Cannabis use in Britain

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1. Introduction

1.1 These lecture notes are intended as an introduction to Cannabis use in the UK. These briefly cover prevalence of cannabis use among different age groups, consumption patterns, initiation to drug use (the 'progression' theory), the types of cannabis available, methods of use, driving, medicinal use and possible future policy options.

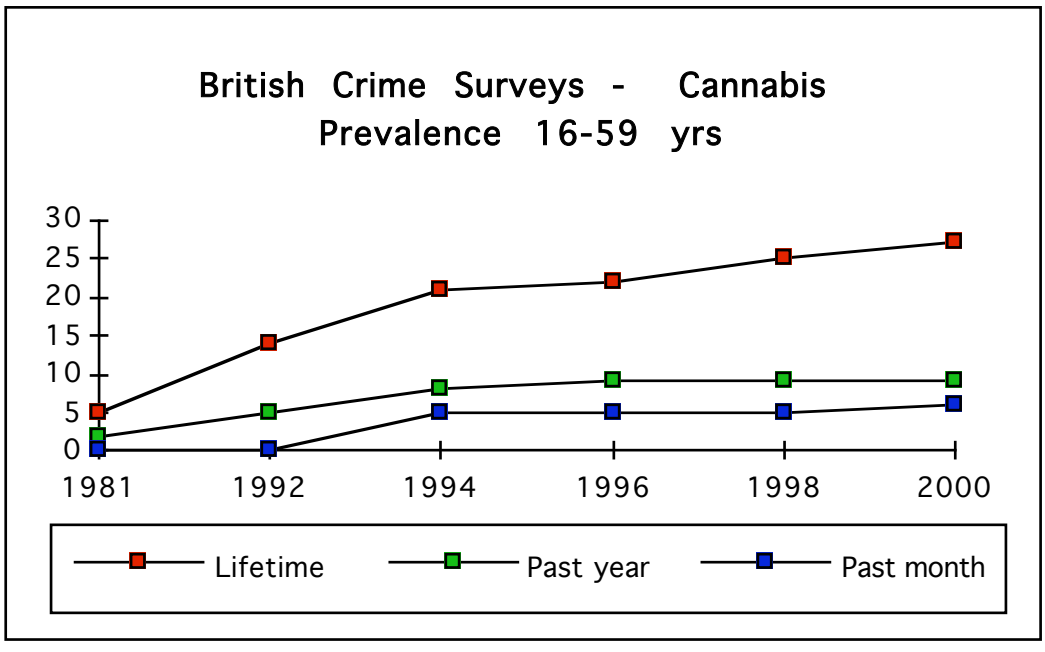
1.2 Cannabis is the most widely-used illegal drug on the planet, and has been one of the most intensively-studied substances of all time. It is also the drug which causes the most controversy, and arouses the strongest emotions on both sides. The legalisation argument has been creeping steadily up the political agenda in recent years, with the opinion polls, once 6 to one against reform, now showing public opinion to be evenly divided between the reformers and prohibitionists.

1.3 The purpose of this lecture is to shed light where there is darkness, and critically analyse some of the misinformation, myths and half-truths on both sides of the argument.

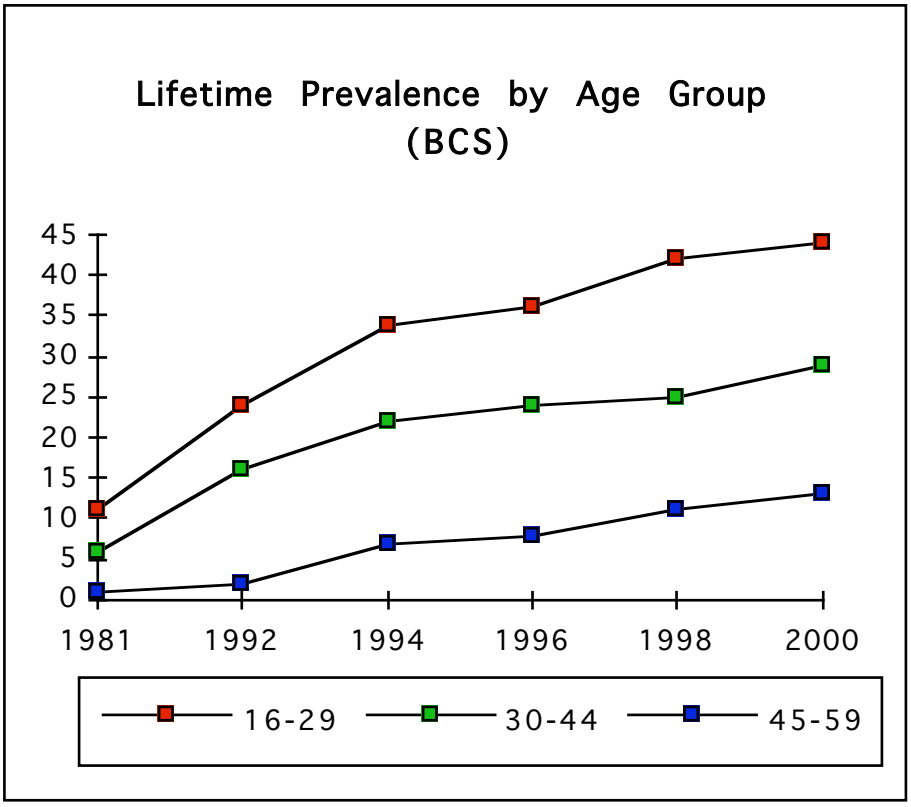
1.4 This document presents some of our own research data, mostly in graphic or tabular form, and much of it for the first time. Commentary is generally kept to a minimum.

2. Prevalence of Cannabis Use

2.1 The Home Office conducts the British Crime Survey every 2 years, including questions on whether people have ever used a range of drugs, and if so whether they have done so in the past year or past month. The prevalence of cannabis use has been rising in these surveys since they were first conducted in the early 1980s. In the UK, around 15 million people would now admit having tried cannabis, with between 2 and 5 million regular users.

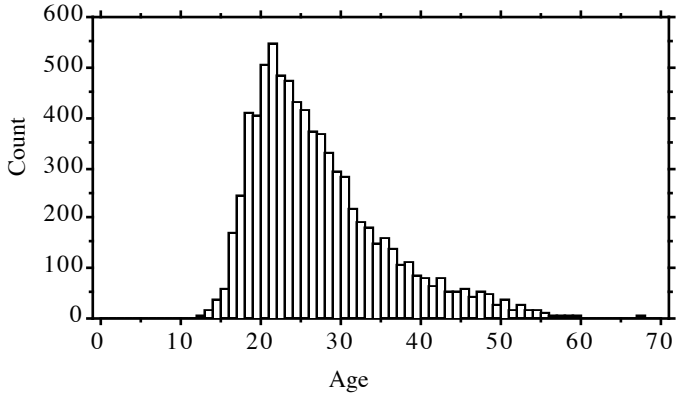


2.2 Cannabis use is highest in the 16-29 age group, although the rise in use is sharpest among older adults. Part of this is demographic, as existing or former users progress into the older age groups, although first time use among elderly citizens, particularly for medicinal reasons, is becoming more common.

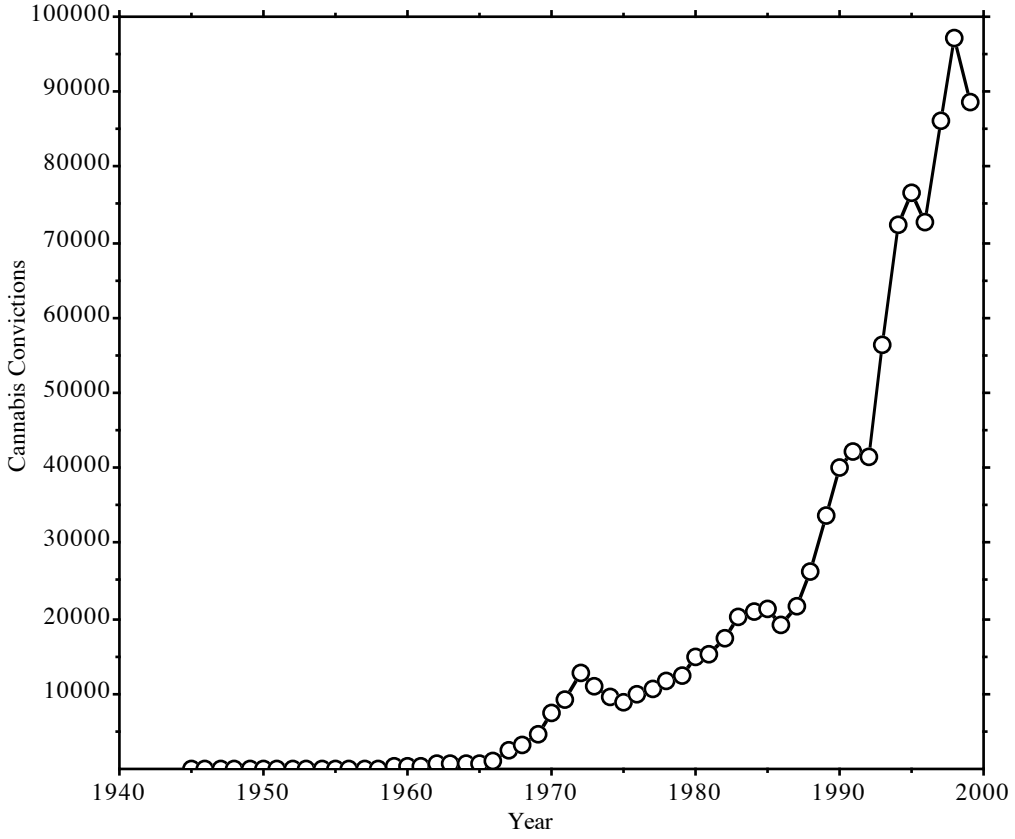


2.3 **IDMU Surveys -** Our research is based primarily on our drug user surveys, which have been conducted in 1994, and in each year since 1997, as well as my own 1984 survey which pioneered the methodology. Respondents are asked to complete anonymous questionnaires, containing a number of core variables, with other questions varying from year to year. Surveys have been distributed primarily at pop-festivals and pro-cannabis rallies, although smaller batches have been distributed via subcultural magazines, snowballing, via direct mailings to members of pressure groups, and at other events. Development has been evolutionary, and response rates have been increased via use of our own stalls and provision of clip-boards at outdoor events.

2.4 The age range of respondents would appear to be broadly representative of regular cannabis users in the UK population, with the majority falling in the 18-30 age range.

