



**SUBSTANCE
USE**
IN SCHOOL GOING
TEENAGERS

IN
**Co. KILDARE &
West WICKLOW**



**EASTERN
HEALTH
BOARD**

SORD
SLAINNE
AN OIBHE

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**EASTERN
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BORD
SLAINTE
AN OIRTHIR



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INDEX

Introduction	3
Literature Review	4 - 6
Background and Methodology	7 - 9
Results	10
Discussion	20 - 25
Summary of Findings	26
Conclusion and Recommendations	27 - 28
References	29 – 31

DRUG USE IN ADOLESCENCE

Adolescence is a period of significant change. Children practice adult roles through play. During adolescence the practice of roles shifts from play to actual behaviour. A process of separation from parents occurs with a concomitant increase in reliance on peers for validation and direction (1). It is crucial for teenagers that they are accepted by their friends; rejection can be devastating (2). Conformity to peers is at its peak in early adolescence; thereafter it declines.

Risk taking increases during adolescence. This often occurs accompanied by a sense of invulnerability (3). Furthermore health habits and behaviours are formed and coping strategies developed (4). It is thus an opportune time to continue to encourage the development of healthy behaviour.

The initiation of substance use has its roots in adolescence (5). Most smokers began by the age of 21; in the U.S 3,000 children a day start using tobacco. (6). Previous research has shown that tobacco use may act as a 'gateway' to alcohol and illicit drug use. (7). Alcohol may also act as an 'introductory' substance leading to other drug use or abuse. (8). Of increasing concern in Ireland is the fact that many heroin users start between the ages of 14 and 16 (9). Although substance abuse tends to begin at a relatively young age, not all adolescents develop substance abuse problems. It would appear that some young people are more susceptible and certain risk factors for involvement in adolescent drug use have been identified. School problems, family conflict, low religious involvement, peer rejection, economic deprivation and most significantly association with drug using peers have all been identified as risk factors for adolescent drug use (10.). Personality characteristics that have been linked to substance use include low assertiveness, low self esteem and external locus of control. (11,12,13,14). In addition adolescent substance users tend to be more alienated from social values (12). While there is no evidence of an 'addictive personality type', adolescents with personality disorders are at increased risk of abusing substances (15). There is some evidence that early conduct problems are significantly associated with subsequent substance use (16).

Genetic influences may contribute to the risk of substance abuse. Some studies (17,18) show an increased risk of alcohol disorders with positive family history. It is generally accepted that genes interact with environmental influences, so that genetic vulnerabilities exist to certain environmental factors (19).

LITERATURE REVIEW

There have been a number of studies evaluating drug use in adolescence in the United States and Europe, including Britain and Ireland. The evidence suggests that drug use at this stage of development, instead of being deviant, is very much the norm. Furthermore the prevalence of drug use in young people has increased substantially since the 1970's.

THE E.S.P.A.D. SURVEY

A large scale survey was conducted in 26 countries including Ireland in 1997 (20). The European School Survey Project on Alcohol and other Drugs (ESPAD) evaluated prevalence, knowledge of and perceived availability of substances. In Ireland a national sample of 1,849 fifth year students participated. Most students in all countries had drunk alcohol at least once in their lives. The proportion of students who drank 40 times or more varied. The highest proportions were in Denmark (49%), U.K (42%) and Ireland (34%). 23% of Irish students reported 'binge drinking' (drinking more than five drinks in a row). This was the highest figure for binge drinking.

18% of Irish students reported smoking daily which placed Ireland in the top four countries for numbers of 15-16 year olds smoking daily.

The lifetime prevalence of cannabis, amphetamines, LSD, crack cocaine, ecstasy and heroin was assessed. The highest rates were found in Ireland (37%) and the UK (42%). The lowest figures were for Malta (2%) and Lithuania (3%).

The most frequently used illicit drug is cannabis; the highest proportions were found in the UK (41%), Ireland (37%) and the Czech Republic (22%).

The ESPAD survey found higher rates of use for all substances among Irish pupils when compared to 25 other European countries; this was particularly the case with illicit drug use.

RESEARCH IN THE UK

The use of illicit drugs by young people increased significantly in the U.K. between 1969 and 1994. The proportion of 14-15 year olds who knew someone taking drugs increased four fold from 15% in 1969 to 65% in 1994. The proportion that had been offered drugs increased from 5% in 1969 to 45% in 1994. Between 1989 and 1994 there was a doubling in the proportion of students who knew someone taking drugs and who had been offered drugs; the widespread availability and use of ecstasy accounted for a large proportion of this increase. (21). A study in the north-west of England found a lifetime prevalence of illicit drug use among 16 year olds to be 51% (22). Also in the Northwest, a three year longitudinal study (1991-1994) of eight secondary schools suggested that drug use had become normal among young people. Lifetime prevalence of experimentation with drugs was 51% (23).

In 1995, as a part of the European Pompidou survey, a self-report study of the patterns of illicit drug use was conducted among a sample of 15 and 16 year old students in Britain and Northern Ireland (24). 42.3% of the 7,722 students had used illicit drugs at some time, mainly cannabis, which demonstrated a significant increase on the previous 5 years. Lifetime prevalence for cannabis was 43% in boys and 38% in girls. The use of ecstasy was reported by 9.2% of boys and 7.3% of girls. Levels of drug use were highest in Scotland. Differences for males and females were not statistically significant. Lifetime prevalence for cannabis use was 45%, LSD 24%, amphetamines 18% and ecstasy 5%.

STUDIES IN DUBLIN

Grube and Morgan (1986) reported lifetime prevalence figures for smoking, drug and alcohol use in 13-17 year old post primary school students in Dublin (25). 67% of students had smoked, 65% had taken alcohol and 22% had used illicit drugs. 24.4% were regular smokers, 36% were regular drinkers and 8.4% were regular users of illicit drugs. The prevalence of all substance use increased with age.

