatile substances / solvents have the next highest prevalence with lifetime rate of 14.3% and a current prevalence of 5.9%. After cannabis and solvents the drugs with the highest prevalences were cough syrup with a lifetime prevalence of 6.2%, magic mushrooms with a lifetime prevalene of 5.1% and LSD with a lifetime prevalence of 3.7%. The other named drugs were used much less frequently, with lifetime prevalences of 2.0% or less. "Other" substances had a lifetime prevalence of 4.2%.

Table 68 *: Prevalence Rates for Specific Drugs*

	Prevalence	
Substance	*Ever*	*Previous* Month
Cannabis	407 (15.5%)	227 (8.8%)
Ecstasy	56 (2.2%)	32 (1.3%)

Volatile substances / Solvents	371 (14.3%)	152 (5.9%)
LSD	93 (3.7%)	45 (1.8%)
Amphetamines	49 (1.9%)	18 (0.7%)
Heroin / Opiates	19 (0.8%)	6 (0.2%)
Sleeping tablets / Tranquillisers	51 (2.0%)	22 (0.9%)
Magic mushrooms	131 (5.1%)	66 (2.6%)
Cocaine	25 (1.0%)	15 (0.6%)
Cough syrup	156 (6.2%)	58 (2.3%)
Other substances	99 (4.2%)	44 (1.8%)

25.7% of the sample reported that it would be easy for them to obtain drugs.There was a significant relationship between ease of access to drugs and the prevalence rate for drug use, chi-square (1 d.f.) = 255.67, $p < 0.001$. The prevalence of drug use was 45.1% among those who reported that they had easy access to drugs and 10.4% among those who reported that it would be very difficult for them to obtain drugs. Those that reported ever using drugs in order to get high were asked where they usually obtained them. More than one answer was permitted. 46.4% responded that they usually obtained the drugs from friends, 25% from a drug dealer, 25% in a nightclub, 10.6% in a private house, 7.3% in a public house, 7.1% on or near school grounds, 4.4% from relatives, 3.7% in an amusement arcade, 2.5% in a cafe and 10.6% from another source.

Age Related Trends for Specific Drugs

Because of the small numbers involved it is not possible to do statistical analyses on age-related trends for most of the individual drugs apart from cannabis and solvents. The lifetime prevalence of cannabis increases with age from 1.4% at age 13 years and younger to 24.9% at age 18 years and older. This relationship between age and cannabis use is significant, chi-square (5 d.f.) = 92.57, $p < 0.001$. The lifetime prevalence is 1.4% at age 13 years and younger, 8.5% at age 14 years, 13.6% at age 15 years, 16.6% at age 16 years and 22.3% at age 17 years. The lifetime prevalence for solvents increases from 4.5% at age 13 years and younger to 18.3% at age 18 years and over. The greatest increase in lifetime prevalence for solvents is between 13 years and younger and 14 years, increasing from 4.5% at age 13 years and younger to 14.5% at age 14 years. The lifetime prevalence is 15.8% at age 15 years, 14.8% at age 16 years and 15.8% at age 17 years. The relationship between age and lifetime use of solvents is significant, chi-square (5 d.f.) = 27.54, $p < 0.001$.

Background Characteristics

Gender

Table 69 shows the lifetime prevalence of drug use among boys and girls. The lifetime prevalence among boys is 26.2%, and among girls is 20.5%. This association between lifetime drug use and gender is significant, chi-square with Yates correction = 10.85, $p < 0.001$.

Table 69 *: Lifetime Drug Use Rates by Gender*

	Ever Used Drugs	
Gender	*No*	*Yes*
Boys	968 (73.8%)	344 (26.2%)
Girls	919 (79.5%)	237 (20.5%)

Table 70 shows the breakdown of lifetime prevalence between boys and girls in each age group. The lifetime prevalence for drug use increases with age among boys from 7.4% at 13 years and younger to 36.2% at age 18 years and older. The greatest increase is between 13 years and younger and 14 years, increasing from 7.4% at age 13 years and younger to 19.7% at age 14 years. Among the girls lifetime prevalence for drug use increases from 8.1% at age 13 years and younger to 26.7% at age 18 years and older. The largest increase is between 13 years and younger and 14 years, increasing from 8.1% at age 13 years and younger to 19.1% at age 14 years.

Table 70 *: Lifetime Drug Use Rates by Agegroup and Gender*

	Lifetime Drug Users	
Age Group	*Boys*	*Girls*
13 years or younger	6 (7.4%)	15 (8.1%)
14 years	27 (19.7%)	25 (19.1%)
15 years	59 (23.9%)	40 (19.3%)
16 years	88 (25.8%)	80 (21.7%)
17 years	110 (30.8%)	61 (30.2%)
18 years and over	54 (36.2%)	16 (26.7%)
All age groups	344 (26.2%)	237 (20.5%)

Table 71 *: Lifetime Drug Use by Father`s Socio-ecnomic Status*

	Ever Drug Use	
Father`s Socio-economic Group	*No*	*Yes*
S.C.1 (Higher professional / managerial or farmers over 200 acres)	185 (72.0%)	72 (28.0%)
S.C.2 (Lower professional / managerial or farmers with 100-199 acres)	400 (72.9%)	149 (27.1%)
S.C.3 (Non-manual and farmers with 50-99 acres)	306 (81.6%)	69 (18.4%)
S.C.4 (Skilled manual and farmers with 30-49 acres)	470 (75.2%)	155 (24.8%)
S.C.5 (Semi-skilled and farmers with under 30 acres)	187 (86.6%)	29 (13.4%)
S.C.6 (Unskilled manual)	39 (78.0%)	11 (22.0%)
S.C.8 (long-term unemployment)	71 (86.6%)	11 (13.4%)

Father`s Socio-economic Status

Table 71 shows the lifetime prevalence of drug use according to the father`s socio-economic status. There is a significant relationship between the father`s socio-economic status and lifetime use of drugs, chi-square (6 d.f.) = 30.02, $p < 0.001$. When social class 7 (occupation unknown) is included in the calculation of significance, chi-square is still significant, though not as strongly, chi-square (7 d.f.) = 16.26, $p < 0.025$.

Mother`s Work Status

Table 72 shows the lifetime prevalence for drug use according to whether the mother works outside the home or not. The relationship between lifetime drug use and the work status is significant, chi-square with Yates correction = 6.73, $p < 0.01$. There is a slightly higher prevalence of drug use among respondents whose mothers work outside the home, 25.6% compared to those whose mother works only in the home, 21.0%. However a larger percentage of mothers work outside of the home, when the father is placed in a higher socio-economic grouping. When stratified analysis is done according to the father`s socio-economic grouping, there is no longer a significant relationship between the work status of the mother and lifetime prevalence of drug use, Mantel-Haenszel summary chi-square, corrected = 0.74, $p > 0.05$ ($p = 0.389$).

Table 72 *: Lifetime Drug Use by Mother`s Work Status*

	Ever Drug Use	
Mother`s Work	*No*	*Yes*
In the home only	954 (79.0%)	254 (21.0%)
Employed outside the home	884 (74.4%)	304 (25.6%)

Table 73 *: Lifetime Drug Use by Weekly Income / Pocket Money*

	Ever Drug Use	
Weekly Pocket Money	*No*	*Yes*
Less than £1	135 (86.0%)	22 (14.0%)
£1 to £5	1,026 (83.7%)	22 (16.3%)
£6 to £10	346 (70.2%)	147 (29.8%)
£11 to £20	146 (58.4%)	104 (41.6%)
£21 to £30	56 (59.6%)	38 (40.4%)
£31 to £50	39 (63.9%)	22 (36.1%)
More than £50	23 (62.2%)	14 (37.8%)

Income / Pocket Money

Table 73 shows the lifetime prevalence of drug use according to the weekly income or pocket money. There is a significant relationship between the amount of weekly income or pocket money and the lifetime prevalence of drug use, chi-square (6 d.f.) = 123.79, $p < 0.001$. Lifetime prevalence increases from 14.0% among those with less than £1 weekly pocket money to 37.8% among those with more than £50 weekly pocket money.

Education

Respondents were asked if they had ever received any drug education at school or at the training centre. Those that reported receiving such education had a lifetime prevalence rate for drug use of 21.6%, while those that reported not receiving drug education had a lifetime drug use prevalence of 27.1%. There is a significant difference in the lifetime drug use rates between those that received education and those that did not, chi-square with Yates correction = 9.29, $p < 0.005$.

Location

In this section the lifetime prevalence of drug use according to the county of residence and urban / rural location is examined.

County of Residence

Here the lifetime prevalence of drug use is examined in Galway City, Galway County outside of Galway City, County Mayo and County Roscommon. Table 74 gives the breakdown of lifetime drug use according to the county of residence.

Table 74 : *Lifetime Drug Use Rates by County*

	Ever Drug Use

County of residence	*No*	*Yes*
Galway City	158 (58.5%)	112 (41.5%)
Galway County	795 (79.7%)	202 (20.3%)
County Mayo	619 (78.5%)	170 (21.5%)
County Roscommon	276 (77.7%)	79 (22.3%)

It can be seen that the lifetime prevalence of drug use is 41.5% in Galway City, while it is 22.3%, 21.5% and 20.3% respectively in County Roscommon, County Mayo and in Galway County (excluding Galway City). There is a significant difference between the four "county" groups for lifetime drug use prevalence rates, chi-square (3 d.f.) = 56.58, $p < 0.001$. When Galway City was examined without including the early school leavers there was no real change in the lifetime prevalence rates, lifetime prevalence was 42.6% for the sample, 47.1% among the boys and 36.2% among the girls.

The respondents from the four "county" groups were asked the age at which they had first tried drugs. The mean age for first taking drugs for Galway City, Galway County, County Mayo and County Roscommon was 14.40 years, 14.16 years, 14.92 years and 14.49 years respectively. There was a significant difference between the four groups regarding the mean age of first drug use, F statistic = 5.81, $p < 0.001$.

Tables 75 to 78 show the breakdown of lifetime drug use by age and gender for the four "county" groups. It can be seen that the overall lifetime prevalence rates for drug use among the boys in Galway City, Galway County, County Mayo and County Roscommon are 45.2%, 22.6%, 22.7% and 25.0% respectively. There is a significant difference in lifetime prevalence rate of drug use among the boys between the four groups, chi-square (3 d.f.) = 37.30, $p < 0.001$. Among the girls the overall lifetime prevalence rates for the four groups are 35.9%, 18.0%, 20.4% and 19.8% respectively. Again there is a significant difference in lifetime prevalence rates for drug use between the four groups among the girls, chi-square (3 d.f.) = 16.91, $p < 0.001$.

Table 75 *: Lifetime Drug Use Rates by Agegroup and Gender ; Galway City*

	Lifetime Drug Users	
Age Group	*Boys*	*Girls*
13 years or younger	0 (0.0%)	0 (0.0%)
14 years	6 (35.3%)	2 (33.3%)
15 years	22 (40.7%)	8 (53.3%)
16 years	30 (50.0%)	13 (26.5%)
17 years	10 (45.5%)	13 (41.9%)
18 years and over	7 (58.3%)	1 (50.0%)
All age groups	75 (45.2%)	37 (35.9%)

Due to small numbers in the age groups 13 years and younger, 14 years and 18 years and older, it was not possible to calculate the significance of the difference in lifetime drug use rates for these age groups, but it

can be seen that in general the rates are higher among both boys and girls in Galway City. It was possible to examine the age groups 15 to 17 years for

Table 76 *: Lifetime Drug Use Rates by Agegroup and Gender ; Galway County*

	Lifetime Drug Users	
Age Group	*Boys*	*Girls*
13 years or younger	2 (7.4%)	12 (10.9%)
14 years	11 (18.6%)	17 (20.5%)
15 years	17 (18.7%)	20 (21.5%)
16 years	33 (24.8%)	22 (16.4%)
17 years	32 (23.7%)	14 (27.5%)
18 years and over	18 (32.7%)	4 (16.7%)
All age groups	113 (22.6%)	89 (18.0%)

Table 77 *: Lifetime Drug Use Rates by Agegroup and Gender ; Mayo*

	Lifetime Drug Users	
Age Group	*Boys*	*Girls*
13 years or younger	1 (5.9%)	2 (8.0%)
14 years	9 (17.6%)	4 (11.1%)
15 years	15 (17.4%)	5 (8.3%)
16 years	16 (15.4%)	26 (23.4%)
17 years	36 (31.6%)	26 (28.0%)
18 years and over	19 (37.3%)	10 (30.3%)
All age groups	96 (22.7%)	73 (20.4%)

Table 78 *: Lifetime Drug Use Rates by Agegroup and Gender ; Roscommon*

	Lifetime Drug Users	
Age Group	*Boys*	*Girls*
13 years or younger	3 (8.3%)	1 (2.0%)
14 years	0 (0.0%)	2 (50.0%)
15 years	2 (20.0%)	7 (18.4%)
16 years	6 (17.1%)	18 (27.3%)
17 years	25 (40.3%)	7 (30.4%)
18 years and over	7 (31.8%)	1 (100.0%)
All age groups	43 (25.0%)	36 (19.8%)

significance of the difference in lifetime prevalence between the four groups. Chi-square for age 15 years (3 d.f.) = 26.97, $p < 0.001$, for 16 years (3 d.f.) = 18.53, $p < 0.001$, and for 17 years (3 d.f.) = 9.05, $p < 0.05$.

The respondents from each of the four "county" groups were asked the ease of access which they had to drugs. 53.1% of the Galway City sample reported that they had easy access, compared to 22.3% of the Galway County sample , 23.4% of the County Mayo sample and 20.1% of the County Roscommon sample who reported ease of access.

Tables 79 to 82 show the breakdown of lifetime and current drug use for the individual drugs, according to the four "county" groups. It can be seen that for most drugs both the lifetime prevalence and the current prevalence rates for the individual drugs are higher in Galway City, than in the other groups. Cannabis and volatile substances are the most popular drugs used, with cannabis being the commonest except in Roscommon where volatile substance use is reported more often.

Table 79 *: Prevalence Rates for Specific Drugs ; Galway City*

	Prevalence	
Substance	*Ever*	*Previous* Month
Cannabis	105 (36.3%)	69 (24.1%)
Ecstasy	16 (6.0%)	10 (3.6%)
Volatile substances / Solvents	80 (28.6%)	30 (10.8%)
LSD	31 (11.4%)	19 (6.8%)
Amphetamines	13 (4.9%)	5 (1.8%)
Heroin / Opiates	2 (0.8%)	1 (0.4%)
Sleeping tablets / Tranquillisers	10 (3.8%)	3 (1.1%)
Magic mushrooms	30 (11.2%)	16 (5.8%)
Cocaine	2 (0.8%)	2 (0.7%)
Cough syrup	17 (6.5%)	5 (1.8%)
Other substances	15 (6.4%)	9 (3.4%)

As with the analyses for smoking and drinking, the prevalence of lifetime drug use was examined according to the socio-economic groupings for Galway City in comparison to the rest of the other locations. Apart from social class 5 (semi-skilled manual) and social class 8

Table 80 *: Prevalence Rates for Specific Drugs ; Galway County*

	Prevalence	
Substance	*Ever*	*Previous* Month
Cannabis	123 (11.5%)	76 (7.2%)
Ecstasy	15 (1.4%)	10 (1.0%)
Volatile substances / Solvents	116 (10.9%)	54 (5.2%)
LSD	23 (2.2%)	9 (0.9%)
Amphetamines	15 (1.4%)	6 (0.6%)
Heroin / Opiates	7 (0.7%)	3 (0.3%)
Sleeping tablets / Tranquillisers	20 (1.9%)	8 (0.8%)
Magic mushrooms	43 (4.1%)	27 (2.6%)
Cocaine	7 (0.7%)	3 (0.3%)
Cough syrup	85 (8.2%)	31 (3.0%)
Other substances	40 (4.1%)	22 (2.2%)

Table 81 *: Prevalence Rates for Specific Drugs ; Mayo*

	Prevalence	
Substance	*Ever*	*Previous* Month
Cannabis	119 (14.3%)	46 (5.6%)
Ecstasy	13 (1.6%)	3 (0.4%)
Volatile substances / Solvents	103 (12.6%)	36 (4.4%)
LSD	29 (3.6%)	9 (1.1%)
Amphetamines	13 (1.6%)	3 (0.4%)
Heroin / Opiates	6 (0.8%)	2 (0.2%)
Sleeping tablets / Tranquillisers	12 (1.5%)	4 (0.5%)
Magic mushrooms	41 (5.1%)	15 (1.8%)
Cocaine	6 (0.8%)	4 (0.5%)
Cough syrup	156 (6.2%)	15 (1.9%)
Other substances	27 (3.6%)	9 (1.1%)

(long-term unemployment) where the rates were similar the prevalence of lifetime drug use was much higher for each of the social class categories in Galway City in comparison to the other areas, by a margin of bewteen 10 to 40%.

Table 82 *: Prevalence Rates for Specific Drugs ; Roscommon*

	Prevalence	
Substance	*Ever*	*Previous* Month
Cannabis	42 (11.4%)	26 (7.2%)
Ecstasy	11 (3.1%)	8 (2.2%)
Volatile substances / Solvents	57 (15.6%)	29 (8.1%)
LSD	6 (1.7%)	5 (1.4%)
Amphetamines	7 (2.0%)	3 (0.8%)
Heroin / Opiates	2 (0.6%)	0 (0.0%)
Sleeping tablets / Tranquillisers	9 (2.5%)	7 (2.0%)
Magic mushrooms	10 (2.8%)	6 (1.7%)
Cocaine	8 (2.2%)	5 (1.4%)
Cough syrup	19 (5.3%)	7 (1.9%)
Other substances	16 (4.8%)	4 (1.2%)

Urban / Rural Location

Table 83 shows the lifetime prevalence of drug use according to the urban / rural location of the respondent, The lifetime prevalence of drug use is 34.0% among those from an urban location, and 17.8% among those from a rural location. There is a significant difference between the two groups regarding the lifetime prevalence rate for drug use, chi-square (1 d.f.) = 79.53, $p < 0.001$.