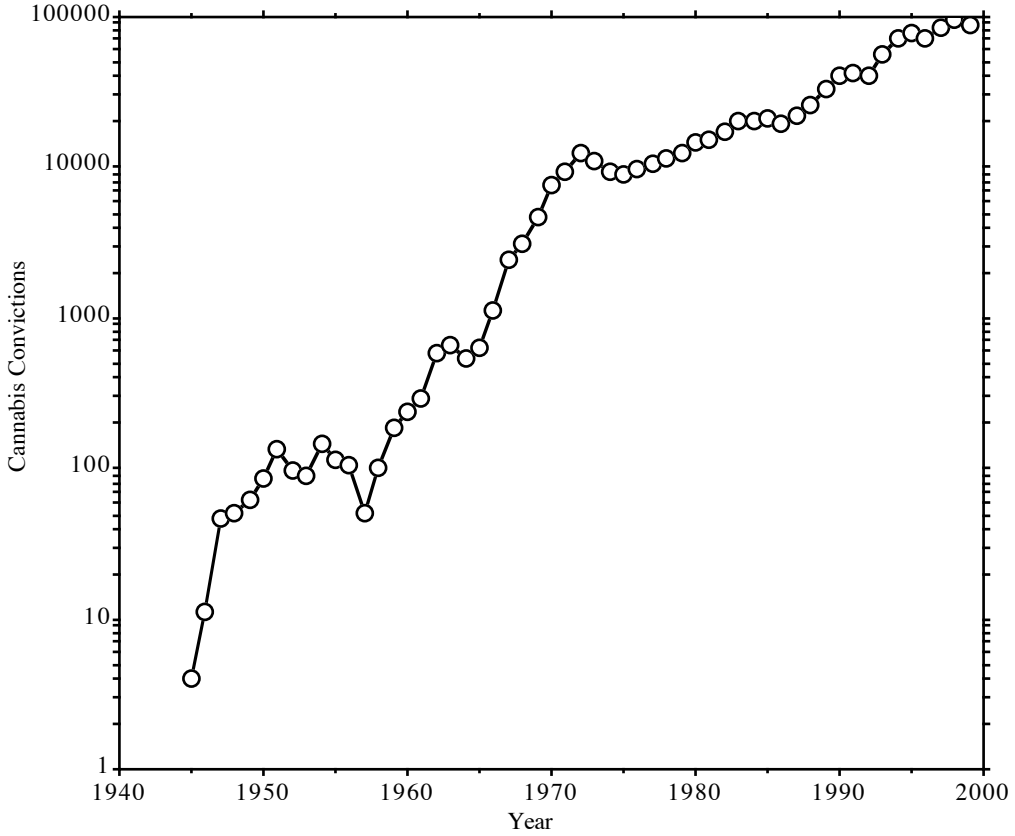


Cannabis Convictions 1945-1999 (Linear Scale)
(includes Cautions and all formal disposals)



2.5 The Home Office publishes annual statistics on drug seizures and drugs offenders. These have been rising steadily since the end of World War II, the millionth conviction would have occurred around December 1999. Dangerous Drugs Acts 1945-1972 = 44,834, Misuse of Drugs Act 1973-1999 = 958,688, Total - 1,003,522

Cannabis Convictions 1945-1999 (Logarithmic scale)



3. Frequencies of Cannabis Use

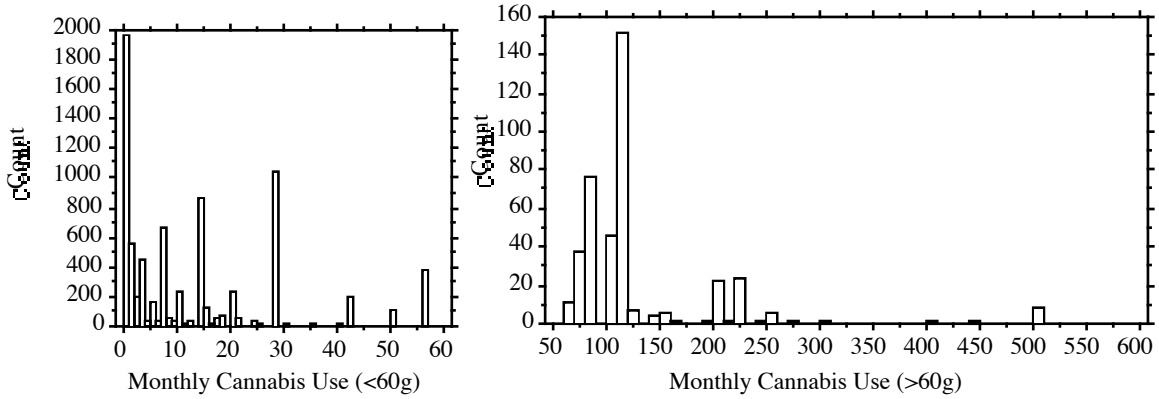
Frequency of Cannabis Use 1984-2000									
Year	**1984**	**1994**	**1995**	**1997**	**1998**	**1999**	**2000**	**84-00*n***	**84-00%**
Non/ex-users	2.5%	5.3%	9.4%	10.8%	11.8%	5.4%	5.5%	524	7.1%
Experimental	0.0%	2.6%	2.6%	2.5%	2.4%	3.8%	4.3%	215	2.9%
Occasional	11.2%	16.6%	2.1%	16.6%	18.5%	19.8%	21.6%	1303	17.7%
Weekly	31.8%	20.5%	29.8%	20.0%	18.3%	20.2%	20.4%	1560	21.2%
Daily	53.5%	55.0%	56.0%	50.1%	49.0%	50.8%	48.1%	3766	51.1%

3.1 The majority of users in our surveys smoked cannabis regularly, with the usage pattern more similar to that for tobacco and for caffeine than for other illicit drugs. The survey population would thus be broadly equivalent to the 'used in past month'

4 Amounts used

Cannabis Use/Ratings by year							
Subject	**1984**	**1994**	**1995**	**1997**	**1998**	**1999**	**2000**
Subjective rating (0-10)	n/a	8.8	8.5	8.8	8.4	8.3	8.4
Mean used per month	29.3g	24.8g	31.3g	23.9g	20.7g	26.9g	31.6g

Distribution of monthly cannabis use (94-00)



4.1 The majority of users smoke relatively small amounts of the drug, with mean consumption of 1g per day. Progressively smaller numbers use larger amounts, around one in 20 use 1oz per week, and one in 100 2oz per week. However, in the Caribbean Schaeffer et al described use of up to 2oz (56g) per day of herbal cannabis containing 8% THC.

Cannabis Use Percentiles (1994-2000 - *n* = 8146)					
Percentile	**Monthly Cannabis Use (g)**	**Daily THC @ 3% (mg)**	**Daily THC @ 15% (mg)**	**Reefers per day**	**Reefer content (mg)**
Bottom 5%	1	<1	5	0.03	23
Lower 10%	2	2	10	0.1	35
Lower 25%	7	7	35	2	67
Median (50%)	14	14	70	4.1	122
Upper 25%	28	28	140	8.1	188
Upper 10%	56	56	280	13.8	312
Upper 5%	112	112	560	19.2	468
Top 1%	224	224	1120	31.5	1246

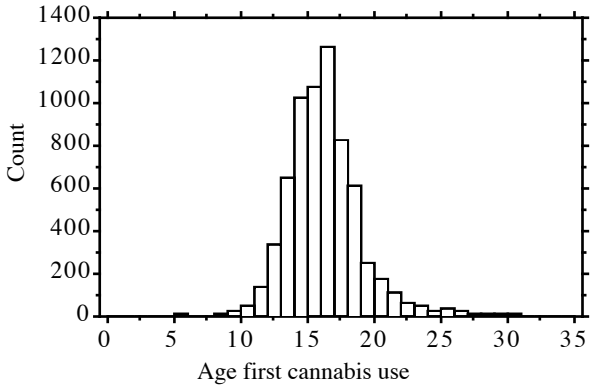
Cannabis Use Indices by Sex & Frequency of Use				
Monthly Cannabis Spending (all drugs section)				
Frequency of use	Female	Male	Not Stated	Totals by freq: p<.0001
Experimental	£15.65	£32.12	£29.67	£25.22
Occasional	£6.98	£14.30	£18.76	£11.32
Regular	£18.23	£25.08	£28.74	£22.55
Daily	£59.67	£92.52	£133.92	£85.80
Totals by sex: p=.07	£30.14	£51.31	£52.02	£44.40
Monthly Cannabis Use (g)				
Frequency of use	Female	Male	Not Stated	Totals by freq: p<.0001
Experimental	6.83	15.64	19.60	12.32
Occasional	3.50	7.90	12.57	6.21
Regular	8.33	9.89	9.40	9.24
Daily	28.25	34.55	30.59	32.45
Totals by sex: p<.05	16.32	24.11	17.49	20.99
Monthly Cannabis Purchase (g)				
Sex:	Female	Male	Not Stated	Totals by freq: p<.0001
Experimental	6.32	20.17	23.07	14.72
Occasional	3.19	7.10	26.70	6.36
Regular	8.79	22.84	10.70	16.53
Daily	36.83	64.24	72.78	56.87
Totals by sex: n.s.	22.13	41.85	36.26	34.88
Monthly Cannabis Spending (Cannabis section)				
Frequency of use	Female	Male	Not Stated	Totals by freq: p<.0001
Experimental	£14.95	£45.56	£46.67	£33.13
Occasional	£8.60	£18.73	£20.71	£14.40
Regular	£18.48	£30.01	£32.74	£25.56
Daily	£73.24	£114.23	£136.06	£103.82
Totals by sex: n.s.	£43.35	£71.87	£67.00	£62.07
Reefers Smoked per day				
Frequency of use	Female	Male	Not Stated	Totals by freq: p<.0001
Experimental	1.06	3.67	1.59	2.45
Occasional	0.76	1.88	2.91	1.44
Regular	2.05	2.33	2.52	2.23
Daily	6.46	6.80	6.88	6.70
Totals by sex:p<.001	3.60	4.93	4.28	4.43
Freq x Sex p<.05				

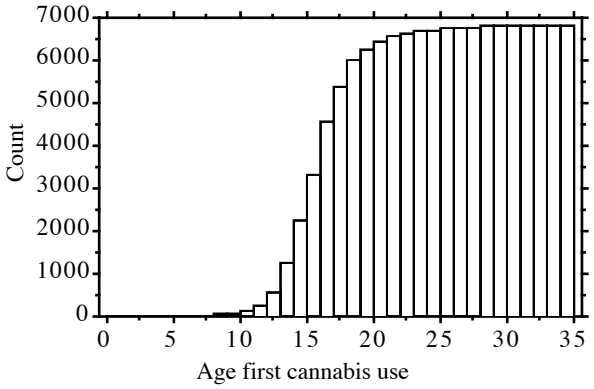
4.2 Women as a whole tend to smoke cannabis less often than males, although differences in purchase and spending were not statistically significant. The difference is greatest amongst women who are experimental or occasional users, there was little difference between consumption of daily users of either sex. Those experimenting with cannabis will tend to buy or use more than occasional users. In couples, it is usually the man who buys the cannabis for both to use. Note also that many regular users grow their own, so spending alone is an imperfect measure of cannabis usage.