In 1996 a survey of 15-17 year old students (26) attending transition and 5th year classes in North Dublin demonstrated an alarmingly high lifetime prevalence of illicit drug use - 62.5%. The prevalence was significantly higher in males and was increased in older students. Drugs surveyed were cannabis, amphetamines, LSD and ecstasy. Almost one third reported current use of at least one of the drugs surveyed.

In 1998 a study in Dublin (27) was conducted as part of a European collaborative project - 'Drug Dependence: Risk and Monitoring' (DDRAM). This was conducted in Dublin, Newcastle upon Tyne, Groningen, Rome and Bremen. The project attempted to monitor trends of substance use in young people, to compare trends among the five cities and to establish a data base concerning 10 to 12 year olds as the initial stage of a longitudinal study of risk and protective factors associated with risk taking behaviour. The following figures refer to the Irish situation.

This study revealed a lifetime prevalence of cigarette smoking of 77%. 16% of pupils reported daily smoking. 16% of students reported regular drinking.

The lifetime prevalence of any illicit substance was just less than 33%; cannabis was most commonly used. The positive effects of alcohol, tobacco and cannabis were cited by a higher proportion of students than the negative effects. Alcohol was seen in the most favourable light followed closely by cannabis and tobacco. The study found high rates of alcohol, solvent, and illicit substance use in Dublin in comparison to the other cities evaluated. Correspondingly the availability of illegal substances was highest in Dublin.

RESEARCH OUTSIDE DUBLIN

In 1998 an evaluation of drug and alcohol use in almost 4,000 post primary school students was carried out in Limerick City, Co. Clare and Co. Limerick (28). High rates of exposure to, and current cigarette smoking were identified. This was also true for alcohol. The lifetime prevalence of cigarette smoking was 58%. 28.5% of the sample were current smokers. The lifetime prevalence of alcohol use was 81.5%. 67.8% of the students reported current drinking of alcohol. Almost 30% of the sample had used at least one illicit drug in their lifetime. Cannabis was the most commonly used drug, while 3.3% of the sample reported ever having used ecstasy. For all drugs surveyed, the perception of danger was inversely related to drug use.

In 1995 Kiernan (29) surveyed 2,787 adolescents from Galway City, County Mayo and County Roscommon. The lifetime prevalence of cigarette smoking was 67.3%. Cigarette smoking increased with age with 42% of 18 year olds reporting regular smoking. 67% of the sample reported ever drinking alcohol and the prevalence increased substantially from 24.8% at 13 years to 85.6% at 18 years.

The lifetime prevalence for illicit drug use was lower than the urban studies, with 25% of the sample reporting ever having used any of 11 substances. The drug with the highest prevalence was cannabis, with figures of 15.5% for lifetime prevalence and 8.8% for current use. The greatest increase in lifetime prevalence of drug use occurred between 13 and 14 years of age.

In 1996 Keenaghan and Denyer (30) described drug misuse in young people using qualitative methodology. Participants were aged 12 - 22 years. Alcohol and cigarettes were both widely used. Substances were regarded as being part of the leisure scene, and therefore it appeared inevitable that use of substances would persist unless alternative means of relaxing or 'getting high' were sought. However, the participants expressed fears about becoming addicted and wished to avail of relevant educational activities.

There is no doubt that many young people have experience of using cigarettes alcohol and other substances, especially cannabis. In many instances positive attitudes exist to drugs (27). It is important to monitor trends of drug use in all areas of Ireland, so that appropriate intervention and treatment strategies can be developed and implemented. This study evaluates such trends in a large sample of school going teenagers residing in Kildare and West Wicklow, counties which neighbour Dublin city and county.

BACKGROUND

In December 1995 Community Care Staff initiated a survey to obtain an indication of illegal drug use and related service needs in Co. Kildare. At this time it was not possible to carry out an in-depth epidemiological survey. Instead, information was requested from relevant agencies, professionals and service providers. The outcome of this internal report was such that a recommendation was made for an in-depth, population-based, epidemiological study to obtain a more accurate representation of the extent and type of drug use in the county.

As a response to this, Community Care Staff and Community Addiction Services of the Eastern Health Board in this region came together jointly to follow up on this recommendation. A shift in services towards the development of the impending Eastern Regional Health Authority has since brought West Wicklow into the catchment area of Community Addiction Services. Therefore, it was determined to include both County Kildare and West Wicklow in the survey.

The Eastern Health Board has the largest population (1,295,939) of the eight regional health boards of Ireland. Co. Kildare and West Wicklow, which comprise a mix of rural and urban areas, account for 147,581 of that population. Within this population exists a large proportion of young people. In the period 1997/1998 the population growth showed a 6-8% increase in birth rate. Current social and economic trends would indicate that the proximity of Co. Kildare and West Wicklow to the greater Dublin region has also had implications for population growth. Reflecting this, there has been an increasing number of young people presenting to services with problems relating to their drug use. Alongside this, has been a growth in the demand for information from parents, schools and community groups on aspects of drug use which would equip them to intervene at an early stage in detecting signs of problematic drug use in a young person.

Anecdotal evidence abounds regarding the use of substances among young people in this region. This report aims to present epidemiological evidence on current drug use of young people in the region, which would inform the strategic development of services therein.

AIM

The overall aim of the survey was to provide data on the extent and type of drug use, both legal and illegal, in the secondary school-going population in Co. Kildare and West Wicklow.

OBJECTIVES

- ➔ to provide quantitative, research based, evidence on drug use in pupils aged 13-18 years in this region.
- ➔ to inform strategic planning of Eastern Health Board services in this region.
- ➔ to inform the work of all statutory, voluntary and community agencies involved in youth related services, in this region.
- ➔ to obtain information which can be used to influence schools, and other agencies, in planning for the provision of health education for young people.
- ➔ to provide base line data which will inform further surveys in this region.

METHODOLOGY

SAMPLE

A sample of 1,838 pupils from second, transition and fifth year classes in secondary schools in Co. Kildare and West Wicklow was obtained. Transition year students were included to ascertain if any differences in drug taking behaviour might be indicative of time spent outside the 'regular' school routine. All 31 schools in the region were invited to participate. Schools were stratified by county (Kildare and West Wicklow) and by school type (Secondary or Vocational/Comprehensive). A gender balance was also aimed for.

