

**Cannabis Use in Amsterdam**

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**Peter COHEN & Arjan SAS**

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# 1 INTRODUCTION AND CHAPTER SUMMARIES

In his overview of cannabis policy debates in Australia, Hall states that the debate often boils down to a discussion of a false antithesis, that is the debate between the position that cannabis is harmless (ergo it should be legal) or harmful (ergo it should be banned)<sup>1</sup>. According to Hall, this reduction in the debate makes it difficult to reach a balanced appraisal between positive and negative effects of cannabis use and the positive and negative effects of its prohibition. He paraphrases Room by saying that one either engages in “problem inflation” or in “problem deflation” when discussing the pro’s and con’s of cannabis use, and their – allegedly – logical connections to policy.

Our investigation into positive and negative effects, consequences, disadvantages and advantages of cannabis consumption in Amsterdam may help to create a more balanced condition in the policy debate. Our aim is to present a wide and multi sided range of data on cannabis consumption from a large sample of experienced cannabis users who had had access to cannabis for a very long time.

We knew from our repeated series of household surveys in the municipality of Amsterdam<sup>2</sup>, that we would find a large number of experienced cannabis users in the population. Since social disapproval of cannabis use in the largest city of the Netherlands is declining for a fairly long time (since the beginning of the seventies) we would be in the position to tap information about cannabis use as it occurs in a context of non criminalisation or social marginalisation. We can not stress enough the importance of researching drug use outside the social context of marginalisation. If a society ostracises particular behaviour, like drug use or homosexuality, such behaviour will necessarily be constrained to hidden subcultures. Rules and regulations will develop that are for a part compensations for (and products of) the socially deviant status of that behaviour. In *Crack in America* Reinerman and Levine state that a “criminalized context has influenced how illicit drugs are used, by whom, what their effects are taken to mean, and to a significant degree even their behavioural consequences.”<sup>3</sup>

We heartily agree with this remark, and it underscores the immense importance of getting information about cannabis use in a situation *in which consumption is not hidden and regulated by fairly normal social controls*.

Another reason why cannabis research in Amsterdam is important is, that through our series of household surveys, we would be able to reach a sample of experienced cannabis users that is just as representative for the whole population of experienced users, as the household survey sample is for the population of Amsterdam. By tapping the experienced cannabis users in the household sample, we would for the first time in the history of cannabis use create knowledge on a non biased sample. However careful one would make samples via other methods<sup>4</sup> one would never be able to fully discard intuitions of uncertain representativity. The only other study we know, of users that live in a context of low to zero social taboo about cannabis use, is the Rubin and Comitas study of Jamaican consumers.<sup>5</sup> Although this study is exemplary in its erudition and scope, it carries the disadvantage that the highly studied subjects live in

a totally different culture than users living in the more industrialised parts of this world. Because so much of the policy debates about cannabis take place in western industrialised countries, this is an important disadvantage.

Therefore the three important advantages of studying cannabis users in Amsterdam via the household survey are:

1. sample representativity for experienced cannabis users,
2. the collection of data from users that developed their use over time in a non criminalizing context,
3. that is part of the western industrialised cosmopolitan culture and life style.

Experience with cannabis in Amsterdam is not higher than almost 30 percent of the adult population (12 years and older) of which only 43 percent has an experience of 25 times of use or over.<sup>6</sup> This means that experienced use is constrained to twelve percent of the Amsterdam adult population, or about 72,000 people. Our cannabis survey was directed at this pool of experienced users. In chapter two we will return to the topic of sampling.

We asked our sample of 216 experienced users 69 pages of questions, divided into twelve topics:

1. initiation of cannabis use,
2. level of use through time,
3. patterns of use through time,
4. quitting and diminishing of use,
5. the use of other drugs and combinations of drugs,
6. buying cannabis,
7. contexts of cannabis use,
8. advantages and disadvantages,
9. prevalence of effects of use (more than a hundred potential effects are mentioned),
10. attitudes about cannabis and other users,
11. cannabis dependence both from a subjective angle and according to DSM-IV, and
12. use of cannabis at work.

Of course, what the risks are of cannabis use, is not an objective problem. It is up till now a battleground for ideological positions around drug use in general, and cannabis use in particular. Risks are definable in terms of behaviour or social relations, but also as physical functioning, till the level of the human cell. Nowadays, with the recent advance made in understanding of how substances influence brain activity, risks are often formulated in terms of 'brain damage'. Each time some activity of an illicit drug is recognised in part of the brain, this activity is labelled as 'damage' under the current ideological climate. Hopefully this labelling will be a temporary matter, as knowledge will increase. As the neurologist and Parkinson disease specialist Wolters remarked during a small symposium on the risks of MDMA use, much activity in the brain that is labelled as 'damage' should be labelled as 'adaptive brain behaviour' because there is no evidence of this activity to be really damaging or irreversible.<sup>7</sup>

In our cannabis survey we could not ask anything that relates to risks on the level of the human cell, or the level of organs within the human body. But, as the careers of experienced users in Amsterdam appeared to be ten years or longer, the structure and openness of our questionnaire would allow tapping information on at least some physiological risks if our respondents would have noticed them.

We have to take into account however, that users normally do not interpret their risk perceptions in terms of organ malfunctioning, unless such malfunctioning is highly perceivable.

Risks of substance use is easier seen in terms of one's own behaviour and in terms of effects on the micro cosmos of the user, which is more the type of risks we dealt with in the structured part of our survey. How to measure the prevalence and relevance of all possible health related phenomena is an unsolved problem, one of the reasons why scientific research is of limited value to international drug policy. It is more of value to national drug policies, where more restricted and homogeneous notions of health and of problems with health are defined. Research can clarify local impacts on predefined health risks by doing rigid and systematic comparative research between different cities or regions as we are now projecting in Bremen, Amsterdam and San Francisco. Of course, we are light years away from balanced multi-disciplinary calculations of the costs and benefits of drug use in different cultural contexts.

When speaking about the notion of risk, we have to measure the negative side of some behaviour against its positive yield or potential. The risk of breaking a leg during skiing is huge when compared to the risk of breaking ones leg during a walk in the park. But, we accept some high risks if the benefits of the behaviour are high as well. So, few skiers will, on the basis of risk assessment, exchange the excitement of their skiing for walking in the park. Risk is a rather complicated topic for research or for policy, because there is no immediate way of doing aggregate cost-benefit analyses on drug use or on the cost benefit calculations drug users make for themselves. We also have to deal with the dominant ideological climate around drug use in which the notion of drug use having benefits is far from accepted. And, when substance use does bring about some risks, just as skiing does, do these risks have to be labelled as unacceptable?<sup>8</sup>

In our questionnaire we did not include questions that allow good insight into these processes of cost benefit comparison, as it goes on in experienced cannabis users. This topic lends itself much more to qualitative research until well quantifiable hypotheses can be formulated. However, we did collect information on reasons for use, for quitting cannabis, for diminishing use level and on how users control their use by applying many types of rules. This information allows some fairly detailed insight into what is seen as costs by users, and what as benefits.

Health is not an objective entity, so what we in Amsterdam consider healthy or unhealthy, may reflect in the wording of our questionnaire. It also reflects in the type of answers we get, so to a certain extent even our outcomes are determined by our local bias. This can not be prevented. Every questionnaire is a reflection of political or professional preoccupations.<sup>9</sup> Sociologists will ask completely different questions than psychologists, and again than psychiatrists. One can observe this very nicely in the enormous difference between the topics of the recent Kleiber et al study of cannabis users in Germany<sup>10</sup>, and our own. Kleiber lives in a political and professional world in which psychological and psychiatric questions are considered relevant (although Kleiber is critical of a 'deviance orientation' in this area<sup>11</sup>). This means that relevant questions about health are operationalised in terms of scores on psychological scales. We omitted such scales. In our user survey we opened the possibility for each

respondent to insert his or her own definition of problems and/or health around cannabis. We introduced many open questions in order to tap into the notions of users themselves. Just for the purpose of comparison we introduced some 'foreign' items, like the items inspired by DSM-IV.

By not introducing a pathology paradigm in many of the questions, and by trying to focus as much as possible on more neutral self- perceived "advantages and disadvantages" we have tried to steer free of introducing a particular labelling language in our questionnaire. Also, we freed ourselves that way from the necessity to collect the same data in a matched contrast group. Above all we tried to collect systematic descriptive information on many aspects of use (buying, prices, rules of use, quitting, risks related to driving or to the justice system, etc.). In this sense we have tried to at least approach something that according to Quensel et al. is impossible, to create a 'neutral research instrument'.<sup>12</sup> As also we have shown earlier, a fully neutral research instrument is indeed impossible because every step in a survey, from sampling to item selection to question wording, is tied up to constructs about drug use and its ethical evaluation.<sup>13</sup>

### *Some results and chapter summaries*

In chapter 2 we report some methodological issues relating to the sample of respondents. We found our experienced cannabis users (25 times of use or more during life time) via a household survey among a random sample (N=4,363) of those inhabitants in Amsterdam that were registered in the local register in 1994. In 1994 of the Amsterdam population of twelve years and older, 29.2 percent had life time experience with cannabis, of which 43 percent has used 25 times or more. Of the 536 respondents with the necessary level of experience, 216 participated in our cannabis survey. A comparison between these respondents and the non response (N= 319) revealed that of the eight variables we compared, the only significant difference was that among the respondents a higher proportion has higher education than among the non respondents (45 percent versus 36 percent). On gender, age, type of household, type of employment, income, prevalence of cannabis use (during last year and during last thirty days prior to interview), length of cannabis use career and prevalence of other drug use, respondents and non respondents did not differ.

The average age of our respondents was 34 years (range 18-66) and average length of cannabis consumption career is 14 years.

Many respondents (76 percent) in our cannabis survey report that at least half of their social environment has some experience with cannabis.

Chapter 3 deals with initiation into use of cannabis. Our respondents start on average at 17.0 years, versus an initiation age of 19.8 for all cannabis users in the Amsterdam population. Almost two third used hashish at their initiation which took place, for most (88 percent), in the company of one or more friends. A large proportion of 40 percent did not perceive any effect at their first use of cannabis.

In chapter 4 we report many data on the development of cannabis consumption over time. An important variable is 'level of use' and its development over time. Level of use is defined as a composite variable, constructed as frequency of use per month multiplied by typical amount of use per consumption. The result is expressed in grams of cannabis per month.



We confronted our respondents with graphs of patterns of use. The largest single group (48 percent) said their use pattern over time was defined by a rise from beginning of use till it would reach a certain top level and then decline, to present use level or abstinence. This up-top-down level was also found for a large proportion of cocaine users in the 1987 cocaine study.<sup>14</sup>

The second most prevalent use pattern definition was 'varying' (24 percent) meaning that use levels had had many different heights during the course of the consumption career. A pattern that is usually associated to problems — 'slowly more' — was chosen by six percent as the pattern that best described their career.

The average age at which our respondents started their first year of regular use was 19, which is on average 15 years before interview. Average age at beginning of top period of use was 21.4 years. Top period, irrespective of the level of use during this period, would on average last 39 months. This is considerably longer than the average top period we measured for experienced cocaine users in 1987 and 1991 (19 months).

Daily cannabis use occurs for 49 percent at period of heaviest use, with 10 percent using daily during last three month before interview.

We tried to design a measure of level of use, as we did before in the cocaine studies. The methodological difficulties and potential bias of measuring quantities of cannabis used over a 14 year career are explained in chapter 4. We decided that all use of over 10 grams of cannabis a month would be labelled high level. Level of use is defined as low if 2.5 grams per month or less, and medium level is defined as between 2.5 and 10 grams per month.

The range between respondents of use level at top period is very large: between 0.2 grams and 300 grams a month.

High level use occurs for 33 percent of the sample, during period of heaviest use. Outside this particular period, the proportion of high level users is very constant at just over 10 percent of all non abstinent users.<sup>15</sup>

The duration of being high sharply diminishes from top period of use to last three months (from 41 percent reporting four hours or longer to 12 percent).

The advantage of not setting any inclusion criterion for our interview, except for a minimum experience of use of 25 times lifetime, is that we can draw some conclusions about quitting cannabis consumption. We found that 38 percent of the experienced users are abstinent during the twelve months before interview. Looking at last three months before interview this rises to 51 percent. This means, that a very large proportion of experienced users develop into abstinence or very infrequent use over an average consumption career of 14 years. The average length of the cannabis using career of respondents who had quit cannabis use at the time of the interview was 9.6 years.<sup>16</sup> Out of the 71 respondents who used more than 10 grams a month (high level) during their top period, 30 (or 42 percent) had not used any cannabis in the last three months before interview.

Chapter 4 on pattern of cannabis use over time shows very clearly that there are many differences between users, and within users over different phases during their career. We did find eight respondents (four percent) who consume quite constantly from early in their career to last three months prior to interview, at high levels, intoxicating themselves daily. The majority of users however shows an up-top-down pattern in quantities of use, frequency of use and levels of being high. After an average career of 14 years, for almost 50 percent this downward trend in use parameters ends in abstinence during last three month before interview. 29 percent of all experienced users

are using at low level during last three month before interview, and just six percent at high level.