Sex	Number	%
Male	4777	58.64%
Female	2683	32.94%
Not Stated	686	8.42%

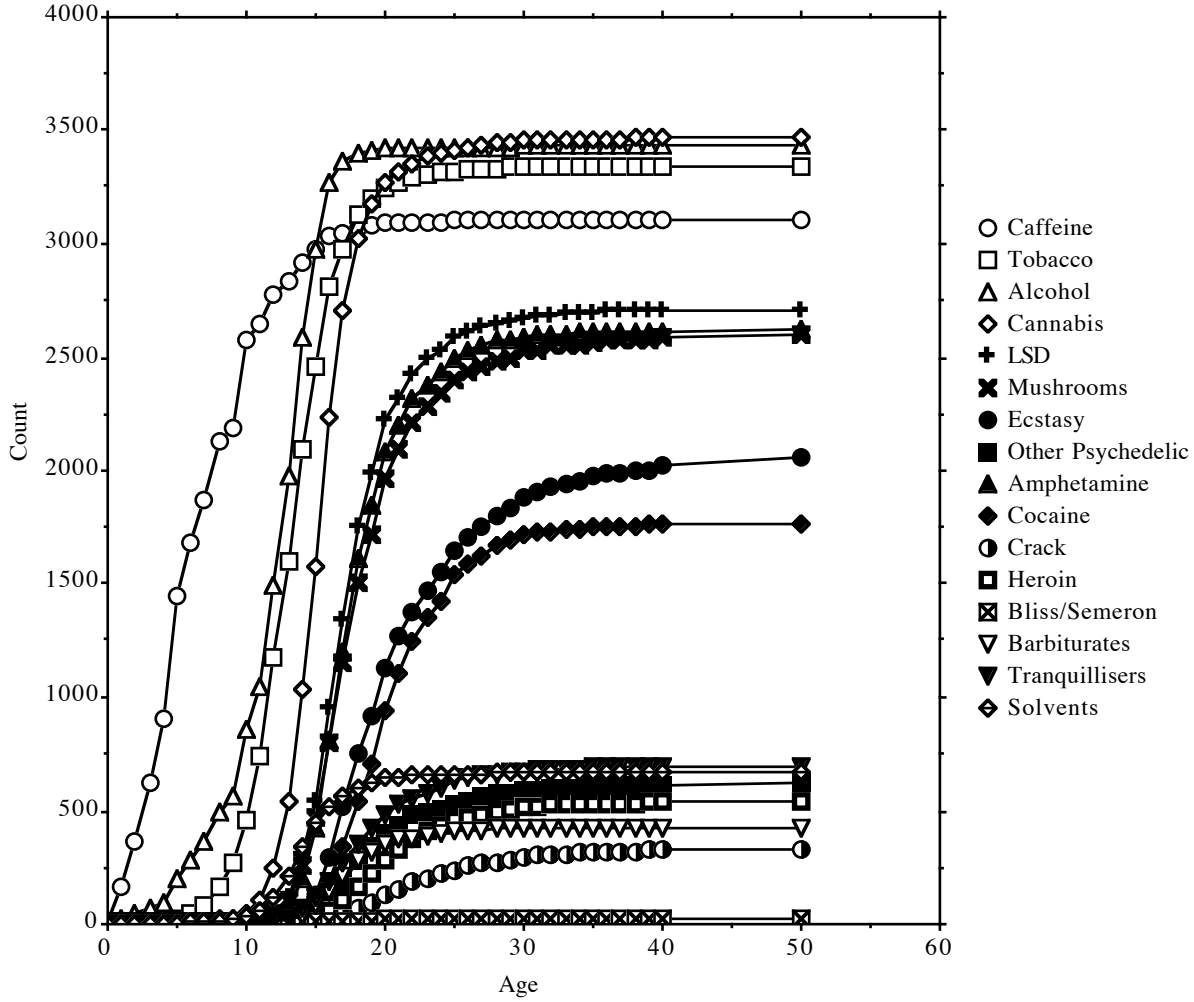
5. Initiation to drug use - the 'stepping stone' hypothesis reconsidered

5.1 The peak years of initiation to cannabis use are 14-18 years, at age 16, roughly half of those who will eventually try cannabis have already used it. Results from school surveys should take account of the initiation to drug use by older pupils and young people who have left school.





5.2 Use of Other Drugs

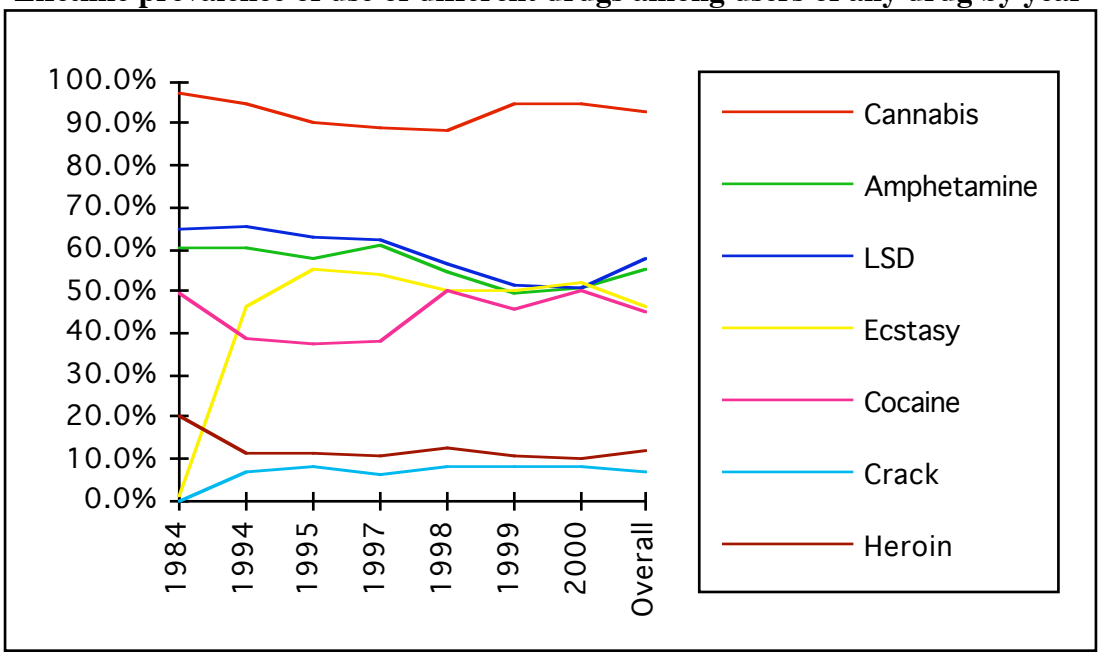


5.2.1 The Drug Acquisition Curves show the numbers who had tried each drug by a given age. Very few people who have not tried a drug by age 25 will start using it afterwards, the only exception being ecstasy (and to a lesser extent crack cocaine), which both arrived on the scene when many existing drug users were in their 30s and 40s. Note - 'tea/coffee' was not included in the questions from one batch of surveys. 'Bliss' was included as a fictitious drug from 1994-98, when it came to our attention that a 'herbal high' was being sold under that trade name, for 1999 and 2000 we used the same 'bogus' drug as the Home Office (i.e. Semeron) which was given the bogus street name 'space'.

5.3 Drug Prevalence

5.3.1 The lifetime prevalence of using most drugs has remained relatively stable among the user population as a whole, however amphetamine and LSD appears to be declining steadily, whereas cocaine and ecstasy appear to be increasing slightly. Prevalence of magic mushroom use (not shown) is similar to that of LSD. Crack and Ecstasy were not listed options in 1984, although 1% mentioned MDA as a write-in option. Users of crack in 1984 (then known as freebase) did not report it directly, but some of the cocaine would have been used in that form.

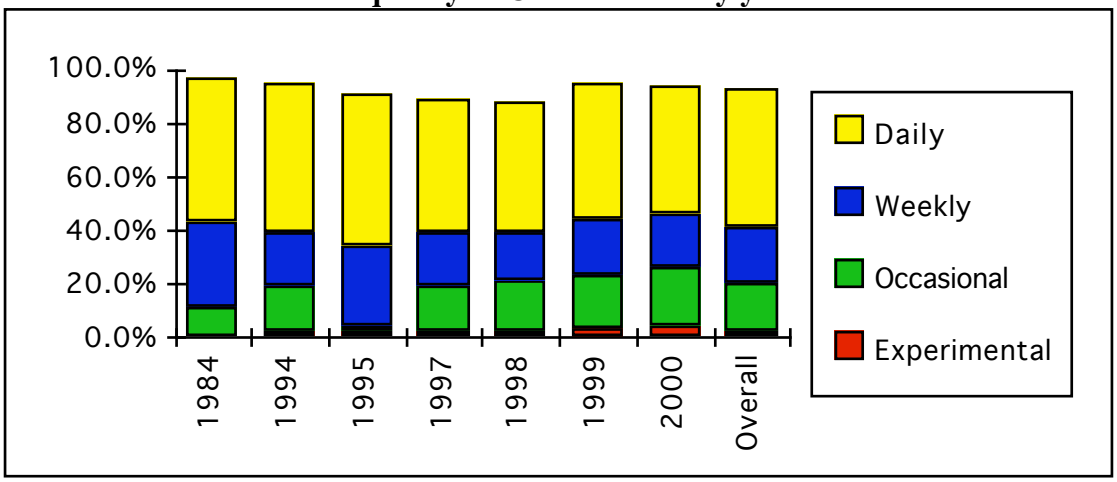
Lifetime prevalence of use of different drugs among users of any drug by year



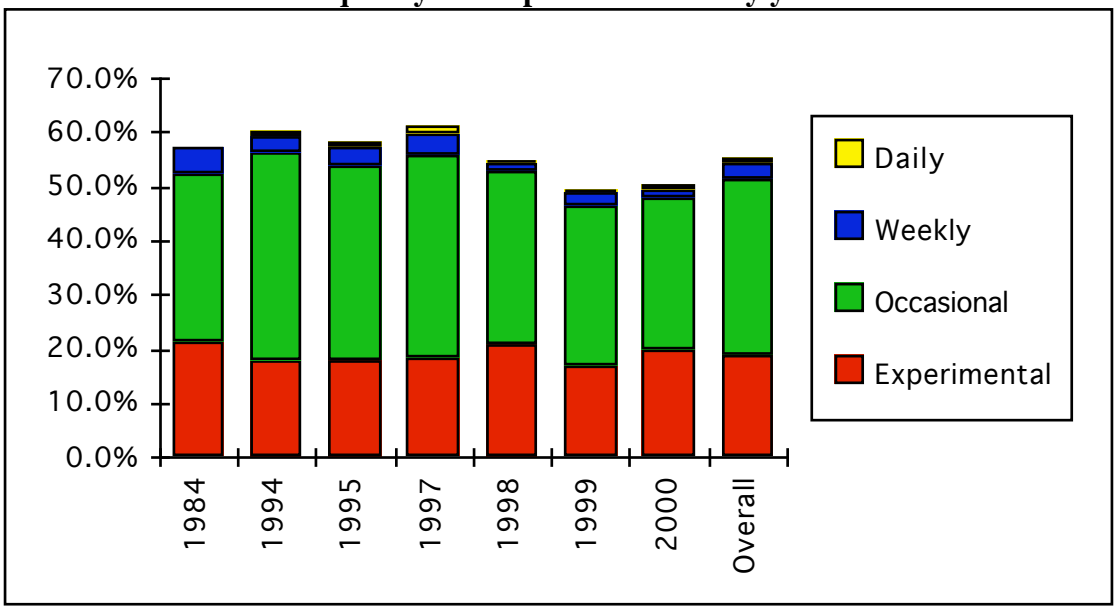
5.4 Frequency of use

5.4.1 Users of each drug were asked to state how often they used the drug. Other than cannabis and legal drugs (caffeine, tobacco, alcohol), there were few daily users, with experimental or occasional use the norm.