PROCEDURE

Details of the survey were sent to the principal of each school with an invitation to participate. Schools that agreed to partake in the survey were asked to return the class names and an approximation of class pupil numbers. Classes were randomly selected thus producing a cluster sample of pupils in a given class. Schools were issued with further information about the survey, and a draft consent form, for parents/guardians of the children from the selected classes.

A pilot survey was conducted in a class of each of second, transition and fifth year. The pilot school was randomly picked. This piloting of the questionnaire resulted in minor modifications, mainly around clarity of particular questions.

Trained fieldwork staff, from Community Addiction Services, contacted each school and arranged to carry out the survey at the schools convenience. Pupils completed the questionnaire in the presence of the field workers. The need for such a survey was explained to the pupils who were given assurance of anonymity and confidentiality. Having completed the questionnaire each pupil placed his or her questionnaire into an individually sealed envelope. This was then placed in another sealed envelope and taken away by the fieldworkers.

RESPONSE RATES

There was a very positive response from schools in the region. Of 31 invited schools, 29 agreed to participate. Only two schools declined to participate, citing the fact they had recently taken part in a similar survey. There were no incidents of individual pupils refusing to participate.

RESEARCH INSTRUMENT

A self-report questionnaire was used. This was based on a questionnaire used by Dr. Evan Murphy in a study of drug use in 15-17 year old pupils in North Dublin schools (26). Modifications were made to this questionnaire to obtain broader information on drug use in Co. Kildare and West Wicklow. As mentioned in the procedure, the revised questionnaire was piloted in only one school, as it was felt there was rigorous piloting of the original.

ANALYSIS

Data was coded to facilitate analysis which was carried out using SPSS software package. The chi-squared test was used to compare frequencies. Where significance tests were performed, p values are given, a 'p value' of $< \text{ or } = 0.05$ denotes statistical significance at the 95% level.

Values are given in percentages. Actual numbers follow in brackets.

RESULTS

The mean age was 14.7 years, ranging from 13-18 years. 94% (1,787) were between 13 and 16. Both sexes were well represented. 53% (970) were male and 47% (863) were female.

Most students were either in 2nd year - 46% (846) or 5th year - 40% (731). 14% (255) were in transition year. 30% (216) of 5th year students had completed transition year.

Most students - 92% (1,692) were from the Co Kildare area. 8% (146) were from West Wicklow. 63% (1,157) were in Secondary schools. 37% (681) came from Vocational schools.

1. LIFETIME PREVALENCE OF SUBSTANCES

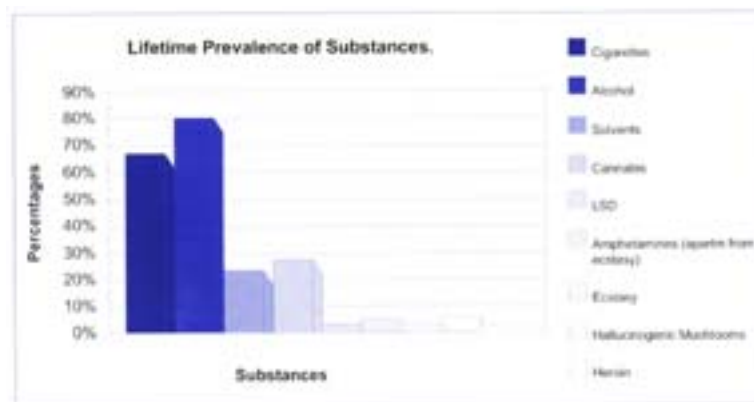
Table 1 shows the percentage of students reporting ever having taken at least one of the substances listed. High rates exist for cigarettes, alcohol, solvents, and cannabis. Only 14.4% of students had never taken any substance.

LIFETIME PREVALENCE OF SUBSTANCES

TABLE 1

Substance	Lifetime Prevalence	Sample Quantity
Cigarettes	67%	(1,223)
Alcohol	81%	(1,488)
Solvents	23%	(417)
Cannabis	27.5%	(506)
LSD	2.3%	(43)
Amphetamines (apart from ecstasy)	4.1%	(76)
Ecstasy	2.8%	(52)
Hallucinogenic Mushrooms	5%	(94)
Heroin	1.5%	(27)

FIGURE 1



Statistical comparisons were then made to ascertain if the lifetime prevalence of use of any of the substances were higher: 1) in either of the geographical areas evaluated, 2) in any of the school types (i.e. Vocational or secondary), 3) in certain age groups, 4) in males or females, 5) in certain school years.

2. GEOGRAPHIC AREA

TABLE 2

Substance	Lifetime Prevalence Co. Kildare	Lifetime Prevalence West Wicklow
* Cigarettes	65.9%	75.9%
* Cannabis	27.0%	35.2%
* LSD	2.1%	4.8%
* Ecstasy	2.5%	6.5%

The asterisk indicates statistically significant results.

The lifetime prevalence rates are significantly higher in West Wicklow for cigarettes, cannabis, LSD and ecstasy. Patterns of age and gender (which could influence this difference) were similar in both counties. No significant differences were found in the prevalence of use of other substances between the regions. (Table 2).

3. COMPARISON OF LIFETIME PREVALENCE OF SUBSTANCE USE IN SCHOOL TYPES

The lifetime prevalence of heroin was higher in Vocational schools, 2.2% (15 students), than in secondary schools, 1% (11 students). This difference is statistically significant, ($p=.04$). (No other significant difference in lifetime prevalence of any other substance was discovered between the school types).

4. LIFETIME PREVALENCE OF SUBSTANCE USE IN DIFFERENT AGE GROUPS

Comparisons were made between students aged less than 16 (13-15 year olds) and those 16 and over. Higher proportions of those students over the age of 16 had used cigarettes, alcohol, cannabis, LSD and amphetamines. The differences are statistically significant. There was no significant difference in lifetime prevalence of the other substances evaluated in older or younger age groups. (Table 3, fig. 3).