In chapter 5 on methods of use we report that a very large majority (over 90 percent) smokes cannabis in so called 'joints', in a mixture with tobacco. Almost two third of our respondents want their cannabis moderate to strong in strength. Only 30 percent wants it mild to very mild. In the hypothetical case that users would be confronted with unusually strong cannabis two third report they would use less. We concluded that many respondents have a particular level of intoxication they regard as preferable, and they titrate the dosage of consumed cannabis to reach just that level. In other words, for a large proportion of cannabis users consumption is only functional at a particular level of intoxication, not less, not more. High strength variants of cannabis are preferred by 33 percent and pose little risks to these experienced users because of dose adjustment.

Chapter 6 is dedicated to rules of control over cannabis use and to buying cannabis. We assumed that cannabis users do not use in arbitrary situations or company, or in indiscriminate locations or moods. Our questions were directed on finding out if this is true, and if so, what rules of cannabis use our respondents have developed. We asked questions about dissuasion of use or encouragement of others, and how this is steered. We also asked what advice users would give novices of cannabis consumption, as one of the many different ways in which we tried to tap users' notions on rules. Other topics, related to regulatory mechanisms in this chapter are driving under the influence of alcohol and cannabis, or cannabis alone, and the relation between price and amounts of use.

We show that users have many possibilities, 'sensory equipment', for controlling their use and that reliance on external controls too easily dismisses the capacity and the influence of a large battery of differentiated internal controls.

Chapter 7 is dedicated to advantages people associate with cannabis use, disadvantages and the prevalence of a large range of effects. Like other cannabis studies, we found as well that relaxation is an advantage of cannabis, perceived by many. It takes the first place among many advantages mentioned. However, very many disadvantages are mentioned by these users. We asked respondents to grade illicit drugs on a ten point scale between 'all advantages (10) and all disadvantages (1). Highest grade goes to marihuana, with an average of 6.5, and alcohol, with grade 6.1. Lowest grade goes to amphetamine, with 2.8 average. Although many negative effects of cannabis are mentioned, they are not mentioned by many. Positive effects clearly lead, and we explain this by the success of the rules that users have learned to apply, in order to prevent negative effects occurring and disadvantages becoming dominant. We postulate that the experience with advantages, disadvantages and effects are the most important regulatory mechanisms of drug use because they underlie individual rule systems.

In chapter 8 diminishing and quitting cannabis is discussed, together with some information on periods of abstinence. Users may intentionally quit cannabis and see themselves as having 'quitted' (36 persons in our sample) but it is also possible that no use is shown for some time, after which respondents may simply appear to have 'drifted' out of cannabis use. Looking at last twelve months prevalence we see that 83 respondents have not consumed any cannabis. A large part of them (57 percent) reports it will use in the future or is insecure about future use. Non use is most often explained by our respondents as 'no need for it' or 'don't feel like it'. Periods of abstinence of longer than one month occurred more than five times during the career for 59 percent of the sample. The longest period of abstinence lasts on average 18.8 months. Besides

quitting cannabis use, or being abstinent for a certain period, cannabis users may decide to cut back on their use. Of our respondents, 86 (40 percent of the sample) indicated that they deliberately decreased their cannabis use at some point during their cannabis using career. A minority (15 respondents) reports to have had problems with diminishing their use level, ranging from mood swings to drinking more alcohol.

In chapter 9 we discuss other drug use by experienced cannabis users. Other drugs are tried by at least 65 percent during life time. Frequent and recent other drug use is less prevalent. The number of experienced cannabis users in our sample that reports over 100 times of other illicit drug use, is small. Largest number of 100 times and more users is found with powder cocaine, 32 persons out of all 103 cocaine users (32 percent) or 15 percent of all experienced cannabis users in the sample. Hundred times of use or more for opiates during life time is reported by eight persons, four percent of the sample.

There is evidence that other drug use is largely experimental, in the sense that at relatively early age other substances are tried, but discontinued after a certain period of experimentation. Some cannabis users consume other illicit drug with cannabis. We found that 38 persons (18 percent) have experience with intravenous methods of drug use, of which 21 persons with multiple drugs. Most often mentioned are tranquillisers (11 respondents), morphine (10 respondents), cocaine (6 respondents) and heroin (3 respondents).

Chapter 10 deals with 'dependence'. A list of problem behaviours was read to respondents as an operationalisation of the strength of attraction that cannabis can have for users. We show that criminal and deviant behaviour which is attributed to cannabis use does occur, but not very frequent. Also, we asked about the prevalence of six criteria of 'dependence' taken from DSM-IV. No prevalence of any criterion is reported by 39 percent. One or two criteria are reported by 37 percent. Prevalence of three or more criteria during life time is reported by 24 percent.

Nineteen users report to have ever considered asking for some form of assistance to help them manage their cannabis use. These nineteen users are examined on a number of variables. They show remarkably high levels of use during top period. However, during last twelve months their use is not different from other users. In the conclusion some thoughts are offered about prudent use of diagnostic tools like DSM-IV.

In chapter 11 we offer some data regarding drug policy preferences of our respondents, about legal complications that users experienced, and some common 'gateway' functions of cannabis. We found that six percent of respondents prefer less liberal policies in the Netherlands for cannabis. Just over one third wants cannabis to be regulated like alcohol.

Of the 216 respondents, 212 (98 percent) had never been arrested in the Netherlands for the use or possession of cannabis. Looking only at respondents who actually have life time experience with other drugs, we still find that 93 percent of them had never been arrested or convicted in the Netherlands for use or possession of other drugs than cannabis.

Most respondents deny a role of cannabis in their use of other drugs in the sense that they want to acquaint themselves with 'stronger' substances or that cannabis made them curious for other drugs. However, cannabis use as a social activity occurs among drug users in general, and just over half of our respondents report to have learned to know other drug users via users of cannabis. Cannabis users are far more outgoing than non cannabis users, so their chance to see and meet other drug users is much larger than of

non outgoing people. Outgoing behaviour may be a much stronger determinant of any drug use experience, than the use of cannabis itself.

## Notes

- <sup>1</sup> Wayne Hall (1997), The recent Australian debate about the prohibition on cannabis use. *Addiction*, 92(9), pp. 1109-1115.
- <sup>2</sup> Sandwijk et al., 1988, 1991, 1995.
- <sup>3</sup> Reinerman, Craig & Harry G. Levine (eds.) (1997), *Crack in America. Demon drugs and social justice*. Berkeley: University of California Press. p. 8.
- <sup>4</sup> Snowball sampling: Goode, 1970; Kleiber & Soellner, 1998; Didcott et al., 1997; referral studies: Stefanis et al., 1977, or 'reasoned' target sampling methods: Rubin & Comitas, 1975.
- <sup>5</sup> Rubin, Vera, & Lambros Comitas (1975), *Ganja in Jamaica. A medical anthropological study of chronic marihuana use*. The Hague: Mouton & Co.
- <sup>6</sup> Sandwijk, J.P., P.D.A. Cohen, S. Musterd & M.P.S. Langemeijer (1995), *Licit and illicit drug use in Amsterdam II: Report of a household survey in 1994 on the prevalence of drug use among the population of 12 years and over*. Amsterdam: Department of Human Geography, University of Amsterdam.
- <sup>7</sup> Eric Wolters, MD, at a symposium on risks of MDMA, Jellinek Centre October 29, 1997.
- <sup>8</sup> And if so, who is the one that does the labelling? And if such risks are seen as acceptable by the user but unacceptable by the State, under what definition of State power does such a conflict of view legitimise a State dominance in the construction of policy?
- <sup>9</sup> See for a discussion on the relation between types of data that are requested, and type of drug control system: Cohen, Peter (1997), The relation between drug use prevalence estimation and policy interests. In: European Monitoring Center for Drugs and Drug Addiction, *Estimating the prevalence of problem drug use in Europe*. Luxembourg: Office for Official Publications of the European Communities. pp. 27-34.
- <sup>10</sup> Kleiber, Dieter & Renate Soellner (1998), *Cannabiskonsum. Entwicklungstendenzen, Konsummuster und Risiken*. Weinheim: Juventa Verlag.
- <sup>11</sup> Ibid. p. 9.
- <sup>12</sup> Quensel, Stephan, Birgitta Kolte & Ingo Michels (1997), Monitoring cannabis use: A case study. In: *Invitational conference on monitoring illicit drugs and health. Final report*. Utrecht: Trimbos Instituut. pp. 95-105.
- <sup>13</sup> See "Introduction into the author's bias." In: Peter Cohen (1990), *Drugs as a social construct*. Amsterdam: Department of Human Geography, University of Amsterdam. pp. 1-7. Online: <http://www.frw.uva.nl/cedro/library/dis/I.html>
- <sup>14</sup> 39 percent, cf Cohen, Peter (1989), *Cocaine use in Amsterdam in non deviant subcultures*. Amsterdam: Department of Human Geography, University of Amsterdam.
- <sup>15</sup> 11.1 percent at first year of regular use, 10.4 percent at last year of use, and 10.9 percent at last three months of use.
- <sup>16</sup> We regard a respondent as having quitted cannabis use if the respondent did not report any use of hashish or marijuana during the last twelve months prior to the interview, or if the respondent stated that he or she had totally quitted the use of marijuana or hashish.

## 2 SAMPLING EXPERIENCED CANNABIS USERS

### *2.1 Introduction*

In 1995 and in 1996 we interviewed experienced cannabis users in Amsterdam, Utrecht and Tilburg. In this publication we will discuss results obtained from the Amsterdam sample.

We will describe cannabis use over time and other characteristics of the group of 216 experienced cannabis users of which most were interviewed in 1995. In our investigation we focused on the experienced user and not on 'any user' because we wanted to examine in depth many aspects of cannabis use, something that would be hard or impossible if we would interview users that had had only fleeting experience with the substance. We defined experienced users as those who reported to have had at least 25 occasions of use during life time. Of all cannabis users in the city of Amsterdam, 43.7 percent reaches a life time experience of 25 occasions of use. The majority (56.3 percent) of those who ever had tried hashish or marijuana in the Amsterdam population, used it less than 25 times.

We applied the same criterion of 'experience' with the first 160 cocaine users we had interviewed in 1987.<sup>1</sup> We found that by applying the criterion of 'at least 25 occasions of use' we sampled highly experienced users that were able to supply a wealth of information about their use over time. We did not work with any other inclusion criterion (like 'current use'), because we wanted to find out, as we did for experienced cocaine users, what proportion of experienced cannabis users are abstinent at the time of interview. Expressing valid observations about abstinence and other career characteristics over time would be made impossible or unclear if we had introduced criteria about current use or maximum periods since current use.

### *2.2 Sampling*

Our aim was to interview in depth a number of experienced cannabis users, sampled in such a way that we would be able to generalise from the findings to the population of experienced cannabis users in the city of Amsterdam.

Some of the best studies on cannabis users still suffer from the fact that we do not exactly know how representative the samples are for what type of users.<sup>2</sup> Of course random sampling from populations that are not registered or structured in some accessible way is extremely difficult, if not impossible. Although very valuable, such studies are limited in relevance because no certainty can exist about the question if the findings from those studies are generalisable to groups of users outside the one observed.

Of course, studies of drug users not always have to be representative. Empirical studies of drug users will more or less describe the populations from which their respondents are drawn. Even if generalisability in the statistical sense is not possible, such studies can fill important gaps of explorative and even in depth knowledge. And, as long as is

understood well that these studies can not fulfil the desire for generalisable results, not much damage can be done.

However, in the case of all illicit drug use and certainly with relation to cannabis use, representativity still is very important for a number of reasons.

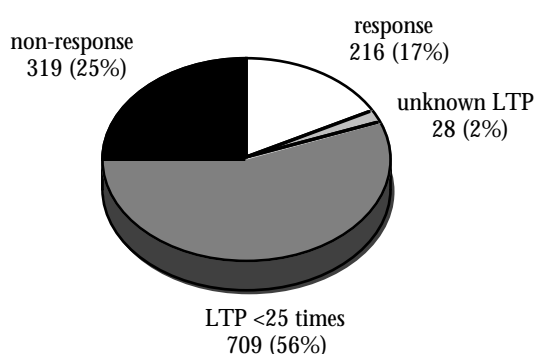
1. In Amsterdam cannabis is the most important illicit drug<sup>3</sup>, where experience with cannabis use is available with almost one third of the total adult population, and with 50 percent of the age group between 20 and 24 years old.<sup>4</sup> Under such circumstances, one would like to know in a generalisable way, what dominant cannabis use careers one can find and what they look like in a community based sample.
2. In Amsterdam cannabis is available from a number of semi legal outlets, numbering just a few in the early eighties, to about 400 in April 1996. From a drug political point of view, one should have reliable knowledge of how cannabis is used in the population under circumstances of full and non criminalised availability. A good, representative overview is needed in order to reach some certainty as to the 'effects' of this availability. Of course, the best way to reach relevant knowledge about the 'effects' of this availability, is to compare the Amsterdam patterns of cannabis use with those in other cities where such availability does not exist. Such a comparison is now under way.<sup>5</sup>
3. Much related to reason #2, is that once an illicit drug has outgrown small and hidden populations, and has accessed the general population as cannabis has done in most European cities, the study of hidden groups is no longer adequate. In many countries cannabis is the most important drug of pleasure after alcohol, tobacco and coffee.<sup>6</sup> The total lack of in-depth knowledge on patterns of cannabis use in the general population is a significant factor in the stubbornness of many fears around the use of this substance. Studies on cannabis use in representative groups may yield the knowledge to either firmly confirm these fears, or ease them.
4. If representativity, at least for a known group of specific characteristics, is not the aim of an investigation on drug use, it will remain unclear if some alleged effects of drug use are related to the sub group investigated or are more or less universal for all users of the particular substance.