Table 83 : *Lifetime Drug Use Rates by Urban / Rural Location*

	Ever Drug Use	
Area of residence	*No*	*Yes*
City and Towns	562 (66.0%)	289 (34.0%)
Villages and Countryside	1,298 (82.2%)	281 (17.8%)

Table 84 shows the breakdown of lifetime drug use by gender in the two groups. It can be seen that the lifetime prevalence rate is higher for both boys and girls among those from an urban area. There is a significant association for both boys and girls between urban / rural location and lifetime drug use, chi-square for boys (1 d.f.) = 59.01, $p < 0.001$, and chi-square for girls (1 d.f.) = 20.48, $p < 0.001$. While the breakdown of lifetime prevalence rate for drug use according to age groups is not given here, for each age group apart from 13 years and younger, there is a significant association between location and prevalence of lifetime drug use, with the rates higher among those from urban areas. Chi-square at age 13 years and younger = 0.48, $p > 0.05$ ($p = 0.49$), chi-square at age 14 years = 8.80, $p < 0.005$, chi-square at age 15 years = 16.49, $p < 0.001$, chi-square at age 16 years, = 16.51, $p < 0.001$, chi-square at age 17 years = 23.58, $p < 0.001$, chi-square at 18 years and older = 10.60, $p < 0.005$.

Table 84 : *Lifetime Drug Use Rates by Gender and Urban / Rural Location*

	Ever Drug Use	
Area of residence	*Boys*	*Girls*
City and Towns	184 (38.3%)	105 (28.4%)
Villages and Countryside	151 (18.8%)	130 (16.8%)

Perceived Peer Drug Use and Perceived Parental and Peer Approval

Perceived Peer Drug Use

In this section the association between drug use and the perceived drug use by friends or normative beliefs is examined. Table 85 shows the lifetime prevalence of drug use according to whether the respondents friends do or do not use drugs. It can be seen that the lifetime

Table 85 *: Lifetime Drug Use by Perceived Peer Drug Use*

	Ever Drug Use	
Perceived Peer Drug Use	*No*	*Yes*
No friends use drugs	1,652 (89.2%)	201 (10.8%)
Best friend only uses drugs	25 (32.1%)	53 (67.9%)
Other friends only use drugs	115 (47.9%)	125 (52.1%)
All friends use drugs	54 (22.6%)	185 (77.4%)

prevalence of drug use is 10.8% when no friends use drugs, compared to a lifetime prevalence of 77.4% when all friends use drugs. There is also a large difference in lifetime prevalence rates when best frind only uses drugs compared to when no friends use drugs, 67.9% versus 10.8% respectively.

Perceived Parental and Peer Disapproval

Perceived parental and peer disapproval was measured using a likert scale rating the degree of disapproval of the respondent`s drug use from "disapprove extremely" to "would not disapprove".

Table 86 shows the lifetime prevalence of drug use according to perceived mother`s, father`s, best friend`s and other friends` disapproval. There is a significant relationship between the degree of mother`s disapproval and the rate of lifetime drug use, with drug use decreasing with increasing disapproval, Kruskal-Wallis H (4 d.f.) = 52.24, $p < 0.001$. Lifetime prevalence of drug use increases with decreasing mother`s disapproval, from 22.4% when the mother is perceived to disapprove extremely of drug use to 50.0% when the mother would not disapprove. The relationship between the degree of father`s disapproval and lifetime prevalence of drug is signficant, Kruskal-Wallis H (4 d.f.) = 54.35, $p < 0.001$. Lifetime prevalence of drug use increases from 22.1% when the father disapproves extremely to 45.5% when he would not disapprove.

The association between perceived disapproval of best friend and lifetime prevalence of drug use is very strong, Kruskal-Wallis H (4 d.f.) = 601.25, $p < 0.001$. The lifetime prevalence of drug use increases from 8.8% when the best friend disapproves extremely to 65.9% when the best friend does not disapprove. There is also a strong significant relationship between the degree of disapproval of other friends and lifetime drug use, Kruskal-Wallis H (4 d.f.) = 509.85, $p < 0.001$. The lifetime prevalence for drug use increases from 6.9% when the other friends disapprove extremely to 58.2% when the other friends would not disapprove.

Table 86 *: Lifetime Drug Use By Perceived Parental and Peer Disapproval*

	Ever Drug Use	
Perceived Mother`s Disapproval	*No*	*Yes*
Disapprove extremely	1,798 (77.6%)	518 (22.4%)
Disapprove very much	60 (67.4%)	29 (32.6%)
Disapprove	8 (32.0%)	17 (68.0%)
Disapprove slightly	1 (14.3%)	6 (85.7%)
Would not disapprove	5 (50.0%)	5 (50.0%)
	Ever Drug Use	
Perceived Father`s Disapproval	*No*	*Yes*
Disapprove extremely	1,777 (77.9%)	504 (22.1%)
Disapprove very much	64 (70.3%)	27 (29.7%)
Disapprove	9 (27.3%)	24 (72.7%)
Disapprove slightly	5 (55.6%)	4 (44.4%)
Would not disapprove	6 (54.5%)	5 (45.5%)
	Ever Drug Use	
Perceived Best Friend`s Disapproval	*No*	*Yes*
Disapprove extremely	1,082 (91.2%)	104 (8.8%)
Disapprove very much	275 (84.9%)	49 (15.1%)
Disapprove	244 (80.5%)	59 (19.5%)
Disapprove slightly	134 (57.3%)	100 (42.7%)
Would not disapprove	134 (34.1%)	259 (65.9%)
	Ever Drug Use	
Perceived Other Friends` Disapproval	*No*	*Yes*
Disapprove extremely	859 (93.1%)	64 (6.9%)
Disapprove very much	294 (86.2%)	47 (13.8%)
Disapprove	304 (83.1%)	62 (16.9%)
Disapprove slightly	223 (61.9%)	137 (38.1%)
Would not disapprove	186 (41.8%)	259 (58.2%)

Expectancy-Value Beliefs and Attitudes

Expectancy-Value Beliefs

The expectancy-value beliefs are measured by asking the respondents the likelihood of 7 possible consequences of drug use happening to them if they were to use drugs. The responses were placed on a five point likert scale, ranging from "Yes, I am certain it would" , "Yes, I think it would", "Unsure", "No, I think it would not" to "No, I am certain it would not".

Table 87 shows the statistical association between lifetime drug use and the belief in the potential consequences. It can be seen that there is a significant relationship between the respondent`s belief that a potential consequence of drug use would occur to them and the prevalence of ever drug use for each possible consequence listed. This relationship is reflected when looking at the prevalence of drug use and the degree of belief in each outcome. In the category "Harm my health", the prevalence of drug use is 16.7% when the respondent is certain that it would occur and 54.8% when the respondent is certain that it would not occur. The corresponding lifetime prevalences for drug use for "Make me feel good" are 47.2% and 6.3% respectively, for "Be exciting and adventurous" are 41.5% and 9.5%, for "Get me into trouble with the police" are 19.1% and 31.7%, for "help me forget my problems" are 35.6% and 15.4%, for "Lead me to become an addict" are 13.5% and 55.3% and finally for "Give me a bad name" are 13.5% and 51.4%.

Table 87 *: Statistical Association between Lifetime Drug Use and the Potential Consequences*

Consequence	*Kruskal-Wallis H*	*p value*
Harm my health	288.72 (4 d.f.)	$p < 0.001$
Make me feel good	340.22 (4 d.f.)	$p < 0.001$
Be exciting and adventurous	225.43 (4 d.f.)	$p < 0.001$
Get me in trouble with the police	64.19 (4 d.f.)	$p < 0.001$
Help me forget my problems	78.22 (4 d.f.)	$p < 0.001$
Lead me to become an addict	325.36 (4 d.f.)	$p < 0.001$
Give me a bad name	231.85 (4 d.f)	$p < 0.001$

Attitudes

Attitudes towards drugs were measured by asking the respondents how pleasant they thought using drugs would be, and how they thought that they would like using them. Their responses were placed on a likert scale for pleasant-unpleasant and like-dislike. It can be seen from Table 88 that there is a significant relationship between lifetime prevalence of drug use and attitudes towards drug use, Kruskal-Wallis H (4 d.f.) = 567.05, $p < 0.001$ for the pleasant-unpleasant item, and Kruskal-Wallis H (4 d.f) = 758.06, $p < 0.001$ for the like-dislike item. The more favourable the attitude the higher the level of drug use. Among those who thought that drug use would be very pleasant the lifetime prevalence of drug use was 54.1% versus 4.8% among those who thought that it would be very unpleasant to use drugs. Similarily among those who thought that they would like using drugs very much the lifetime prevalence of drug use was 78.1% versus 7.5% among those who thought that they would dislike using drugs very much.

Table 88 *: Statistical Association between Lifetime Drug Use and Attitudes towards Drug Use*

Attitude Item	*Kruskal-Wallis H*	*p value*
Pleasant-Unpleasant	567.05 (4 d.f.)	$p < 0.001$
Like-Dislike	758.06 (4 d.f.)	$p < 0.001$

Social Bonding

Social bonding was measured by asking the respondents how well they got on in school or their training centre, with their parents, with their friends, how often they prayed and how important their relationship with these institutions was to them. Table 89 shows the statistical association between each of these social bonding factors and the lifetime prevalence of drug use. There was a significant relationship between the degree of bonding to the parents, the school or training centre and to religion, and the level of lifetime drug use, with closer bonding being associated with lower use of drugs. While there was not a significant relationship between the perceived relationship with either best friend or other friends and the level of drug use, the importance of these relationships to the respondents did have a significant effect on the level of drug use, being associated with lower drug use. The lifetime prevalence of drug use was 17.3% among those who got on very well with their mothers and 43.8% among those who got on very badly. The corresponding percentages for relationship with the father were 16.1% and 56.3%. Among those who considered religion to be very important the lifetime prevalence of drug use was 12.0% versus 57.0% among those who considered it to be very unimportant. Similarily among those who considered achievement at school or the training centre to be very important the lifetime prevalence of drug use was 21.6% versus 36.8% among those who considered it to be unimportant.

Table 89 *: Statistical Association between Lifetime Prevelnce of Dug Use and Social Bonding Items*

Social Bonding Item	*Kruskal-Wallis H*	*p value*
Self-rated school or training centre performance	12.79 (5 d.f.)	$p < 0.05$
Importance of school or training centre achievement	17.03 (4 d.f.)	$p < 0.05$
Perceived relationship with mother	97.05 (4 d.f.)	$p < 0.001$
Importance of mother relationship	79.09 (4 d.f.)	$p < 0.001$
Perceived relationship with father	122.50 (4 d.f.)	$p < 0.001$
Importance of relationship with father	117.63 (4 d.f.)	$p < 0.001$
Relationship with best friend	3.99 (4 d.f.)	$p = 0.41$
Importance of relationship with best friend	14.04 (4 d.f.)	$p < 0.01$
Relationship with other friend	7.843 (4 d.f.)	$p = 0.10$
Importance of relationship with other friends	14.03 (4 d.f.)	$p < 0.01$
Frequency of praying	108.90 (4 d.f.)	$p < 0.001$
Importance of religion	201.02 (4 d.f.)	$p < 0.001$

Tolerance of Deviance

Tolerance of deviance was measured by asking the respondents the frequency they had carried out a list of five deviant behaviours. The statistical relationship between the frequency that each of these behaviours was performed and the lifetime prevalence of drug use is shown in Table 90. There is a significant relationship between each of the behaviours and the level of lifetime drug use. Among those that reported that they never swore or cursed the prevalence of lifetime drug use was 10.5% versus 34.5% among those who swore or cursed very often. The corresponding prevalences for lied to parents were 8.1% among those who never lied and 48.2% among those that did so very often, the prevalences for lied to teachers were 7.9% among those who never lied and 45.7% among those who lied very often, the prevalences for damaged other people`s property were 15.0% among those who never damaged property and 61.3% among those who did so very often and for stealing the prevalences were 15.4% among those who never stole and 50.0% among those who stole very often.

Table 90 : *Statistical Association between Lifetime Prevalence of Drug Use and Frequency of Deviant Behaviours*

Behaviour	*Kruskal-Wallis H*	*p value*
Sworn or cursed	173.10 (4 d.f.)	$p < 0.001$
Lied to parents	214.11 (4 d.f.)	$p < 0.001$
Lied to teachers	223.59 (4 d.f.)	$p < 0.001$
Damaged property	223.13 (4 d.f.)	$p < 0.001$
Stolen things	158.49 (4 d.f.)	$p < 0.001$

Comparison Between School Students and Early School Leavers

Lifetime Prevalence of Drug Use

The lifetime prevalence of drug use for each of the three comparison groups is shown in Table 91. The overall prevalence of lifetime drug use among the school stutents is 23.3%. The prevalence of drug use increases with age from 8.0% at age 13 years and younger to 35.1% at age 18 years and over. The largest increase in lifetime prevalence is between 13 years and younger and 14 years, increasing from 8.0% at age 13 years and younger to 18.7% at age 14 years. The overall lifetime prevalence of drug use among the travellers is 10.0%. The prevalence of drug use in the individual age categories for the travellers is too low to comment on age related trends. The overall prevalence of drug use among the settled early school leavers group is 33.1%. As with the travellers the numbers of respondents in each age group are small. There does not appear however to be an age-related trend in lifetime prevalence of drug use among the settled early school leavers, the prevalence being 30.0% at age 15 years, 31.8% at age 16 years, 38.5% at age 17 years and 27.8% at age 18 years and older. There is a significant difference in the lifetime prevalence rates between the three groups with the settled early school leavers having the highest prevalence rate and the travellers the lowest. Chi-square (2 d.f.) = 12.29, $p < 0.005$.

Table 91 *: Lifetime Drug Use Rates Among the Comparison Groups*

	Ever Used Drugs	
Comparison Groups	*No*	*Yes*
School Students	1,764 (76.7%)	536 (23.3%)
Travellers	54 (90.0%)	6 (10.0%)
Settled Early School Leavers	81 (66.9%)	40 (33.1%)

Mean age of first drug use

The mean age of first drug use was 14.51 years among the school students, the median age was 15 years. The mean age of first drug use among the travellers was 14.17 years, the median age was 13.50 years. The mean age of first drug use among the settled early school leavers was 14.28 years, the median age was 14 years. There is not a significant difference in the mean age of first drug use among the three groups, F statistic = 0.41, $p > 0.05$ ($p = 0.66$).

Gender

The lifetime prevalence of drug use among the comparison groups according to gender is examined in Table 92. Among the school students the overall lifetime prevalence of drug use among the boys is 26.0%, and among the girls is 20.6%. Among the boys the lifetime prevalence of drug use increases from 7.7% at age 13 years and younger to 36.9% at age 18 years and older. Among the girls the lifetime prevalence of drug use increases from 8.1% at age 13 years and younger to 31.8% at age 18 years and older.

Table 92 *: Lifetime Drug Use Rates by Gender*

	Lifetime Drug Users	
Comparison Groups	*Boys*	*Girls*
School Students	308 (26.0%)	227 (20.6%)
Travellers	6 (14.0%)	0 (0.0%)
Settled Early School Leavers	30 (35.3%)	10 (27.8%)

Among the travellers, the overall lifetime prevalence of drug use among the boys is 14.0%. The numbers in each age group do not allow the age related trends to be examined. The lifetime prevalence of drug use among the girls is 0.0%. Among the settled early school leavers the overall prevalence of drug use among the boys is 35.3% and among the girls is 27.8%. There does not appear to be an age-related trend of lifetime prevalence of drug use among either the boys or the girls in this group. The significance of the difference in lifetime prevalence rates for drug use between the three groups was examined by gender. Due to the small numbers among the girls in the travellers and the settled early school leavers, it was not possible to do chi-square for the girls. For the boys chi-square (2 d.f.) = 6.99, $p < 0.05$.

Lifetime and Current Rates for Specific Drugs

In this section the lifetime and current prevalence rates for each specific drug is examined for each of the comparison groups. Tables 93, 94 and 95 look at the lifetime and current prevalence rates for the specific drugs among the school students, travellers and settled early school leavers respectively.

Cannabis, solvents, magic mushrooms and cough syrup are among the four most prevalently used drugs for each comparison group. The lifetime prevalence for cannabis is 15.0% among the school students, 8.8% among the travellers and 27.3% among the settled early school leavers, while the current prevalence rates for cannabis among the comparison groups are 8.5%, 2.9% and 17.2% respectively. The lifetime prevalence rates for volatile substances are 11.5% among the school students, 4.4% among the travellers and 23.3% among the settled early school leavers. The current prevalence rates for volatile substances among these groups are 6.0%, 0.0% and 7.9% respectively. Cough syrup has a lifetime prevalence rate of 6.1% among the school students, 4.5% among the travellers and 8.7% among the settled early school leavers, while the current prevalence for its use is 2.3%, 1.5% and 2.4% respectively. The lifetime prevalence rates for magic mushrooms are 4.8% among the school students, 2.9% among the travellers and 12.5% among the settled early school leavers. The current prevalence rates for magic mushrooms are 2.5%, 0.0% and 6.3% respectively.