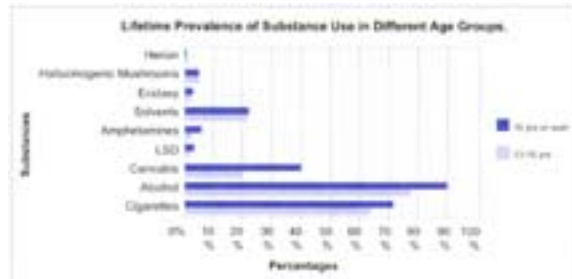
LIFETIME PREVALENCE OF SUBSTANCE USE IN DIFFERENT AGE GROUPS

TABLE 3

Substance	13-15 Yrs	16 Yrs or Over
* Cigarettes	64%	72%
* Alcohol	76%	90%
* Cannabis	20%	40%
* LSD	1.8%	3.4%
* Amphetamines	2.8	6.4%
Solvents	22.5%	22.7%
Ecstasy	2.2%	3.7%
Hallucinogenic Mushrooms	5.3%	5.1%
Heroin	1.6%	1.3%

The asterisk indicates statistically significant findings. (p < 0.05)

FIGURE 3



5. COMPARISONS WERE MADE FOR LIFETIME PREVALENCE BETWEEN GENDERS

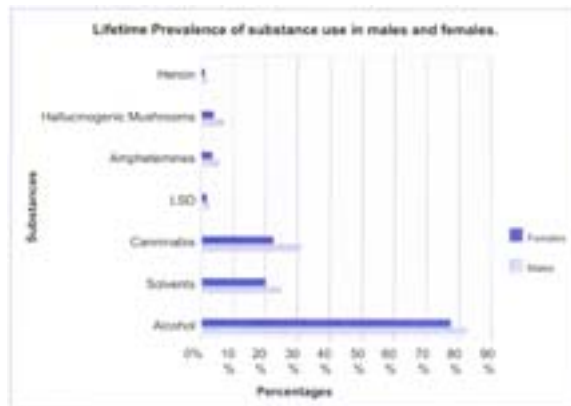
Higher rates exist in males for all drugs apart from cigarettes. Statistically significant differences exist for all drugs apart from ecstasy and heroin. (Table 4, fig. 4).

TABLE 4

Substance	Males	Females
Cigarettes	65.3%	68.2%
* Alcohol	84.4%	77.5%
* Solvents	25.4%	19.9%
* Cannabis	31.7%	23.1%
* LSD	2.9%	1.5%
* Amphetamines	5.4%	2.8%
* Hallucinogenic Mushrooms	6.5%	3.5%
Ecstasy	3.3%	2.1%
Heroin	1.9%	0.8%

Statistically significant differences are marked with an asterisk.

FIGURE 4



6. LIFETIME PREVALENCE RELATED TO SCHOOL YEAR

Comparisons were made: (1) between 5th and transition year students and (2) between transition year and 2nd year students. Significantly higher rates of exposure occurred in 5th year students for all drugs except solvents. (Table 5a).

**SCHOOL YEAR -
LIFETIME PREVALENCE OF SUBSTANCE**

TABLE 5 (a)

Substance	5th Year	Transition Year
* Cigarettes	72%	66.3%
* Alcohol	90.9%	85.5%
* Cannabis	43.1%	22.4%
* Amphetamines	7.4%	2.4%
* Ecstasy	4.8%	0.8%
* Hallucinogenic Mushrooms	7.7%	1.2%
Solvents	24%	21.2%
* Heroin	1.5%	0

Significant differences are marked with an asterisk.

Significantly higher rates were found in transition year students for alcohol and cannabis. Significantly higher rates for heroin and hallucinogenic mushrooms were found in second year students. Other differences not statistically significant. (Table 5b).

**SCHOOL YEAR -
LIFETIME PREVALENCE OF SUBSTANCE**

TABLE 5 (b)

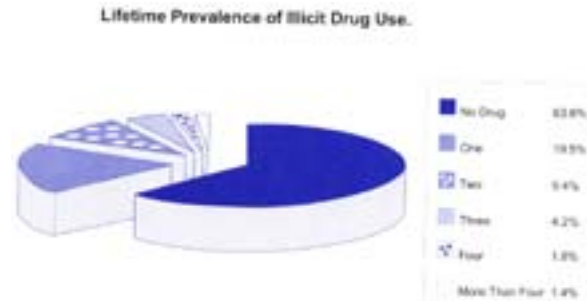
Substance	Transition year	2nd year
Cigarettes	66.3%	62.4%
* Alcohol	85.5%	71.6%
* Cannabis	22.4%	15.9%
Amphetamines	2.4%	1.9%
Ecstasy	0.8%	1.8%
* Hallucinogenic Mushrooms	1.2%	4.1%
Solvents	21.2%	22%
* Heroin	0%	1.9%

Significant differences are marked with an asterisk.

7. POLY SUBSTANCE USE

In relation to the use of illicit drugs, that is, drugs other than nicotine or alcohol, 64% had not used any illicit drug; 20% had tried one drug while 9.4% had tried two drugs. The remainder (6.6%) had used three or more drugs. (Fig. 6).

FIGURE 6



8. LIFETIME PREVALENCE OF ILLICIT DRUG USE AND ITS RELATIONSHIP TO OTHER FACTORS

The data was analysed to ascertain if there were any differences in lifetime prevalence of illicit drug use related to, age, gender, county, school type, school year and completion of transition year.

No significant association was found between lifetime prevalence of any illicit drug and county, school type or having completed transition year.

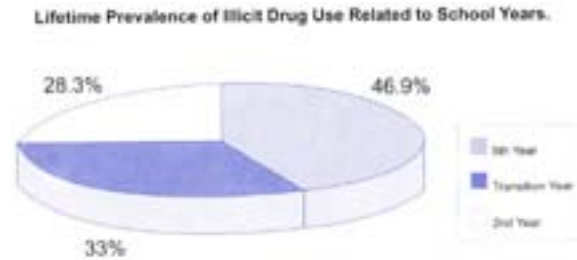
Significantly more males (41%) than females (31%) have experimented with illegal drugs. This is a statistically significant difference. (Fig. 7).