We decided that we would use the popularity of cannabis to achieve a fully random sampling of our respondents by connecting the cannabis study to our population survey.<sup>7</sup> The 1995 Amsterdam sample of experienced cannabis users was created by using respondents from the population survey we had conducted in 1994 to measure drug use in the population of Amsterdam of 12 years and older. In order to measure drug use in the population we accessed a nett random sample of 4,363 persons that was taken from the Municipal Registry.<sup>8</sup>

Among the respondents in the 1994 population survey we found 1,272 persons who had used hashish or marihuana at least once in their lifetime. This is 29.2 percent of the response group of the population survey. Research into cannabis use is only possible if the respondents have a certain level of experience. We decided that an intake criterion of a life time prevalence of cannabis use of 25 occasions or more would suffice to participate in the survey. This meant that of the 1,272 persons with a life time prevalence of cannabis, 709 did not have enough experience to be recruited for our in depth survey. Another 28 persons with a life time prevalence of cannabis did not know or did not want to tell us how many times they used cannabis in their life, so they were also excluded from the cannabis survey. This left us with 535 potential respondents who satisfied the entry criterion.

We had asked all users of cannabis that were found during the 1994 household survey in Amsterdam to sign a consent form that allowed us to keep the address and to invite the respondent for the cannabis follow up survey. Of the 535 cannabis users who reported life time prevalence of at least 25 occasions of cannabis use, 250 persons were willing to participate in the cannabis survey. In 1995 we sent all 250 potential respondents a letter, reminding them they had filled in a consent form for follow-up research. Moreover, the letter announced that an interviewer would contact them a week after receipt of the letter to make an appointment. In the letter we offered the respondents a voucher for a movie, a book, or a compact disc, and asked them to indicate to the interviewer which of the three they would choose.

**Figure 2.1** Response compared to the total number of respondents in the population survey who reported life time prevalence of cannabis use (N=1,272).



Ultimately we managed to track down and interview during the years 1995 and 1996 a total of 216 persons. This gives us a response rate of 40.5 percent. We interviewed 205 respondents in 1995, and eleven in 1996. The remaining 34 persons could not be interviewed. They refused us an interview despite their earlier promise to participate (six persons), or could not be traced due to moving to an unknown address (16 persons) or a long stay abroad (five persons). Despite our efforts, four persons could not be reached for an interview. Furthermore, one person was suffering from AIDS and was too ill to be interviewed, and one person had died. In one case we decided not to interview a respondent because he indicated that he had never used cannabis in his life.

### *2.3 Interviewing and educating the interviewers*

We employed 24 experienced interviewers, that were introduced into the research project and into the interview and its secrets in a one day course. The interviewers were not paid for attending the introduction class, but for Dutch standards they were very well paid for each completed interview (f100,-<sup>9</sup> per interview).

We discussed each question plenary, allowing the interviewers to ask questions on wording, order and routing. This discussion resulted in several last minute improvements to the questionnaire. We required of every interviewer that he or she interviewed one colleague interviewer, and one experienced cannabis user from her own circles. These test interviews were checked and discussed with the interviewer. This way we achieved that each interviewer knew the interview schedule quite well before they went into the field.

On average an interview took 1.5 hours to complete. Maximum number of interviews by one interviewer was 15, minimum was two. Two hundred interviews were done at

respondent's homes, seven were done at the interviewers home, one was done in a cannabis retail shop, six at the university, one at respondents employment, and two outside on a street bench. Four of all the respondents were under the influence of cannabis at the time of interview, and one under the influence of alcohol.<sup>10</sup>

## *2.4 Non-response*

In order to know if our nett random sample of experienced cannabis users would be a non biased sub set of all experienced users we found in the population survey, we had to check the response against the non-response. We compared the 216 experienced cannabis users we interviewed with the 319 we did not, on eight variables. The tables and the statistical tests are added to the back of this chapter.<sup>11</sup>

This comparison showed that there were no statistically significant differences between the two groups on five demographic and socio-economic variables: gender, household composition, age, position on the labour market and average nett income per month. The response group, however, had a slight but statistically significant higher level of education than the non-response group. The proportion of respondents with a high level of education (university or higher professional schools) is 45 percent, versus 36 percent in the non-response group.

Although this difference might be relevant, in the light of the large and important similarities between response and non response this difference is insufficient to warrant the conclusion that the response group is not representative for experienced cannabis users in the population sample.

There are no statistical significant differences between the non-response group and the response group regarding the last year prevalence and last thirty days prevalence of cannabis use. Also the length of the cannabis use career differs not significantly between the two groups. The average length of the cannabis use career is 14 years in the response group, and 12 years in the non-response group. The prevalence of other drug use also does not show any differences between the response group and the non-response group.

The sample of 216 experienced cannabis users we have drawn from the general population is therefor one of the most, if not *the* most, representative samples of community based cannabis users found in the literature. We will describe this sample on a few background variables in the next section.

## *2.5 Social, demographic, and economic characteristics of the sample*

Almost 90 percent of all our respondents had some form of employment or had income as students.



**Table 2.1** Position on the labour market at time of the interview.

<i>Position on the labour market</i>	<i>n</i>	<i>%</i>
Fully employed	109	50
Partly employed	45	21
Student	32	15
Unemployed	23	11
Other	7	3
Total	216	100

We asked our respondents if they had ever been unemployed during the last 24 months, and if so, for what period. Sixty respondents had been unemployed for some period, at an average of just over one year (median ten months). Over half (56 percent) were employed in non managerial functions, and 31 percent had some form of management responsibility.

Income of our respondents was divided in the following way:

**Table 2.2** Average nett income per month in the year prior to the interview.

<i>Average nett monthly income</i>	<i>n</i>	<i>%</i>
Less than f1,000	29	13
f1,000 - f1,500	41	19
f1,500 - f2,000	34	16
f2,000 - f2,500	31	14
f2,500 - f3,000	32	15
f3,000 - f4,000	31	14
f4,000 - f5,000	10	5
f5,000 - f6,000	3	1
More than f6,000	5	2
Total	216	100

average nett monthly income: f2,281

The average nett monthly income of our respondents was f2,281. The average income in the same age cohort (18-66 years) in the Amsterdam population is higher with f2,970. This difference is statistically significant.<sup>12</sup>

At the moment of interview, 71 respondents (or 33 percent) were receiving some kind of social benefits or study grants.

Average age of our respondents was just over 34 years. Nineteen percent of our respondents were married at time of interview, 6.5 percent was divorced. Of all respondents, 42 percent was living together with a partner, and 44 percent was living alone. Just over five percent was living with parents, and eight percent was living with children or friends. Two thirds of the respondents had no children.

**Table 2.3** Age at time of the interview.

<i>Age</i>	<i>n</i>	<i>%</i>
18 - 25	40	19
26 - 35	83	38
36 - 45	74	34
46 - 55	17	8
Older than 55	2	1
Total	216	100

average age: 34

A large majority of 86 percent of our respondents was born in the Netherlands, five percent was born in Surinam. The rest (ten percent) of the respondents was born in Germany, Indonesia, Rumania, New Guinea, Ireland, Venezuela, Denmark, Belgium, Nigeria, England, Hong Kong, Tunisia, the United States of America or South Africa.

We asked our respondent what education they had finished, and if they were still involved in any form of more education. At the moment of interview 70 respondents were following some kind of education, either full time or part time next to employment.

## *2.6 Outgoing behaviour*

Since our first population survey in 1987, part of all our questionnaires is a standard series of questions that ask about social and cultural involvements of the respondents. We ask how many evenings the respondents normally remain at home, how often in the past four weeks prior to interview they visited cafés, night-clubs, discos, restaurants, diners and snackbars.

We also want to know how often during the last eight weeks prior to interview respondents have visited the movies, art houses, theatres for plays or ballet, concert halls, opera or comedians. All these data are recomputed in such a way that they yield a score from 0 to 6, zero meaning very low outgoing behaviour, 6 meaning on all participating variables a score of at least medium.

Respondents in our experienced cannabis user survey have a median score of 5 for the composite outgoing behaviour scale. The average is just over 4. Our respondents are often not at home. Their median score is 3 in an 'at home scale' from 1 (often at home) to 3 (often from home). Their outgoing behaviour is mostly directed towards restaurants, then to cafés/discos, then to theatres. In short, they are the type of person that uses the city quite extensively for purposes of leisure and cultural exploits.

## *2.7 Miscellaneous characteristics*

We asked every one a series of questions relating to experience with mental health care and relating to own criminal behaviour in the past. It showed that 9 out of 216 respondents, or four percent had been convicted for a felony during the past four years prior to interview.

We also asked if respondents knew other people in their circle of friends and relations who had life time experience with cannabis. It shows that 76 percent of our respondents describe their social circles as having for at least half some experience with cannabis.

When asked how large the proportion is of those, who inside the social circle have a risky pattern of cannabis use, two respondents answer: 'all'. A large group, 205 respondents, answer that a minority in the social circle or no one shows such behaviour.

## 2.8 Appendix: Tables comparing response with non-response

**Table 2.4** Sex of response and non-response group.

<i>Sex</i>	<i>Response</i>		<i>Non-response</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Male	127	59	212	66
Female	89	41	107	34
Total	216	100	319	100

$\chi^2 = 2.93$ ;  $df = 2$ ; Yates correction; not significant.

**Table 2.5** Household composition of response and non-response group.

<i>Household composition</i>	<i>Response</i>		<i>Non-response</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Single parent	12	6	27	8
Couple without children	35	16	32	10
Couple with children	40	19	52	16
Youth	17	8	32	10
Single	81	38	139	44
Other	31	14	37	12
Total	216	100	319	100

$\chi^2 = 8.36$ ;  $df = 5$ ; not significant.

**Table 2.6** Age of response and non-response group.

<i>Age</i>	<i>Response</i>		<i>Non-response</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
20 or younger	16	7	25	8
21 - 25	31	14	53	17
26 - 30	45	21	65	20
31 - 35	41	19	54	17
36 - 40	39	18	67	21
Older than 40	44	20	55	17
Total	216	100	319	100

Student's  $t = 0.51$ ; not significant.

**Table 2.7** Position on labour market of response and non-response group.

<i>Position on labour market</i>	<i>Response</i>		<i>Non-response</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Full time employment	87	40	120	38
Part time employment	37	17	62	19
Unemployed for short period	16	7	23	7
Unemployed for longer period	13	6	16	5
Disabled	7	3	16	5
Student	17	8	19	6
Other	38	18	55	17
Unkown	1	0	8	3
Total	216	100	319	100

$\chi^2 = 5.94$ ;  $df = 8$ ; not significant.

**Table 2.8** Average nett income per month of response and non-response group.

<i>Average nett income per month</i>	<i>Response</i>		<i>Non-response</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Less than f1,250	31	14	42	13
f1,250 - f2,000	44	20	62	19
f2,000 - f3,000	40	19	57	18
f3,000 - f4,000	23	11	36	11
f4,000 - f5,000	24	11	30	9
More than f5,000	32	15	30	9
Unknown	22	10	62	19
Total	216	100	319	100

Mann-Whitney U = 32940; not significant.

**Table 2.9** Educational level of response and non-response group.

<i>Educational level</i>	<i>Response</i>		<i>Non-response</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Elementary school	14	6	21	7
Low level vocational school	7	3	30	9
Medium level vocational school	15	7	38	12
Medium level high school	29	13	31	10
High level high school	52	24	76	24
University, high level vocational school	96	44	110	34
Other	1	0	7	2
Unknown	2	1	6	2
Total	216	100	319	100

Mann-Whitney U = 31173;  $p=0.0521$ , significant.

## Notes

- <sup>1</sup> Cohen (1989), *Cocaine use in Amsterdam*; Cohen & Sas (1993), *Ten years of cocaine*.
- <sup>2</sup> Goode (1970), *The marijuana smokers*; Rubin & Comitas (1975), *Ganja in Jamaica*; Kleiber & Soellner (1998), *Cannabiskonsum. Entwicklungstendenzen, Konsummuster und Risiken*.
- <sup>3</sup> Cf Sandwijk et al. (1988, 1991, 1995).
- <sup>4</sup> Sandwijk, J.P., P.D.A. Cohen, S. Musterd & M.P.S. Langemeijer (1995), *Licit and illicit drug use in Amsterdam II: Report of a household survey in 1994 on the prevalence of drug use among the population of 12 years and over*. Amsterdam: Department of Human Geography, University of Amsterdam.
- <sup>5</sup> Cf proposals to exactly replicate the Amsterdam study of experienced cannabis users, by Reinerman (1995), and Böllinger & Quensel (1995).
- <sup>6</sup> European Monitoring Centre for Drugs and Drug Addiction (1997), *Annual report on the state of the drugs problem in the European Union 1997*. Luxembourg: Office for Official Publications of the European Communities.
- <sup>7</sup> In our cocaine studies of 1987 and 1991 we had sampled experienced users, by means of a complicated method of snowball sampling. We were in the position to compare our snowball samples with samples of cocaine users from two population surveys within the general population of 12 years and older (the 1987 and 1990 surveys). These comparisons were not perfect, because the population samples contained too few experienced users. The comparison therefor was done with a sample of all 'last year' cocaine users, not the same category of persons as sampled in our snowball samples. We had no choice, however, and we were already very fortunate to be able to partly validate our snowball samples by making a check of the selection bias that might exist for our snowball sample of cocaine users.
- <sup>8</sup> For a full description of the population sampling, survey methodology, non response and the analysis there of see Sandwijk et al. (1995), *Licit and illicit drug use in Amsterdam II*.
- <sup>9</sup> On January 1st, 1996, 100 Netherlands guilders equalled US\$ 62.12. Source: Olsen & Associates, Zürich. Online: <http://www.oanda.com/>
- <sup>10</sup> We asked our interviewers to report whether a respondent was under the influence of cannabis or alcohol during the interview. We did not perform any objective tests like breath analysers, or urine tests. We just asked the interviewers for their impressions.
- <sup>11</sup> The data in these tables may differ from data mentioned elsewhere in this report for two reasons: (1) the data were derived from the 1994 Amsterdam population survey, which means that the point of measurement is at least one year earlier than the point of measurement for the cannabis survey, and (2) in some cases the wording of the questions or the answer categories used differed between the population survey and the cannabis survey.
- <sup>12</sup> Man-Whitney U=245802; p<0.001. Student's  $t = 7.83$ ;  $df=270.8$  (separate variance estimate,  $F = 40.025$ ; p<0,001).