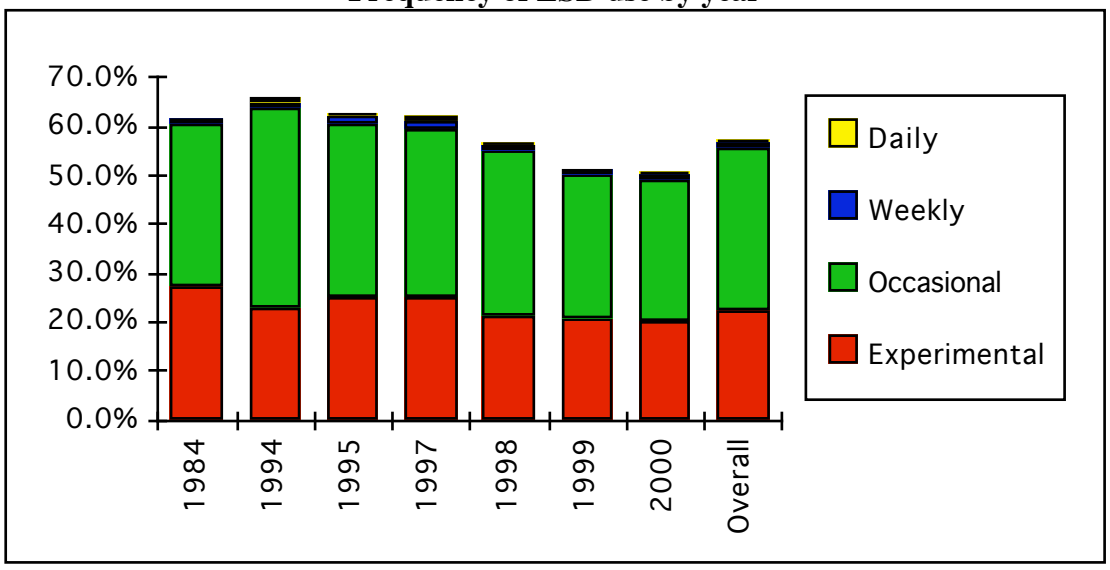
Frequency of Cannabis use by year



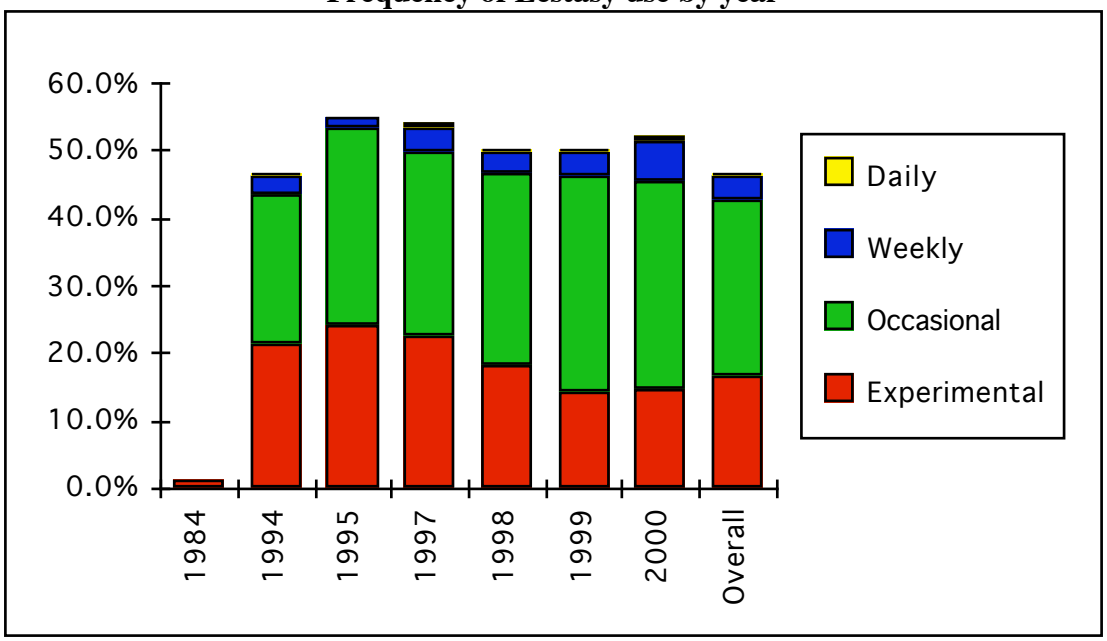
Frequency of Amphetamine use by year



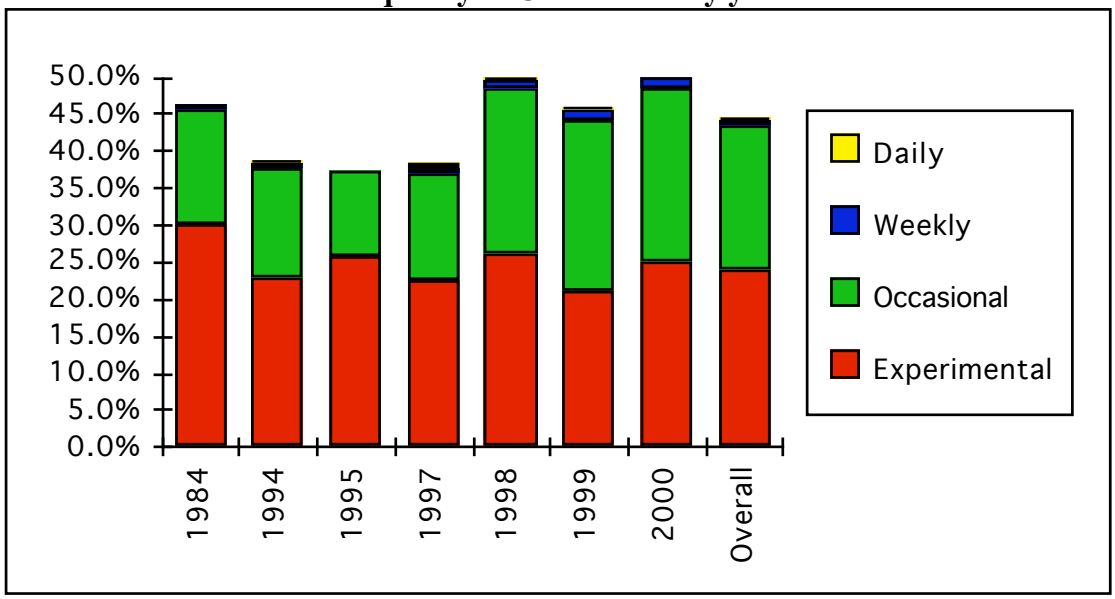
Frequency of LSD use by year



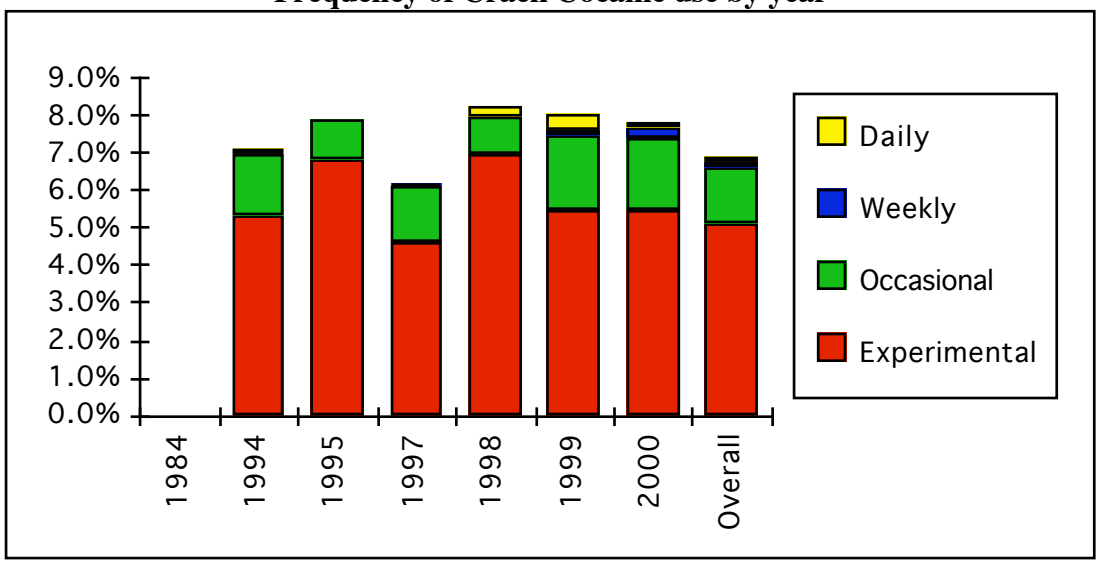
Frequency of Ecstasy use by year



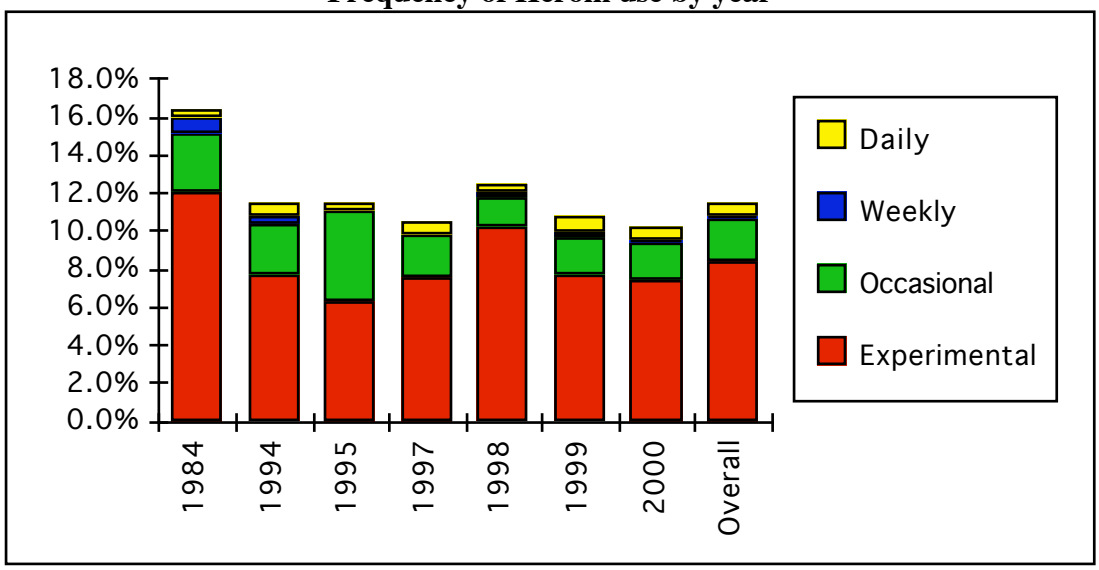
Frequency of Cocaine use by year



Frequency of Crack Cocaine use by year



Frequency of Heroin use by year



5.5 Busts/deterrence

5.5.1 Laws prohibiting drug use and possession are frequently justified on the basis that they deter people from using drugs. However the effect of a drugs arrest tends to consolidate or stimulate drug use, rather than deterring the user from continuing or indeed experimenting with other drugs. Drug users who have been arrested for drugs offences typically use a wider range of drugs more frequently and more heavily than users with clean records. They also tend to give higher ratings to drugs.