FIGURE 7



Significantly more 5th year students (46.9%) have experimented compared to transition year (33%) or 2nd year students (28.3%), ($p < 0.05$) (Fig. 8).

FIGURE 8



Significantly more students who are 16 years and older (44.8%), have had some exposure to drugs, than those who are aged 13-15 (31.8%) ($p < 0.05$).

In the light of previous findings the data was analysed to see if there was any association between: 1) cigarette smoking, 2) use of alcohol and 3) cannabis intake and the use of other substance

9. CIGARETTE SMOKING AND OTHER SUBSTANCES

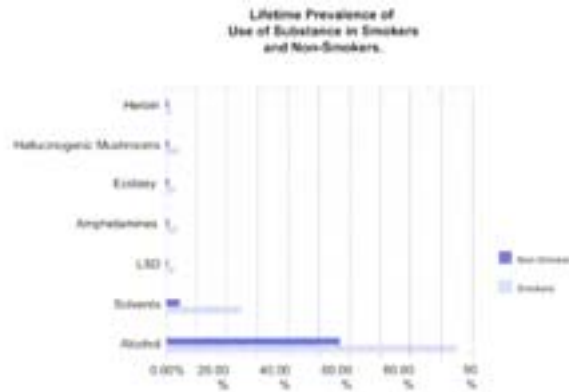
The data was analysed to see if there was any association between cigarette smoking and the use of other substances. Analysis revealed that a higher number of those who had tried cigarettes (compared to those who had not) had also tried other substances. All differences are statistically significant. (Table 9, Fig. 9).

LIFETIME PREVALENCE OF USE OF SUBSTANCE IN “SMOKERS” AND “NON-SMOKERS”

TABLE 9

	“Smokers”	“Non-Smokers”
Alcohol	93.7%	56.1%
Solvents	30.3%	7.5%
LSD	3.0%	1.0%
Amphetamines	5.6%	1.3%
Ecstasy	3.8%	0.8%
Hallucinogenic Mushrooms	7.3%	0.8%
Heroin	1.9%	0.7%
Cannabis	39.4%	3.9%

FIGURE 9



10. LIFETIME PREVALENCE OF SUBSTANCE USE IN THOSE WHO HAD TRIED ALCOHOL AND IN THOSE WHO HAVE NOT.

All differences are statistically significant. (Table 10).

TABLE 10

	Alcohol Exposed	Alcohol Naïve
Cigarettes	77%	23%
Solvents	27.1%	4.1%
Cannabis	33.7%	1.4%
LSD	2.7%	0.9%
Amphetamines	5.0%	0.3%
Ecstasy	3.4%	0.3%
Magic Mushrooms	6.3%	0.3%
Heroin	1.7%	0.3%

11. CANNABIS USE AND THE RISK OF USE OF OTHER SUBSTANCES

Lifetime prevalence of other substance use in cannabis and non-cannabis exposed students. All differences are statistically significant. (Table 11).

TABLE 11

	Cannabis exposed	Not exposed to Cannabis
Cigarettes	95.3%	55.8%
Alcohol	99%	74.4%
Solvents	52%	11.5%
LSD	6.9%	0.6%
Amphetamines	14%	0.4%
Ecstasy	9.1%	0.5%
Hallucinogenic Mushrooms	16.8%	0.7%
Heroin	4.2%	0.5%

EXAMINATION OF PATTERNS OF USE OF ILLICIT DRUGS

CANNABIS

27.5% (506) of pupils had tried cannabis at least once. The mean age of first use was 13.7 years. Almost 50% (251) of those who had ever tried the drug continue to use it. Pupils who still use cannabis report starting at a younger age (13.5) than those who do not (14 years).

SOLVENTS

23% (417) had used solvents. The mean age of starting solvent use is 12.8 years. 20.4% (93 cases) of those who ever used solvents report current use. A higher proportion of males (23.7%) report persistent solvent use than females (16%), ($p < 0.05$).

LSD

The lifetime prevalence of LSD use was 2.3% (43 pupils). 38% (18) of these report current use. The mean age of starting LSD use is 13.4 years.

AMPHETAMINES

The lifetime prevalence of amphetamine use is 4% (76). The mean age of first use is 14.6 years. 40.7% (33) of these report current use of amphetamines.

A significantly higher proportion of pupils in Vocational schools (57%) report current use than pupils in Secondary schools (31.4%). ($p < 0.05$).

ECSTASY

The lifetime prevalence was 2.8% (52). The mean age of first use is 14 years. 45.6% (23) report current use. Students in Vocational schools report younger age of first use of ecstasy (13 years) than those in Secondary schools (15 years).

A higher proportion of Vocational students (61%) report current use than Secondary school students (31%), [$p < 0.05$].

HALLUCINOGENIC MUSHROOMS

The lifetime prevalence of 'magic' mushrooms use is 5% (94). 37% (34) of these report current use. The mean age of first use is 13.6 years. More males (45%) than females (20%) report persistent use, [$p < 0.05$].

HEROIN

The lifetime prevalence of heroin use is 1.5%. This is significantly higher in 5th year and 2nd year students compared to transition year. 51.5% (13) report current use. The mean age of first use is 13 years. The mean age of first use of heroin was younger in the West Wicklow area (11.2 years) than in Kildare (13.6 years). Students in Vocational schools who used heroin started younger (12 years) than those in Secondary schools (14.5 years).

DISCUSSION

Trends and patterns of substance use in a large (1,838) sample of school going teenagers are presented in this report. A broad age range is represented (13-18 year olds) and those sampled attend 3 different school years, including the transition year. The students reside in two distinct regions (Kildare and West Wicklow) neighbouring Dublin city and county; two different school types are represented.