### 3 INITIATION INTO CANNABIS USE

Studying initiation into drug use may teach us something about why some people start experimenting with drugs, and others do not. We wanted to know details about age, conditions and feelings related to initiation. The best knowledge on initiation would be assembled if we were able to ask questions to non users about their reasons not to experiment, to ask the same questions to all experimenters, and to compare these two groups on socio economic and cultural variables. Of course we can not do this here, and we will just present some data on initiation behaviour of our sample of experienced users in Amsterdam.

The average age of initiation into cannabis of our experienced cannabis consumers is 16.9 years. At time of interview (1995-1996) our respondents averaged 34 years of age, which means that most of our respondents had been initiated quite a long time ago (average 17 years ago).

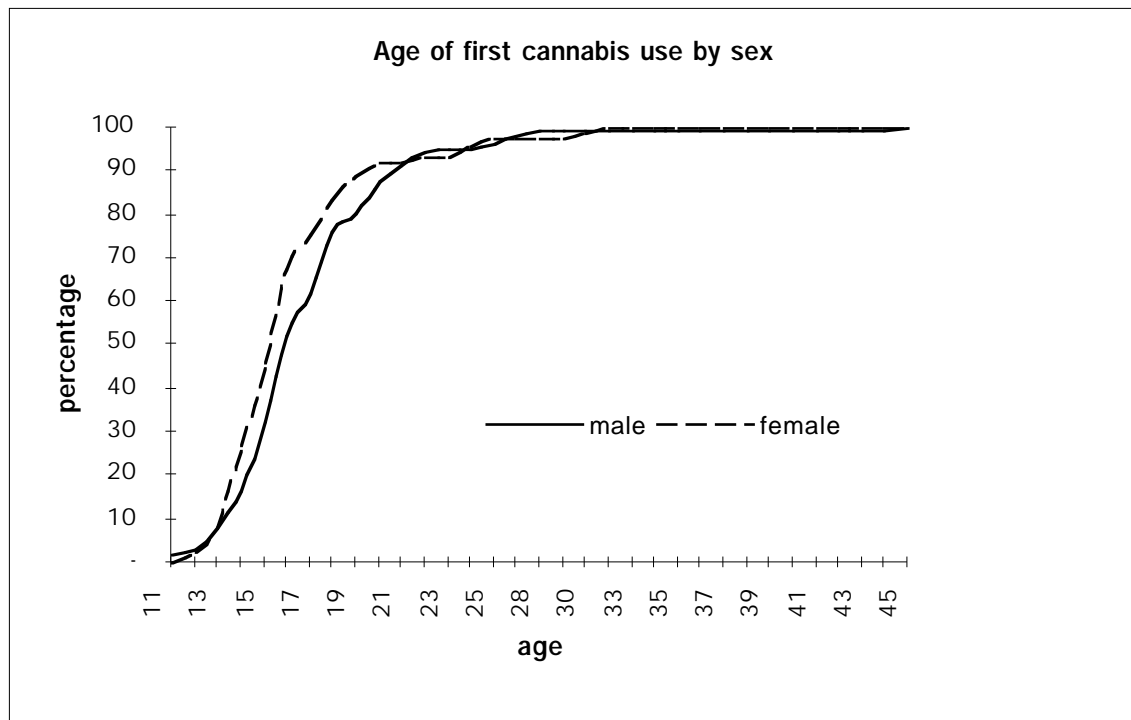
Comparing initiation age of experienced users with initiation age for *everybody* with life time experience with cannabis in 1994 in the population of Amsterdam we see that in all of the population initiation occurs much later, at 19.8 years on average. Inexperienced cannabis users in the population as a whole (those with less than 25 times life time experience) initiate later still, at average age of 21.1 years. We have no explanation for this.

Initiation age was 17 years with the 166 cannabis users interviewed in the city of Utrecht in coffeeshops.<sup>1</sup>

Table 3.1 and Figure 3.1 show the age of first cannabis use by sex. More than 96 percent of the experienced users initiate before the age of 25. There are no statistical differences between men and women. However, there are differences in the way men and women obtain their first cannabis.

**Table 3.1** Age of first cannabis use by sex

<i>age</i>	<i>male</i>		<i>sex</i>		<i>female</i>		<i>total</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
< 16	41	32.3	41	46.1	82	38.0		
16 - 20	70	55.1	41	46.1	111	51.4		
21 - 25	11	8.7	5	5.6	16	7.4		
26 - 30	4	3.1	1	1.1	5	2.3		
> 30	1	0.8	1	1.1	2	0.9		
total	127	100.0	89	100.0	216	100.0		
mean	17.3		16.5		17.0			
Student's <i>t</i> = 1.51; df = 214; p = 0.133 (n.s.)								



Only four women (4.5%) bought their initiation hashish or marihuana themselves. Of the men, 18% bought their first cannabis. This difference is significant<sup>2</sup> and shows men to be a bit more active. Relatively more women than men were being offered hashish or marihuana at the first time they ever used. But both for women and for men, a large majority of 97 percent receives the first cannabis from close associates and from friends; 88 percent of our respondents report close friends as initiation company. Not much has changed since H. Cohen published in 1969, that 86 percent of his respondents in the Netherlands received hashish from friends at initiation.<sup>3</sup>

The majority (70 percent) of the respondents used hashish when they first tried cannabis. When asked what type of cannabis they currently prefer, 46.1 percent answered marijuana, 25.8 percent preferred hashish and 28.1 percent did not prefer one above the other. Of the respondents who used hashish at initiation, 31.4 still prefers hashish above marijuana, but 44.3 percent prefers marijuana. Of the respondents who used marijuana at their initiation, 54.1 still prefers marijuana. Only 18 percent prefers hashish. We may see here a shift in preference from hashish to marihuana, that was made possible by developments on the cannabis market. During the last ten years Dutch grown marihuana has become very available, and popular. At the time of initiation of most of our respondents, hashish was probably much more available than the bulkier and therefore more difficult to import marihuana. It may very well be that if marijuana had been as available at time of initiation our respondents would have preferred marihuana then as well.

We omitted a question about method of use *at initiation*. However, from the answers we got when asking which method was used during the first year of regular use, we can infer that most users must have been initiated by means of smoking a 'joint' i.e. a tobacco cigarette filled with a mixture of tobacco and cannabis. Eating or drinking cannabis did not happen even once during first year of regular use. (See chapter 5, 'Methods of use')

We asked the respondents if they had ever asked for hashish or marihuana, or had ever been offered hashish or marihuana at occasions that preceded their first use. Table 3.2 shows that women had significantly more been offered cannabis than the men. There is no difference however in having asked for hashish and marihuana between men and women (before actual initiation took place). Apparently, with only 5.5 percent asking for cannabis before initiation actually took place, it happens rarely that asking for cannabis does not result in actual initiation.

**Table 3.2** Obtaining cannabis for the first time.

<i>obtainment</i>	<i>male</i>		<i>sex</i> <i>female</i>		<i>total</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
being offered	89	70.1	67	75.3	156	72.2
asked for it	15	11.8	18	20.2	33	15.3
bought myself	23	18.1	4	4.5	27	12.5
total	127	100.0	89	100.0	216	100.0

$\chi^2 = 10.38179$ ;  $df = 2$ ;  $p = 0.00557$  (significant)

**Table 3.3** Earlier experiences of asking for cannabis of being offered cannabis before initiation

*Ever being offered cannabis before initiation*

	<i>male</i>		<i>sex</i> <i>female</i>		<i>total</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
yes	36	28.3	43	48.3	79	36.6
no	89	70.1	42	47.2	131	60.6
unknown	2	1.6	4	4.5	6	2.8
total	127	100.0	89	100.0	216	100.0

$\chi^2 = 10.23514$ ;  $df = 1$ ;  $p = 0.00138$  (significant); Yates corr.

*Ever asked for cannabis before initiation*

	<i>male</i>		<i>sex</i> <i>female</i>		<i>total</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
yes	6	4.7	6	6.7	12	5.6
no	117	92.1	76	85.4	193	89.4
unknown	4	3.1	7	7.9	11	5.1
total	127	100.0	89	100.0	216	100.0

$\chi^2 = 0.53109$ ;  $df = 1$ ;  $p = 0.46615$  (not significant); Yates corr.

However, refusing an offer to try cannabis before one actually accepted happens relatively often, at 36 percent. We asked no questions about this, but the reasons might be similar to the ones mentioned by Goode. He found that 46 percent of his



respondents had refused cannabis at occasions before they were 'turned on'. Reasons for such refusal were most often that the person was afraid of the drug, or "a lack of closeness with the person or persons offering the opportunity to try it."<sup>4</sup> We might add that other reasons may lie in a sense of unfitting context, or an unfitting emotional situation.

Table 3.4 shows that cannabis is almost always first used in a social setting. Initiation in a group of friends or with one friend is reported by 88 percent of the respondents. For experienced cocaine users we found the same proportion reporting to be initiated in the company of one or more friends.<sup>5</sup> So, cannabis, like cocaine is rarely tried for the first time without company. Probably all initiation into unknown drugs occurs like this, and we may once again use these data as support for Beckers statement that "Marihuana use, even at its very inception, is simultaneously participation in a specific social group."<sup>6</sup> There are no differences in initiation company between men and women.

We see that the company of trusted persons around the initiate is a very important condition for initiation. Once such persons are available, the context of initiation can be perceived as positive. This explains why the setting in which initiation into cannabis use occurred was labelled by 75 percent of the respondents as 'positive'. Only a very small percentage (3.7 percent) described the setting of first cannabis use as 'negative' and 21.2 percent did not perceive the setting as either positive or negative. These figures support Goode's insight, that an important pre condition for initiation is the presence of a certain intimacy or trust with others.

Although 75 percent reports initiation as happening in a 'positive' setting, no more than half of the respondents said their first use of hashish or marijuana was a pleasant experience. Since Becker we know that perceiving the high of cannabis has to be learned. So, a large group of respondents (40 percent) did not immediately learn to perceive some effect of cannabis at initiation. A full 8 percent did not like the experience and had to await more learning experience, just like the ones who did not feel any effect.

**Table 3.4** Characteristics of initiation into cannabis use

<i>Form of cannabis used at initiation</i>		
	<i>n</i>	<i>%</i>
marijuana	60	27.8
hashish	140	64.8
don't know	16	7.4
total	216	100.0

<i>Company at initiation into cannabis use</i>		
	<i>n</i>	<i>%</i>
alone	6	2.8
with one friend	48	22.2
with a group of friends	142	65.7
with colleagues	2	0.9
with siblings	4	1.9
with acquaintances	2	0.9
other	12	5.6
total	216	100.0

We asked the respondents about the feelings they had right before their first use of cannabis. A third (34.2 percent) of them felt excited, enchanted and adventurous. Also, a large group said they felt normal (13 percent) or just 'good' (13.0 percent). Nervousness was reported by 9.2 percent of the respondents and 'relaxation' by 4.5 percent.

A clear minority of the respondents reported bad feelings just before their first use of hashish or marijuana, like 'feeling bad or rotten' (1.7 percent), being afraid and finding the situation frightening and eerie (0.7 percent) and feeling uncomfortable (1.0 percent). This confirms once more that people willing to experiment wait for occasions they feel as adequate or better, as positive. Few persons seek initiation in bad conditions, like a lack of trusted persons or a positive emotional state.

Overall we can conclude that first use of hashish or marijuana occurs in a social, pleasant and probably intimate setting. The presence of others is a condition for initiation. Although a large number of cannabis initiators does not perceive any effect of the substance, bad experiences are rare.

### *Notes*

<sup>1</sup> N. Maalsté (1995), *Cannabis in Utrecht. Deel III. Stamgasten van de coffeeshop*. Utrecht: Centrum voor Verslavingsonderzoek. p 17.

<sup>2</sup>  $\chi^2 = 7,52$ ,  $p < 0,01$ .

<sup>3</sup> H. Cohen (1969), *Psychologie, sociale psychologie en sociologie van het deviante druggebruik*. Mimeograph. Quoted in Baan (1972), p. 24.

<sup>4</sup> Erich Goode (1970), *The marijuana smokers*. New York: Basic Books. p. 131.