Drug use frequency, purchasing, Subjective Ratings & other consumption patterns by whether ever busted (1994-98 Consolidated)

	Cannabis offence			Other drug offence			Other offence		
	No	Yes	*p*	No	Yes	*p*	No	Yes	*p*
Base	2831	792		3389	234		3181	442	
(% of total)	78%	22%		94%	6%		88%	12%	
Age	25.71	29.01	*.064*	27.38	30.03	*<.0001*	26.24	28.52	*<.0001*
Caffeine									
Rating	5.98	5.79	*ns*	6.14	5.60	*ns*	5.97	5.68	*ns*
Frequency	3.15	3.30	*ns*	3.19	3.27	*ns*	3.18	3.20	*ns*
Spending	4.39	5.09	*ns*	4.41	5.05	*ns*	4.50	4.87	*ns*
Tobacco									
Rating	3.82	3.46	*ns*	3.72	3.56	*ns*	3.72	3.91	*ns*
Frequency	2.76	3.10	*ns*	2.81	3.20	*<.01*	2.80	3.13	*<.0001*
Spending	21.00	24.30	*ns*	18.56	24.35	*ns*	19.93	34.31	*<.0001*
Cigs/day	8.81	10.63	*ns*	10.14	10.82	*ns*	8.94	11.45	*<.0001*
Alcohol									
Rating	5.97	5.51	*ns*	6.68	5.22	*.0001*	5.90	5.62	*.057*
Frequency	2.63	2.65	*ns*	2.88	2.66	*ns*	2.63	2.70	*ns*
Spending	33.21	32.28	*ns*	38.71	34.54	*ns*	32.64	37.13	*.066*
Units/ week	18.43	18.21	*<.001*	25.46	23.00	*ns*	18.25	22.09	*<.001*
Cannabis									
Rating	8.51	9.11	*ns*	8.82	9.10	*<.05*	8.64	8.72	*ns*
Frequency	2.97	3.51	*ns*	3.19	3.53	*<.0001*	3.06	3.33	*<.0001*
Used/ month (g)	21.17	31.57	*ns*	21.56	40.27	*<.05*	23.06	87.13	*<.05*
Bought/ month (g)	42.18	101.7	*ns*	43.55	75.56	*<.05*	46.98	103.38	*<.0001*
£Spending 1	36.53	90.98	*ns*	29.88	79.22	*<.05*	44.54	78.8	*<.05*
£Spending 2	67.44	188.96	*ns*	59.53	99.29	*.051*	84.92	137.76	*<.05*
Spliffs smoked/day	5.05	6.86	*<.05*	5.72	8.57	*<.0001*	5.39	7.15	*<.0001*
Rolled/ day	4.82	6.24	*ns*	4.73	7.55	*ns*	5.06	6.60	*ns*
Pipes/ day	2.23	3.23	*<0.1*	2.75	4.90	*<.05*	2.34	4.17	*<.0001*
Plants Grown	13.37	25.58	*ns*	11.38	65.13	*<.05*	15.68	43.95	*<.0001*
% bought for own use	69.06	73.03	*ns*	70.15	70.06	*ns*	69.86	70.41	*ns*

Drug use frequency, purchasing & other consumption patterns by whether ever busted

	Cannabis offence			Other drug offence			Other offence		
	No	**Yes**	***p***	**No**	**Yes**	***p***	**No**	**Yes**	***p***
LSD									
Rating	6.74	7.55	*ns*	7.83	7.01	*ns*	6.97	6.68	*ns*
Frequency	1.01	1.31	*<.0001*	1.38	1.61	*<.005*	1.06	1.33	*<.0001*
Spending	1.38	2.75	*ns*	2.46	3.08	*ns*	1.54	2.92	*<.01*
% bought for personal use	81.25	80.89	*ns*	98.64	75.53	*.052*	80.12	86.39	*ns*
Ecstasy									
Rating	6.56	6.64	*<.05*	7.44	7.32	*ns*	6.62	6.74	*ns*
Frequency	.85	1.01	*<.0001*	1.17	1.54	*<.005*	0.89	1.11	*<.0001*
Spending	5.58	8.65	*ns*	6.92	11.64	*<.05*	5.73	11.38	*<.0001*
% bought for personal use	84.52	80.10	*ns*	86.94	80.54	*ns*	83.33	83.84	*ns*
Amphetamine									
Rating	5.21	4.82	*ns*	5.32	5.29	*ns*	5.15	5.05	*ns*
Frequency	1.05	1.27	*<.01*	1.33	1.47	*<.05*	1.07	1.41	*<.0001*
Spending (£)	4.13	5.83	*<.05*	12.38	8.19	*ns*	3.95	10.36	*<.0001*
% bought for personal use	76.30	78.54	*ns*	72.60	78.65	*ns*	76.74	77.26	*ns*
Cocaine									
Rating	5.51	6.09	*ns*	6.23	6.32	*ns*	5.68	0.83	*ns*
Frequency	0.56	0.93	*<.005*	0.85	1.10	*<.0001*	0.62	0.93	*<.0001*
Spending	3.34	9.43	*ns*	4.69	4.92	*ns*	2.83	16.16	*<.0001*
% bought for personal use	70.09	69.28	*ns*	80.00	76.18	*ns*	69.75	74.39	*ns*
Crack									
Rating	1.87	2.59	*<.05*	4.06	2.82	*ns*	2.00	2.83	*<.05*
Frequency	0.07	0.15	*<.005*	0.10	0.28	*<.0001*	0.08	0.19	*<.0001*
Spending	0.34	3.68	*ns*	6.25	2.55	*ns*	0.97	1.92	*ns*
% bought for personal use	45.83	37.50	*ns*	•	50.00	*ns*	42.11	50.00	*ns*
Heroin									
Rating	2.17	3.00	*<.005*	4.35	3.20	*ns*	2.28	3.35	*<.0001*
Frequency	0.12	0.26	*<.0001*	0.35	0.45	*<.01*	0.14	0.35	*<.0001*
Spending	1.32	3.70	*<.0001*	30.21	13.44	*<.05*	1.51	11.52	*<.0001*
% bought for personal use	62.38	60.71	*ns*	•	100	*ns*	62.00	77.78	*ns*
'Semeron/ Bliss'*									
Rating	1.88	1.44	*<.005*	5.60	1.70	*<.005*	1.92	1.27	*.069*
Frequency	0.01	0.01	*<.0001*	0.15	0.03	*<.0001*	0.01	0.03	*<.05*
Spending	0.01	0.09	*ns*	0.10	0	*ns*	0.02	0	*ns*
Tranquillisers									
Rating	2.71	2.62	*ns*	3.36	3.10	*ns*	2.63	3.21	*<.05*
Frequency	0.19	0.32	*<.0001*	0.50	0.55	*.081*	0.20	0.46	*<.0001*
Spending	0.12	0.21	*<.001*	0.83	1.01	*ns*	0.11	0.76	*<.0001*
Solvents									
Rating	1.51	1.49	*ns*	1.20	1.28	*ns*	1.36	2.17	*<.001*
Frequency	0.14	0.16	*ns*	0.19	0.18	*ns*	0.13	0.25	*<.0001*
Spending	0.07	0.13	*ns*	0.27	0.11	*ns*	0.06	0.29	*<.0001*

* The list of drugs on the multiple-choice questions changed in 1998. Ketamine was not previously specified, replacing 'Other Psychedelic'. 'Semeron' is a fictitious substance included as an error-detector, replacing 'Bliss' in earlier studies- a 'legal high' of that name now exists..

5.5.2 "Busted' users are much more likely - post arrest - to initiate use of heroin or crack cocaine, and also to be willing to try an unknown (fictitious) drug.

Prevalence Differences between 'Busted' and 'Clean' users									
Drug	**Cannabis Arrest**			**No Cannabis Arrest**			**Busted/Clean ratios**		
	Use(d) drug	Might use	Never/ Stopped	Use(d) drug	Might use	Never/ Stopped	Use(d) drug	Use or might	Never/ stopped
Caffeine	88.1%	0.0%	11.9%	81.4%	0.2%	18.4%	1.083	1.080	0.647
Tobacco	83.5%	0.0%	16.5%	78.9%	0.1%	21.0%	1.058	1.057	0.787
Alcohol	88.3%	0.0%	11.7%	87.4%	0.1%	12.5%	1.011	1.009	0.935
Cannabis	95.4%	0.2%	4.4%	89.6%	0.1%	10.2%	1.064	1.065	0.430
LSD	71.9%	1.2%	26.9%	62.1%	4.6%	33.3%	1.158	1.096	0.808
Mushrooms	75.6%	3.1%	21.3%	60.0%	7.6%	32.5%	1.261	1.165	0.657
Ecstasy	60.1%	6.8%	33.1%	47.1%	7.0%	45.9%	1.276	1.237	0.721
Amphetamine	66.2%	0.6%	33.2%	56.5%	2.1%	41.3%	1.171	1.138	0.803
Cocaine	58.3%	2.9%	38.8%	37.3%	7.1%	55.6%	1.565	1.380	0.697
Crack	13.1%	4.4%	82.5%	5.4%	3.3%	91.3%	2.413	2.012	0.904
Heroin	24.9%	3.8%	71.3%	8.5%	3.3%	88.2%	2.921	2.433	0.808
Bliss/Semeron	0.8%	3.5%	95.7%	0.6%	2.0%	97.3%	1.364	1.611	0.983
Tranx	22.4%	2.7%	74.9%	12.9%	3.5%	83.7%	1.739	1.539	0.895
Solvents	12.4%	0.6%	87.0%	10.1%	0.6%	89.3%	1.226	1.215	0.974
Base	840			2782					

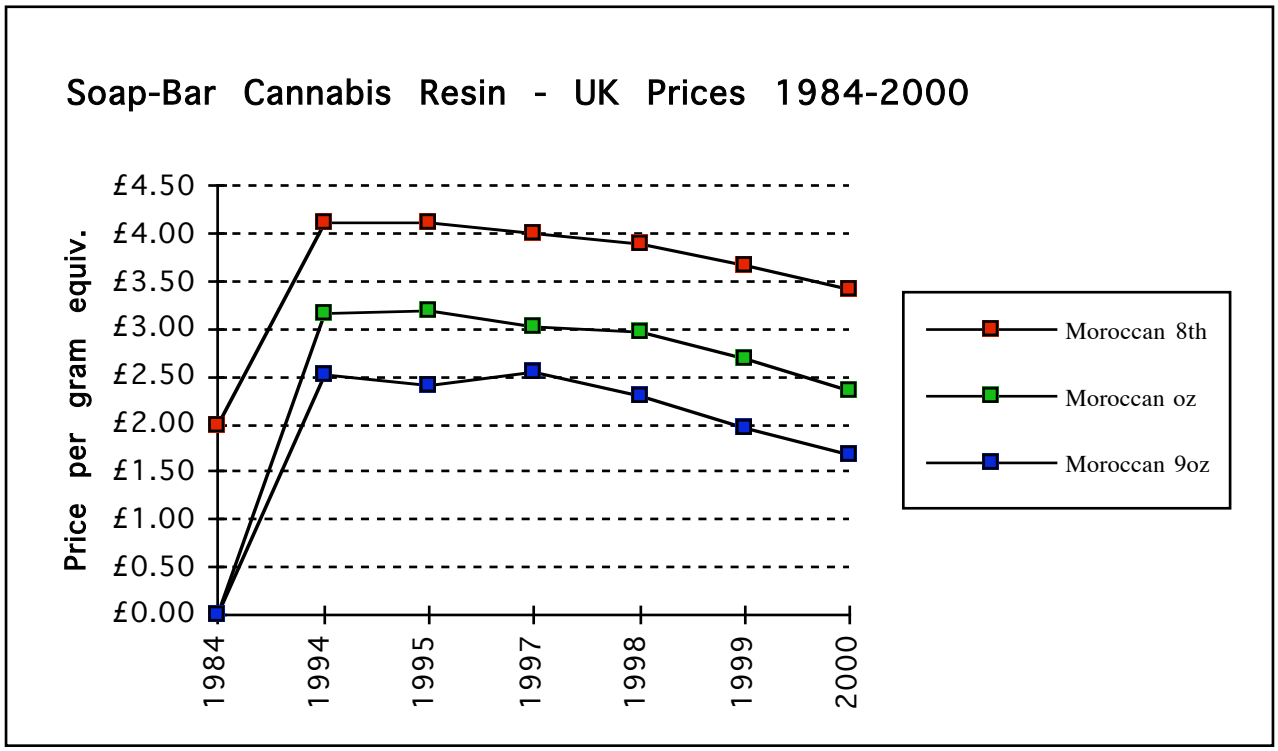
5.5.3 The prevalence data tells half the story, as this may simply reflect the greater tendency of police to arrest heavier users, particularly of Class A drugs. However, by comparing the age of initiation to particular drugs to the age of the first 'bust', it can be seen that initiation to particularly heroin and crack usually follows the first drugs bust, supporting the hypothesis of a causal effect.