The publication of these results occurs in the context of 3 similar, relatively recent large-scale studies in Ireland (26, 27, 28), (two of which were Dublin based) and a larger international report comparing patterns of drug use in young people in 26 countries, including Ireland (20). Evidence of high rates of exposure to certain substances in Ireland demonstrated in this report are consistent with the findings of the other studies, (85.6% of students used at least one drug at the time of the study). The principal drugs involved are, alcohol, cigarettes, cannabis and solvents. Exposure to other substances is less prevalent.

It is noteworthy that between 20-50% of those who had ever tried an illicit drug report current use of that drug. Some regional differences were noted. Higher rates of exposure to certain drugs (cigarettes, cannabis, LSD, amphetamines and ecstasy) occurred in the West Wicklow area; the mean duration of cannabis use was longer in this region and heroin exposed students appeared to have had their first experience of this drug at a younger age. The significance of these findings is difficult to evaluate accurately; it must be kept in mind that just 8% of those represented in the study reside in the region. Further research is needed to explore this in more depth.

In some instances, the prevalence of exposure to certain drugs is increased in older students (cigarettes, alcohol, cannabis, LSD, amphetamines). However, in the case of solvents (lifetime prevalence 23%) and other less commonly used drugs (ecstasy, hallucinogenic mushrooms, heroin) the risk of exposure was as great in younger pupils. No excess of drug use was found, by comparison to 5th year students, either in transition year students or in 5th year students who had completed transition year. The risk of having taken any illicit drug is higher in males, a finding reported in other studies (26, 27, 28). Those who have smoked cigarettes or cannabis or had taken alcohol were more likely to have tried other substances than those who have not.

Significantly more Vocational school students persist using ecstasy and amphetamines than students in Secondary schools. Furthermore the mean age of the initiation of heroin use was lower in Vocational school students.

ALCOHOL

This study demonstrates a high (81%) lifetime prevalence of alcohol which is more significant in males and in older students. Similar trends have been reported elsewhere (28). However, high proportions of females (77.5%) and younger (13-15 year olds) students (76%) had nevertheless taken alcohol at least once.

While high numbers of students who had tried alcohol had experimented with other substances, the number of non-drinkers who had done so was small. These findings occur in the context of earlier relevant research. Brinkley's study (27) demonstrated that many young people regard alcohol in a positive light and tend to feel that the advantages of drinking outweigh any risk. Up to 68% of students in another region reported regular drinking patterns, often occurring in the context of socialising (28).

High levels of alcohol use among young people in Ireland relative to other countries have been reported (20). A recent investigation of patterns of substance use among a large sample of 15-44 year olds in the south of Ireland (31) revealed that 44% of people under 18 years drank alcohol regularly, 23% of men drank more than the recommended amount and that 60% of the sample regarded alcohol to be less dangerous than illicit drugs. Positive attitudes to alcohol and an endorsement of its importance in social situations have been expressed in a qualitative survey (30).

Young people who start drinking alcohol in early teens are at risk of misusing alcohol and of engaging in other problem behaviours in later years (32). Peer influences affect the risk of initial use of alcohol and in addition to intra-familial dysfunction, may predict subsequent levels of use (33). The role of alcohol as a 'gateway' drug to other substances has been well established (34).

In summary, initiating alcohol use at a young age predisposes certain individuals to subsequent problem drinking and the use of alcohol is strongly associated with that of other substances. Despite these risks many young people enjoy and engage in regular drinking. We live in a culture in which alcohol is socially acceptable and in many instances drunkenness occurs in the context of a 'night out'. It is therefore unrealistic to expect that young people are not going to drink alcohol. Many individuals drink moderately without adverse consequence. There are, however, certain predisposed individuals who engage in problem drinking with disastrous interpersonal and economic consequences.

Preventative programmes need to be realistic and to be targeted at all age groups, including children approaching adolescence. Such programmes should educate individuals about the risks of over-indulgence, particularly at a young age. It would seem relevant to explore the concept of a 'good night out' and whether intoxication with alcohol is, or is not, an intrinsic component of pleasurable socialising. Discussion should also take place about the risks of other substance use occurring in the context of alcohol use.

CIGARETTE SMOKING

67% of students in the sample reported ever having smoked tobacco. Other studies have demonstrated high levels of tobacco use and that significantly more females than males engaged in smoking behaviour (20, 27, 28). In this study, although the lifetime prevalence of smoking among females (68.2%) was higher than that among males (65.3%), the difference is not statistically significant. Similar to alcohol, smoking rates are significantly higher in students aged 16 years and over than in younger students (13-15 year olds).

Nevertheless, 64% of younger pupils had smoked at some time. Significantly more cigarette smokers, than non-smokers had tried another substance. The association between cigarette smoking and other substance use was also identified in Gleeson's study (28). In that study cigarette smokers were twice as likely to have used another substance. A study of substance use patterns in 1,709 school going students by Lewinsohn (35) demonstrated that having ever been a smoker in adolescence is associated with the risk of subsequent alcohol, cannabis and opiate addiction. This was particularly the case for young cigarette smokers. Furthermore, smoking in adolescence is associated with deviant behaviour.

Young people may smoke because of peer influences and because they wish to experiment (27, 28). A history of economic deprivation and of smoking within the family is also associated with starting smoking (36). Having started smoking at a young age (i.e., 11 years or younger) has been recognised as being predictive of subsequent smoking behaviour (37).

The health risks of cigarette smoking have been well publicised. The risks of carcinoma and ischaemic heart disease, illnesses that account for high levels of morbidity and mortality in Ireland are grossly elevated in smokers. Apart from the risk to physical health, the association between early smoking and subsequent substance abuse has been established. However, in common with alcohol, many people young and old enjoy smoking, and continue to do so, despite knowledge of the serious health risks. Jackson (31) reported that 37% of men and women aged 15-44 years were current smokers.