Table 93 *: Prevalence Rates for Specific Drugs ; School Students*

	Prevalence	
Substance	*Ever*	*Previous* Month
Cannabis	363 (15.0%)	202 (8.5%)
Ecstasy	50 (2.1%)	30 (1.3%)
Volatile substances / Solvents	268 (11.5%)	142 (6.0%)
LSD	83 (3.5%)	41 (1.7%)
Amphetamines	41 (1.8%)	15 (0.6%)
Heroin / Opiates	17 (0.7%)	6 (0.3%)
Sleeping tablets / Tranquillisers	46 (2.0%)	21 (0.9%)
Magic mushrooms	113 (4.8%)	58 (2.5%)
Cocaine	24 (1.0%)	15 (0.6%)
Cough syrup	142 (6.1%)	54 (2.3%)
Other substances	94 (4.3%)	43 (1.9%)

Table 94 *: Prevalence Rates for Specific Drugs ; Travellers*

	Prevalence	
Substance	*Ever*	*Previous* Month

Cannabis	6 (8.8%)	2 (2.9%)
Ecstasy	0 (0.0%)	0 (0.0%)
Volatile substances / Solvents	3 (4.4%)	0 (0.0%)
LSD	0 (0.0%)	0 (0.0%)
Amphetamines	0 (0.0%)	0 (0.0%)
Heroin / Opiates	1 (1.5%)	0 (0.0%)
Sleeping tablets / Tranquillisers	0 (0.0%)	0 (0.0%)
Magic mushrooms	2 (2.9%)	0 (0.0%)
Cocaine	0 (0.0%)	0 (0.0%)
Cough syrup	3 (4.5%)	1 (1.5%)
Other substances	0 (0.0%)	0 (0.0%)

Table 95 *: Prevalence Rates for Specific Drugs ; Early School Leavers*

	Prevalence	
Substance	*Ever*	*Previous* Month
Cannabis	38 (27.3%)	23 (17.2%)
Ecstasy	6 (4.7%)	2 (1.6%)
Volatile substances / Solvents	31 (23.3%)	10 (7.9%)
LSD	10 (7.7%)	4 (3.2%)
Amphetamines	8 (6.3%)	0 (0.0%)
Heroin / Opiates	1 (0.8%)	0 (0.0%)
Sleeping tablets / Tranquillisers	5 (4.0%)	1 (0.8%)
Magic mushrooms	16 (12.5%)	8 (6.3%)
Cocaine	1 (0.8%)	0 (0.0%)
Cough syrup	11 (8.7%)	3 (2.4%)
Other substances	5 (4.6%)	1 (0.8%)

Among the school students the lifetime prevalence rate for LSD was 3.5%, for ecstasy was 2.1% and for sleeping tablets or tranquillisers was 2.0%. The lifetime prevalence rate for the other named drugs was less than 2.0%. Among the travellers only one other drug was reported to be used by any of the respondents, that being heroin which was reported by one

person, a lifetime prevalence rate of 1.5%. Among the settled early school leavers the lifetime prevalence rate for LSD was 7.7%, for amphetamines was 6.3%, for ecstasy was 4.7% and for sleeping tablets or tranquillisers was 4.0%. The lifetime prevalence rates for the other named drugs was less than 1.0%.

Settled Early School Leavers By Urban / Rural Location

The lifetime prevalence of drug use was calculated for the settled early school leavers according to whether they resided in an urban or a rural location. There were 120 respondents who answered the question, 60 from both rural and urban locations. The lifetime prevalence rate for drug use among those who lived in an urban area was 48.3%, while it was 16.7% among those from a rural area. There was a significant difference in the lifetime drug use rates between those from urban and rural areas, chi-square (1 d.f.) = 13.71, $p < 0.001$.

Chapter 6 DISCUSSION

6.1 *Introduction*

Smoking, drinking alcohol and drug taking are all high risk behaviours which are usually initated during the adolescent years. The aim of this study in the Western Health board was to determine the prevalence of substance use, including tobacco, alcohol and drugs, both illicit and licit, and also to study in more detail the attitudes and beliefs of adolescents and other factors which increase the risk for taking alcohol and drugs, so that effective intervention could be initiated.

This study used a questionnaire based on previous similar studies in Dublin. 2,787 adolescents aged between 13 and 18 years were surveyed from Galway City, Galway County (apart from Galway City), County Mayo and County Roscommon. School students made up the majority of the respondents but 68 travellers who had left school early and 140 "settled" early school leavers were also surveyed.

Results

6.2 *Sample Characteristics*

The sample as a whole had a slightly higher proportion of boys versus girls. This was due to random variation, and was not felt to bias the results. There were also approximately twice as many respondents in the older age groups 16 years and over compared to the younger age groups, 15 years and younger. This was as expected due to the wieghting given the senior cycle students. A representative sample of adolescents from the various socio-economic groupings was obtained.

Important differences exist among the comparison groups of school students, travellers and the settled early school leavers, and between the Galway City respondents and those from the other parts of the Western Health Board as regards the sample characteristics, which need to be noted and considered when examining the prevalence rates for substance use. Firstly there are gender differences, with both travellers and the settled early school leavers having a preponderance of boys compared to girls, while there is a more even balance of boys and girls among the school students. Similarily the Galway City sample has a higher percentage of boys than the other Western Health Board area samples. When substance use rates are different between the genders, this random difference in the proportions of boys and girls in the groups needs to be considered. Secondly there are the age differences among the groups. There is a significant difference between the mean ages of the school students, the travellers and the settled early school leavers, and also among the "county" groups. Where the prevalence of substance use increases with age, this differences between the comparison groups should be remembered.

6.3 *Smoking*

Prevalence of Smoking

The results show that there is a large pool of new smokers being initiated to the habit. While the factors associated with smoking were not examined in detail some important points emerge from the study. It is

apparent that girls are out numbering boys in the older age groups, and therefore we can expect to witness a reversal in the trends of smoking related diseases being more common among men which has been the case in Ireland. Another factor found to be associated with increased smoking rates was the weekly income, with higher smoking rates among those with larger incomes. Similar results have been found previously both in Ireland (Grube and Morgan, 1986 and 1990a) and elsewhere (Bachman et al., 1981). As with previous Irish studies (O`Rourke et al., 1974, Shelley et al., 1982, O`Rourke et al., 1983, Grube and Morgan, 1986, and Grube and Morgan, 1990), no relationship was found between father`s socio-economic status and smoking rates. There was also no relationship found between the mother`s work status and smoking rates, confirming the findings of Grube and Morgan (1986 and 1990).

Comparison between Smoking Rates in Galway, Mayo and Roscommon

Some interesting differences were found in the comparison between Galway City and the other areas studied. Lifetime and regular smoking rates were higher in Galway City. As mentioned earlier Galway City has a higher percentage of boys and a higher mean age. However the smoking rates continued to be higher when examined by age and gender in Galway City adolescents. The prevalence of smoking was also higher among each of the social classes in Galway City compared to the other areas. Therefore the differences between the groups regarding sample characteristics, do not completely explain the higher rates in Galway City.

Linking in with the higher rates found in Galway City, both lifetime and regular smoking rates were found to be higher in adolescents from urban areas, than those from rural areas. This difference between the urban and rural adolescents may partly explain the higher smoking rates found in Galway City adolescents.

Comparison with other Studies

The smoking rates in this study are higher than those found in a previous survey done in County Roscommon and East Galway by Moroney (1993). This may be expalined by the higher prevalence of smoking found in urban areas, as Moroney`s study was mainly on rural students.

The questionnaire used in the present study was based on ones used by Morgan and Grube in their Dublin studies, therefore comparisons between their studies and the present one are made easier. Comparing the Western Health Board smoking rates with those obtained in the recent study in Dublin (Morgan and Grube, 1994), Dublin adolescents have a higher initial smoking rates among 13 year olds, but by the age of 17 years, adolescents from this study have a much higher prevalence of both lifetime and regular smoking rates. In both studies a time lag was also found for smoking rates among the girls compared to the boys, with the girls initially laging behind the boys smoking rates but later by-passing and having higher rates at age 17 years.

All the smoking rates were higher in the Western Health Board study than in a recent Northern Ireland study, except for regular smoking rates among the girls (Health Promotion Agency, 1994). The smoking rates in the

present study were also higher than rates found in the United Kingdom (Galt et al., 1994) and in the United States (Kandel, 1991).

It emerges therefore that not only are the smoking rates not declining among the adolescent population in the west of Ireland, but that the rates are also higher than those among comparable populations in Dublin, Northern Ireland, the United Kingdom and the United States. The reasons for this are not obvious, but it would appear important to institute preventive strategies for smoking in the west of Ireland while the children are still in National School, prior to 12 years of age, the mean age for the first cigarette.

Comparison between School Students, Travellers and Settled Early School Leavers

This study compared the prevalence rates for substance use between school students and early school leavers. As travellers have a culture which is unique in Ireland, it was considered appropriate to study traveller and settled early school leavers separately, despite the small numbers.

A significant difference was found between the smoking rates of the students and the settled early school leavers and the travellers who had left school, with both lifetime and regular smoking rates being considerably higher among the settled early school leavers than the other two groups. While it was not possible to compare smoking rates among these groups by age groups due to the small numbers involved in each age group for the travellers and the settled early school leavers, smoking rates were compared among the groups by gender, and a sigificant difference in lifetime and regular smoking rates was found for both boys and girls between the three groups. This comparison by gender confirmed the high smoking rates among the settled early school leavers, especially the girls, but also indicated that traveller girls had relatively high regular smoking rates.

The results can not be generalised to all early school leavers in the Western Health Board, as they were not a random sample. However from the results it can be seen that the settled early school leavers are more likely to have tried smoking and also to be regular smokers. This is especially the case among the girls who have the highest lifetime and regular smoking rates. Forde (1992) in his national study of early school leavers also found very high levels of smoking. Early school leaving has been previously shown to be associated with higher smoking rates (Glynn et al., 1991). Traveller girls, while less likely to have tried a cigarette than traveller boys or students, are more likely to be regular smokers. This finding confirms the high prevalence of smoking found by a recent study commissioned by the Task Force on the Travelling Community and the Department of Health. This study found that travelling women had a high prevalence of smoking, at 62.0%, in comparison to the settled population with smoking rates of about 30% (O`Donovan, McKenna and Kelleher, et al., 1995). It is apparent that those adolescents who have left school early, both travellers and settled adolescents are at high risk to become regular smokers, especially the girls. It would be important that smoking preventive measures should be targeted at potential early school leavers in primary schools prior to school leaving.

6.4 ***Drinking***

Prevalence Rates

When the overall results for drinking are examined, it can be seen that about two thirds of the sample have ever had a drink, that beer is the preferred beverage and that quite a substantial proportion of the respondents indicated that they had ever been intoxicated.

Associated Features

Age

As would be expected increasing age was associated with increased drinking rates, both lifetime and current.

Gender

While for each age group the prevalence rates were higher among the boys than the girls, the gap narrowed considerably in the older age groups. There is therefore a time lag between the drinking rates of the girls compared to the boys, with the girls reaching nearly the same prevalence rates as the boys in later adolescence. In the past the relatively high number of abstainers of alcohol in Ireland were mainly among the female population, but it can be seen in this study that the number of abstainers are quite small and roughly similar among the sexes. This reduction in the number of abstainers is similar, though not as large as that found by Morgan and Grube (1994). As with the lifetime prevalence rates the rates of current drinking are higher among the boys, but the girls narrow the gap in the older age groups. There is a difference between the genders regarding the most popular drink. Among the boys, beer is the preferred drink, while among the girls, spirits are the preferred drink. The frequency of intoxication was also examined by gender. While the frequency of having felt drunk increased with age for both sexes, boys continued to have much higher rates than girls for each age group. Also of note is the fact that boys had much higher rates for the more frequent episodes of intoxication. Therefore while the prevalence rates of drinking among the girls approaches that of the boys in the older age groups, the boys continue to drink much more frequently than the girls to the stage of intoxication.

Availability

The respondents in this study had very little difficulty in obtaining alcohol, with the ease of access being a strong factor associated with drinking rates. This factor, ease of access has been found in other studies to be associated with higher levels of consumption (Morgan and Grube, 1994).

Another important aspect of availability of alcohol is the weekly income or pocket money available to the adolescents. This study found a significant relationship between weekly income and current drinking rates. These findings confirm the prior work of Grube and Morgan (1986 and 1991) and Bachman et al. (1981).

Father`s socio-economic status

Unlike previous studies done in Ireland, this study found an asssociaion between current drinking status and father`s socio-economic grouping. Those adolescents whose fathers were from professional backgrounds or were farmers with over 100 acres, were more likely to be current drinkers, while those whose fathers were semi-skilled or farmers with small farms were least likely. A study done among Scottish adolescents (Green et al., 1991) had a similar finding when it was found that young people from non-manual households were more likely to drink. A possible explanation for this finding is that adolescents from professional families may have more access to pocket money, which as discussed is correlated with current drinking rates.

Mothers` work status

No association was found between mother`s work status and current drinking levels. This result was also found by Grube and Morgan in their studies.

Education

This study found that those who reported receiving alcohol education had a slightly higher prevalence of curent drinking compared to those who reported not receiving education. While the difference between the rates is not large, it does emphasise the importance of carefully planning alcohol education programmes, and also that doing something for the sake of doing something is not always better than doing nothing. As discussed in the literature review alcohol education in general is not as successful as smoking or drug education in reducing drinking rates, due to the ambiguous messages about alcohol use in the media and the environment. Education which includes social reinforcement, social norms - lifeskills education, started at 12 to 13 years and continued through out adolescence has proved to be the most successful.

Location

Unlike the study by Mac Hale (1994), this study found that those from urban locations had a higher prevalence of both lifetime and current drinking, compared to those from rural locations. The reasons for this difference in findings are not known. As the percentage difference between the urban and rural populations are small it may be due to random variation.

Perceived parental drinking

This study found an association between perceived parental drinking and current drinking status in that those whose parents drink or are reported to drink were more likely to be drinkers themselves. It is noteworthy that maternal drinking appeared especially important. This perhaps reflects the traditional values where paternal drinking is an accepted feature of Irish life, whereas maternal drinking has been a rarer event, and therefore exerts a stronger influence.

Perceived parental disapproval

As would be expected a significant relationship was found between the magnitude of both parents disapproval of their childrens drinking and current drinking status.

Perceived peer drinking

The influence of perceived friends drinking behaviour emerged to have a very strong association with current drinking status, much greater than that of perceived paraental drinking.

Perceived peer disapproval

Similarily perceived peer disapproval had a stronger association than perceived parental disapproval with current drinking status. These findings reaffirm previous research findings that found peer influence to be a stronger influence on drinking rates than parental influence. It is felt that parental influence is important in determining social norms and attitudes toward drinking, but that peer influence has a more immediate effect on adolescents continuing to drink alcohol (Fossey, 1994).

In the survey those who ever had a drink were asked with whom they had their first drink. The fact that 73.3% were with friends, while only 13.2% were with their parents emphasises the interaction between adolescents drinking and their friends. These findings confirm another tradition which has been previously found in Ireland, that Irish adolescents are more likely to have their first drink in the company of friends and without their parents knowledge (Bagnall, 1988). This form of socialisation to alcohol is associated with heavier or more problematic drinking than when socialisation occurs within the family environment, which has been more traditional in the other European countries. A possible benefit from the findings of the influence of friends on drinking levels is that this same influence may be used to prevent problem drinking as well as to encourage it.

Attitudes and beliefs

As expected those who believed that negative personal consequences were unlikely to occur and that positive personal consequences were likely to occur to them as a result of drinking, had a significantly higher level of current drinking. Also those with more favourable attitudes to drinking, that is the belief that they would find drinking very pleasant and would like it very much were significantly more likely to be current drinkers. In fact attitude items had one of the strongest associations with current drinking status. These findings, that is the influence of attitudes and beliefs have also been found in other Irish studies by Grube and Morgan and in other international studies (Howe, 1989 and Plant, Bagnall, Foster et al., 1990b). Unfortunately once formed attitiudes are very difficult to change, even when knowledge is increased. There is therefore a need to try to influence attitudes through education at an earlier stage before drinking experience is gained (Fossey, 1994).

Social bonding

Social Bonding Theory proposes that the degree of bonding to social institutions like the family, the church and school modifies the likelihood of substance use including alcohol. Other researchers including Irish researchers (O`Connor, 1978, Grube and Morgan, 1986 and 1990) have confirmed this theory. The findings

of this study corroborate the social bonding theory, as increased bonding to parents, the school or training centre and religion was significantly associated with lowered frequency of current drinking.

Personality and values

Problem Behaviour Theory predicts that those who engage in other "deviant" behaviours are more likely to be substance users. While drinking alcohol is so common in adolescence that it would be farcicial to term it "deviant" behaviour, this study did find an association between tolerance of deviance such as swearing, lying, causing malicious damage to property and theft, and current drinking levels, that it is consistent with the problem behaviour theory or tolerance of deviance.

Comparison between Drinking Rates in Galway, Mayo and Roscommon

There was a significant difference found between Galway City and the other locations as regards the prevalence of drinking, with higher lifetime and current drinking rates in Galway City. The mean age for the first drink was also lower in Galway City.

To outrule the possibility that the higher prevalences in Galway City were caused by the higher proportion of boys and older age group in the sample, the difference in drinking rates were examined according to age groups and gender. The main fact to emerge is that the greatest difference between the "county" groups is caused by the higher prevalence rates among the girls in Galway City. Among the boys, while the lifetime and current drinking rates are higher, though not significantly so in Galway City compared to the other locations, there is a large and significant difference in drinking rates between the groups among the girls, with the prevalence being much higher in Galway City. The preponderance of boys in the Galway City sample in fact masks the higher rates among the girls.

While the statisitical tests for significance did not reach significance for each age group among the boys and girls for lifetime and current drinking prevalence it can be seen from the relevant tables in the results that in most age groups the rates are somewhat higher in Galway City. Therefore any age difference between the groups does not fully account for the higher rates in Galway City.