Initiation to use of different drugs before and after first drug arrest (1998)									
Drug	**Age First Use**	**Initiated before arrest**		**Initiated same age**		**Initiated after first arrest**		**Same age or older**	
Mean age first bust	22.53	n	%	n	%	n	%	% of busted	Total % after age 22.5 yrs
Caffeine	7.91	228	97.5	4	1.7	3	0.9	2.6	0.7
Tobacco	13.85	238	97.1	4	1.6	3	1.2	2.8	0.7
Alcohol	12.41	248	98.4	1	0.4	3	0.8	1.2	0.4
Cannabis	16.29	238	94.1	12	4.7	3	1.2	5.9	1.4
Amphet.	18.58	172	78.5	18	8.2	29	13.2	21.4	5.5
Base Amph.	20.67	59	53.2	21	9.9	41	36.9	46.8	13.1
Cocaine	21.51	83	42.4	31	15.8	82	41.8	66.6	16.3
Opium	21.52	60	48.0	20	16.0	45	36.0	52.0	16.5
Mushrooms	19.99	135	61.6	25	11.4	59	26.9	38.3	10.1
Ketamine	23.60	12	20.3	9	15.3	38	64.4	79.7	24.9
Crack	24.03	7	13.5	7	13.5	38	74.0	87.5	35.2
Heroin	21.83	36	46.2	10	12.8	32	41.0	53.8	20.4
LSD	18.81	160	72.1	30	13.5	32	14.4	27.9	7.6
Ecstasy	22.79	69	39.7	21	12.1	84	48.3	60.3	15.8
Barbs	17.95	42	75.0	4	7.1	10	17.9	25.0	10.5
Tranx	19.77	59	67.8	7	8.0	21	24.2	32.2	10.7
Solvents	14.77	55	90.2	3	4.9	3	4.9	9.8	3.0

Totals based on 1128 of 1153 respondents (35 respondents gave no age data)

6. The Cannabis Market

6.1 Prices of cannabis resin have been falling steadily since 1994, actually having peaked in the late 1980s, with the most substantial falls seen since 1998. Data for a range of cannabis resin and herbal varieties are available, only the most common Moroccan/Soap Bar resin is shown. Prices for imported herbal cannabis are also in decline, as is the market share, which has been overtaken by domestically produced cannabis (skunk). Skunk prices have remained relatively stable in the region of £6 per gram, with a price premium as compared to resin at all market levels..



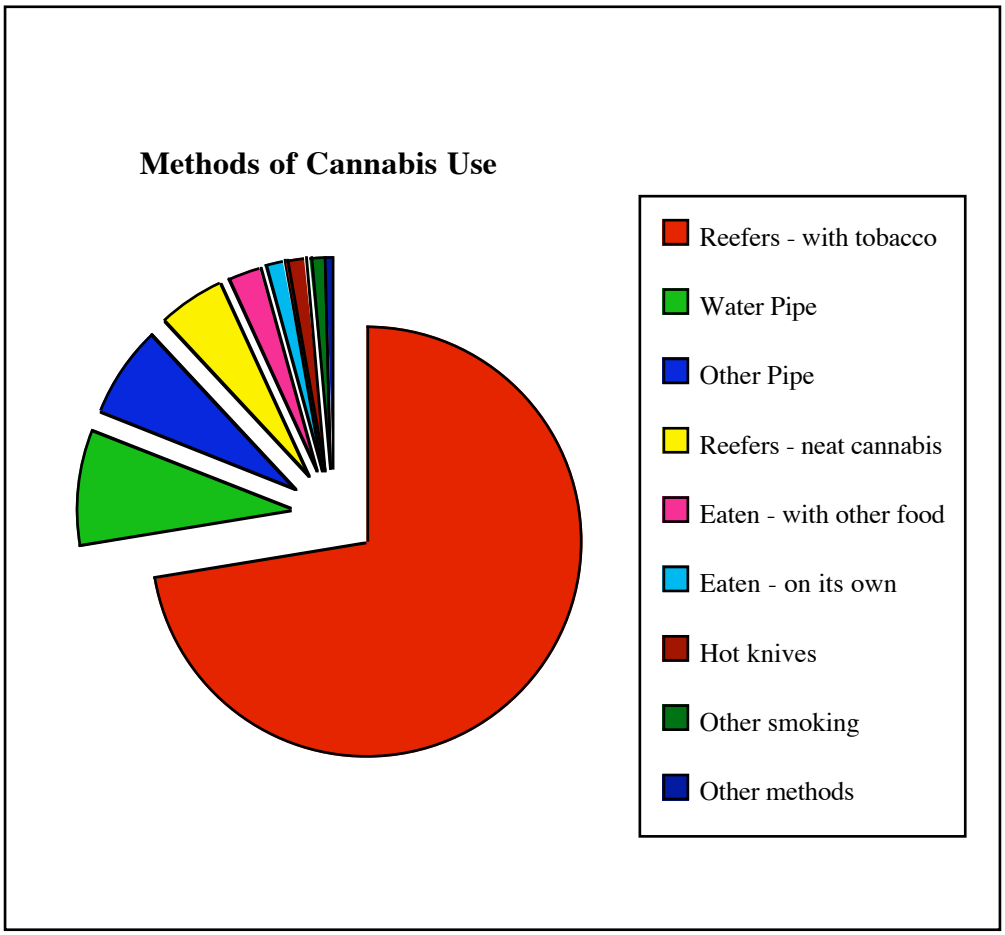
6.2 Although Moroccan (soap-bar) resin and 'skunk' are the most common forms of cannabis found, other types do occur infrequently. Liquid cannabis (hash oil) is occasionally reported, although much is believed to reconstituted into solid form as 'formula' resin.

Types of Cannabis Available in the UK

Type/Variety	Appearance	Market Share	Potency (% THC)
Cannabis Resin			
Moroccan ('soap-bar')	Hard, mid-brown, 250g blocks/bars	~50%	3-7%
Asian ('Black', 'Red Seal')	Soft, dark brown, 500g-1kg slabs	~5%	3-7%
Exotics (e.g. 'Pollen', Charas, Nepalese, Minali)	Soft light brown hand-pressed blocks (Pollen), hard dark brown (Charas, Nepalese), soft cylinders/medallions (Minali), flat fibrous slabs (Slate)	<1%	5-15%
Herbal Cannabis			
Imported (e.g. African, Thai, Jamaican)	brown/green, usually compressed with stalk and seeds	~5%	3-7%
Skunk	green, strong odour, seedless flowers	~35%	8-20%
Homegrown	green, leaf only	~5%	0-5%

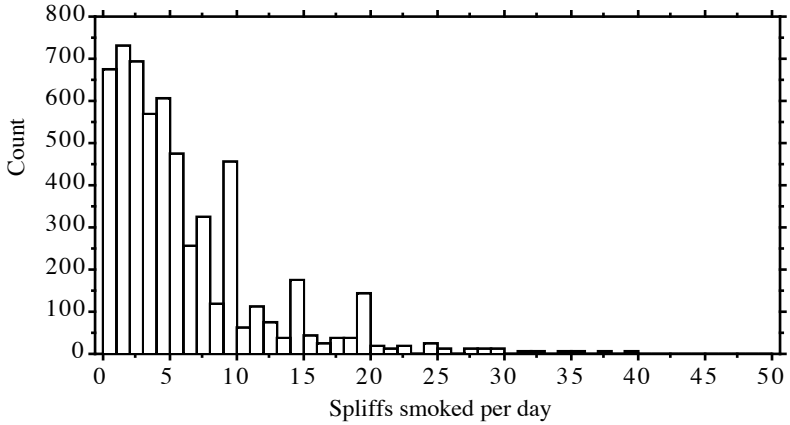
7. Methods of Cannabis Use

7.1 Around 75% of cannabis is smoked in joints/spliffs/reefers mixed with tobacco, 5% in pure cannabis reefers, around 15% in pipes, and around 5% eaten - either on its own or mixed in food (e.g. space cakes) or drink (e.g. bhang, cannabis tea), with small numbers smoking using other methods e.g. hot knives - where resin is pressed between red-hot knife blades and the fumes inhaled through a bottomless bottle, or 'buckets' where smoke is drawn into a large bottle and inhaled when cooler.



7.2 Although most users smoke between 1 and 6 spliffs per day, smoking up to 20 per day is not uncommon. Many of those smoking 20 reefers will be primarily addicted to the tobacco in their 'weak' reefers, but still claim they don't smoke cigarettes in a state of denial. The mixing of cannabis with tobacco may explain why the proportion of daily users in our surveys are much higher than those found in the USA where cannabis is smoked 'neat'.

Distribution of number of 'spliffs' (reefers) smoked per day

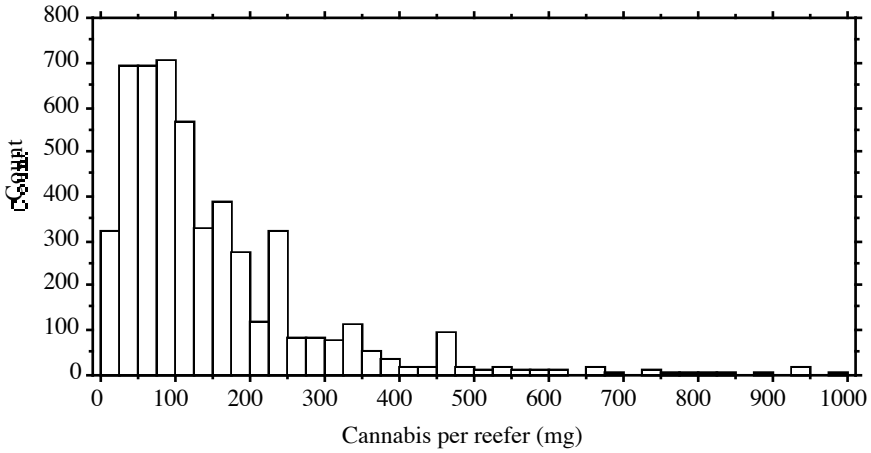


7.3 Users of both sexes tend to smoke nearly twice as many reefers per day at weekends than on weekdays. Many occasional users confine use to weekends only.

Differences in Daily Reefers Smoked Midweek & Weekends (2000 survey)		
Sex	Weekdays	Weekends
Female	5.12	9.24
Male	6.12	11.88
Not Stated	6.74	10.32
Total	5.89	10.89

7.3 The Forensic Science Service has analysed unsmoked reefers, and typically quote 7 reefers per gram of resin, and 5 of herbal cannabis. The distribution of analysed reefers is similar to the predicted data derived from the monthly amount used and the number of reefers smoked per day.

Distribution of cannabis/resin per reefer (IDMU data)



8. Settings of use

8.1 Cannabis is mainly used in the home, although it is being smoked more frequently in public places, including pubs, clubs, parks, streets, gigs and pop festivals.