Preventative efforts must be aimed at young teenagers and children approaching the teen years. Disadvantaged individuals with a history of smoking in the family should be particularly targeted. It is clearly difficult to prevent a behaviour that is widespread, and similar to alcohol, accepted in many social situations. Education is of crucial importance. Young people need to be aware of the health risks of cigarettes as well as the risk of progression to other drugs. Preventative programmes, which involve parents together with implementing school policies, which restrict smoking, may be effective in reducing smoking behaviour in young people (33).

CANNABIS

In keeping with many studies this report identifies cannabis as the most frequently used illegal drug. 27.5% of the students have tried it at least once. Almost 50% of these (12% of the total) report current cannabis use. Those who start to use cannabis early are more likely to continue to do so, but, persistent use is not associated with other variables. In common with alcohol and cigarettes, cannabis use is significantly associated with exposure to all other drugs.

Reasons given for smoking cannabis in Brinkley's (27) study were for relaxation and pleasure. The drug is most commonly used in social situations. It was also found in their study that many young people regard cannabis positively. Chronic cannabis use may impair academic performance and suppress motivation and concentration. Frequent users of cannabis are more likely to drink alcohol heavily, to experience loss of energy and show a lack of interest in activities. They also complain of problems with school and work (38). In predisposed individuals cannabis may precipitate psychotic reactions (39) and there is evidence that chronic use can cause prevailing short-term memory loss (40).

Cannabis use is widespread, may lead to other drug use and if regular may impair performance. There is insufficient information about the effects of moderate or infrequent drug use. It is unrealistic to expect that young people will stop experimenting with this widely available, though illegal drug. Young people need to be fully informed of the risks of cannabis use and of the association with the use of other potentially more toxic substances.

SOLVENTS

The lifetime prevalence of solvents (potentially lethal agents) is high at 23%; it is the second most commonly used drug. 20.4% of the total number of solvent users continue to use the drug. Males are more likely to persist. Persistent use is associated with early age of starting. The figure of 23% is higher than that of recent reports. The lifetime prevalence of use in younger students (22.5% in 13-15 year olds) is similar to that of older students (22.7% in those aged 16 or older)

A recent review (41) of solvent abuse suggests that solvent use is associated with delinquent behaviours. Most users appear to dabble and do not persist. Solvent users are at risk of developing cardiac arrhythmia and neurotoxic complications. Furthermore, there is a high risk of subsequent drug abuse and addiction in solvent abusers. Solvent use may be more common in disadvantaged groups although Brinkley's study(27) found the converse to be true. Furthermore, because of ready availability and lack of expense, inhalants may be the first drug of abuse. This report suggests a high prevalence of solvent use in the region studied, compared to other studies (27, 28). Further research would provide valuable information about the profiles of those students who are currently regularly abusing such toxic substances. Young students need to be made fully aware of the toxic effects of solvents and of the association with subsequent drug abuse.

HALLUCINOGENICS

LSD is a potent hallucinogenic drug which may provoke psychotic reactions, some prolonged in predisposed individuals (42). A relatively low (2.3%) lifetime prevalence was discovered in this study. However it is of some concern that a sizeable proportion (38%) of those who had ever tried LSD reported current usage. A higher (5%) lifetime prevalence of hallucinogenic mushrooms has been identified. This maybe because of easier availability and access. Males were found to be at increased risk of persistent use of hallucinogenic mushrooms. The risks of psychotic symptoms and of developing unpleasant effects such as panic experiences exists for 'magic' mushrooms as well as for LSD. The high rates of prevalence of 'magic' mushroom use in 2nd year students relative to transition year warrants further study.

Peer influences play a role in initiating and maintaining hallucinogenic use. Some pupils perceive hallucinogenics in a positive light and may not be aware of potential hazards (28). Students must be made fully aware of those risks as part of comprehensive preventative programmes.

AMPHETAMINES

Amphetamines are potentially toxic substances. As well as acting as potent stimulants, abuse may cause delirium, panic states, violent behaviour and paranoid psychotic states, which may persist (43). In this study more than 40% of those who have ever tried amphetamines continue to use the drug. The fact that a substantially higher proportion of Vocational school students persist in amphetamine use warrants further investigation. Students who started using amphetamines early appear to be more likely to persist. Stimulants such as amphetamines have strong addictive properties with specific withdrawal phases. Amphetamines are thus dangerous, addictive drugs. Prevention should encompass detailed delineation of risks and should be targeted at all age groups.

ECSTASY

MDMA or ecstasy has been the subject of media attention in recent years, not least because of its life threatening properties and its association with the dance culture scene in young people. This study, similar to others (27, 28) shows a lifetime prevalence of use at 2.8%. A high proportion (45.6%) of experimenters report current use. Like amphetamines, students in Vocational schools are more likely to persist. Persistent use tends to occur in those starting young. However, unlike all other illicit drugs, the lifetime prevalence was not significantly higher in males.

Ecstasy continues to be used by young people. It is indisputably dangerous - precipitating toxic psychoses, tachycardia, hypothermia and in certain instances death (44). Students who do not use ecstasy are more likely to regard it as being dangerous (28). Other associations between ecstasy and other drug use were documented in a recent study of young opiate abusers in the Eastern Health Board region of Ireland (45). It was found that one third of opiate abusers first used heroin to 'come down' off ecstasy; opiate users who had ever used the drug tended, to start using opiates earlier, to engage in heavier opiate use and were more likely to change route of administration to injecting compared to those who had never used ecstasy.

Preventative efforts must include education regarding the aforementioned risks of this popular drug. This should ideally be done in the context of an ongoing, comprehensive, lifeskills based programme.

HEROIN

The risks of heroin use in terms of HIV infection, hepatitis, overdose, criminality and psychosocial dysfunction are well established. There are currently over 13,500 opiate addicted individuals, (4,040 of which are in treatment) in the Eastern Health Board region. A recent report concerning drug misuse in Ireland (9) showed that 63% of heroin users started using the drug between 15 and 19 years of age; most were male.

Relative to other drugs, the lifetime prevalence of heroin use identified in this study was low at 1.5%. However, more than 50% of experimenters reported current use. Students in Vocational schools and those residing in West Wicklow started to use heroin earlier. The high rate of heroin use in 2nd year students, relative to transition year, warrants further investigation.