The prevalence of current drinking was also examined by socio-economic groupings to ensure that the differences between the social class groups in the locations did not bias the results. Apart from two of the eight social class categories the prevalence of cuurent drinking was approximately 10 to 20% higher for each social class group in the Galway City respondents, compared to the other locations. Therefore social class differences do not account for the higher prevalence of drinking in Galway City.

The main point of importance to emerge in this section of the results is the fact that the rates are significantly higher among girls in Galway City. As was discussed in the section on associated features, adolescents from urban areas in this study had higher drinking rates than rural adolescents. This finding is consistent with

Galway City adoelscents having higher drinking rates. The analysis of the urban/rural factor was not examined by gender, so it is unknown whether girls from urban areas have higher prevalence rates than rural girls. The reasons for the high drinking rates among girls from Galway City are not obvious and further multivariate analysis is necessary.

Comparison with other Studies

Western Health Board : The prevalence of both lifetime and current drinking rates among 12 - 15 year olds is higher in the present study than that found by Johnson in County Galway in 1990. Lifetime prevalence rates are also higher than those found by Moroney (1993) in his study of County Roscommon and east County Galway. Moroney studied a mainly rural population, which may explain some of the differences between the two studies. The most recent study which examined the prevalence of drinking was by Mac Hale (1994), who surveyed post-primary students in County Galway. The overall lifetime prevalence rates were similar in the two studies.

The findings show that in the past few years there has been an increase in the numbers of adolescents in the west of Ireland who ever have had a full drink, and more importantly are current drinkers. The similarity of the findings of Mac Hale`s results and the present studys` results help to substantiate the findings on alcohol use in the present study.

National studies : In comparison to the Kilkenny survey (O`Reilly and Shelley, 1991), while the lifetime drinking rates were lower in this study, the current drinking rates and the frequency of intoxication were much higher among adolescents from the west.

The current prevalence rates in this study were similar to those found in a Dublin study by Barry (1993). In Morgan and Grube`s most recent study (1994) the prevalence of lifetime drinking among both boys and girls was much higher among their sample than in the present study and than in their other previous studies. The prevalence of current drinking was higher however in the present study among the older age groups in both genders in this study than in the Dublin study. While there are more abstainers in the Western Health Board study, those in the older age groups that do drink, appear to drink more frequently than in the Dublin study. The results of the present study confirm the recent increase in drinking rates among girls as well as boys in Ireland found by Morgan and Grube.

Northern Ireland : The most recent study in Northern Ireland (Health Promotion Agency, 1994) asked the adolescents about ever tasting alcohol rather than having a full drink of alcohol, so it is not possible to directly compare the drinking rates. The lifetime prevalence of intoxication was however similar in both studies.

International studies : No recent comparable studies have been published in the United Kingom, but the lifetime prevalence for alcohol appears to be higher both in Scotland, (Plant and Foster, 1991) and in England (Plant et al., 1990b), than in the Western Health Board. The lifetime prevalence rates found in this study are higher than those found in the United States among adolescents (Kandel, 1991).

The comparison of the present study with other national and international studies, confirms the increase in drinking rates among adolescents, and especially among girls in Ireland in recent years. Irish adolescents appear to have more abstainers than the United Kingdom including Northern Ireland adolescents which has been a traditional finding. However the number of abstainers continues to fall in Ireland,as found in this study and in recent Dublin studies. The Irish adolescent prevalence rates are now higher than the United States rates and are continuing to increase.

Comparison between School Students, Travellers and Settled Early School Leavers

When the three groups, students, travellers and settled early school leavers are compared, it can be seen that the settled early school leavers have the highest prevalence of both lifetime and current drinking rates, followed by the students, with the travellers having the lowest rates. Both the lifetime and current prevalence rates are approximately 10% higher among the settled early school leavers than the students, and 20% higher than the rates among the travellers.

The drinking rates were examined by gender to ensure that the preponderance of boys in the settled early school leaver and the traveller samples did not bias the results. While the lifetime and current prevalence rates among the boys were indeed higher among the settled early school leavers compared to the students and the travellers, the results were not significant. However there was a large difference in the drinking rates among the girls in the three groups, which was very significant. The rates among the girls were high among the settled early school leavers in comparison to the students, and very low among the travellers. The extremely low rates among the traveller girls and the relatively high rates among the settled early school leaver girls explain most of the differences between the three groups in drinking rates.

As would be expected from studying the drinking prevalence rates, there is a higher frequency both of ever having felt drunk and of being drunk on 5 or more occasions among the settled early school leavers in comparison to the other two groups, among both the boys and the girls. Among the traveller boys the frequency of having felt drunk is similar to the rate among the male students, but the rates among the female travellers are exceptionally low. There was no significant difference between the three groups regarding the age at which they first felt drunk.

Two points of note emerge from this part of the analysis. The first is the high prevalence of lifetime and current drinking rates, and the frequency of ever having felt drunk among the settled early school leavers, especially the girls in comparison to the other groups. The second point is the extremely low prevalence rates

among the traveller girls. As discussed these results cannot be generalised to all the early school leavers in the Western Health Board, as a randon sample of the early school leavers was not taken, but they are still important findings.

Settled early school leavers may consist of two distinct sets, those who come from urban backgrounds, who live in areas where early school leaving and unemployment are the custom, and those who come from rural backgrounds, who leave school early to work on farms or fishery. These two distinct groups may be expected to have different substance use rates. The prevalence rates among the settled early school leavers were therefore examined according to whether the respondents came from urban or rural backgrounds. While a lower prevalence was found among the rural settled early school leavers, it was not significant, and their prevalence rates continued to be higher than the students and the travellers.

It can therefore be inferred that the settled early school leavers, whether from urban or rural backgrounds are at high risk for increased drinking levels and possible problem drinking. High prevalence rates of drinking among early school leavers were also found by Forde (1992) thus reaffirming the increased risk among early school leavers. Special efforts should therefore be made to target the settled early school leavers, both boys and girls with preventive strategies.

The traveller culture is very different and distinct to that of the settled population. Traditionally there are very strong moral and ethical guides for the girls, who tend to perform many domestic duties for their families, and are not given the freedom to socialise with members of the opposite sex until they are married, which they do at a relatively young age. A recent study which looked at the lifestyles of the travelling people, especially married women also found a relatively low prevalence of drinking among the women with a prevalence rate of 49.5% (O`Donovan et al.,1995). It is therefore not surprising that the traveller girls have such low prevalence rates for drinking. On the other hand the traveller boys are given much more freedom and subsequently have prevalence rates which are similar to the male student rates.

6.5 ***Drug Use***

Prevalence Rates

Nearly one quarter of the respondents reported that they had ever used any of 11 listed drugs in order to get “high”. The results confirm anecdotal evidence that certain types of drugs are easily available in the west, with cannabis reported to have a steady supply, through out the Western Health Board area. Volatile substances can be bought in many formats in shops through out the Western Health Board. Recent verbal reports had indicated that abuse of volatile substances had decreased in the west, but the evidence from this study shows that unfortunately it is still quite prevalent. Nearly 50% of those who use drugs obtain them from their friends. This corroborates the verbal reports I obtained prior to the survey, that there is a network of drug supply, with friends or acquaintances being the main source of drugs.

Associated Features

Age

The prevalence rates for most of the specific drugs increased with age. Previous research has found that volatile substance use decreases after the age of about 16 years, but this study found only a slight decrease in prevalence of volatile substances in the older age groups.

Gender

The prevalence rate for drug use was higher among boys than girls. There was no evidence of a lag period for lifetime drug use between the boys and the girls, in fact the gap in prevalence between them widened in the older age groups.

Father` socio-economic status

The findings of this study, unlike prior Irish studies indicate that there is an asssociation between social class and likelihood of drug use, with prevalence of drug use being higher in those whose parents are from professional backgrounds or large farms, and in contrast the prevalence rates are lower among those from semi-skilled, or unemployed backgrounds. One possible explanation for this finding is that those from social classes 1 and 2 may have access to financial resources not available to others, thus increasing the accessability of drugs.

Mother` work status

Unlike the research of Grube and Morgan, an association was found between the mothers` working outside the family home, and increased prevalence of drug use. This finding could be of importance if indeed the fact that mothers working outside of the home increases the likelihood of drug use among adolescents. However it was noted that mothers who work outside of the home are more likely to come from professional households, and this could bias the results. Indeed when stratified analysis was done by fathers socio-economic groupings, there no longer was an association between mothers work status and drug use. It therefore appears that the socio-economic status of the father is confounding the relationship between mother`s work status and prevalence of drug use, but multivariate analysis would need to confirm this.

Availability

Over a quarter of the sample reported that it would be easy for them to have access to drugs and a strong relationship was found between ease of access to drugs in this study and the prevalence of drug use. Similar findings have been found in previous studies (Grube and Morgan, 1986).

As expected there was a strong association between weekly income or pocket money and prevalence of drug use. Similar findings were obtained by other researchers (Bachman et al., 1981, Shelley et al., 1982, Shelley et al., 1984 and Grube and Morgan, 1986). Income is one facet to drug availability, as the higher the income the more affordable the drug.

Education

Those who reported that they had ever received drug education at school or the training centre had significantly lower rates of drug use, than those who never received such education. This finding underlines the benefits which can accrue from carefully planned drug education.

Urban / rural location

As has been found in previous studies the prevalence of drug use was much higher among those from urban backgrounds compared to those from rural backgrounds. In fact the rates among the urban adolescents were nearly double the rural rates, with the greatest difference being found amongst the boys. This finding may reflect local availability of drugs.

Perceived parental disapproval

There was a moderately strong relationship between the strength of perceived parental disapproval of drug use and lifetime prevalence rates.

Perceived peer disapproval

As expected from prior research, perceived peer disapproval especially approval / disapproval of the best friend had a strong relationship with prevalence of drug use. This relationship is stronger than the relationship between drug use and parental disapproval.

Perceived peer drug use

The extant literature has found that peer drug use, especially that of the best friend is one of the strongest predictors of adolescent drug use. This study corroborates these findings.

It is believed that parental influence mediates the attitudes of adolescents towards drugs and that susceptibility to peer influence is related to the degree of attachment to the parents, the stronger the attachment the less likely is an individual to be influenced by friends. Therefore while parental influence is important it is more distal, compared to the more immediate effect of friends, whose influence increases in strength in the mid-teens. Preventive strategies aimed at using parental influence probably need to be initiated in early childhood, while the influence of friends could be utilised in adolescence.

Attitudes and beliefs

As with alcohol there was a significant relationship between the belief that a possible personal consequence would occur as a result of drug use, and the prevalence of drug use, with drug use being higher among those who believed that positive personal outcomes were more likely to occur, and negative personal outcomes less likely to occur. One of the strongest predictors for drug use found in this study was a favourable attitude towards drug use. These findings have emerged in previous research including that of Grube and Morgan. It is believed that the other correlates or risk factors for drug use operate by changing individuals attitudes

towards drugs, and that attitudes are the crucial proximal determinant of drug use (Kandel, 1991 and Smith, 1993). However attitudes once formed are extremely difficult to change. The mean age of first drug use in this study was 14.49 years, which implies that attitudes to drugs have been formed at this age. It would therefore be necessary to try to influence attitudes prior to 14 years of age.

Social Bonding

As expected from reviewing the extant literature, this study found a significant association between the degree of bonding to the family, school and religion and the prevalence of drug use. The lifetime prevalence of drug use was lower among those who reported good relationships with these institutions. As mentioned earlier, bonding or the strength of the relationship with the parents affects the suceptibility of adolescents to peer influence.

Tolerance of deviance

As considered in the section on alcohol use , the problem behaviour theory proposes that those who engage in other "deviant" behaviours are more likely to use drugs. This study examined the relationship between a list of other "deviant" behaviour, such as cursing, lying, damaging property and stealing, and drug use. A significant relationship was found for all the above mentioned behaviours and the level of drug use.

Comparison of Drug Use Rates between Galway, Mayo and Roscommon

The prevalence of drug use was compared between Galway City, Galway County, County Mayo and County Roscommon. The lifetime prevalence of drug use in Galway City was nearly double the rates found elsewhere.

As with the analysis on alcohol, the prevalence of drug use was examined by gender and age group, to see if the preponderance of males and slightly older age group in the Galway City sample accounted for the higher prevalence rates. When the lifetime prevalence of drug use is examined separately by gender, it can be seen that the prevalence in Galway City continues to be nearly double the rates for the other locations. It can therefore be inferred that the preponderance of boys in Galway City does not account for the difference in prevalence rates.

While it was not possible to perform statistical analysis on all the age groups, due to small numbers in some, it was seen quite clearly that for each age group the prevalence of drug use is considerably higher among both boys and girls from Galway City than from the other locations.

The prevalence of lifetime drug use was examined according to social class, to ensure that the differences between the socio-economic groupings in the locations did not account for the higher prevalence rate of drug use in Galway City. Apart from two social classes, where the rate of drug use were similar, the lifetime prevalence of drug use was much higher, by approximately 10 to 40% for each social class category in

Galway City compared to the other locations. The differences in the distribution of the socio-economic groupings, do not therefore account for the higher prevalence of drug use on Galway City.

Anecdotal evidence suggests that "recreational" drugs like cannabis, ecstasy, LSD and amphetamines, have a steady supply in Galway City, whereas apart from cannabis, there is an eratic supply in other areas of the Western Health Board. The findings of this study help to corroborate this anecdotal evidence. The Galway City sample reported that it would be easier for them to obtain drugs, than the other areas. Also use of LSD, ecstasy and amphetamines are reported much more frequently in Galway City compared to the other areas. It would thus appear that availability of drugs is one of the main reasons for the larger prevalence of drug use in Galway City than the other areas of the Western Health Board.

Comparison wth other Studies

Western Health Board

Moroney (1993) found a lifetime prevalence that was similar to that obtained in the present study, and the slight difference in rates could be explained by the fact that he did not enquire about ecstasy or cough syrup. As in this study, cannabis and volatile substances were the commonest used drugs.

Mac Hale (1994) in her survey of alcohol and drug use and sexual activity found a much lower prevalence of drug use among the second-level students in Galway City and county, compared to the present study, and that of Moroney. The large difference in lifetime drug use rates could be explained by instrument variation. The present study listed 11 specific drugs, including prescribed medication which were excluded in Mac Hale`s questionnaire, which asked the generic question if any addictive drugs had ever been used. It is posible that volatile substances were omitted by the adolescents, not being considered by many as an addictive drug. The exclusion of these drugs could account for the lower prevalence rate found by Mac Hale.

National studies

The lifetime prevalence rates for drugs, specifically for cannabis and volatile substances were lower in this study than in the Dublin school-based study by Morgan and Grube (1994). The lifetime rates for the main drugs used are between $^{2}/_{3}$ and $^{3}/_{4}$ of the Dublin rates. The lifetime rates for the other drugs and the current rates for most drugs were similar in the two drugs. Ecstasy was not examined in the Dublin study.

In 1981 a comparison of national figures to Dublin rates found that the national rates to be between $^{1}/_{2}$ and $^{2}/_{3}$ of the Dublin rates (Shelley et al., 1984). Therefore it can be seen that the Dublin rates continue to be higher, but the gap has narrowed, especially among current use. The prevalence of drug use has tripled since the 1981 national study. The only other published study on drug use among students outside of the Dublin area in recent years, was carried out on behalf of the Southern Health Board (1994), which found similar rates of drug use to the present study, with slightly lower prevalence of cannabis and slightly higher

prevalence of volatile substance use compared to the present study. These two drugs were again the commonest drugs used.

It would appear therefore that drug use among adolescents has increased considerably in the past 10 to 15 years nationally, with rates continuing to be higher in Dublin. Rates among boys continue to exceed rates among girls in Ireland. Cannabis and volatile substances appear to be the main drugs used by Irish adolescents.

Northern Ireland

In comparison to a recent study on drug use among 11 to 15 year old students in Northern Ireland (Health Promotion Agency, 1995), drug use was slightly lower among the 15 year olds in the Western Health Board. Cannabis was the main drug used in Northern Ireland also.

International studies

United Kingdom : In England studies based in London have found higher rates (Swadi, 1990), while studies based outside London have found lower rates of drug use (Pritchard and Cox, 1990) than those found in the present study. A World Health Organisation study in Wales (Smith and Nutbeam, 1992) found rates of substance use similar to the present Western Health Board rates. Again cannabis and volatile substances were the most popular drugs. One point noted in the United Kingdom studies was that prevalence rates for girls were appoaching those of boys in recent years, whereas such a trend has not been evident in Ireland yet.

The Netherlands: Interestingly Irish prevalence rates of drug use, including those of the Western Health Board adolescents are higher than the rates obtained in the National Youth Health Care Survey (Schwartz, 1992) among 15 to 19 year old adolescents in the Netherlands, including both lifetime and current cannabis use.

United States : The prevalence of drug use among adolescents has decreased during the 1980`s in the United States, though this downward trend has lessened since 1988. In the National Household Survey (Kandel, 1991) among 12 to 17 year olds, the prevalence of drug use was similar to that found in this study.

From these comparisons it can be seen that the prevalence of drug use is fairly consistent world-wide among adolescents, with Irish rates, including the present ones from the Western Health Board being comparable with rates in other countries.

Comparison between School Students, Travellers and Settled Early School Leavers

The prevalence of drug use was compared between the school students, travellers who have left school early and the "settled" early school leavers. The overall prevalence of drug use was higher among the settled early school leavers and lower among the travellers compared to the students.

The prevalence of drug use was higher in each age group among the settled early school leavers than among the students. It would thus appear that the higher average age among the settled early school leavers does not explain the difference in drug use rates. The numbers of respondents in the traveller age groups are too small to comment on the influence of age on the prevalence, but as the average age of the travellers is higher than the students, the age effect could not explain the lower prevalence of drug use among the travellers. There was no significant difference between the three groups regarding the mean age of first drug use.