Settings of cannabis transactions		
Supply Offences	**Count:**	**Percent:**
Ever bought for others	1423	78.62%
Never bought for others	387	21.38%
Share Spliffs	1619	96.31%
Never share spliffs	62	3.69%
Never sold	673	39.59%
Ever sold	1027	60.41%
Sold at cost	421	24.76%
Sold for profit	261	15.35%
Sold both cost/profit	204	12.00%
Base (sale)	1700	
Cannabis Purchase	**Count:**	**Percent:**
Home Town Friends	839	45.0%
Other Town Friends	113	6.1%
Both Friends	115	6.2%
Total Friends	1067	57.2%
Home Town Dealer	598	32.1%
Other Town Dealer	99	5.3%
Both Dealers	100	5.4%
Total Dealers	797	42.8%
Base (Purchase)	1864	

8.2 The majority of users smoke cannabis socially, and virtually all will be technically guilty of supply offences merely by 'passing the spliff'. Communal buying is another common form of social supply, where a group of friends 'chip in' to purchase a larger amount. Most cannabis is bought from friends in users' own towns or cities, although commercial dealers are another common source. Around 10% of users will travel to buy cannabis.

9 Reasons for use

Why Use Cannabis? (1994 data)	
No of reports	**Reasons Given/ quotes**
231	**Enjoyment**
32	Enjoy with ... general
14 13 4 ea.	Enjoy with ... Sex - "Feel bliss out buzz erotic love play" Music Art, other drugs/alcohol
196	**Relaxation/ Calming/ Stress Relief**
90	Relax and ... general
76 43 30 38 9	Relax and ... Socialise Enjoy Pain/ hangover killer Enlighten Music - "Reduce stress, boredom, and alcohol craving"
89 8 5 2	**Inspiration, Perception, Meditation, Spiritual** Look at reality/ what's important Know self, "Tool for life's events", "To turn on, tune in, drop out", "It seems to grow my ears, eyes, & heart/brain", "Not to commit moral suicide" Closer to God
47	**Get Stoned**/High/Intoxicated/fucked/mullered, "Gets me fried, pumps my juice", "Love feeling like a gibbering mess", "Mong out"
42	**Better than alcohol/ cigs**
39	**Medical uses** (5 x Asthma, 1 x M.S., 7 x pain relief)
31 2	**Why Not** /Because/ I choose to Because I can
14	**Escapism** - "It's better than real life"
9	Avoid boredom
6	Cheap
13	**Habit**
4	Sensual
6 3 ea.	It's nice/amazing/beautiful/heaven/ good shit "It's part of life", "It makes common sense"
12	Happy/ Euphoric/ Laughter
11	Non aggressive
8	Tastes nice
5	Natural/ plant
4 ea.	Don't be stupid, try it and see
3 ea.	Anti-depressant, experimental, to smoke/ mainly in spliffs
2 ea.	Mild psychedelic, can't remember
1 ea.	Light relief, "Yes", "I'm a fool", "the illusion of clamping", "free & not fattening", "Family tradition", "It's the word", "live in London", "Gods gift", "hope," "same reasons as you", "minor offence", "What was the question again?", "not enough space", "various", "It's from Mother Nature, I like the effect, the world is too fast" "A complex mixture of bio-psycho-social causes, and I like it" "Love to chill, thrill, humble sinner" "Lesser of several evils" "Searching for real dope"
5	Don't use any more

9.1 The majority of users quote enjoyment or relaxation as the primary reason for using cannabis. Use for inspiration/creativity, and hedonism are more common than medicinal use.

10 Cannabis and Health

10.1 Health Problems:

10.1.1 Although many users experience health problems from cannabis use, in most cases these are occasional and of mild severity. Commonly reported problems include panic attacks, apathy, memory problems and paranoia.

Health Problems reported by Cannabis Users
(includes problems attributed to other drugs - 1999 data)

Frequency/ Severity	Headache	Paranoia	Chest Problems	Panic/ Freakout	Anxiety	Psychosis
Never	30.8%	19.8%	33.3%	42.5%	29.7%	55.4%
Once or twice	20.1%	17.6%	11.0%	13.7%	14.9%	2.6%
Occasionally	16.1%	22.0%	16.0%	5.4%	14.1%	1.2%
Regularly	1.5%	6.4%	3.5%	0.7%	3.8%	0.4%
All the time	0.3%	1.4%	1.2%	0.7%	1.0%	0.4%
Total ever	**38.0%**	**47.3%**	**31.8%**	**20.6%**	**33.7%**	**4.6%**
Not Applicable	20.8%	13.4%	20.5%	27.4%	18.8%	35.5%
Mild	23.3%	24.2%	16.5%	8.1%	19.4%	2.3%
Moderate	10.4%	15.5%	12.1%	6.3%	9.3%	1.4%
Severe	2.1%	3.8%	1.6%	4.8%	2.4%	0.8%
Total	**35.7%**	**43.5%**	**30.2%**	**19.1%**	**31.2%**	**4.5%**
Frequency/ Severity	**Apathy**	**Running Out (of drug)**	**Withdrawal**	**Balance**	**Domestic accidents**	**Vomiting**
Never	12.4%	20.7%	38.0%	20.8%	41.5%	30.0%
Once or twice	5.4%	9.9%	6.6%	13.2%	8.0%	18.3%
Occasionally	20.6%	17.3%	6.4%	18.9%	2.3%	8.4%
Regularly	20.9%	8.8%	1.5%	8.3%	0.5%	1.1%
All the time	6.9%	6.3%	0.6%	2.0%	0.3%	0.2%
Total ever	**53.7%**	**42.3%**	**15.2%**	**42.4%**	**11.1%**	**28.0%**
Not Applicable	7.9%	17.6%	25.0%	13.8%	27.2%	18.5%
Mild	16.9%	15.2%	7.4%	22.9%	8.0%	9.9%
Moderate	24.4%	8.6%	4.3%	12.9%	1.5%	12.0%
Severe	7.7%	9.6%	1.8%	2.9%	0.6%	4.0%
Total	**49.0%**	**33.4%**	**13.5%**	**38.7%**	**10.0%**	**26.0%**
Frequency/ Severity	**Fatigue**	**Overdose/ 'Whitey'**	**Thinking**	**Memory**	**Halluci-nation**	**Other Problems**
Never	14.1%	28.9%	19.4%	15.7%	30.2%	3.9%
Once or twice	9.6%	21.4%	10.8%	10.7%	14.0%	0.6%
Occasionally	20.2%	5.5%	15.3%	18.0%	8.2%	0.7%
Regularly	10.8%	0.6%	7.6%	10.3%	1.4%	0.9%
All the time	2.4%	0.0%	2.9%	3.9%	0.8%	0.4%
Total ever	**42.9%**	**27.5%**	**36.6%**	**42.8%**	**24.5%**	**2.7%**
Not Applicable	8.6%	18.1%	11.6%	10.6%	19.8%	2.6%
Mild	17.6%	9.2%	19.2%	21.4%	11.0%	0.2%
Moderate	18.2%	9.4%	11.8%	14.4%	8.7%	1.2%
Severe	3.2%	6.5%	3.3%	3.1%	2.3%	0.9%
Total	**39.0%**	**25.2%**	**34.2%**	**38.9%**	**22.0%**	**2.3%**

10.2 Medicinal use

10.2.1 Medicinal use of cannabis was first reported in 2737 BC in China, and 'hemp' has a western tradition as listed by Culpepper. O'Shaughnessy wrote the first modern medical paper in 1839. Tincture of cannabis was available in the UK as a medicine until banned by the Misuse of Drugs Act in 1971.

10.2.2 After over a century of research primarily aimed at discovering the dangers of cannabis, Cannabis was described by the British Medical Association as 'a remarkably safe drug with a side effects profile superior to many conventional medications'.

10.2.3 The cannabinoid receptor has been found in many areas of the nervous system and bodily tissues, including the skin and gut. It is suggested that the receptor, reacting to the body's own cannabinoids (e.g. anandamide) regulates the pain threshold. New research is emerging at an exponential rate, with papers being published at the rate of one a day into this developing field of pharmacology.

10.2.4 Conditions which may be improved by cannabis include:

(a) **Multiple Sclerosis** - Recent research is very encouraging, suggesting the condition may result from disorders of the body's own cannabinoid metabolism, with many patients reporting dramatic improvement of symptoms.

(b) **Pain** - including arthritis, spinal injury, migraine etc and other forms of chronic pain

(c) **Asthma** - THC has powerful bronchodilator properties, although cannabis smoke can irritate the lungs.

(d) **Gastrointestinal** - THC slows the gut, and has been claimed to improve disorders such as Crohn's disease and irritable bowel syndrome

(e) **AIDS/Cancer** - THC or cannabis improves appetite and reduces nausea and the wasting associated with AIDS or cancer chemotherapy treatment. While several components of cannabis smoke have been found to be carcinogenic, some research has suggested there may be a protective effect of certain cannabinoids against breast or skin cancers.

(f) **Strokes** - Dexanabinol, a synthetic cannabinoid, has been found to dramatically reduce the death of brain cells following a stroke or severe head injury.

(g) **Glaucoma** - THC reduces intraocular pressure, although relatively high dosages and frequent repetition are needed. Glaucoma is the second most common cause of blindness.

(h) **Epilepsy** - Various cannabinoids (notably cannabidiol or CBD present mainly in resin) have powerful anticonvulsant properties.

(i) **Stress** - The most commonly-reported effect of cannabis is relaxation and stress relief. However cannabis increases heart rate, whilst reducing blood pressure via lowered smooth muscle tone in the arteries - the net effect being similar to changing down a gear when driving uphill.

(j) **Mental Health**: Several individuals claim to have reduced psychiatric symptoms after replacing prescribed medications (antidepressants or tranquillisers) with cannabis.

11 Cannabis and Driving

11.1 Drug driving has become a hot topic over recent years, with much ill-informed opinion from motoring organisations. The Transport Research Laboratory has been conducting tests, which confirm most previous findings that cannabis:

(a) has no effect on reaction time
(b) marginally affects tracking ability
(c) drivers under the influence tend to be more careful, driving more slowly, leaving a larger gap, and undertaking fewer aggressive driving manoeuvres.

11.2 New users of cannabis, and inexperienced drivers, tend to be most impaired, whereas regular users or drivers show little effect on performance. Skunk tends to impair performance more than resin. Our results show that women tend to have a higher risk of impairment, as there may be less scope for improvement in 'driving behaviour', but that most drivers have similar, or even lower, rates of accidents compared to those expected for the same age and sex.

11.3 Driving (or being in charge of a vehicle etc) whilst unfit through drink or drugs has long been an offence under the Road Traffic Acts. To prove this, the police have to show a driver is unfit, meaning that the ability to drive properly is impaired, and the presence of drugs which can cause impairment.

11.4 The police have been steadily improving their enforcement techniques (now using blood rather than urine tests) and have developed 'field impairment tests', based on tests used in the US for alcohol impairment - examining a drivers performance in a number of tasks:

(a) Pupil size (cannabis has only a marginal effect on pupil diameter)
(b) Romberg test (head back, legs apart, eyes closed, asked to estimate when 30 seconds have passed - observe balance and accuracy of time estimation)
(c) Walk & Turn test - (heel to toe walk, swivel turn and retrace steps along straight line - observe accuracy of following instructions and balance)
(d) One-legged stand - (asked to stand on either leg, observe balance)
(e) Finger to nose test - (observe co-ordination, using correct hand etc)

11.5 IDMU has recommended that such tests be improved and made more objective - e.g. being recorded on videotape, and introduction of in-car simulators to test tracking and reaction times as objective measures of impairment. In addition, we have recommended that at least two blood samples be taken 15 minutes apart, in order to distinguish between acute intoxication and baseline levels, as cannabis metabolites can be detected in body fluids for up to a month after use.