<sup>5</sup> Peter Cohen (1989), *Cocaine use in Amsterdam in non deviant subcultures*. Amsterdam: Department of Human Geography, University of Amsterdam. p 38

<sup>6</sup> Becker (1963), p. 55, quoted in Grinspoon (1994), *Marihuana reconsidered*, p. 190.

## 4 LEVEL OF CANNABIS USE OVER TIME

### 4.1 Introduction

For the cannabis user survey we used a questionnaire comparable to the one used in the 1987 and 1991 cocaine user.<sup>1</sup> This not only reflects our experience in user surveys. It also enables us to make future comparisons between cocaine use and cannabis use concerning amounts of substance consumed, motivations, settings and effects of use.

In this chapter we will discuss a series of characteristics of cannabis use, around a central variable we call 'level of use'. This is a composite variable consisting of *frequency of use* during a typical month of use, multiplied by the *number of typical units* used during the same time. This way of computing level of use was also employed in the cocaine studies. The reason for computing level of use as a composite variable is that frequency of use alone is not a realistic measure of amounts used. It ignores the fact that variety between users in amounts used can be caused by amount in 'grams' and amount in 'frequency'. By including both in a 'level of use' variable this variability can be taken into account. A disadvantage of this way of measuring is, that distortion in recollection may occur in reporting each part of the variable. Unreliability could thereby be increased. However, dissimilar distortion in each of the variables may result in neutralising error. Also, because we use data of over 200 respondents, over and under reporting might be distributed in such a way that ultimately error on the aggregate level is mitigated or neutralised. We have no method for validation, which means that all our data on 'level of use' have to be read with a certain caution.

We asked questions concerning characteristics of use and level of use, over the complete user career of the respondent. Within a career we distinguish:

1. first year of regular use, defined as the first year in which the respondent used *at least* once a month,
2. period of maximum use, or top period
3. last twelve months of use
4. last three months of use.

However, for the basic variable 'level of use' concerning drug use over time, cannabis created very difficult problems.

In the cocaine studies we measured the level of cocaine use by taking into account the typical amount of cocaine used during an average occasion of use and the frequency of use occasions per month. The amount of cocaine per use occasion was measured in 'lines', defining a 'standard line' of cocaine of 25 mg as the unit of measurement. This gave us the possibility to define low, medium and high levels of use, expressed in grams per week.

Of course, this way of measuring does not take into account differences over time in purity of cocaine, problems with recollection, and over- or underestimation.

Defining a similar way of measurement for cannabis is not possible. A construction like the 'standard line' is on the edge of acceptability for cocaine users, and we saw no possibility to defend the construction of a 'standard joint' for our cannabis users. Researchers who study the effects of cannabis at one certain point in time have the possibility to measure the level of THC ingested (see for instance Robbe, 1994) but this is impossible for our study, mainly because we look back so long in time. Of course, it is not possible to obtain samples of hashish or marihuana from all the periods we distinguish. Then, unlike Robbe, we did not do experimental research about the effects of THC on behaviour, but we wanted to collect social scientific data on development of use and its functions over time.

We were not able to measure the levels of ingested THC, but we could find ways to measure other characteristics of use. For each of the four periods of use we asked

- frequency of cannabis use per month,
- parts of the day that cannabis was used on an average day of use,
- days of use during an average week (use mainly during weekends or all through the week),
- level of being high at a typical occasion of cannabis use,
- duration of being high in hours per typical occasion of cannabis use,
- level of cannabis use, or average amount of cannabis used per month.

We will discuss the results of each of these indicators in the next sections of this chapter.

We found that top period of use occurred early in the use career of our respondents. Average age of respondents was 34 years (median 33) at time of interview. Their first year of regular use occurred on average at age 19 (median age 18). Top period of use occurred average at age 21 (median age 20). This means that first year of regular use and top period were located very close in time, within 2 years.

Average duration of top period was three years and three months, median duration was two years. This means that for 50 percent of all respondents their top period of use was over by the time they were 22 years old. For 80 percent of all respondents the top period of use had a duration of four years or less.

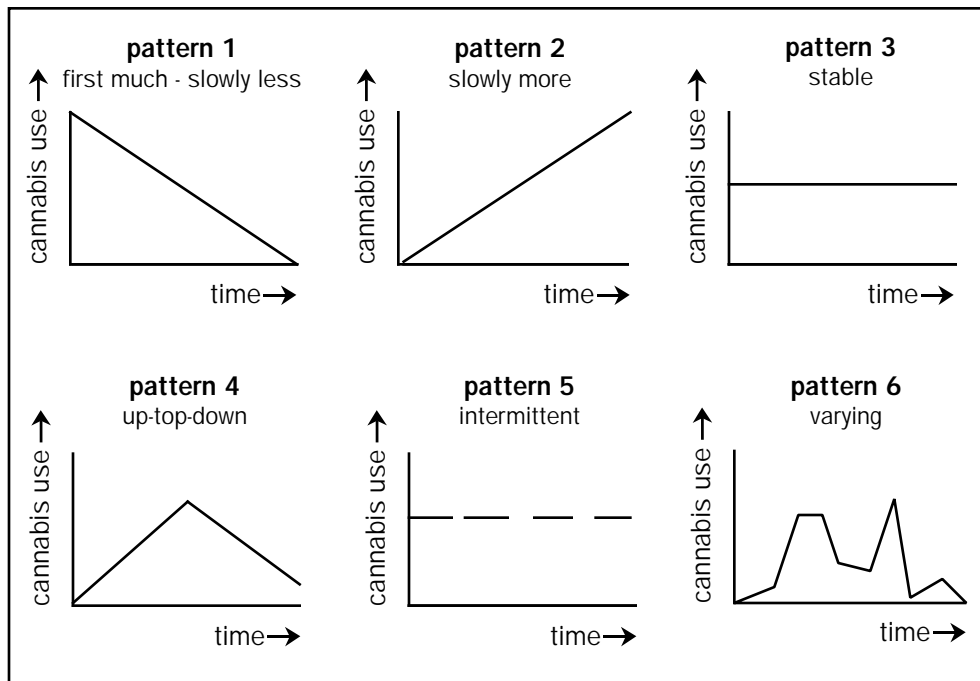
#### *4.2 Pattern of use during career*

In order to get an overall picture of the total cannabis using career of the respondent, we showed a card describing in words plus an illustration of a graphic image six patterns of cannabis use we had also adopted from Morningstar and Chitwood (1983) for our cocaine user surveys. We asked respondents to choose from this card one of the (graphically

displayed) patterns of use, the one that resembled most closely their own development of level of cannabis use through time. We distinguished the following six patterns of use (see Figure 4.1):

1. *First much - slowly less.* The respondent starts using large amounts after he or she first tried marijuana or hashish but gradually decreased since then. This pattern of cannabis use was reported by 17 respondents (8 percent).
2. *Slowly more.* The respondents' marijuana use has gradually increased over the years. This pattern of cannabis use was reported by 13 respondents (6 percent).
3. *Stable.* The respondent started using marijuana or hashish at the same level that he or she still uses, and the amount and frequency have not changed. This pattern was reported by 24 respondents (11 percent).
4. *Up - top - down.* The respondents' use increased gradually until it reached a peak, then it decreased. This is the pattern of cannabis use that was reported most frequently. Almost half of the respondents (104, 48 percent) said that this pattern resembled their own cannabis using career.
5. *Intermittent.* The respondent has started and stopped using marijuana or hashish many times. This is the pattern least reported. Only 7 respondents (3 percent) reported this pattern.
6. *Varying.* The respondents' use pattern has varied considerably over the years. This pattern was reported by 51 respondents (24 percent) and is the pattern reported second frequently.

Figure 4.1 Theoretical patterns of development in cannabis use



### 4.3 Frequency of cannabis use per week

The most common reported pattern of use over the full career ‘up-top-down’ is also clearly visible in frequency of cannabis use that is reported per week or month and shown in table 4.2. Almost half of the 216 respondents report daily use of hashish or marijuana in their period of heaviest use. But only ten percent of the respondents report daily use of cannabis during the last twelve months prior to the interview. If we exclude the respondents who did not use any hashish or marijuana during the last twelve months prior to the interview, the proportion of daily users during last twelve months prior to the interview is 17 percent.

When looking at frequency of use per week, more than half of all experienced users consume once a week or less in any period, with the exception of top period. During top period only 25 percent reports a frequency of once a week or less.

The daily users are the largest group during top period, totalling 106 respondents (49 percent). But, of the 106 respondents using daily during top period, only 22 continue this daily pattern till last twelve month, showing that almost 80 percent of the daily users decrease their frequency of use. Nine of these 22 daily users also continue their high level use, reporting more than 10 grams per month in top period, *and* in last three months prior to interview. This means that we found eight persons out of 216 who use every day, in a large amount, since their first year of regular use till the last three months prior to the interview. Their average length of career is 12 years (median 9.5) average time since top period to interview is 10 years and their average age is 30 (median 29.5). In the following table (table 4.1) we show how these 22 persons are distributed among the categories of level of use.

**Table 4.1** Level of use of persons reporting daily use during the last 12 months prior to the interview.

<i>level of use</i>	<i>period of heaviest use</i>		<i>last 12 months</i>		<i>last 3 months</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
none	-	-	-	-	2	9
low	2	9	3	14	3	14
medium	8	36	8	36	7	32
high	10	45	10	45	9	41
unknown	2	9	1	5	1	5
total	22	100	22	100	22	100

In table 4.2 we see non use increasing over time, almost 40 percent not using during the last 12 months before interview, and almost 50 percent during last three months. It is clear that along with ageing abstinence of cannabis use increases sharply.

**Table 4.2** Frequency of cannabis use

<i>frequency</i>	<i>first year of regular use</i>		<i>period of heaviest use</i>		<i>last 12 months</i>		<i>last 3 months</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
daily	16	7	106	49	22	17	20	18
more than once a week	57	26	57	26	29	22	30	28
once a week	50	23	30	14	12	9	13	12
at least once a month	60	28	19	9	20	15	17	16
less than once a month	33	15	4	2	50	38	29	27
sub-total	216	100	216	100	133	100	109	100
none-use	-	-	-	-	83	-	107	-
total	216		216		216		216	

#### *4.4 Parts of the day on which cannabis is used on a typical day of use*

In Chapter 6 we will show that the functions of cannabis use are closely linked to going out, visiting parties, and relaxing. In this chapter we report on which parts of the day our respondents report cannabis use. Table 4.3 displays the answers to the question “On what parts of the day were you high on an average day you used hashish or marijuana?”

Approximately 90 percent of the respondents report being high in the evening. Only during the period of heaviest use this percentage is lower (77 percent) due to the fact that significantly more respondents used cannabis all day long or already in the afternoon on an average day they used hashish or marijuana. During the last 12 months and the last three months prior to the interview only one person reported being high all day long on an average day of cannabis use. Being high all day is also a minority behaviour during top period: 17 percent. Consumption in the morning is rare, even during period of heaviest use.

So, we may conclude that cannabis is most often used during the evening and night, irrespective of period of use. This confirms our data that functions of use are related to socialising and relaxation. A minority of 17 percent use cannabis all day long during period of heaviest use. The afternoon is included for consumption of cannabis for a minority that ranges from 9 percent to 15 percent, except during period of heaviest use. Then afternoon use rises to 23 percent.



**Table 4.3** Parts of the day on which cannabis is used on an average day of use.

<i>part of day*</i>	<i>first year of regular use</i>		<i>period of heaviest use</i>		<i>last 12 months</i>		<i>last 3 months</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
morning	3	1	7	3	-	-	1	1
afternoon	32	15	49	23	12	9	13	12
evening	185	86	165	77	122	92	97	89
night	45	21	52	24	30	23	26	24
all day	8	4	37	17	1	1	1	1
total	273	127	310	144	165	124	138	127
	n=215		n=215		n=133		n=109	

\* Respondents could give more than one answer. Percentages are based on the number of respondents.

#### 4.5 Days of use during a typical week

As long as the use of hashish or marijuana is linked to an outgoing lifestyle one can expect to find that respondents will report more cannabis use on weekends than during the week. Table 4.4 shows that this is the case for the first year of the respondent's regular use of cannabis. During the period of heaviest cannabis use more than half of the respondents reports using cannabis equally on weekends as during the week but still for over one third of all respondents the weekend remains the dominant part of the week for cannabis consumption. For the last twelve months and the last three months prior to the interview, weekdays and the weekend have almost equal importance. We see that over time the use of hashish or marijuana becomes somewhat more integrated into daily life of about half of the cannabis users that remain active consumers.