As mentioned previously there is a higher proportion of boys in both the settled early school leavers and the travellers groups. It is therefore important to examine the difference in drug use rates between the three groups according to gender. Two notable findings emerge. Firstly the difference in drug use rates between the three groups are not explained by the differences in gender proportions, as the rates of lifetime drug use are uniformly higher among both the boys and the girls in the settled early school leavers group compared to the students. The second point to emerge is that while the lifetime prevalence of drug use is relatively low among the male travellers at 14.0% in comparison to the other groups, the prevalence of drug use among the traveller girls was 0.0%.
While cannabis, volatile substances, "magic" mushrooms and cough syrup are among the four most prevalently used drugs for each of the comparison groups, the prevalence for each drug is as expected from the prior findings higher among the settled early school leavers. Another point to emerge is the limited range of drugs tried by the travellers in comparison to the other two groups.

The difference in lifetime prevalence rates for drug use between the three groups is therefore not explained by the difference in mean age and the ratio of the genders between the three groups. The results which emerge from this study is that firstly both boys and girls from the settled early school leavers group are at higher risk for drug use, and secondly that the travellers group but especially the girls are at lower risk.

These results cannot be generalised to all early school leavers in the Western Health Board as a random sample of early school leavers was not done, but relate to those early school leavers actually surveyed. They do provide indications of trends however.

Unmarried traveller girls do not have the freedom to socialise or to imbibe either alcohol or drugs. This explains the very low prevalence of both drinking and drug use among the traveller girls. There are possible reasons also for the relatively low prevalence rate among the male adolescent travellers. These include a cultural factor, where drug use may not be approved of by the travellers in general, and secondly due to limited financial resources, they may not have access to drugs.

It is apparent that settled early school leavers, both boys and girls are at higher risk of drug use, confirming previous work in Ireland by Forde (1992). The use of drugs was examined among the settled early school leavers according to urban / rural location. The lifetime prevalence of drug use was nearly three times higher

among those from urban locations than among those from rural locations. There therefore appears to be two distinct groups of settled early school leavers. As elaborated in the section on alcohol use, settled early school leavers in rural areas tend to leave school early in order to work on farms or fishing. Those from urban areas leave school early as it is the custom to do so, and subsequently enter long-term unemployment. It has been shown that lack of bonding to social institutions such as the family, school and religion are important predictors of drug use among adolescents, and by definition early school leavers lack bonding to school. A factor which has been found important in continuation of drug use by adults is lack of employment or a defined role in life (Kandel et al., 1986, Peck and Plant, 1986, Kandel and Raveis, 1989 and Morrison and Plant, 1991). These two factors operate here among the urban early school leavers, making this group at especially high risk for drug use, as borne out here by the fact that the rate of drug use among urban early school leavers, at 48.3% is higher than any other group. It would seem especially important therefore to try to target urban settled early school leavers with preventive strategies.

Chapter 7 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

7.1 ***Smoking***

67% of the respondents have ever smoked, ranging from 40% of those aged 13 years and younger, to 75% of those aged 18 years and older. The mean age of first cigarette is 12.2 years, and over 70% of the smokers have tried their first cigarette by the age of 13 years. 27.1% of the sample can be classified as regular

smokers, this increases to 42.2% of those aged 18 years and older. There is a time lag between the smoking rates among the boys and girls, with girls having lower rates than the boys initially, then exceeding the boys rates in the older age groups. A strong relationship was found between the weekly income and smoking rates. Smoking rates were found to be higher among those from Galway City than other parts of the Health Board area. Smoking rates found in the Western Health Board are higher than those found in Dublin, Northern Ireland, the United Kingdom and the United States.

This study attempted to examine the prevalence of substance use among early school leavers, both settled and travellers. While a random sample was not obtained the results give important indications of substance use behaviours among these groups which has not previously been done in Ireland. Examining smoking, the rates were higher among the settled early school leavers and the travellers, especially the girls, in comparison to the students. The girls from the settled early school leavers sample had the highest rates of any group, the rate of regular smoking among them being 65%, while the corresponding rates for the travellers girls were 42% compared to 21.6% among the student girls.

7.2 *Drinking*

67% of the sample have ever had a drink, and 62% were current drinkers. The lifetime prevalence of drinking increased with age, for example, 85.6% of those aged 18 years and older have ever had a drink. The mean age of the first drink was 13.7 years. 10% of those that have had a drink had their first drink by the age of 10 years, and 60% had done so by the age of 14 years. 62% of drinkers (15% of the sample) usually drink 5 or more drinks on any one occasion. Nearly 50% of the sample have ever felt drunk, and nearly 17% have been drunk on more than 10 occasions. The mean age of first feeling drunk was 14.5 years. While the prevalence of drinking among the girls is similar to the boys in late adolescence, the boys continue to drink more and to be intoxicated more frequently than the girls.

This study confirms the increase in drinking rates among adolescents and especially among girls in the west of Ireland in recent years, though boys do continue to drink heavier and more frequently than the girls. Drinking rates found in this study for adolescents in the Western Health Board area are similar to rates found elsewhere in Ireland. Ireland traditionally has had more alcohol abstainers than in the United Kingdom, especially among the girls. This study shows that while this is still the case for the west of Ireland the number of abstainers are falling, though not as dramatically as in Dublin. Adolescent drinking rates found in this study are higher than those in the United States.

Factors found to be associated with increased alcohol use include ease of access to alcohol, weekly income or pocket money, coming from the higher socio-economic groupings, education, urban location, perceived parental drinking and perceived parental approval, perceived friends drinking and perceived friends approval, favourable attitudes and beliefs towards drinking, lack of bonding to the family, religion and school, and tolerance of deviance. The increase in drinking rates among those whose fatheres are from the

higher social classes has not previously been found in Ireland. It is possible that these adolescents have more weekly income which is asssociated with increased drinking rates. Increased drinking rates were also asssociated among those from urban areas which again is a new finding. Multivariate analysis would be useful to see if these factors do indeed increase drinking rates.

Results from the comparison of Galway City and the other areas of the Health Board, found that the rates of drinking are much higher in Galway City, especially among the girls in comparison to the girls in the other locations. As discussed the reasons for the higher drinking rates among girls from Galway City are unknown and need to be examined further. The higher rates found in Galway City overall are consistent with the finding of higher rates among urban adolescents.

Results from the comparison between school students and settled early school leavers and travellers found that the drinking rates and frequency of intoxication are higher among the settled early school leavers than the students or the travellers. The drinking rates are especially high among the girls from the settled early school leavers in comparison to the students, with current prevalence of 64% among the settled early school leavers compared to 54% among the students. While the drinking rates among the traveller boys are similar to the other boys, the drinking rates among the traveller girls are exceptionally low, which probably results from their unique culture. The important point to emerge in this section is the high drinking rates among the settled early school leavers, especially the girls.

7.3 ***Drug Use***

23.5% of the sample have ever used any drug, licit or illicit in order to get "high". The rate is 26.2% among the boys and 20.5% among the girls. Of those drugs listed the commonest drugs used were cannabis with 15.5% of the sample ever using it and volatile substances with 14.3% ever using them. The other listed drugs were used much less frequently, for example ecstasy use was reported by 2.2%. The mean age of first drug use was 14.49 years. Of those who used drugs nearly 47% had obtained them from friends, and just over 25% from drug dealers.

The prevalence of drug use is lower in the Western Health Board area than in Dublin, the rates being about $^{2}/_{3}$ to $^{3}/_{4}$ of the Dublin rates for the main drugs used. The rates are similar to those reported recently from the Southern Health Board. Cannabis and volatile substances are the main drugs used by Irish adolescents, with Irish drug use rates of adolescents similar to those found in the United Kingdom and the United States.

Factors associated with increased drug use include, ease of access or availability, weekly income or pocket money, coming from the higher socio-economic groupings, urban location, perceived parental approval or more specifically lack of disapproval, perceived friends drug use and perceived friends approval, favourable attitudes and beliefs towards drug use, lack of bonding to the family, religion and school, and tolerance of deviance. As with drinking the finding that there was a higher prevalence of drug use among those whose

father is from the higher social classes is a new finding in Ireland. Again this may be due to increased access to money. Multivariate analysis is needed to examine this relationship further.

Results from the comparison of Galway City with other areas of the Health Board found that the rates in Galway City are double the drug use rates of the other areas, with 41.5% of those from Galway City reporting drug use. This difference in rates is not accounted for by any differences in gender, age or socio-economic grouping between the respondents from the different areas. A difference in the availability of drugs may account for these results. Over 50% of the Galway City sample report easy access to drugs, compared to between 20 to 23% for the other areas. Use of individual drugs are also much higher in Galway City, cannabis was ever used by 36.3% of the Galway City sample, volatile substances used by 28.6%, LSD used by 11.4%, ecstasy used by 6.0% and amphetamines used by 4.9%. These rates may reflect the supply network which is reported to exist in Galway City but not in other areas of the Health Board.

Results from the comparison between the students and the settled early school leavers and the travellers found that the rate of drug use is much higher among the settled early school leavers, among both boys and girls than either the students or the travellers. The settled early school leavers from urban areas are at especially high risk for drug use compared to any other group in the survey, with nearly 50% of the urban settled early school leavers reporting drug use. Travellers, especially the girls were at exceptionally low risk for drug use.

Recommendations

7.4 *Smoking*

Smoking was not identified as a priority area for the purpose of this study, but due to the high prevalence of smoking found in the Western Health Board in the study I would recommend that efforts should be made to reduce the smoking prevalence among the adolescents.

1. The early age at which children have their first cigarette, 12 years old, means that children should be targeted while still at primary school with smoking prevention programmes. The advantage of this is that those children who leave school early would still be reached. A Health Education Officer or another suitable person should work in conjunction with the national school teachers to formulate a suitable programme. It is important to reinforce these education sessions throughout the child`s school career while in second-level schools. For those who leave school early who are at higher risk, prevention efforts should be continued through youth clubs, training centres etc. Smoking prevention programmes should be intergrated with healthy lifestyles education, using the methods to be described in the recommendations on alcohol.

2. Another strategy which could be adopted is a server training course for shop-keepers and other vendors of cigarettes. The purpose of the training courses is to increase awareness of smoking related ill-effects,

increase awareness of the legislation regarding sales of cigarettes to minors, and the penalties which could occur following trangression of the legislation.

3. A target of reduced smoking rates among children should be set by the Health Board, and a survey repeated within five years to evaluate the effectiveness of any intervention strategies.

As Galway City has been identified as having higher smoking rates, these efforts could be piloted initially in Galway City, evaluated and if effective expanded to the rest of the Health Board area.

7.5 *Drinking*

This study found that there is increasing rates of drinking among adolescents in the Western Health Board area, which mirrors the increases in other parts of the country. Those who have been found to be at particular risk are those from Galway City and the settled early school leavers, therefore special efforts should be made to target these adolescents.

1. Availability of alcohol was one of the factors found to be associated with increased drinking rates. Server training courses for publicans, off-licence and bar staff should be introduced, as have been started in the North Western Health Board in 1994, to increase awareness among those who sell alcohol of the dangers of selling to minors, to increase the awareness of the legislation governing alcohol sales and the penalties which may occur. These training courses could be organised by either a Health Education Officer, or an Alcohol Counsellor. The existence of an identification card scheme would help enforce the minimum drinking age laws.

2. The Western Health Board should liaise with the education services, including FAS and the VECs in the area in order to plan alcohol education programmes in schools. Due to the young age of first experience with alcohol, it may be necessary to start alcohol programmes in primary schools. Alcohol education if not properly implemented can result in an increase in drinking rates, as was found in this study. The most effective type of alcohol education programmes are those that are part of a healthy lifestyles education rather than being isolated, and those that rely on social resistence, social norms and lifeskills training and are peer led. The other important component is that they are continued through out the school career of the child into second-level schooling. Galway City has been identified as having a higher prevalence rate for drinking, therefore a pilot programme should be introduced in Galway City and if effective should be extended to all of the area.

3. Adolescents who leave school early are not accessible through the schools. These adolescents often are members of youth clubs, training centres and community projects for children. Community workers and youth workers have established a rapport and trusting relationship with these adolescents which Health Board staff could not hope to achieve, and are an ideal educational resource. I would recommend that youth

and community workers should receive training and support from the Health Board in using alcohol prevention programmes which could be introduced in the centres or clubs. The preventive programmes should be amended as necessary to suit the needs of the early school leavers.

4. Training should be provided by the Health Board for as many health care professional staff as possible in relation to alcohol misuse among the adolescents, both in relation to identification and management of alcohol problems.

5. Training should also be provided to community and youth workers in relation to alcohol problems among adolescents.

6. Family and parent support groups have already been set up in parts of the Western Health Board. Parental behaviours affect the attitudes towards drinking and therefore future drinking of their children. Advantage should be taken of these parent support groups to educate the parents regarding alcohol.

7. Media campaigns organised by a Health Education Officer could be established using local radio and papers, to reinforce the sensible drinking messages which the school and youth centre alcohol prevention programmes portray.

8. A telephone hotline should be established by the Health Board to offer advice and counselling regarding alcohol. Ideally an alcohol counsellor or someone with such training should cover this service. The hotline should be accessible to parents, adolescents themselves, teachers, or any other interested person.

9. A protocol should be established by the Western Health Board, to be available to all health care professionals, teachers, community and youth workers and all other involved disciplines, describing the procedures to be followed for referral and management as appropriate, of alcohol problems among adolescents.

10. Targets should be set by the Health Board for alcohol use among adolescents and the effectiveness of the prevention strategies should be evaluated by repeating the survey within the next five years, and comparing the rates against the targets.

7.6 *Drug Use*

As was discussed in the report Galway City respondents and settled early school leavers from urban areas are at especially high risk for drug use.

1. Availability of drugs has been identified as being associated with increased drug use. Through the use of the server training courses which have been previously discussed, the sales of abusable volatile substances, the second most commonly abused drug by adolescents could be reduced.

2. School-based education programmes using the same principles as those described for alcohol prevention could be formulated by the Health Board in conjunction with the education services in the area, including FAS and the VECs. Drug education should not be provided as an isolated course but should be included in healthy lifestyles promotion. Education which is not carefully planned can lead to increase in drug use by adolescents, and great care should be taken that this does not occur. It is essential that the prevention programmes are monitored and evaluated. The use of the Substance Abuse Prevention Programme which has been formulated by the Department of Education and the Department of Health should be encouraged by the Health Board.

3. Adolescents who have left school early should be provided with drug prevention programmes as discussed in the section on alcohol, and the community and youth workers should be trained and given support by the Health Board in using the prevention packages. These preventive programmes should be modified as necessary for use with early school leavers.

4. Training should be provided by the Health Board for as many health care professional staff as possible in relation to drug misuse among adolescents, both in relation to identification and management of drug use problems. General practitioners with a special interest should receive training in the Drug Treatment Centre in Dublin, which should be organised by the Health Board. Other health care professionals, such as public health nurses and social workers etc., who so desire should also receive such training. Such trained professionals can then manage the problem or refer on as appropriate, or be a resource for other professionals.

5. Training should also be provided as appropriate to community and youth workers in relation to drug use problems among adolescents.

6. As with alcohol, parenting behaviours can influence drug use by adolescents and advantage should be taken of the family and parent support groups have already been set up in parts of the Western Health Board, by educating parents of young children regarding drug use and possible causes.

7. Media campaigns organised by a Health Education Officer could be established using local radio and papers, to reinforce community norms regarding drug use, and to reinforce the antidrugs messages given in schools and at youth centres and clubs.

8. The telephone hotline which was discussed in connection with alcohol should be used to provide advice and guidance regarding adolescent drug use as well. An addiction counsellor or someone with similar training should cover the service. This telephone service should give advice and counselling to parents, teachers, adolescents themselves, or indeed anyone with any queries or worries regarding drug use.

9. Galway City has been identified as having a particular problem with regard to drug use among adolescents. I feel that a Community Addiction Team, which could tackle both alcohol and drug problems should be set up. As discussed by the Department of Health in the Government`s Strategy against drug use, 1991, these teams should consist of multidisciplinary team members, which could include general practitioners, outreach workers, social workers, public health nurses, representatives from the psychiatric or addiction counsellor services, juvenile liaison officers, etc. The role of the team as proposed by the government is to identify the extent of alcohol and drug misuse problem in its area of operation, to identify and establish contact with known alcohol and drug misusers and persons at risk, to establish links with the appropriate statutory and voluntary services, to refer and monitor alcohol or drug misusers as appropriate, to asist local education services in developing appropriate and relevant primary education programmes and to liaise with the prison services. If appropriate at a later date, further teams could be established in other areas of the Health Board.

At the present time there is no community based service apart from the general practitioner for management of alcohol or drug problems among adolescents. Referral has to be made to the specialist services either in the psychiatric units or the addiction counselling service. Provision of a telephone hotline and a Community Addiction Team should be a cost-effective way of managing alcohol or drug problems in the community.

10. A protocol should be established by the Western Health Board, to be available to all health care professionals, teachers, community and youth workers and all other involved disciplines, describing the procedures to be followed for referral and management as appropriate, of drug use problems among adolescents.

11. A central notification system or data-base of drug misuse should be set up by the Western Health Board, until such time as a national one is established. Notifications about possible drug addicts should be received from the general practitioners, pharmacists, the Accident / Emergency Departments, the psychiatric services, etc.

12. The Government`s Strategy for the prevention of drug misuse also recommends that Health Boards should provide a mechanism for co-ordination and dialogue between the statutory and voluntary services in their areas. The Western Health Board should facilitate the establishment of a committe, similar to the Special Committee on Drug and Alcohol Abuse, which has been established by the Southern Health Board, which would consist of members of the Gardai, Customs and Excise, the education services including FAS and the VECs, the prison services, the health care services and community and youth workers. This committee could then oversee the preventive strategies and monitor and evaluate their effectiveness.