12 Policy Options - Decriminalisation & alternatives

12.1 Is Decriminalisation Desirable?

12.1.1 If decriminalisation involves removing criminal penalties for possession (e.g. of less than a designated amount), but leaving supply of drugs in the hands of criminals, there would be some benefits, but many problems would remain.

(a) Benefits

(i) The move would be popular among users of drugs, reducing the levels of conflict between young people, police and society

(ii) Removing the threat of a criminal record (and/or expunging existing criminal records for simple possession) would reduce the financial impact of an arrest on the individual and society.

(iii) The credibility of government messages among wide sections of society may increase. Our recent survey showed that the least trusted sources of drugs information were Government Ministers, the Drugs Czar, and the Police.

(iv) Society as a whole could benefit from a more tolerant climate of individual rights and responsibilities, with a less authoritarian relationship between the government and its citizens.

(b) Problems

(i) Leaving civil penalties in place for possession would not remove the 'naughty' or 'forbidden fruit' image of drugs, and would decrease the attractions of usage.

(ii) Civil fines would be paid by a small minority of users (those who are caught), and would therefore represent a very inefficient form of taxation.

(iii) If demand increases, the untaxed profits of drug traffickers would increase, and with this the levels of corruption and violence associated with any illegal trade.

(iv) Decriminalisation would mean users still having to get their supply from a source. If the 'legal' source of drug (GP, licensing) is inferior in quality to the 'illegal' sources, then the criminal control of the drug trade would not be halted. To be effective the criminal element that controls the supply of drugs must be put out of business. This can be achieved by ensuring the supply of drugs is at least of a standard users are already accustomed to. In the case of cannabis the easiest solution would be to allow anyone to grow their own supply for own personal use only. This would enable relatively law abiding citizens who only smoke cannabis to avoid visiting criminal suppliers.

(v) The government would not benefit from Excise Duty revenues payable on (particularly) cannabis. Our surveys have indicated that such duties, along with reduced enforcement costs, could generate between £2 Billion and £5 Billion per year for the exchequer.

12.2 What are the practical alternatives?

12.2.1 Status Quo - No change in legislation. Public opinion is steadily moving towards support of drug law reform and some form of liberalisation. Opportunities have been missed in the past (e.g. following Wooton Report and 1979 ACMD report) to reduce the criminal status of cannabis, and those failures are at least in part responsible for the levels of drug problems we face today (ten times as many drug users/arrests today as when the Misuse of Drugs Act was introduced)

12.2.2 Reduce penalties (reschedule cannabis to class C, Ecstasy/LSD etc. to class B) - These proposals from the Police Foundation in essence echo those of the ACMD in 1979. This would represent tinkering with the system, as the damaging effects of a criminal record for drugs on the individual and society would remain.

12.2.3 Regulation/Licensing: In the long term, some form of regulated supply of cannabis must be considered. The extent to which licensing could cover existing illicit preparations would depend on international agreements (i.e. for cannabis resin or herbal imported from countries where production remains illegal), although domestic production could supply the bulk of the UK cannabis market. The objective of such models would be to satisfy existing

demand without creating additional demand. Different models may be appropriate for different drugs:

(a) *Prescription and dispensation from Pharmacy* - this could be appropriate for opiates, but would impact on NHS resources (GPs' time). Individual use could be regulated.

(b) *Individual licenses to possess/purchase* - Users could apply for a licence (smartcard?) which would enable them to buy (e.g. opiates) in appropriate amounts at or near cost price.

(c) *Licenses to produce* - cannabis growers could be allowed a 'duty free' surface area or lighting wattage, but could apply for licenses to produce larger amounts. Duty could be levied at quarterly intervals based on the available surface area, subject to regular inspection.

(d) *Licensed supply*

  (i) Outlets such as 'coffee shops' could be licensed to supply cannabis, with appropriate restrictions on advertising, age restrictions (as with alcohol or tobacco), and location (e.g. not within 1/4 mile of a school).

  (ii) Alternatives would include a 'club' model whereby licensed clubs could supply cannabis to their members, who would have to produce a membership card. Reciprocal agreements could allow cards to be valid in all clubs within an association.

12.2.4 Free Market (Legalisation) - This would involve drugs being sold in normal retail outlets (e.g. supermarkets/tobacconists) without significant controls. Excise duties could be levied on producers and/or wholesalers as with tobacco or alcohol. This policy would probably lead to increased usage (particularly among middle-aged or elderly citizens), although this would also generate the highest duty revenues for government.

13 About IDMU Ltd.

13.1 Description

13.1.1 IDMU is a small independent research consultancy specialising in the study of illegal drug consumption patterns, prices and effects. Our mission is to provide accurate, up to date and impartial information on drugs to all parties to the debate over drugs policy.

13.1.2 IDMU is funded wholly via professional fees earned in providing expert evidence for the criminal and civil courts, with experience of over 900 criminal cases since 1991. The evidence mainly covers personal consumption and drug valuations, but includes yields of cannabis cultivation systems, effects of drugs (re criminal intent, driving impairment etc.), and a range of other aspects, most notably therapeutic uses of cannabis.

13.1.3 Other than legal casework, we have provided consultancy for GW Pharmaceuticals, the House of Lords enquiry, the Home Office, Transport Research Laboratory, and Northamptonshire Police, as well as press journalists and broadcast media.

13.2 Student Placements

13.2.1 IDMU does not have the resources to fund writing up and publishing the vast majority of our survey data, and much has never been fully analysed. Each year we ask a number of core questions, concerning consumption and prices for a range of drugs, with core demographic data, but have also asked other questions including drugs education, driving records positive and negative effects, best and worst drug experiences, political affiliation and many more. Preparations are well advanced to put the survey on the internet.

13.2.2 We would be happy to welcome students seeking a research placement, with a view to preparing articles and research papers for publication. Longer term projects can involve inclusion of new survey questions. Much information could be distilled using multivariate analyses, if anyone is up to the task.

13.2.3 We are also seeking people working with drug users, particularly those using heroin, amphetamine and/or crack cocaine, to distribute surveys among their client groups, as we find that problem drug users are underrepresented.

13.3 Follow-Up

13.3.1 I am happy to answer your questions via e-mail (mail@idmu.co.uk). Please be patient, as it can sometimes take a few weeks to respond, particularly when we are busy. Please keep questions specific whenever possible.

13.3.2 Please also check the FAQ pages on our website, as someone may already have asked a similar question. Many of these pages (indexed by drug) contain unpublished data or literature reviews unavailable elsewhere.

14. Further Reading & Websites

14.1 General

The IDMU website -***www.idmu.co.uk*** - Lots of frequently (and not so frequently) asked questions, on-line publications, legal information, links and much more.

UK Cannabis Activists - www.ukcia.org - The main cannabis information site in the UK, run by activists, but containing much information as well as argument

Cannabis Culture - a journey through disputed territory Matthews P (1999) Bloomsbury

Potology - Newcombe RD - Lifeline Publications - serious information presented in a readable and entertaining format

Science of Marijuana - Iversen L (2000) - Oxford University Press

Hashish - ClarkeRC (1998) Red Eye Press - superb reference text re types and potencies.

14.2 Consumption & UK Market

Regular Users - Self-reported drug consumption patterns and attitudes to drugs among 1333 regular cannabis users. Atha MJ & Blanchard S (1997) - IDMU Publications - full 1994 survey results

Regular Users II - UK Drugs Market Analysis, Purchasing Patterns & Prices 1997 - Atha MJ, Blanchard S & Davis S (1999) IDMU Publications

Developing a methodology for measuring illegal activity for the UK National Accounts. Groom C, Davies T & Balchin S (1998) Economic Trends 536 pp33-72 (July)

Drugwatch - Just Say No - Caplin S & Woodward S (1995) Corgi - early attempt at quantitative research

How to get off drugs - Mothner & Weitz (1984) Penguin - comparative info on amphetamines and opiates

Mixmag - always good for drugs articles, particularly the definitive ecstasy user surveys

Cognition & long term use of Ganja, Schaeffer et al (1982) Science - Heaviest cannabis users

Hashish, studies of long-term use - Stefanis, Dornbush & Fink (1977) Raven Press

Cannabis in the Marketplace - Legalise Cannabis Campaign 1980/1984 - analysis of different models of legalised cannabis distribution

Drug Seizure and Offender Statistics - Home Office Statistical Bulletin - published annually, with supplementary and regional tables, available as pdf formats on Research, Development & Statistics directorate website www.homeoffice.gov.uk

14.3 Law & Politics

The Law on the Misuse of Drug and Drug Trafficking Offences, Fortson R (1992) Sweet & Maxwell

Bucknell & Ghodse on Misuse of Drugs (1996) - Sweet & Maxwell

Misuse of Drugs Act 1971 - HMSO

Political opinions of drug users 1998-2000 Atha & Davis (2001) - IDMU Publications (on-line)

Drugs and the Law - Report of the Independent Enquiry into the Misuse of Drugs Act 1971 Police Foundation (2001)

14.4 Medicinal

Therapeutic Uses of Cannabis, British Medical Association (1997) Harwood Academic Publishers BMA

Marijuana and Medicine - assessing the Science Base US National Institute of Medicine (1999) National Academy Press

Cannabis, the scientific and Medical Evidence - House of Lords Science & Technology Select Committee (1998) The Stationery Office HL paper 151 (Report) and 151-I (Volume of written & oral evidence)

Marihuana the Forbidden Medicine Grinspoon L & Bakalar JB (1997) Yale University Press

Marijuana Medical Papers - Mikuriya T (Ed) (1972) Medi-Comp Press - contains many early studies from 1837 to 1971

IDMU Submission to House of Lords Enquiry Atha, Davis & Ganly (1998) - reviews of scientific evidence and analysis of relevant survey data - available on-line or in volume of evidence published by Lords Enquiry.

14.5 Driving

Cannabis and Driving, a review of the literature and commentary. Ward NJ & Dye L (1999) Road Safety Research Report No 12 London: DETR

The Influence of Cannabis on Driving - Sexton BF et al (2000) Transport Research Laboratory UK: TRL Report 477

The Prevalence and role of alcohol, cannabis, benzodiazepines and Stimulants in non-fatal road crashes. Hunter et al (1998) Adelaide: Forensic Science/Clinical & Exp. Pharmacology (Monograph)

The Influence of Marijuana on Driving Robbe HWJ (1994) Maastricht, University of Limburg

Drugs & Driving Atha, Blanchard, Davis & Liptrot (2001) IDMU - in preparation

14.6 Research Tools On-line

Drugscope - ***www.drugscope.org*** - Formed by merger of the National co-ordinating body for the voluntary sector (SCODA) with the UK's most comprehensive drugs library (ISDD).

Medline - ***http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=PubMed*** searchable database, usually with abstracts, of research papers in the biological sciences

Media Awareness Project - ***www.mapinc.org*** - searchable database of 100,000+ media articles on drugs, US and worldwide

Parliament - ***www.parliament.uk*** - written answers to parliamentary questions provide a rich source of drug-related information and statistics

Home Office (Research & Statistics Directorate) - ***www.homeoffice.gov.uk*** - Source of many on-line drugs research papers commissioned by the UK government, including British Crime Surveys.