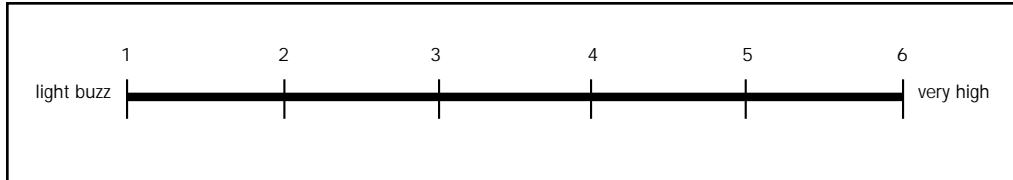
**Table 4.4** Pattern of use during an average week

<i>pattern</i>	<i>first year of regular use</i>		<i>period of heaviest use</i>		<i>last 12 months</i>		<i>last 3 months</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
only on weekends	82	38	12	6	26	20	17	16
more on weekends than during the week	70	32	68	31	37	28	31	28
equally on weekends and during the week	50	23	125	58	58	44	51	47
more during the week than on weekends	9	4	11	5	8	6	7	6
only during the week	5	2	-	-	3	2	2	2
unknown	-	-	-	-	1	1	1	1
sub-total	216	100	216	100	133	100	109	100
did not use cannabis	-	-	-	-	83	-	107	-
total	216	-	216	-	216	-	216	-

#### 4.6 Level of being high at a typical occasion of cannabis use

We asked the respondents for each of the four periods how high or how stoned they generally got when they used marijuana or hashish. We asked them to indicate the level of being stoned on a six point scale as displayed in figure 4.2.

Figure 4.2 Six point scale for measuring level of being stoned.



We reported above that cannabis users tend to decrease their frequency of cannabis use during the course of their cannabis using career. This decrease is also reflected in the reported levels of intoxication in table 4.5.

Table 4.5 Level of being high at an average occasion of cannabis use

<i>level of being high</i>	<i>first year of regular use</i>		<i>period of heaviest use</i>		<i>last 12 months</i>		<i>last 3 months</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
1 (light buzz)	24	11	12	6	13	10	8	7
2	33	15	20	9	28	21	27	25
3	51	24	48	22	44	33	31	28
4	54	25	62	29	28	21	23	21
5	30	14	51	24	16	12	16	15
6 (very high)	22	10	20	9	4	3	4	4
unknown	2	1	3	1	-	-	-	-
sub-total	216	100	216	100	133	100	109	100
did not use cannabis	-	-	-	-	83	-	107	-
total	216	-	216	-	216	-	216	-
mean	3.5	-	3.8	-	3.1	-	3.2	-

Of course, self-reported levels of being high or stoned have one important defect. One does not know exactly how a respondent establishes 'level of being high' and whether this way of establishing remains the same over time. Another problem is that level of being

'high' is a very difficult variable to remember, and we may see here a lot of bias. This means we have to be very careful with these data.

#### 4.7 Duration of being high at a typical occasion of cannabis use

Table 4.6 shows that the duration of intoxication – apart from those who stopped using cannabis – is quite stable throughout the cannabis using career. Of course, duration of intoxication is correlated to the frequency of use during the day (table 4.3). The large proportion (40 percent) of respondents who report a duration of intoxication of four hours or more during their period of heaviest use can be explained by the increased frequency of cannabis use on an average day of use. It is clear however that (outside the period of heaviest use) a large majority of almost 90 percent chooses to be under the influence of cannabis for periods of 4 hours or less.

**Table 4.6** Duration of being high at an average occasion of cannabis use

<i>duration of being high</i>	<i>first year of regular use</i>		<i>period of heaviest use</i>		<i>last 12 months</i>		<i>last 3 months</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
only for an hour or so	45	21	45	21	52	39	42	39
for 2 or 3 hours	122	56	84	39	66	50	54	50
for 4 or more hours	48	22	87	40	14	11	12	11
unknown	1	0	-	-	1	1	1	1
sub-total	216	100	216	100	133	100	109	100
did not use cannabis	-	-	-	-	83	-	107	-
total	216	-	216	-	216	-	216	-

#### 4.8 Average amount of cannabis used per month

In Amsterdam hashish or marijuana is usually not bought per gram, but in bags of 10 guilders or bags of 25 guilders<sup>2</sup>. However, we allowed the respondent to report the amount of cannabis used on average per month in grams, or in the number of 10 guilders or 25 guilders bags. For those who answered in number of cannabis cigarettes, we included the interviewer instruction to recompute this into bags.

For the respondents who answered our question how much cannabis they used in terms of bags of 10 or 25 guilders we needed to recompute the amount from bags into grams. In order to do this we would have to know the price per gram for each of the four periods during the respondent's cannabis use.

It is clear that reconstructing the amount (in grams per month) of use per respondent is difficult. This reconstruction suffers from a number of biases:

- *Memory.* This bias is the same for all our variables that describe a situation in the past. We have no way of checking the reliability of the numbers (bags, number of cannabis cigarettes used, or grams) that are reported by our respondents for each of the periods of use. However, we must assume that underreporting and overreporting will level each other out. Part of our interviewer instruction was, that those respondents who report in number of cannabis cigarettes smoked in each period, should recompute this number of cannabis cigarettes into bags of *f*10 or *f*25. This recomputation can not be checked for reliability.
- *Lack of knowledge.* We do not have a precise and well documented description of price per gram of all varieties of hashish and marihuana over the period in which our respondents used cannabis. Therefor our recomputation from bags to grams for those respondents that answered in 'bags' can not be watertight.
- *Levels of THC.* Even if we would have very good price descriptions of cannabis for every period in the use career of each respondent, we still would not know how much active THC the smoked material would contain. This diminishes the importance of exact gram per month information.

All respondents started to use cannabis regularly after 1950. Table 4.7 gives an overview of the distribution of the years the respondents started to use cannabis regularly and the years at the beginning of their period of heaviest cannabis use.

**Table 4.7** Year of first regular cannabis use and period of heaviest use.

<i>year</i>	<i>first year of regular use</i>		<i>period of heaviest use</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
1950 - 1959	1	0	-	-
1960 - 1969	27	13	17	8
1970 - 1979	62	29	51	24
1980 - 1989	99	46	99	46
1990 - 1995	25	12	46	21
unknown	2	1	3	1
total	216	100	216	100

During the 1950's, 1960's, and 1970's prices of hashish and marijuana varied considerably. In the beginning of the 1970's prices of hashish varied between *f*1.00 and *f*7.00 per gram. The price of marijuana ranged from *f*0.60 for 'Nederwiet' to *f*2.75 for Columbian marijuana<sup>3</sup>. In the early 1980's prices were roughly twice as high as in the early 1970's with an average price of hashish in Amsterdam of *f*7.50 per gram and an average price of marijuana of *f*5.00<sup>4</sup>.

For the 1990's, Jansen reports a rise of the average price of the most expensive 'Nederwiet' from *f*11.40 in 1991 to *f*13.70 in 1995. The average price of the cheapest

'Nederwiet' decreased from f10.30 in 1991 to f9.30 in 1995<sup>5</sup>. Korf and Verbraeck established that a 25 guilders bag of hashish usually contains about 2.5 gram. A 25 guilder bag of marijuana on average contained a little more than 2 grams. The difference between the nominal weight of a 25 guilders bag of marijuana and the real weight (2.3 grams) was probably caused by drying out after weighing and packaging<sup>6</sup>.

One can observe that the prices of hashish and marijuana have risen over time since the fifties. However, this rise can largely be explained by inflation. Since 1960 the price-index of the average year-consumption has quadrupled<sup>7</sup> which also can be said for the prices of hashish and marijuana. The only researcher in the Netherlands who has long term experience with studying economic characteristics of cannabis and the cannabis trade in the Netherlands, dr. A.C.M. Jansen at the University of Amsterdam, suggested to us that we would not make a big mistake if we would average cannabis prices over the years at f10 a gram. This runs parallel to findings of Korf and Verbraeck who state that a 25 guilder bag usually contains 2.5 grams of material. At first we doubted the usefulness of this suggestion. So, we decided to compare the respondents who report their amount of use in grams with those who report their use in bags. If the comparison would not show large differences between those who report grams and those who report 10 and 25 guilder bags (recomputed into grams by allowing f10 per gram) we would accept the average price of f10 per gram. This would then imply using as a rule of thumb that each 10 guilder bag contains one gram, and that each 25 guilder bag contains 2.5 grams.

Because we asked for amounts of cannabis used in four different periods, we decided to compare respondents who report bags and respondents who report grams per period.

We found that for the first year of regular use 98 respondents report in grams per month (average consumption 5.7 grams per month) and 104 respondents report in bags (average consumption 5.5 grams per month). The difference between these two categories is not significant.<sup>8</sup> For this analysis we rejected the data of one respondent who reported one kilo of cannabis per month during first year of regular use. This amount must be wrong and can be explained by a reporting error of the interviewer. For analysis we kept 215 cases. Because the difference between the two groups is not significant, we may accept the f10 per gram rule for all computations of amount of use that relate to first period of regular use.

Comparing gram and bag reporters for the period of heaviest use we found that those who report grams average 20.2 grams per month (96 respondents), and that those who report bags average 17.7 grams per month (104 respondents). The difference is not significant.<sup>9</sup> This means that we may accept for this time period the rule that one gram equals f10.

Doing this comparison for the period of the last twelve months prior to the interview shows that 58 respondents report in grams, averaging 6.6 grams per months, versus 71 respondents who report in bags, averaging 5.2 grams per month. The difference of 1.4 gram per month is not significant.<sup>10</sup> Again we conclude that the f10 per gram rule does not lead to significant differences between the two groups.

For the period of the three months prior to interview – theoretically the most reliable report of the four time periods – those who report in grams average 6.2 grams per month (50 respondents). Those who report in bags average 5.8 grams per month (55 respondents). The difference is not significant.<sup>11</sup>

Because we did not find any significant differences between respondents who reported in grams and respondents who reported in bags we decided to accept Jansen's suggestion after all.

Using the f10 a gram rule allows us to make the following table (4.8) of level of use per month during four periods.

**Table 4.8** Amount of cannabis used per month in four periods.

amount	first year of regular use		period of heaviest use		last 12 months		last 3 months		last month	
	n	%	n	%	n	%	n	%	n	%
less than 1 gram	64	29.6	22	10.2	49	36.8	41	37.6	19	17.4
1 to 2.5 grams	54	25.0	30	13.9	28	21.1	22	20.2	33	30.3
2.5 to 5 grams	40	18.5	37	17.1	26	19.5	18	16.5	16	14.7
5 to 10 grams	20	9.3	42	19.4	14	10.5	14	12.8	11	10.1
10 to 25 grams	17	7.9	34	15.7	3	2.3	2	1.8	18	16.5
more than 25 grams	7	3.2	37	17.1	11	8.3	10	9.2	10	9.2
unknown	14	6.5	14	6.5	2	1.5	2	1.8	2	1.8
sub-total	216	100.0	216	100.0	133	100.0	109	100.0	109	100.0
none use	-		-		83		107		107	
total	216		216		216		216		216	
mean	10.5 gram		19.2 gram		6.0 gram*		6.2 gram*		6.5 gram*	

\* non users excluded

The largest range of amounts of use was between 0.2 grams per month and 300 grams per month during the period of heaviest use. Sixty percent of all respondents report a level of use below 10 grams per month during the period of heaviest use.

For a division of amount of cannabis use over time into a simpler system, like low level, medium level and high level use, we decided to create the following categories: low level is all use up till 2.5 grams per month. Medium level is defined as all use between 2.5 and 10 grams per month. All use over ten grams a month is defined as high level use. This quite conservative division was created by asking a few very experienced and long term cannabis users – all non participants of our study – in the Netherlands and the United States of America to give their opinion. All these experienced users were fully employed persons in their forties and fifties, and this may have influenced their opinions. No objective criterion was used, and this division in low, medium and high level of use is therefor arbitrary.

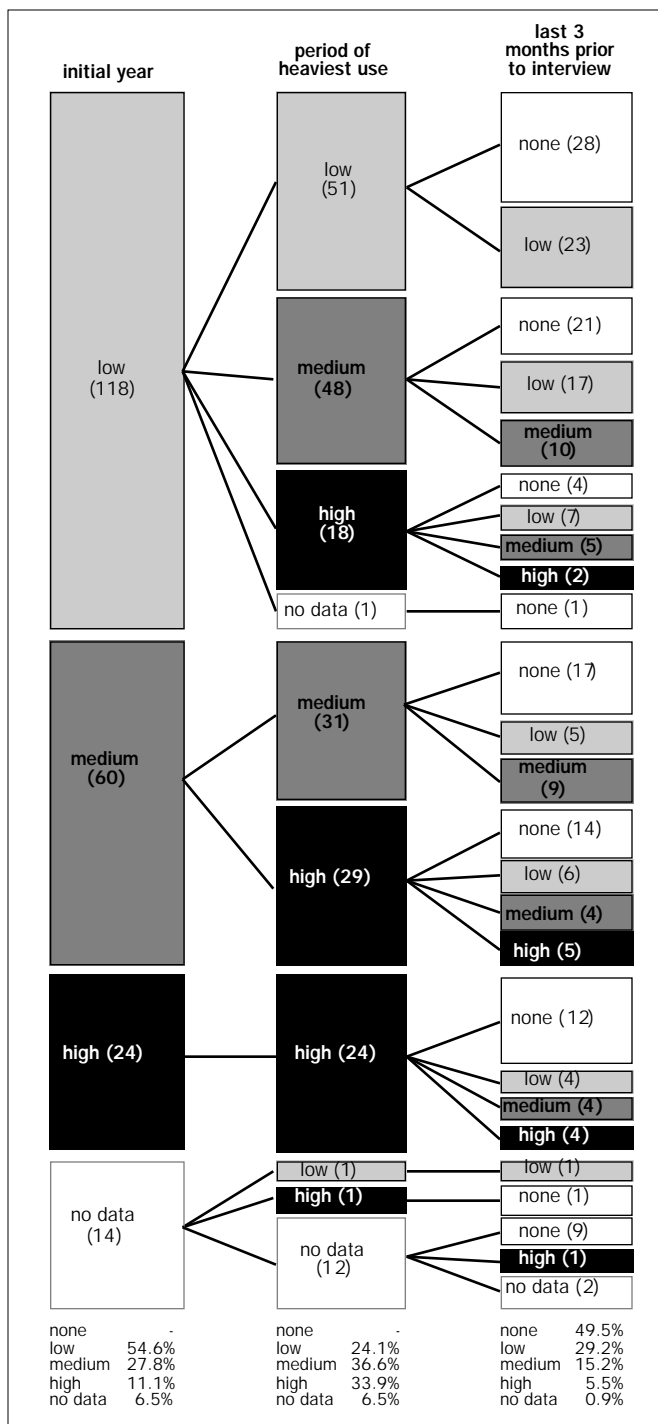
Using this categorisation allows us to draw the following figure (4.3) to show development of level of use over time in a similar way as we did in our cocaine studies<sup>12</sup>.