13. Targets should be set by the Western Health Board regarding drug use by adolescents and the preventive strategies monitored to ensure their effectiveness. A survey should be repeated within the next five years on drug use among adolescents in the Health Board area to this end.

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Appendix A

A SURVEY OF

CIAGARETTES, ALCOHOL AND OTHER DRUGS

In this survey we are asking you questions about cigarettes, alcohol, and other drugs. This is not a test. There are no right or wrong answers. We need you to answer all the questions as honestly as you can.

If you do not understand a question please ask the researcher to explain it. It is very important to us that you try to answer each question as best you can. DO NOT PUT YOUR NAME ON THIS QUESTIONNAIRE. No one will know who you are or what answers you have given on this questionnaire. We do not want to be able to identify any individual person, so please do not put any mark on the questionnaire that might identify you. Do not let your neighbours, or your teachers see your answers. When you are finished the questionnaire, please put your questionnaire forms face down on the table.

YOUTH SURVEY QUESTIONNAIRE

OFFICIAL USE ONLY

Survey no. ❒❒❒❒ 1-4

Location no. ❒❒ 5-6

Q.1 Have you ever smoked a cigarette? (Please circle one answer and follow the instruction)

1. YES ----------> Please go to question Q.2 ❒ 7

2. NO ----------> If you have never smoked a cigarette, please go to Q.5

Q.2 How old were you the first time you smoked a cigarette? _____ years old ❒❒ 8-9

Q.3 Were you alone or with others the first time you smoked a cigarette? (circle as many as apply)

1. ALONE ❒ 10
2. WITH FRIENDS ❒ 11
3. WITH BROTHERS OR SISTERS ❒ 12
4. WITH PARENTS ❒ 13
5. WITH OTHERS ❒ 14

Q.4 About how many ciagarettes did you smoke last month? (please circle one answer)

1. NONE
2. ONLY A FEW, LESS THAN ONE EACH WEEK
3. AT LEAST 1 EACH WEEK, BUT NOT DAILY
4. ABOUT 1-2 A DAY ❒ 15
5. ABOUT 3-5 A DAY
6. ABOUT 6-10 A DAY
7. ABOUT 11-15 A DAY
8. ABOUT 16-20 A DAY
9. MORE THAN 20 A DAY

OFFICIAL USE ONLY

Q.5 About how many ciagarettes do you think you will smoke next month?
(please circle one answer)

1. NONE
2. ONLY A FEW, LESS THAN ONE EACH WEEK
3. AT LEAST 1 EACH WEEK, BUT NOT DAILY
4. ABOUT 1-2 A DAY
5. ABOUT 3-5 A DAY
6. ABOUT 6-10 A DAY
7. ABOUT 11-15 A DAY
8. ABOUT 16-20 A DAY
9. MORE THAN 20 A DAY

❐ 16

Now, we would like to ask you some questions about alcohol. Please answer them truthfully. Your answers will not be shown to anyone.

Q.6 Have you ever had a whole drink (more than just a sip or taste) of any alcoholic drink?
(please circle one answer)

1. YES ----------> PLEASE GO TO Q.7

❐ 17

2. NO ----------> IF YOU HAVE NEVER HAD A WHOLE ALCOHOLIC DRINK, PLEASE GO TO Q.14

Q.7 How old were you the first time you ever had a whole alcoholic drink?

_____ years old

❐❐ 18-19

Q.8 Were you alone or with others the first time you had a whole alcoholic drink?
(please circle as many as necessary)

1. ALONE
2. WITH FRIENDS
3. WITH BROTHERS / SISTERS
4. WITH PARENTS
5. WITH OTHERS

❐ 20
❐ 21
❐ 22
❐ 23
❐ 24

Q.9 How often have you ever had enough of any alcoholic drink to feel drunk?
(please circle one answer)

1. NEVER
2. 1-2 TIMES
3. 3-4 TIMES
4. 5-6 TIMES
5. 7-8 TIMES
6. 9-10 TIMES
7. MORE THAN 10 TIMES

❐ 25

OFFICIAL USE ONLY

Q. 10 How old were you the first time you ever felt drunk from an alcoholic drink?

_____ years old

❒❒ 26-27

Q. 11 Have you ever had a whole drink of the following? (please circle one answer for each drink)

	YES	NO	
a. CIDER ----------	1	2	❒ 28
b. BEER (lager, ale, stout) ----------	1	2	❒ 29
c. WINE ----------	1	2	❒ 30
d. SPIRITS ----------	1	2	❒ 31

Q.12 How many times during the last month did you drink a whole drink of the following?
(please circle one answer for each category of drink)

	None	1-2 Times	3-4 Times	5-6 Times	7-8 Times	9-10 Times	More Than 10 Times	
a. CIDER ----------	1	2	3	4	5	6	7	❒ 32
b. BEER ----------	1	2	3	4	5	6	7	❒ 33
c. WINE ----------	1	2	3	4	5	6	7	❒ 34
d. SPIRITS ----------	1	2	3	4	5	6	7	❒ 35

Q.13 How many whole drinks or glasses of the following do you usually have on any one occasion ?

	None	Less than 1 drink	About 1 drink	About 2 drinks	3-4 drinks	5-6 drinks	7-8 drinks	9-10 drinks	
a. CIDER ----------	1	2	3	4	5	6	7	8	❒ 36
b. BEER ----------	1	2	3	4	5	6	7	8	❒ 37
c. WINE ----------	1	2	3	4	5	6	7	8	❒ 38
	1	2	3	4	5	6	7	8	❒ 39

d.
SPIRITS

Q.14 How many times do you think that you will have a whole drink of the following alcoholic drinks
during the next month ? (please circle one answer for each category of drink)

	None	1-2 Times	3-4 Times	5-6 Times	7-8 Times	9-10 Times	More Than 10 Times	
a. CIDER ---	1	2	3	4	5	6	7	❒ 40
---	1	2	3	4	5	6	7	❒ 41
b. BEER ---	1	2	3	4	5	6	7	❒ 42
---	1	2	3	4	5	6	7	❒ 43

c. WINE

---

d.
SPIRITS

OFFICIAL USE ONLY

Q.15 About how many times do you think that the following people have a whole alcoholic drink each week?
(Pleases circle one answer for each person)

	None	Less than once a week	About once a week	A few times a week	Every Day	Don`t know	
a..Mother ---	1	2	3	4	5	6	❒ 44
b. Father ---	1	2	3	4	5	6	❒ 45
c. Your best friend ---	1	2	3	4	5	6	❒ 46
d. Most of your other good friends ---	1	2	3	4	5	6	❒ 47
e. Most young people your age ---	1	2	3	4	5	6	❒ 48

Q.16 How much would your parents and friends disapprove if you were to drink alcohol?
(please circle one number for each person)

	Disapprove Extremely	Disapprove very much	Disapprove	Disapprove slightly	Would not disapprove	
a..Mother ---	1	2	3	4	5	❒ 49
---	1	2	3	4	5	❒ 50
b. Father ---	1	2	3	4	5	❒ 51
c. Your best friend ---	1	2	3	4	5	❒ 52

-

d. Most of your other good friends --

Q.17 Listed below are some things that might happen to you if you were to drink alcohol. For each one please indicate whether or not you think it would happen to you if you were to drink alcohol.

Drinking alcohol would .....

	Yes, I am certain it would	Yes, I think it would	Unsure	No, I think it would not	No, I am certain it would not	
a. Harm my health ----------	1	2	3	4	5	❒ 53
b. Make me feel good ----------	1	2	3	4	5	❒ 54
c. Make m e feel sick ----------	1	2	3	4	5	❒ 55
d. Help me forget my troubles and problems ----------	1	2	3	4	5	❒ 56
e. Get me into trouble with the police	1	2	3	4	5	❒ 57
f. Be exciting and adventurous -------	1	2	3	4	5	❒ 58
g. Lead me to become an alcoholic ---	1	2	3	4	5	❒ 59
h. Make me look tough ----------	1	2	3	4	5	❒ 60

OFFICIAL USE ONLY

Q.18 If you wanted to drink alcohol, how easy would it be for you to get it? (please circle one answer)

1. VERY DIFFICULT
2. FAIRLY EASY
3. EASY

❒ 61

Q. 19 If you drink alcohol where do you get most of your alcohol from? (please circle as many answers as necessary)

1. I DON`T DRINK ALCOHOL
2. FROM HOME
3. FROM FRIENDS
4. FROM A SHOP
5. FROM AN OFF-LICENCE
6. FROM A PUBLIC HOUSE (PUB)
7. FROM A DISC OR NIGHTCLUB
8. OTHER (Please specify) _____

❒ 62
❒ 63
❒ 64
❒ 65
❒ 66
❒ 67
❒ 68
❒ 69

Q. 20 Do you think that drinking alcohol would be a pleasant or unpleasant thing for you to do? (Please circle one number)

1. VERY PLEASANT
2. PLEASANT
3. I DON`T KNOW

❒ 70

4. UNPLEASANT

5. VERY UNPLEASANT

Q. 21 Do you think that you would like drinking alcohol or dislike drinking alcohol? (Please circle one number)

1. LIKE VERY MUCH
2. LIKE A LITTLE
3. I DON`T KNOW
4. DISLIKE A LITTLE
5. DISLIKE VERY MUCH

❒ 71

Q.22 Have you ever received any education about alcohol ? (Please circle one answer)

1. YES
2. NO

❒ 72

Q. 23 If you needed information, advice or help about alcohol, who would you ask? (Please circle as many answers as necessary)

1. YOUR PARENTS
2. YOUR FRIENDS
3. YOUR TEACHERS
4. YOUR FAMILY DOCTOR
5. OTHERS (Please state who) _____

❒ 73
❒ 74
❒ 75
❒ 76
❒ 77

Q. 24 If you drink alcohol do you think that you should cut down on the amount of alcohol that you drink? (Please circle one answer)

1. I DON`T DRINK ALCOHOL
2. YES
3. NO
4. DON`T KNOW

❒ 78

OFFICIAL USE ONLY

Now we would like to ask you some questions about drugs. Please answer them as truthfully as you can. Remember that no one will know what answers you give. Your questionnaire will not be shown to your parents, your teachers, or anyone else.

Q.25 Have you ever used any of the following to get "high" or to try to get "high" ? (Please circle one number for each drug)

	YES	NO	
a. CANNABIS (marijuana, pot, hash, grass etc.) ----------	1	2	❒ 79
b. ECSTASY (E`s, Eves, Love Doves, etc) ----------	1	2	❒ 80
c. GLUE OR SOLVENTS (Tippex, petrol, lighter fluid, etc.) ----------	1	2	❒ 81
d. LSD (Acid) ----------	1	2	❒ 82

-			❒ 83
e. AMPHETAMINES (Speed, uppers) ----------	1	2	❒ 84
f. NORENOL (Buzz) ----------	1	2	❒ 85
-	1	2	❒ 86
g. HEROIN (Smack) ----------	1	2	❒ 87
-	1	2	❒ 88
h. BARBITUATES OR TRANQUILLISERS (Valium, Mogadon, downers, etc.) ----------	1	2	❒ 89
i. PSILOCYBIN (Magic Mushrooms) ----------	1	2	❒ 90
j. COCAINE ----------	1	2	
-			
k. COUGH SYRUP (Benylin, etc) ----------			

l. OTHER (Please specify) _____

_____

IF YOU HAVE NEVER USED ANY OF THE DRUGS LISTED ABOVE TO GET "HIGH", PLEASE GO TO Q.28.

Q. 26 How old were you the first time that you ever used one of the drugs listed above to get "high ?

_____ years old

❒ ❒ 91-92

OFFICIAL USE ONLY

Q.27 How many times during last month did you use any of the following to get "high" or to try to get get "high" ? (Please circle one number for each drug)

	None	1-2 Times	3-4 Times	5-6 Times	7-8 Times	9-10 Times	More Than 10 Times
a. CANNABIS (marijuana, pot, hash, grass etc.) ----------	1	2	3	4	5	6	7
b. ECSTASY (E`s, Eves, Love Doves etc) ----------	1	2	3	4	5	6	7
c. GLUE OR SOLVENTS (Tippex, petrol, lighter fluid, etc.)	1	2	3	4	5	6	7
d. LSD (Acid) ----------	1	2	3	4	5	6	7
e. AMPHETAMINES (Speed, uppers)	1	2	3	4	5	6	7
f. NORENOL (Buzz) ----------	1	2	3	4	5	6	7
g. HEROIN (Smack) ----------	1	2	3	4	5	6	7

❒ 93
❒ 94
❒ 95
❒ 96
❒ 97
❒ 98
❒ 99

h. BARBITUATES OR TRAN - QUILLISERS (Valium, downers, etc.)	1	2	3	4	5	6	7	❒ 100
i. PSILOCYBIN (Magic Mushrooms)	1	2	3	4	5	6	7	❒ 101
j. COCAINE ----------	1	2	3	4	5	6	7	❒ 102
k. COUGH SYRUP (Benylin, etc) -----	1	2	3	4	5	6	7	❒ 103
l. OTHER (Please specify) _____	1	2	3	4	5	6	7	❒ 104

Q.28 How many times during next month do you think that you will use each of the following to get "high" ? (please circle one number for each drug)

	None	1-2 Times	3-4 Times	5-6 Times	7-8 Times	9-10 Times	More Than 10 Times	
a. CANNABIS (marijuana, pot, hash, grass etc.) ----------	1	2	3	4	5	6	7	❒ 105
b. ECSTASY (E`s, Eves, Love Doves etc) ----------	1	2	3	4	5	6	7	❒ 106
c. GLUE OR SOLVENTS (Tippex, petrol, lighter fluid, etc.)	1	2	3	4	5	6	7	❒ 107
d. LSD (Acid) ----------	1	2	3	4	5	6	7	❒ 108
e. AMPHETAMINES (Speed, uppers)	1	2	3	4	5	6	7	❒ 109
f. NORENOL (Buzz) ----------	1	2	3	4	5	6	7	❒ 110
g. HEROIN (Smack) ----------	1	2	3	4	5	6	7	❒ 111
h. BARBITUATES OR TRAN - QUILLISERS (Valium, downers, etc.)	1	2	3	4	5	6	7	❒ 112
i. PSILOCYBIN (Magic Mushrooms)	1	2	3	4	5	6	7	❒ 113
j. COCAINE ----------	1	2	3	4	5	6	7	❒ 114
k. COUGH SYRUP (Benylin, etc) -----	1	2	3	4	5	6	7	❒ 115
l. OTHER (Please specify) _____	1	2	3	4	5	6	7	❒ 116

OFFICIAL USE ONLY

Q.29 About how often do you think that each of the following people use drugs to get "high" each month ? (Please circle one number for each person)

	None	1-2 Times	3-4 Times	5-6 Times	7-8 Times	9-10 Times	More Than 10 Times	
a. Your Best Friend ----------	1	2	3	4	5	6	7	❒ 117
b. Most of Your Other Good Friends ---	1	2	3	4	5	6	7	❒ 118
c. Most Young Peole Your Age ---------	1	2	3	4	5	6	7	❒ 119

Q.30 How much would your parents and friends disapprove if you were to use drugs to get high ?
(please circle one number for each person)

	Disapprove Extremely	Disapprove very much	Disapprove	Disapprove slightly	Would not disapprove	
a..Mother ----------	1	2	3	4	5	❒ 120
b. Father ----------	1	2	3	4	5	❒ 121
c. Your best friend ----------	1	2	3	4	5	❒ 122
d. Most of your other good friends ---	1	2	3	4	5	❒ 123

Q.31 Listed below are some things that might happen to you if you were to use drugs to get "high".
For each one please indicate whether or not you think it would happen to you if you were to use drugs to get "high"

If I were to use drus to get "high", it would .....

	Yes, I am certain it would	Yes, I think it would	Unsure	No, I think it would not	No, I am certain it would not	
a. Harm my health ----------	1	2	3	4	5	❒ 124
b. Make me feel good ----------	1	2	3	4	5	❒ 125
c. Be exciting and adventurous ---------	1	2	3	4	5	❒ 126
d. Help me forget my troubles and problems ----------	1	2	3	4	5	❒ 127
e. Get me into trouble with the police --	1	2	3	4	5	❒ 128
f. Lead me to become an addict ----------	1	2	3	4	5	❒ 129
g. Give me a bad name ---------- -----	1	2	3	4	5	❒ 130

Q. 32 If you wanted to obtain drugs in order to get "high", how easy would it be for you to get them ?
(Please circle one answer)

1. VERY DIFFICULT ❒ 131
2. FAIRLY DIFFICULT
3. EASY

OFFICIAL USE ONLY

Q.33 If you use drugs to get "high", where do you get most of your supply from ?
(Please circle as many as necessary)

1. I DON`T USE DRUGS ❒ 132
2. FROM FRIENDS ❒ 133
3. FROM RELATIVES ❒ 134
4. FROM DRUG DEALERS ❒ 135
5. IN A PUBLIC HOUSE (PUB) ❒ 136
6. ON OR NEAR SCHOOL GROUNDS ❒ 137
7. AT A DISCO OR RAVE ❒ 138

8. IN AMUSEMENT ARCADES ❒ 139

9. IN A CAFE ❒ 140

10. IN A PRIVATE HOUSE ❒ 141

11. OTHER (Please specify) _____ ❒ 142

Q. 34 Have you ever received any education on drugs ? (Please circle one answer)

1. YES ❒ 143

2. NO

3. DON`T KNOW

Q. 35 From what source have you obtained information on drugs ? (Please circle as many answers as necessary) ❒ 144

1. EDUCATION IN SCHOOL OR A TRAINING CENTRE ❒ 145

2. FROM YOUR PARENTS ❒ 146

3. FROM FRIENDS ❒ 147

4. FROM A DRUG DEALER ❒ 148

5. READ IT IN A NEWSPAPER OR BOOK ❒ 149

6. ON THE RADIO OR TELEVISION ❒ 150

7. OTHER (Please specifiy) _____

Q. 36 If you needed information, advice or help about drugs, who would you ask ? (Please circle as many answers as necessary) ❒ 151

1. YOUR PARENTS ❒ 152

2. YOUR FRIENDS ❒ 153

3. YOUR TEACHERS ❒ 154

4. YOUR FAMILY DOCTOR ❒ 155

5. OTHERS (Please specifiy) _____

Q. 37 If you use drugs to get "high" would you like information, advice or help abour drugs ? (Please circle one answer) ❒ 156

1. I DON`T USE DRUGS

2. YES

3. NO

OFFICIAL USE ONLY

Q. 38 Do you think that using drugs to get "high" would be a pleasant or an unpleasant thing for you to do ? (Please circle one answer)

1. VERY PLEASANT

2. PLEASANT

3. I DON`T KNOW ❒ 157

4. UNPLEASANT

5. VERY UNPLEASANT

Q. 39 Do you think that you would like or dislike using drugs to get "high" ? (Please circle one answer)

1. LIKE VERY MUCH

2. LIKE A LITTLE

3. I DON`T KNOW ❒ 158

4. DISLIKE A LITTLE

5. DISLIKE VERY MUCH

Q. 40 Next is a list of things that some young people do very often and other young people not all. For each one please indicate whether you have done it never, only once or twice, a few times, fairly often, or very often. (Please circle one number for each statement)

How often have you .....