Although the numbers are small, further evaluation of opiate misuse in this population is needed. Those who are currently using the drug must be aware of treatment options and of the significant risks posed by this behaviour.

In general, the use of other drugs, including cigarettes and alcohol, may often precede opiate use. The onset of opiate misuse is complex, often occurring in the context of economic disadvantage in high-density conurbations. An inverse relationship between perceived danger and tendency to use heroin was identified by Gleeson (28). Comprehensive preventative and educational programmes are needed to reduce the likelihood of use of this life threatening substance.

SUMMARY OF FINDINGS

85.6% of pupils had tried at least one substance. High lifetime prevalences were discovered for alcohol (81%), cigarettes (67%), solvent use (23%), and cannabis (27.5%).

- ➔ Between 20-50% of those who ever tried a substance reported persistent use of that substance.
- ➔ Some regional differences in lifetime prevalences were noted with significantly higher rates of exposure to cigarettes, cannabis, LSD and ecstasy in West Wicklow.
- ➔ Apart from heroin use, the lifetime prevalence of any substance use was not influenced by school type. [The lifetime prevalence of heroin use was substantially higher in Vocational schools.]
- ➔ Pupils, 16 years and over, were more likely to have tried cigarettes, alcohol, cannabis, LSD and amphetamines. This is not the case with other substances.
- ➔ The lifetime prevalence of solvent use is high at 23%. It is of concern that almost equal proportions of younger students (22.5% of 13-15 year olds) have experimented with solvents as older students (22.7% of 16+).

The overall lifetime prevalence of ecstasy, magic mushrooms and heroin were relatively small. However, like solvents, experimentation is as likely to occur in younger as in older students.

The lifetime prevalence of most drugs, apart from cigarettes was higher in males. In the case of cigarettes, higher lifetime prevalence rates were found in females but the difference was not statistically significant.

CONCLUSION & RECOMMENDATIONS

This study set out to provide data on the extent and type of drug use, legal and illegal, in the secondary school going population in Co. Kildare and West Wicklow. In total, 1838 pupils from second, transition and fifth year classes completed self report questionnaires.

This study provides conclusive evidence that many young people in this region, to varying degrees, use mood-altering substances. As reflected in the data presented, this phenomenon occurs irrespective of age, gender, school type or religion. Although variations in patterns of substance use with regard to these parameters may exist, it indicates that programmes should be developed which adopt a systemic approach in education prevention and treatment. The desirable outcome of such a programme would be to delay the onset of drug use or to prevent the occurrence of problematic or addictive behaviours in young people.

Both locally, and nationally, various approaches have been adopted in a bid to delay or reduce the onset of drug use in young people. Some of these approaches are outlined below.

One measure adopted has been the development of public policy. The focus of drugs policy in recent times has seen a shift from supply reduction to demand reduction. Whilst problematic drug use has been associated with factors such as psychopathology, family dysfunction and family history of addictive behaviours, attention must also be given to the socio-economic context in which drug abuse occurs. In Ireland, policy makers have publicly and unequivocally accepted that a causal link exists between poverty and serious drug problems, and that demand reduction measures should be aimed at neighbourhoods and communities where a high prevalence of drug problems coincides with generalised social disadvantage (47). In order to have a lasting impact, this measure needs to take cognisance of the need for adequate housing, employment, education and leisure facilities, thus tackling the broader political issue of social disadvantage.

Another approach adopted in the bid to reduce, or delay, the onset of drug use in young people involves the provision of information based programmes. The rationale behind this approach is that young people simply need to be provided with the relevant factual information. Although information based programmes lead to an increase in knowledge they are unlikely to produce lasting changes in behaviour. A recent (46) meta-analysis of 62 studies testing the efficacy of educational programmes in reducing drug-taking among school going young people demonstrated that such efforts are likely to delay or prevent drug use in just 4% of young people who would otherwise be likely to do so. It is suggested that the best that can be achieved is a short- term delay in the onset of drug use and a short-term reduction in current users. Whether achieving such modest aims results in reducing the extent of problematic drug use in ‘at risk’ individuals has not been evaluated.

The drugs targeted in the aforementioned paper were alcohol, cigarettes and cannabis. As is evident from the results of this study, experimentation with these particular drugs is widespread in Co. Kildare and West Wicklow. Availability and acceptability of these particular drugs may reflect the cultural environment within which young people are experimenting. The use of these, and other drugs, generally occurs in the context of socialising, having fun and having a good night out.

Experimentation with substances does not, in most cases, lead to addiction.

Currently, prevention education programmes endorse the use of a lifeskills approach which seeks to have an effect mainly through promoting a range of social skills. These lifeskills programmes embrace a variety of approaches that have in common the underlying assumption that drug use is at least partly due to poor self-esteem, coping strategies and decision making skills. In Co. Kildare and West Wicklow, as nationally, the Department of Education is engaged in the implementation of a lifeskills curriculum. At post-primary level this programme is called “On My Own Two Feet” Currently, efforts are being made to engage primary schools in the “Walk Tall” programme which also entails a curriculum of lifeskills development. This study which includes those as young as 13 years concurs with the need for implementation of such a programme at an early age.

Many of the young people in this study will be involved in activities which take place in the community. Also, young people live in the community who may no longer be within the school system. It is thus vital that agencies in the community continue to play a key role in responding to the needs of young people who may be at particular risk.

A recent Foróige study (48) found that many young people lack self confidence and wish to be taken seriously by adults with whom they would like a friendly and trusting relationship. Such findings are encouraging in an era where stereotypes exist of young people as being drug-taking or irresponsible and rebellious.

The subject of drug use in adolescence is indeed a complex one. It is likely that young people will continue to experiment with substances despite best efforts. Further research is needed to examine more fully the precise often complex processes whereby certain groups progress from experimentation to problematic drug use to developing established addictions. Knowledge of such processes would assist in the ongoing development, and evaluation, of preventive and early intervention strategies.

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