We show that high level use occurs during first year of regular use with 11 percent, to increase 34 percent during period of heaviest use, decreasing to seven percent for last three months prior to the interview. If we exclude the almost 50 percent that shows no use at all during the last three months prior to interview, we could say that high level use is consistent at about 11 percent of current users.

The average length of the cannabis use career is 12 years for the whole sample of 216 respondents. Respondents who had quit cannabis use<sup>13</sup> had an average cannabis using career of 9.6 years. The respondents who had not quit cannabis use reported an average cannabis using career of 13.8 years.<sup>14</sup>

Although 54 percent of the experienced cannabis users report to have raised their level of use during some part of their career with 34 percent reaching a high level during the period of maximum consumption (top period of use), sustained high level use is rare, as is clearly shown in figure 4.3. We also show that the amounts of cannabis one consumes in the beginning of ones career, does not say much about the probability of being abstinent at time of interview. 'High level starters' are as likely to bring their cannabis use down to zero as 'low level starters'.

Figure 4.3. Level of cannabis use over time (number of respondents between brackets, N=216)





#### 4.9 Conclusions about characteristics of use

After having shown that reports about cannabis use will be biased because of reasons we stated above, we will now try to find out if examination of all the indicators we used show some kind of pattern. To summarise, we have asked our respondents about:

- frequency of cannabis use per month,
- parts of the day that cannabis was used on a typical day of use,
- days of use during an average week (weekends or all through the week),
- level of being high at a typical occasion of cannabis use,
- duration of being high in hours,
- level of cannabis use, or average amount of cannabis used per month.

We saw that frequency of cannabis use is highest in the first year of regular use and during the period of heaviest use (that for most people follows shortly after the first year of regular use). Then, over a time span of average 10 years after top period, frequency of use over time does not show very large changes. Except for the period of heaviest use, frequency is in fact rather stable among those that report cannabis use in each of the four periods. Of course the most conspicuous development is that after an average of twelve years since their first regular use, just under 50 percent has stopped consuming regularly. We will dedicate some more attention to these quitters later. The rest who has not quitted, shows a remarkable stability. By dividing the cannabis users in two categories, those that use more than once a week, and those that use less than once a week, we see that with the exception of the period of heaviest use, the division between these two groups remains stable at roughly 50-50.<sup>15</sup> Daily use occurs with about 17 percent of the remaining users.

Stability is also the case when we look at parts of the day that are seen fit for cannabis use. We already concluded that for most users the evening and the night are the times for cannabis. Morning use is rare, afternoon use a bit less.

Looking at consumers that remain active we can see that over time about 50 percent attributes the same importance to weekdays as to the weekend for fitness of use. Almost half will use more at weekends. Compared to first year of regular use this is a shift towards integration of cannabis use from weekend leisure time into daily leisure time.

The duration (in hours) of being intoxicated by cannabis is longest during the initial year of use and the shortly thereafter occurring top period. Apart from the development of abstinence we see the duration of being high to fall sharply for last year of use and last three months. Combined with the finding that cannabis use tends to become more evenly divided over the week, we could say that for remaining users consumption becomes more integrated into daily life *and* less intrusive.

In spite of the fact that most respondents identify themselves as showing an 'up-top-down' pattern when speaking about amounts of use during the whole career, amount of use appears to be quite stable during all periods of the career. *Median use level is within the 1-2.5 grams a month category for all periods*, with the exception of maximum use period. This

exception accounts for the 'up top down' description that most users give of their use levels over time.

High level use, over 10 grams a month, occurs with about 11 percent of respondents in most of the periods of use we distinguish, again with the exception of maximum use period. However, the group that uses almost a gram of cannabis per day, 25 grams or more per month, increases from just 3 percent at time of first regular use to just over 9 percent of remaining users, during last three months.

In short, we can confirm that, as with many other psychotropic substances, a minority (4 percent) develops into steady high level users. A third of all respondents have known a period of steady high level use (average duration 39 months) but most of those diminish their use level or develop abstinence.

### Notes

<sup>1</sup> Cohen (1989), Cohen & Sas (1993, 1995).

<sup>2</sup> On January 1st, 1996, 1 Netherlands guilder equalled US\$ 0.62. Source: Olsen & Associates, Zürich. Online: <http://www.oanda.com/>

<sup>3</sup> SDI (1973), *Samenstelling van illegale drugs in Nederland, 1970-1973*. Amsterdam: Stichting Drugs Informatie. *Aloha* (1973), Nr 5, 5-19 juli, p. 30. Quoted in Korf & Verbraeck (1993), *Dealers en dienders*. Amsterdam: Criminologisch Instituut 'Bonger', Universiteit van Amsterdam. p. 69.

<sup>4</sup> SDAP (1980), *Voorlopig verslag onderzoek*. Uden: Stichting DAP. Quoted in Korf & Verbraeck (1993), p. 68.

<sup>5</sup> Jansen (1996), *Prijsvorming in de Nederlandse marihuana-sector 1990-1995; Een beleidsperspectief*. Amsterdam: CEDRO. Online: <http://www.frw.uva.nl/cedro/library/jansen/prijs.html>.

<sup>6</sup> Korf & Verbraeck (1993), p. 237.

<sup>7</sup> Price index 1960 = 100, 1993 = 413 (CBS, 1966, 1971, 1976, 1981, 1986, 1992, 1995).

<sup>8</sup>  $t = 0.11$ ;  $df = 199$ ;  $p = 0.911$ .

<sup>9</sup>  $t = 0.46$ ;  $df = 198$ ;  $p = 0.649$ .

<sup>10</sup>  $t = 0.71$ ;  $df = 127$ ;  $p = 0.481$ .

<sup>11</sup>  $t = 0.18$ ;  $df = 103$ ;  $p = 0.858$ .

<sup>12</sup> Cohen (1989), Cohen & Sas (1993), Cohen & Sas, (1995).

<sup>13</sup> We regard a respondent as having quitted cannabis use if the respondent did not report any use of hashish or marijuana during the last twelve months prior to the interview, or if the respondent stated that he or she had totally quitted the use of marijuana or hashish.

<sup>14</sup> This difference is significant: Mann-Whitney U = 4020;  $p = 0.003$ .

<sup>15</sup>  $\chi^2 = 3.66$ ;  $df = 2$ ; n.s.

## 5 METHODS OF USE

In this chapter we will report answers of our respondents to questions that dealt with matters like preference for hashish or marihuana, perceived strength of cannabis products, and some control mechanisms to regulate intoxication.

### 5.1 Modes of cannabis ingestion

The vast majority of our sample of experienced cannabis users makes cigarettes of tobacco mixed with cannabis and report smoking these ‘joints’ as their main method of ingestion. Just over 90 percent report this method of smoking cannabis for the first year of regular use, and also for period of maximum use. Of those who report some use during last twelve months or during last three months preceding the interview also just over 90% mixed tobacco and cannabis as main method. Cannabis only cigarettes are reported rarely, as the use of a chillum or waterpipe. Only two respondents report eating of cannabis as their main method during the three months prior to interview.

Table 5.1 Methods of cannabis use

<i>method</i>	<i>first year of regular use</i>		<i>period of heaviest use</i>		<i>last 12 months</i>		<i>last 3 months</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
with tobacco in cigarette	196	90.7	197	91.2	120	90.2	100	91.7
without tobacco in cigarette	6	2.8	5	2.3	6	4.5	3	2.8
pipe	8	3.7	5	2.3	3	2.3	3	2.8
waterpipe	2	0.9	5	2.3	1	0.8	1	0.9
chillum	2	0.9	2	0.9	-	-	-	-
eating	-	-	-	-	2	1.5	2	1.8
drinking	2	0.9	1	0.5	1	0.8	-	-
unknown	-	-	1	0.5	-	-	-	-
total	216	100.0	216	100.0	133	100.0	109	100.0
not applicable	-	-	-	-	83	-	107	-

### 5.2 Preferring hashish or marihuana?

Marihuana is the preferred cannabis products among our respondents. The percentage of respondents who say that they like marihuana better than hashish is almost half (46 percent or 100 respondents). A quarter of all respondents (56 respondents) says they prefer hashish. Twenty-eight percent of the respondents does not have a preference for either marihuana or hashish.

The reasons for preference of either hashish or marihuana are shown in table 5.2. The majority of respondents who prefer to use hashish report the better taste or smell of

hashish as a reason. Another proportion report that the effect of hashish is better than the effect of marihuana and that hashish is somewhat easier to use. The varieties of hashish that are preferred are shown in table 5.3.<sup>1</sup> Moroccan hashish is the most popular variety, after Lebanon and the Asian varieties.

The perception that marihuana is purer, more natural and healthier is an important motivation for respondents who prefer to smoke marihuana instead of hashish. Also the better taste and smell and the more desirable effects of marihuana are important factors. The Dutch variety of marijuana (often called 'Skunk' or 'Nederwiet') is very popular. Of all respondents, 38 percent says to prefer Nederwiet.

A large part of 34 percent of the respondents said to have no preference for a specific type of hashish or marijuana.

**Table 5.2** Reasons for preferring hashish or marihuana.

<i>Why preference for hashish?</i>	<i>number of responses*</i>	<i>percentage of respondents</i>
tastes better	16	30
less sharp, milder	8	15
effect is better, more reliable	7	13
easier to roll, easier to smoke	6	11
smells better	6	11
more relaxing	4	8
more social	3	6
habit	3	6
is less strong	3	6
works faster	3	6
purier	3	6
other	24	45
total	86	162

<i>Why preference for marihuana?</i>	<i>number of responses*</i>	<i>percentage of respondents</i>
purier, more natural	28	29
tastes better	22	22
effect is better, more reliable	21	21
less sharp, milder	20	20
less dullness, more active	17	17
easier to dose	8	8
not so strong	9	9
smells better	5	5
easier to roll, easier to smoke	5	5
healthier	5	5
gives more pleasure	5	5
more relaxing	4	4
habit	4	4
I grow it myself	4	4
other	33	34
total	190	194

\* Respondents could give more than one reason.

**Table 5.3** Preferred types of cannabis for respondents who still use cannabis (N=123).

	<i>n</i> *	% of respondents
no preference	35	28
<i>hashish</i>		
Asia (Kashmir, Nepal, Afghan, Pakistan)	6	5
Middle East (Lebanon)	4	3
Morocco Pollum	8	7
Morocco Katamar	16	13
<i>marijuana</i>		
Africa (Nigeria, Congo, Swasie)	1	1
Asia (Thai)	6	5
Caribbean (Jamaica)	5	4
South America (Colombia)	4	3
North America	1	1
Netherlands (Skunk, Nederwiet, Northern Light, Sensimilia, Orange Bud)	63	51
other	3	2

\* Respondents could give one or two answers.

In the previous chapter we already mentioned that one encounters many problems if one tries to measure the level of use over a long period of time. Measuring the level of THC of cannabis used over time was of course impossible, but we were in the position to ask for (preferred) *strengths* of cannabis products.

Cannabis users usually have clear ideas about the strength of the hashish or marijuana they prefer to consume. Of the respondents who still used cannabis at the time of the interview<sup>2</sup>, only four indicated that they did not prefer a particular strength of cannabis. Of the other respondents, the majority (64 percent) preferred very mild to moderately strong hashish or marijuana. This does not surprise us much. In Amsterdam the availability of hash oil, a high strength cannabis product, has almost disappeared.<sup>3</sup> We may infer, that high strength cannabis products are not in demand.

**Table 5.4** Preferred strength of cannabis for respondents who had not quit cannabis use, and the strength of the cannabis actually consumed during the last thirty days prior to the interview.

<i>strength</i>	<i>preferred strength</i>		<i>strength actually used</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
very mild	5	4	4	4
mild	32	27	27	25
moderate	39	33	31	28
strong	36	30	41	37
very strong	4	3	7	6
does not matter	4	3	-	-
sub-total	120	100	110	100
did not use			10	
unknown	3		3	
total	123		123	

The *experienced* strength of the cannabis that the respondents actually consumed during the last thirty days prior to the interview is more or less in agreement with their preference.