	Never	Only once or twice	A few times	Fairly often	Very often	
a. Sworn or cursed ----------	1	2	3	4	5	❒ 159
b. Lied to a teacher ----------	1	2	3	4	5	❒ 160
c. Lied to your parents ----------	1	2	3	4	5	❒ 161
d. Purposely damaged other people`s property ----------	1	2	3	4	5	❒ 162
e. Taken things that do not belong to you ----------	1	2	3	4	5	❒ 163

Q.41 In general, how well do you do at school or on your training course in comparison with other students in your class or group ? (Please circle one answer)

1. ABOUT THE BEST

2. WELL ABOVE THE AVERAGE

3. A LITTLE ABOVE THE AVERAGE ❒ 164

4. ABOUT AVERAGE

5. A LITTLE BELOW AVERAGE

6. WELL BELOW AVERAGE

Q. 42 How important is it for you to do well in school or on the training course ? (Please circle one answer)

1. VERY IMPORTANT

2. IMPORTANT ❒ 165

3. UNSURE

4. UNIMPORTANT

5. VERY UNIMPORTANT

OFFICIAL USE ONLY

Q. 43 How well do you usually get on with your parents and friends ? (Please circle one number for each person)

	Very Well	Well	Unsure	Badly	Very Badly	
a. Your Mother ----------	1	2	3	4	5	❒ 166
b. Your Father ----------	1	2	3	4	5	❒ 167
c. Your Best Friend ----------	1	2	3	4	5	❒ 168

d. Most of Your Other Good Friends	1	2	3	4	5	❒ 169

Q. 44 How important is it for you to get along with your parents and friends ? (Please circle one number for each peron)

	Extremely Important	Very Important	Important	Slightly Important	Not at all Important	
a. Your Mother ----------	1	2	3	4	5	❒ 170
b. Your Father ----------	1	2	3	4	5	❒ 171
c. Your Best Friend ----------	1	2	3	4	5	❒ 172
d. Most of Your Other Good Friends	1	2	3	4	5	❒ 173

Q. 45 How important is your religion to you in your everyday life? (Please circle one answer)

1. VERY IMPORTANT
2. IMPORTANT ❒ 174
3. UNSURE
4. UNIMPORTANT
5. VERY UNIMPORTANT

Q. 46 About how often do you pray on your own ? (Please circle one answer)

1. NOT AT ALL
2. LESS THAN ONCE A WEEK ❒ 175
3. ONCE A WEEK
4. SEVERAL TIMES A WEEK
5. ONCE A DAY
6. MORE THAN ONCE A DAY

We would now like to ask you some questions about yourself for statistical purposes

❒ 176

Q. 47 What is your sex? 1. MALE 2. FEMALE

❒❒ 177-178

Q. 48 What age are you ? _____ years old

OFFICIAL USE ONLY

Q. 49 What is your father`s job? (If he is deceased, what did he do when he had a job?)

_____

❒ 179

_____

If your father has no job now, what did he do when he had one ?

_____

_____

If he is a farmer how many acres of land does he have? _____

Q. 50 Does your mother have a job other than keeping house for your family?
(Please circle one number, and if the answer is yes please fill in Q. 50a

1. YES 2. NO

❒ 180

Q. 50a What is your mother`s job _____ ❒ 181

_____

Q.51 Where do you live? (Please circle one answer)

1. CITY
2. TOWN
3. VILLAGE
4. COUNTRYSIDE

❒ 182

Q. 52 Which county do you live in ? (Please circle one answer)

1. GALWAY
2. MAYO
3. ROSCOMMON
4. OTHER (Please specify) _____

❒ 183

Q. 53 Do you think that there are enough leisure facilites for young people your age in the area where you live? (Please circle one answer)

1. YES
2. NO
3. UNSURE

❒ 184

Q. 54 How much pocket money do you have on average to spend each week? _____ punts

❒❒❒ 185-187

THANK YOU VERY MUCH FOR YOUR HELP

Appendix B

STAIDEAR AR

TOBAC, ALCOL AGUS DRUGAI EILE

Sa gceistiuchan seo, taimid ag iarraidh ort ceisteanna a fhreagairt faoi toitini, alcol agus drugai eile. Ni scrudu I seo. Nil aon fhreagra direach ceart no mi-cheart. Teastaionn uainn go fhreagroidh sibh na ceisteanna le macantacht.

Ma thagann tu ar cheist nach dtuigeann tu, fiafraigh den taighdeoir e a mhinu duit. Ta se an-tabhachtach duinn go ndeanann tu iarracht gach ceist a fhreagairt chomh maith is feidir leat. NA CU D`AIMN AR AN GCEISTIUCHAN SEO. Ni bheidh a fhios ag einne ce thu no cad iad na freagrai a thug tu ar an gceistiuchan seo. Nilimd ag iarraidh aon duinne aonrach a aithint, mar sin na chuir aon marc ar an gceistiuchain a gcuirfidh thu in aithne duinn. Na thaispean do fhreagrai do do chomharsan, na do mhuinteoir. Nuair ata an gceistiuchan criochnaithe agat, cur do foirmeacha cheistiuchan, cloigeann sios ar an mbord.

Uimhir an staidear ❐❐❐❐ 1-4

Uimhir an ionad ❐❐ 5-6

C.1 Ar chaith tu toitin ariamh ? (Cuir ciorcal timpeall freagra amhain agus lean an treoir)

1. CHAITH ----------> Teigh go C.2 le do thoil. ❐ 7

2. NIOR CHAITH -------> Mar rud e nar chaith tu tabac ariamh teigh go C.5

C.2 Cen aois a raibh tu an chead uair a chaith tu toitin ? _____ bliana d`aois ❐❐ 8-9

C.3 An raibh tu i d`aonar no i gcomhluadar, an chead uair a chaith tu toitin ?
(Cuir ciorcai ar an meid ata oiriunach)

1. I D`AONAR ❐ 10

2. LE CHAIRDE ❐ 11

3. LE DEARTHAIREACHA NO DEIRFUIREACHA ❐ 12

4. LE TUISTI ❐ 13

5. LE DAOINE EILE ❐ 14

C.4 Timpeall ce mhead ar chaith tu an mhi seo caite ?
(Cuir ciorcal timpeall freagra amhain)

1. TADA

2. CUPLA CEANN, NIOS LU NA CEANN AMHAIN GACH SEACHTAINN

3. CEANN AMHAIN GACH SEACHTAIN, ACH NI LAETHUIL

4. TIMPEALL 1-2 I N-AGHAIDH AN LAE ❐ 15

5. TIMPEALL 3-4 I N-AGHAIDH AN LAE

6. TIMPEALL 6-10 I N-AGHAIDH AN LAE

7. TIMPEALL 11-15 I N-AGHAIDH AN LAE

8. TIMPEALL 16-20 I N-AGHAIDH

9. NIOS MO NA 20 IN AGHAIDH AN LAE

NA SCRIOBH ANSEO

C.5 Timpeall ce mhead toitini a chaithfidh tu an mhi seo chugainn, meas tu ?
(Cuir ciorcal timpeall freagra amhainn)

1. TADA

2. CUPLA CEANN, NIOS LU NA CEANN AMHAIN GACH SEACHTAIN

3. CEANN AMHAIN GACH SEACHTAIN, ACH NI LAETHUIL

4. TIMPEALL 1-2 I N-AGHAIDH AN LAE

5. TIMPEALL 3-5 I N-AGHAIDH AN LAE ❒ 16

6. TIMPEALL 6-10 I N-AGHAIDH AN LAE

7. TIMPEALL 11-15 I N-AGHAIDH AN LAE

8. TIMPEALL 16-20 I N-AGHAIDH AN LAE

9. NIOS MO NA 20 IN AGHAIDH AN LAE

Anois ba mhaith linn cupla ceist a cur ort faoi alcol. Mas feidir leat iad a fhreagairt go h-ionraic, le do thoil. Ni thaispeanfar do fhreagrai do einne.

C.6 An raibh deoch iomlan alcol ariamh agat (Ni bolgam beag no blais) ?
(Cuir ciorcal timpeall freagra amhain)

1. SEA ----------> TEIGH GO C.7

2. NI HEA ----------> MAS RUD E NACH RAIBH DEOCH IOMLAN ALCOL ARIAMH AGAT TEIGH GO C.14 ❒ 17

C.7 Cen aois a raibh tu an chead uair a d`ol tu deoch iomlan alcol?

_____ bliana d`aois ❒❒ 18-19

C.8 An raibh tu i d`aonar no i gcomhluadar an chead uair a d`ol tu deoch iomlan alcol ?
(Cuir ciorcal ar an meid ata oirionach)

1. I D`AONAR ❒ 20

2. LE CHAIRDE ❒ 21

3. LE DEARTHAIREACHA NO DEIRFUIREACHA ❒ 22

4. LE TUISTI ❒ 23

5. LE DAOINE EILE ❒ 24

C.9 Ce mhead uaire a mhothaigh tu oltach le dothain alcol ?
(Cuir ciorcal timpeall freagra amhainn)

1. ARIAMH

2. 1-2 UAIRE

3. 3-4 UAIRE ❒ 25

4. 5-6 UAIRE

5. 7-8 UAIRE

6. 9-10 UAIRE

7. NIOS MO NA 10 N-UAIRE

NA SCRIOBH ANSEO

C. 10 Cen aois a raibh tu an chead uair a mhotaigh tu oltach tar eis bheith ag ol alcol ?

_____ bliana d`aois ❒❒ 26-27

C. 11 An raibh deoch iomlan ariamh agat as na deochanna thiosluaite ?

	SEA	NI HEA	
a. CIDER ----------	1	2	❒ 28
b. BEER (lager, leann, leann dubh) ----------	1	2	❒ 29
c. WINE (FION) ----------	1	2	❒ 30
d. SPIRITS (BIOTAILLE ALCOL) ---------- (vodca, uisce beatha, poitin, srl.)	1	2	❒ 31

C.12 Ce mhead uaire i rith an mhi seo caite ar ol tu deoch iomlan de na cinn a leannas ?
(Ciorclaigh freagra amahin i gcoir gach aon catagoir deoch)

	Tada	1-2 Uaire	3-4 Uaire	5-6 Uaire	7-8 Uaire	9-10 Uaire	Nios Mo Na 10 Uaire	
a. CIDER ----------	1	2	3	4	5	6	7	❒ 32
b. BEER ----------	1	2	3	4	5	6	7	❒ 33
c. WINE ----------	1	2	3	4	5	6	7	❒ 34
d. SPIRITS ----------	1	2	3	4	5	6	7	❒ 35

C.13 Ce mhead deochanna iomlan no gloine iomlan a bhionns agat de ghnath, ar aon ocaid amhain as na deochanna seo a leannas ?

	Tada	Nios lu na 1 deoch	Timpeal 1 deoch	Timpeall 2 deoch	3-4 deoch	5-6 deoch	7-8 deoch	9-10 deoch	
a. CIDER ----------	1	2	3	4	5	6	7	8	❒ 36
b. BEER ----------	1	2	3	4	5	6	7	8	❒ 37
c. WINE ----------	1	2	3	4	5	6	7	8	❒ 38
d. SPIRITS ----------	1	2	3	4	5	6	7	8	❒ 39

C.14 Meas tu ce mhead uaire a bheas deoch iomlan agat, de ne deochanna alcol luaite, i rith an mhi seo chugainn ? (Ciorclaigh freagra amhain i gcoir gach aon catagoir deoch)

	Tada	1-2 Uaire	3-4 Uaire	5-6 Uaire	7-8 Uaire	9-10 Uaire	Nios Mo Na 10 Uaire	
a. CIDER ----------	1	2	3	4	5	6	7	❒ 40
b. BEER ----------	1	2	3	4	5	6	7	❒ 41
c. WINE ----------	1	2	3	4	5	6	7	❒ 42
d. SPIRITS ----------	1	2	3	4	5	6	7	❒ 43

NA SCRIOBH ANSEO

C.15 Timpeall ce mhead uaire a bhionn deoch alcol ag na daoine seo a leannas, in aghaidh na? seachtaine ? (Ciorclaigh freagra amhain do gach aon duine)

	Tada	Nios lu na uair amhain sa tseachtain	Timpeall uair amhain sa tseachtain	Cupla uair sa tseachtain	Gach la	Nil a fhios agam	
a..Mathair ----------	1	2	3	4	5	6	❒ 44
b. Athair----------	1	2	3	4	5	6	❒ 45
c. Do chara is fear ----------	1	2	3	4	5	6	❒ 46
d. An chuid eile de d`chairde mhor ----------	1	2	3	4	5	6	❒ 47
-							❒ 48
e. An chuid ba mho de daoine oganaigh ar chomhaois leat ---	1	2	3	4	5	6	

C.16 Ce chomh mishasta a bheadh do thuisti agus cairde da n-olfa alcol ? (Ciorclaigh uimhir amhain le h-aghaigh gach aon duine)

	Fior Mi-shasta	An Mi-shasta	Mi-shasta	Beagann Mi-shasta	Ni bheadh siad Mi-shasta	
a..Mathair ----------	1	2	3	4	5	❒ 49
-	1	2	3	4	5	❒ 50
b. Athair ----------	1	2	3	4	5	❒ 51
c. Do chara is fear ----------	1	2	3	4	5	❒ 52
d. An chuid eile d`chairde mhor -						

C.17 Liosta thios, ta cuid de na rudai a dfheadfai tarlu duit da mba rud e gur ol tu alcol. Le h-aghaidh gach ceann cuir in iul, an gceapann tu go dtarlodh se duitse da mba rud e gur ol tu alcol.

Ag ol alcol .....

	Taim Lan-chinnte	Ceapann go dtarlodh se	Nilim cinnte	Ni doigh liom go dtarlodh se	Taim cinnte nach dtarlodh se	
	1	2	3	4	5	
a. Bheadh mo shlainte i mbaol --	1	2	3	4	5	❒ 53
b. Mhothoinn go maith ---------	1	2	3	4	5	❒ 54
c. Mhothoinn tinn ----------	1	2	3	4	5	❒ 55
d. Chabhrodh se liom dearmad mo fadhbanna agus triobloidi -	1	2	3	4	5	❒ 56
e. Bheinnse i dtriobloid leis na gardai ----------	1	2	3	4	5	❒ 57
f. Bheadh se corraitheach agus eachtriuil ----------	1	2	3	4	5	❒ 58
g. Bheinnse i mbaol bheith i m`alcolach ----------	1	2	3	4	5	❒ 59
h.. Bhreathnoinnse laidir --------	1	2	3	4	5	❒ 60

NA SCRIOBH ANSEO

C.18 Da mba rud e go raibh tu ag iarraidh ol, ce chomh h-easca a bheadh se alcol a fhail ?

1. AN DEACAIR
2. DEACOIR GO LEOIR
3. EASCA

❒ 61

❒ 62

C. 19 Ma olann tu alcol, cen ait a fhaigheann tu an cuid`s mo den alcol ?
(Cuir ciorcal ar an meid ata oiriunach)

1. NI OLANN ALCOL
2. ON MBAILE
3. O CHAIRDE
4. O SIOPA
5. A SIOPA FAOI CHEADUNAS (OFF-LICENCE)
6. O TEACH TABHAIRNE (PUB)
7. O "DISCO"
8. EILE (Aimnigh cen ait) _____

❒ 63
❒ 64
❒ 65
❒ 66
❒ 67
❒ 68
❒ 69

C. 20 An gceapann tu go mbeadh se taitneamhach no mi-thaitneamhach a bheith ag ol alcol ?
(Cuir ciorcal timpeall freagra amhain)

1. FIOR THAITNEAMHACH
2. TAITNEAMHACH
3. NILIM CINNTE
4. MI-THAITNEAMHNACH
5. FIOR MI-THAITNEAMHACH

❒ 70

C. 21 An gceapann tu gur dtaitheodh no dtaitneodh se leat a bheith ag ol alcol ?
(Cuir ciorcal timpeall freagra amhain)

1. TAITHNIONN SE GO MOR LIOM
2. TAITHNIONN SE LIOM
3. NILIM CINNTE
4. NI THAITNIONN SE BEAGAN LIOM
5. NI THAITHNIONN SE GO MOR LIOM

❒ 71

C.22 An bhfuair tu aon oideachas ariamh faoi alcol ? (Cuir ciorcal timpeall freagra amhain)

1. FUAIR
2. NI BHFUAIR

❒ 72

C. 23 Da mbeadh eolas, comhairle no cabhair uait i leith alcol, ce air a gcuirfeadh tu ceist ?
(Cuir ciorcal ar an meid ata oiriunach)

1. DO THUISTI
2. DO CHAIRDE
3. DO MHUINTEOIRI
4. DO DHOCHTUR CLAINNE
5. DAOINE EILE (Ainmnigh ce h-iad) _____

❒ 73
❒ 74
❒ 75
❒ 76
❒ 77

C. 24 Ma olann tu alcol, an gceapann tu gur cheart duit gearradh siar ar an mheid a olann tu ?
(Ciur ciorcal timpeall freagra amhain)

1. NI OLAIM
2. BA CHEART
3. NIOR CHEART
4. NIL A FHIOS AGAM

❒ 78

NA SCRIOBH ANSEO

Anois ba mhaith linn cupla ceist a chuir ort faoi drugai. Mas feidir leat iad a fhreagairt go h-ionraic. Ni thaispeanfar do cheistiuchan le do mhuinteoiro, tuisti, na l`einne eile.

C.25 Ar usaid tu ariamh na substainti a leannas le bheith "high" ?
(Ciorclaigh uimhir amhain i gcoir gach aon druga)

	SEA	NI HEA	
a. CANNABIS (marijuana, pot, hash, grass srl.) ----------	1	2	❒ 79
b. ECSTASY (E`s, Eves, Love Doves, srl) ----------	1	2	❒ 80
c. GLUE OR SOLVENTS (Tippex, peitril, lictear-silteach, srl.) ----------	1	2	❒ 81
d. LSD (Aigead) ----------	1	2	❒ 82
e. AMPHETAMINES (Speed, uppers) ----------	1	2	❒ 83
f. NORENOL (Buzz) ----------	1	2	❒ 84
g. HEROIN (Smack) ----------	1	2	❒ 85
h. BARBITUATES OR TRANQUILLISERS (Valium, Mogadon, downers, srl.) ----------	1	2	❒ 86
i. PSILOCYBIN (Magic Mushrooms) ----------	1	2	❒ 87
j. COCAINE ----------	1	2	❒ 88
k. BUIDEAL CHASACHTA (Benylin, srl) ----------	1	2	❒ 89
l. EILE (Ainmnigh iad) _____			❒ 90

_____

MAS RUD E NAR USAID TU ARIAMH AON CHEANN DE NA DRUGAI THUASLUAITE LE BHEITH "HIGH", TIEGH GO C.28.

C. 26 Cen aois a raibh tu an chead uair a d`usaid tu ceann dena drugai ata luaite le bheith "high ?

❒❒ 91-92

_____ bliana d`aois

NA SCRIOBH ANSEO

C.27 Ce mhead uaire i rith an mhi seo caite ar usaid tu aon dena drugai seo a leannas le bheith "high"
(Ciorclaigh uimhir amhain le h-aghaidh gach aon druga)

	Tada	1-2 Uaire	3-4 Uaire	5-6 Uaire	7-8 Uaire	9-10 Uaire	Nios mo na 10 Uaire	
a. CANNABIS (marijuana, pot, hash, grass srl.) ----------	1	2	3	4	5	6	7	❒ 93
b. ECSTASY (E`s, Eves, Love Doves srl) ----------	1	2	3	4	5	6	7	❒ 94
c. GLUE OR SOLVENTS (Tippex, peitril, lictear-silteach, srl.)	1	2	3	4	5	6	7	❒ 95
d. LSD (Aigead) ----------	1	2	3	4	5	6	7	❒ 96
e. AMPHETAMINES (Speed, uppers)	1	2	3	4	5	6	7	❒ 97
f. NORENOL (Buzz) ----------	1	2	3	4	5	6	7	❒ 98
g. HEROIN (Smack) ----------	1	2	3	4	5	6	7	❒ 99
h. BARBITUATES OR TRAN - QUILLISERS (Valium, downers, srl.)	1	2	3	4	5	6	7	❒ 100
i. PSILOCYBIN (Magic Mushrooms)	1	2	3	4	5	6	7	❒ 101
j. COCAINE ----------	1	2	3	4	5	6	7	❒ 102
k. BUIDEAL CHASACHTA ----------	1	2	3	4	5	6	7	❒ 103
l. EILE (Ainmnigh) _____	1	2	3	4	5	6	7	❒ 104

C.28 Ce mhead uaire an mhi seo chugainn, meas tu a n-usaidfidh tu na drugai a leannas le bheith "high" ? (Ciorclaigh uimhir amhain le h-aghaidh gach aon druga)

	Tada	1-2 Uaire	3-4 Uaire	5-6 Uaire	7-8 Uaire	9-10 Uaire	Nios mo na 10 Uaire	
a. CANNABIS (marijuana, pot, hash, grass srl.) ----------	1	2	3	4	5	6	7	❒ 105
b. ECSTASY (E`s, Eves, Love Doves srl) ----------	1	2	3	4	5	6	7	❒ 106
c. GLUE OR SOLVENTS (Tippex, peitril, lictear-silteach, srl.)	1	2	3	4	5	6	7	❒ 107
d. LSD (Aigead) ----------	1	2	3	4	5	6	7	❒ 108
e. AMPHETAMINES (Speed, uppers)	1	2	3	4	5	6	7	❒ 109
f. NORENOL (Buzz) ----------	1	2	3	4	5	6	7	❒ 110
g. HEROIN (Smack) ----------	1	2	3	4	5	6	7	❒ 111
h. BARBITUATES OR TRAN - QUILLISERS (Valium, downers, srl.)	1	2	3	4	5	6	7	❒ 112
i. PSILOCYBIN (Magic Mushrooms)	1	2	3	4	5	6	7	❒ 113
j. COCAINE ----------	1	2	3	4	5	6	7	❒ 114
k. BUIDEAL CHASACHTA ----------	1	2	3	4	5	6	7	❒ 115
								❒ 116

l. EILE (Ainmnigh)

_____

1	2	3	4	5	6	7

NA SCRIOBH ANSEO

C.29 Timpeall ce chomh minic, meas tu an n-usaideann na daoine seo a leannas drugai le bheith "high" sa mhi ?
(Ciorclaigh uimhir amhain le h-aghaidh gach aon diune)

	Tada	1-2 Uaire	3-4 Uaire	5-6 Uaire	7-8 Uaire	9-10 Uaire	Nios mo na 10 Uaire	
a. Do chara is fear ----------	1	2	3	4	5	6	7	❒ 117
b. An chuid is mo de d`chairde mhor ---	1	2	3	4	5	6	7	❒ 118
c. An chuid is mo de daoine oga ar chomhaois leat ----------	1	2	3	4	5	6	7	❒ 119

C.30 Ce chomh mi-shasta is a bheadh do thuisti no cairde da n-usaidfa drugai le bheith high ?
(Coirclaigh uimhir amhain le h-aghaidh gach aon duine)

	Fior mi-shasta	An mi-shasta	Mi-shasta	Beagann mi-shasta	Ni bheadh siad mi-shasta	
a..Mathair ----------	1	2	3	4	5	❒ 120
b. Athair ----------	1	2	3	4	5	❒ 121
c. Do chara is fear ----------	1	2	3	4	5	❒ 122
d. An chuid eile de d`chairde mhor ---	1	2	3	4	5	❒ 123

C.31 I liosta thios, ta cuid dena rudai a dfheadfai tarlu duit da n-usaidfea drugai le bheith "high"
Cuir in iul an gceapann tu go dtarlodh se duit da mba rud e gur usaid tu drugai le bheith "high"
(Ciorclaigh uimhir amhain le h-aghaidh gach ceann)

Da mba rud e gur usaid me drugai le bheith "high" .....

	Taim lan chinnte	Measaim	Nilim cinnte	Ni doigh liom go dtarlodh se	Taim cinnte nach dtarlodh se	
a. Bheadh mo shlainnte i mbaol----------	1	2	3	4	5	❒ 124
b. Mhothoinn go maith ----------	1	2	3	4	5	❒ 125
c. Bheadh se corraitheach agus eachtruil	1	2	3	4	5	❒ 126
d. Chabhrodh se liom dearmad mo fadhbanna agus triobloidi ----------	1	2	3	4	5	❒ 127
e. Bheinnse i dtriobloid leis na gardai ----	1	2	3	4	5	❒ 128
f. Bheinnse i mbaol bheith i m` "addict" -	1	2	3	4	5	❒ 129
g. Bheadh droch-chail orm ----------	1	2	3	4	5	❒ 130

C. 32 Da mba rud e go raibh tu ag iarraidh drugai a fhail chun bheith "high", ce chomh h-easca is a bheadh se ort iad a fhail ? (Cuir ciorcal timpeall freagra amhain)

1. AN DEACAIR ❒ 131
2. DEACAIR GO LEOR
3. EASCA

NA SCRIOBH ANSEO

C.33 Ma usaideann tu drugai le bheith "high", cen ait a fhaigheann tu an chuid`s mo de do sholathar ? (Cuir ciorcal ar an meid ata oiriunach)

1. NI USAIDIM DRUGAI ❒ 132
2. O CHAIRDE ❒ 133
3. O GHAOLTA ❒ 134
4. O SOLATHRAITHE DRUGAI ❒ 135
5. I DTEACH TABHAIRNE (PUB) ❒ 136
6. SA SCOIL NO TIMPEALL NA SCOILE ❒ 137
7. AG DISCO NO RAVE ❒ 138
8. IONAD SIAMSA ❒ 139
9. I GCAIFE ❒ 140
10. I DTEACH PRIOMHOIDEACH ❒ 141
11. EILE (Ainmnigh cen ait) _____ ❒ 142

C. 34 An bhfuair tu aon oideachas ariamh faoi drugai ? (Cuir ciorcal timpeall freagra amhain)

1. FUAIR ❒ 143
2. NI BHFUAIR
3. NILIM CINNTE

C. 35 O cen ait a bhfuil eolas faighte agat faoi drugai ? ❒ 144
(Cuir ciorcal ar an meid ata oiriunach) ❒ 145

1. OIDEACHAS AR SCOIL NO IONAD TRAENAID ❒ 146
2. O DO THUISTI ❒ 147
3. O DO CHAIRDE ❒ 148
4. O SOLATHRAI DRUGAI ❒ 149
5. LEITE O NUACHTAN NO LEABHAR ❒ 150
6. ON RADIO NO TEILIS
7. EILE (Ainmnigh cen ait) _____

C. 36 Da mba rud e go raibh eolas, chomhairlaitheach, no cabhair uait i leith drugai, ce chuige a rachadh tu ? (Cuir ciorcal ar an meid ata oiriuach) ❒ 151 ❒ 152

1. DO THUISTI ❒ 153
2. DO CHAIRDE ❒ 154
3. DO MHUINTEOIRI ❒ 155
4. DO DHOCHTUIR CLAINNE

5. EILE (Ainmnigh ce h-iad) _____

❒ 156

C. 37 Ma usaideann tu drugai le bheith "high" ar mhaith leat eolas, comhairle no cabhair i leith drugai ?
(Cuir ciorcal timpeall freagra amhain)

1. NI USAIDIM DRUGAI

2. BA MHAITH

3. NIOR MHAITH

NA SCRIOBH ANSEO

C. 38 An gceapann tu go mbeadh se taitneamhach no mi-thaitneamhach drugai a usaid le bheith "high" ?
(Cuir ciorcal timpeall freagra amhain)

1. FIOR THAITNEAMHACH

2. TAITNEAMHACH

3. NILIM CINNTE ❒ 157

4. MI-THAITNEAMHACH

5. FIOR MI-THAITNEAMHACH

C. 39 An gceapann tu go dtaithneodh no nach dtaitneodh se leat a bheith ag usaid drugai le bheith "high" ?
(Cuir ciorcal timpeall freagra amhain)

1. TAITHNIONN SE GO MOR LIOM

2. TAITHNIONN SE LIOM

3. NILIM CINNTE ❒ 158

4. NI THAITHNIONN SE BEAGAN LIOM

5. NI THAITHNIONN SE GO MOR LIOM

C. 40 Anois, ta liosta de rudai a dheanann daoine oga airithe an-mhinic agus daoine oga eile, ni dheanann siad ar chor ar bith. Le h-aghaidh gach ceann cur in iuil ce chomh annamh ..... minic ata na rudai seo deanta agatsa (Ciorclaigh uimhir amhain le h-aghaidh gach aon raiteas)

Ce chomh minic .....

	Ariamh	Uair no dho	Cupla uair	Minic go leor	An mhinic	
a. A lig tu mallacht no eascaine ----------	1	2	3	4	5	❒ 159
b. A d`inis tu breag le muinteoir ----------	1	2	3	4	5	❒ 160
c. A d`inis tu breag le do thuisti ----------	1	2	3	4	5	❒ 161
d. A dhein tu dochar d`aon treallamh daoine eile ----------	1	2	3	4	5	❒ 162
e. A thog tu rudai nar bhain leath --------	1	2	3	4	5	❒ 163

C.41 Go ginearlta, cen chaoi a bhfuil ag eiri leat ar scoil no do chursa traenal i gcomparaid le mic linn eile i do rang no grupa ? (Cuir ciorcal timpeall freagra amhain)

1. SA GHRUPA`S FEARR

2. TAR AN MHEAIN

3. BEAGAN THAR AN MHEAIN ❒ 164

4. MEANACH

5. FAOIN MHEAIN

6. PIOSA MHAITH FAOIN MHEAIN

C. 42 Ce chomh tabhachtach is ata se duit dul chun chinn a dheanamh ar scoil no ar an gcursa traenala ?
(Cuir ciorcal timpeall freagra amhain)

1. AN TABHACHTACH
2. TABHACHTACH ❒ 165
3. NILIM CINNTE
4. BEAGANIN-TABHACHTACH
5. IS BEAG AN TSUIM E

NA SCRIOBH ANSEO

C. 43 Conas a eirionn idir tu fein agus do thuisti no cairde de ghnath ? (Ciorclaigh uimhir amhain le h-aghaidh gach aon duine)

	An mhaith	Maith	Nilim cinnte	Go dona	Go h-uafasach	
a. Mathair ----------	1	2	3	4	5	❒ 166
b. Athair ----------	1	2	3	4	5	❒ 167
c. Do chara is fearr ----------	1	2	3	4	5	❒ 168
d. An chuid eile de d`chairde mhor	1	2	3	4	5	❒ 169

C. 44 Ce chomh tabhachtach`s ata se duit bheith ag eiri go maith le do thuisti no cairde ?
(Ciorclaigh uimhir amhain le h-aghaidh gach aon duine)

	Fior tabhachtach	An tabhachtach	Tabhachtach	Beaganin tabhachtach	Is beag an tsuim e	
a. Mathair ----------	1	2	3	4	5	❒ 170
b. Athair ------ ----------	1	2	3	4	5	❒ 171
c. Do chara is fearr ----------	1	2	3	4	5	❒ 172
d. An chuid eile de d`chairde mhor ----------	1	2	3	4	5	❒ 173

C. 45 Ce chomh tabhachtach`s ata do chreideamh duit i do ghnathshaol ? (Cuir ciorcal timpeall freagra amhain)

1. AN TABHACHTACH
2. TABHACHTACH ❒ 174
3. NILIM CINNTE
4. BEAGANIN-THABHACHTACH
5. IS BEAG AN TSUIN E

C. 46 Ce chomh minic`s a dteann tu ag gui leat fein ? (Cuir ciorcal timpeall freagra amhain)

1. ARIAMH
2. NIOS LU NA UAIR SA TSEACHTAIN ❒ 175
3. CUPLA UAIR SA TSEACHTAIN
4. CUPLA UAIR SA TSEACHTAIN
5. UAIR GACH LA
6. NIOS MO NA UAIR AMHAIN GACH LA

Ar deire, ba mhaith linn cupla ceist a chuir ort, ar mhaithe le sonrai

C. 47 Cen gneas thu? 1. FIR 2. BAINEANN ❒ 176

C. 48 Cen aois thu ? _____ bliana d`aois ❒❒ 177-178

NA SCRIOBH ANSEO

C. 49 Cen post ata ag d`athair ? (muna bhfuil se beo, cen post a bhi aige sula bhfuair se bas ?) ❒ 179

_____

_____

Mas rud e nach bhfuil d`athair fostaithe anois, cen saghas obair a rinne se nuair a bhi post aige ?

_____

_____

Mas feirmeoir e, ce mhead acra talun ata aige ? _____

C. 50 An bhfuil post ag do mhathar taobh amuigh d`obair ti agus togail clainne ?
(Ciorclaigh uimhir amhain. Ma fhreagaionn tu "sea", lion isteach C. 50a

1. SEA 2. NI HEA ❒ 180

C. 50a Cen post ata ag do mhathar ? _____ ❒ 181

_____

C.51 Cen ait a bhfuil conai ort ? (Cuir ciorcal timpeall freagra amhain)

1. I GCATHAR
2. I MBAILE MOR
3. I SRAIDBHAILE
4. FAOIN DTUATH

❒ 182

C. 52 Cen chontae a bhfuil conai ort ? (Cuir ciorcal timpeall freagra amhain)

1. GAILLIMH
2. MAIGH EO
3. ROSCOMAIN
4. EILE (Ainmnigh) _____

❒ 183

C. 53 An gceapann tu go bhfuil go leor aiseanna caitheamh aimsire i gcoir an aos og ins an ait ina bhfuil tu i do chonai ? (Cuir ciorcal timpeall freagra amhain)

1. TA

2. NIL

3. NILIM CINNTE

❒ 184

C. 54 Cen mean airgead poca a bhionn agat le caitheamh gach seachtain ? _____ punts

❒❒❒ 185-187

GO RAIBH MILE MAITH AGAT AS UCHT DO CHABHAIR