We asked respondents what they would do on occasions when they are – unexpectedly – using a particularly strong or potent marijuana or hashish. Two-thirds of the respondents (N=144) answered that they would use less than normal. One quarter, or 56 respondents said that they would use about the same amount. Only six persons answered that they would use more on such an occasion. The most important reasons mentioned to smoke less cannabis in such a case was the wish to prevent too much of an effect (35.2 percent of all responses), to reach a certain level of intoxication (20 percent of all responses), and because one needs less for the desired effect (16 percent). Apparently many respondents have a particular level of intoxication they regard as preferable, and they titrate the dosage of consumed cannabis to reach just that level. In other words, for a large proportion of cannabis users consumption is only functional at a particular level of intoxication, not less, not more. This means that both level of intoxication, and the ways to reach and maintain that level, could be seen as important aspects of the competence to use cannabis.

When asked if one would prefer a stronger variety over a milder variety of cannabis, only 23 respondents said that they would prefer a stronger or more potent variety of cannabis if that was available. The most important reasons they mentioned were the fact that you need less marijuana or hashish (eight respondents). The large majority however (190 respondents, 90 percent) would not prefer a stronger variety. Many different reasons were mentioned for not wanting a stronger variety, but clearly the reasons ‘strong enough now’ and ‘no need for it’ (together mentioned 94 times or 30.6 percent of all answers) are the most important. ‘Too much effect/too stoned’ is mentioned 60 times (25.3 percent of all answers) as the reason not to opt for a stronger variety of cannabis. This means that even if stronger varieties would show up on the market in Amsterdam, we have good reasons to doubt that such varieties would gain popularity.

We see here a certain conservatism with the majority of cannabis users in relation to preferred strength. Explanation may be that in the relatively long time that the

cannabis market in Amsterdam has been able to develop, a certain optimum strength level and distribution of strengths has been reached. Cannabis of very low quality, unpleasantly low (or high) strength, is probably no longer available due to competition on the cannabis market. In this stable situation cannabis users have learned to buy their preferred brands, and stick to it. We infer from the absence of any difference between preferred strength of cannabis (average 3.28) and strength of consumed cannabis during last 30 days (average strength 3.22) that our respondents are very well able to adjust their preferred strength to their actual consumption behaviour. This is very important because this stability on the market safeguards users from surprises. In that way it helps users to not over- or under-intoxicate, in the same way as consumers of licit psychotropic substances are able to know exactly what they buy and consume.

Although Dutch media have quoted a report by the Dutch police that the potency of modern Dutch bred marijuana is high<sup>4</sup>, our respondents are not conclusive about the development of strength of cannabis in Amsterdam. About 36 percent of all respondents state indeed that the strength of marijuana and hashish has increased over the last years, but 31 percent says the strength has remained the same or decreased. One-third (33 percent) of the respondents did not know whether the strength had increased or decreased.

### *Notes*

- <sup>1</sup> The number of responses do not add up to 216 because a respondent could name two preferred types of cannabis.
- <sup>2</sup> We regard a respondent as having quit cannabis use if they indicated so, or if they had not used any cannabis during the last twelve months prior to the interview.
- <sup>3</sup> Another reason might be that hash oil is considered by the authorities as too strong a product, for which the normal regulations of cannabis decriminalisation are not officially valid. However, during the eighties and early nineties almost no checks were performed on the product range available in so called coffeeshops. Nevertheless, hash oil disappeared.
- <sup>4</sup> The CRI, Recherche Informatie Dienst, published a report in July 1992 that was widely publicised. It stated that chemical analyses by the Police Laboratory in Rijswijk had revealed that 'Nederwiet' could have a THC concentration of up till 40 percent. CRI (1992), *Confidentieel Rapport* Jaargang 13, July 1992, number 2. The Hague: Recherche Informatie Dienst. p. 10.



## 6 RULES AROUND CANNABIS

### *6.1 Introduction*

In chapter four we concluded from data about amounts of cannabis consumption that many cannabis users regulate the amount of material they ingest according to pre-set criteria about the level of intoxication that they want to reach at a certain occasion of use. In chapter 5 we noted that users adjust their intake via the type of (strength of) cannabis they purchase. We assumed that we would find more regulating mechanisms with cannabis users. Such regulating mechanisms can more generally be seen as 'rules of use'. According to Schneider rules of use "co-ordinate and regulate drug use behaviour, prevent negative consequences and boost positive drug effects"<sup>1</sup>. Although Zinberg, Harding and Winkelier use the concept of 'ritual' where we would use 'rule' they understand that rituals and sanctions among drug users have multiple functions: they define moderate use and prevent excessive use, define physical or social contexts where use is less safe or less pleasant, aid prevention of dependence, aid mutual control between users, and regulate non drug use relations with the wider social context in which users live<sup>2</sup>. Basic to most present day drug policies is the idea that a strong regulatory structure in the drug use arena has to come from external and repressive institutions like the law, and the judicial. We show here that users report many internal regulatory mechanisms. Therefor, the reliance on external institutional mechanisms and the absence of attention for user's internal regulatory potential is not justified.

### *6.2 Rules applied to the use of cannabis*

In our survey we explicitly asked if respondents have rules, and we gave an example of an exclusionary rule relating to coffee.<sup>3</sup> Of our sample of 216 respondents, 151 (70 percent) confirmed to apply rules to their use of cannabis; in all they mentioned 245 rules. This means that respondents apply more than one rule (on average 1.6 rule per respondent) .The rules that were reported are shown in table 6.1. The most frequently reported rule is an exclusionary one: not to use cannabis during work or while studying. Many other exclusionary rules were given. This creates the suspicion that the example we gave in the questionnaire (an exclusionary rule) may have been suggestive.

More than 60 percent of the respondents report types of rules that are designed to prevent conflicts with work or study, and rules that limit the use of cannabis to a certain part of the day.

Of the 151 respondents who report to apply rules to their use of hashish or marihuana, 64 percents says to stick to these rules strictly. Another 34 percent says to usually stick to these rules.

**Table 6.1** Rules applied to the use of cannabis.\*

<i>rules</i>	<i>n</i>	<i>% resp.</i>	<i>% cases</i>
not during work/study	58	23.8	26.9
not during the day	43	17.6	19.9
not in the morning	32	13.1	14.8
not while driving	10	4.1	4.6
not when I must be clear-headed	10	4.1	4.6
not on official occasions	9	3.7	4.2
not with family	9	3.7	4.2
not in public	7	2.9	3.2
only if I don't have any commitments	7	2.9	3.2
in the evening, late in the evening	6	2.5	2.8
not in combination with alcohol	5	2.0	2.3
only during weekends	4	1.6	1.9
not too much, moderately	4	1.6	1.9
never in the presence of small children	4	1.6	1.9
only use at home	4	1.6	1.9
never use abroad	4	1.6	1.9
don't use just before going to sleep	4	1.6	1.9
not with social contacts	4	1.6	1.9
only with friends and partner	4	1.6	1.9
never use alone	2	0.8	0.9
other	14	5.7	6.5
total	244	100.0	112.4

\* Respondents could give more than one answer.

### *6.3 Other methods for finding 'self regulatory mechanisms' for cannabis consumption*

Even if cannabis users do not explicitly report having rules to apply to their use, many have ideas about places and circumstances (in short: situations) in which cannabis use would be appropriate, or emotions or feelings that go well with cannabis use. In order to tap respondents' notions about 'rules' in other ways than via the concept of 'rule' itself, we asked a series of questions that would tap eventual notions of regulatory mechanisms. These questions were worded in terms of situations, locations, emotions or company that may be considered fit or unfit for the use of cannabis. We also used questions about advice to novice users, about dissuasion or persuasion others to use cannabis and notions about buying cannabis, and the relation between price of cannabis and use level, as instrument for unearthing regulatory mechanisms of cannabis use. In the following paragraphs we will describe the findings on each of the different instruments. We will conclude this long chapter with the topic of cannabis sales, and the availability of other drugs at the point of sale.

### *6.4 Situations that are fit for cannabis consumption*

Asking for situations that are fit for cannabis use, we collected 628 answers distributed with 216 respondents. This means that on average each respondent mentioned 2.9 situations that are fit for cannabis use.

The most often mentioned situation that is regarded suitable for cannabis use is 'being with friends'. A majority of 55 percent of all respondents mention this as a suitable situation for use (representing 19 percent of all answers). In table 6.2 all mentioned situations that are defined as fit for cannabis use are listed.

**Table 6.2** Situations in which cannabis use occurs and frequency of occurrence (N=216).\*

<i>situation</i>	<i>total</i>		<i>always</i>		<i>frequency of occurrence</i>				<i>rarely</i>	
	<i>n</i>	<i>%*</i>	<i>n</i>	<i>%*</i>	<i>often</i> <i>n</i>	<i>%*</i>	<i>sometimes</i> <i>n</i>	<i>%*</i>	<i>n</i>	<i>%*</i>
with friends	119	55	11	5	53	25	41	19	14	6
at home	94	44	10	5	43	20	23	11	18	8
going out	88	41	9	4	44	20	29	13	6	3
parties	79	37	18	8	28	13	28	13	5	2
park, outdoors	30	14	5	2	6	3	15	7	4	2
concerts, popfestivals	29	13	7	3	13	6	6	3	3	1
cafés, bars, youth centres	29	13	7	3	11	5	7	3	4	2
coffeeshop	23	11	16	7	2	1	4	2	1	0
cinema	20	9	3	1	8	4	8	4	1	0
at school, while studying	18	8	1	0	8	4	5	2	4	2
holiday	13	6	3	1	2	1	5	2	3	1
before sleeping	10	5	5	2	2	1	2	1	1	0
football match	8	4	4	2	1	0	3	1	-	-
before sex	8	4	2	1	2	1	4	2	-	-
under pressure, stress	8	4	1	0	3	1	3	1	1	0
at work	8	4	-	-	4	2	3	1	1	0
together with partner	7	3	1	0	2	1	3	1	1	0
while listening to music	7	3	-	-	2	1	5	2	-	-
driving, traveling	6	3	2	1	2	1	2	1	-	-
creative occupations	4	2	1	0	2	1	1	0	-	-
reading	3	1	-	-	-	-	3	1	-	-
other	17	8	3	1	7	3	7	3	-	-

\* Percentages of total number of respondents (N=216) who reported situations (more than one answer was possible).

'Going out' and 'going to parties' are also mentioned by many respondents. Apart from situations that are part of socialising, 94 respondents report they also smoke hashish or marijuana at home (15 percent of all answers). And, contrasting with the large majority of 139 respondents who state that studying is an unfit situation (36.5 percent of all unfit situations mentioned), a minority of 18 respondents (2.9 percent of all answers) report that school or study situations belong to the possible contexts of cannabis consumption.

**Table 6.3** Situations that are not regarded suitable for cannabis use (N=200).\*

<i>setting</i>	<i>n</i>	<i>%*</i>
work, study	138	69
with parents	33	17
with family	30	15
public buildings, official occasions	23	12
with achievements, concentration	22	11
with non-users, people who would object	16	8
in traffic	16	8
traveling abroad	11	6
going out, with other people	10	5
with children	9	5
sports	8	4
daily life, social contacts	6	3
outdoors	6	3
at home	6	3
if it is not allowed	6	3
restaurants	4	2
public transport	4	2
with partner	4	2
parties	3	2
never during the day	3	2
pregnancy	2	1
other	19	10
don't know	1	1

\* 200 respondents reported that there are situations that they regarded not suitable for cannabis use. Respondents could give more than one answer.

Only 200 of 216 respondents mention situations that are unfit for cannabis use (table 6.3). We asked to name at least two unfit situations, but the average number of mentioned unfit situations is only 1.9. Studies and work (or achievement situations in general) is the most often mentioned unfit situation, closely followed by the company of specific persons (non-users, children, parents, family members, partners).

### 6.5 *Emotions and cannabis use*

In our questionnaire we distinguished between situations, emotions, locations and company that are fit, or unfit, for cannabis consumption. In the case of emotions that go well with the use of cannabis, only 168 respondents affirm they recognise such emotions. They mention on average 1.8 emotion per person. Most often mentioned is "joy, happiness" (59 respondents) closely followed by "feeling relaxed" (38 respondents), "feeling good" (37 respondents) and "sexual feelings" (23 respondents). It is very clear that positive emotions related to joy are fit for cannabis use. Negative emotions are fit as well, but they are mentioned by far less respondents. "Feeling bad, or depressive" goes well with cannabis use for 16 respondents, "tension" for seven and "feeling bored" for four respondents.

**Table 6.4** Emotions or feelings that combine well with cannabis use (N=167).\*

<i>emotion or feeling</i>	<i>n</i>	<i>%*</i>
joy, cheerfulness	58	34.7
being relaxed	38	22.8
feeling good	37	22.2
sexual feelings	23	13.8
being depressed, feeling bad	16	9.6
excitement, exuberant	13	7.8
being in love	11	6.6
feeling creative	9	5.4
contentment	8	4.8
philosophical mood	7	4.2
sorrow	7	4.2
tension	7	4.2
sociable, friendship	7	4.2
feeling positive, optimism	6	3.6
melancholy	5	3.0
being worried, having problems	4	2.4
happyness	4	2.4
euphoria	4	2.4
boredom	4	2.4
grumpy mood	3	1.8
romantic feelings	3	1.8
adventures feelings	3	1.8
liefdesverdriet	2	1.2
daydreaming	2	1.2
being tired	2	1.2
shyness	2	1.2
other	12	7.2

\* Respondents could give more than one answer.

**Table 6.5** Emotions or feelings that do not combine well with cannabis use (N=132).\*

<i>emotion or feeling</i>	<i>n</i>	<i>%*</i>
feeling down	32	24.2
sorrow, distress	27	20.5
depression	24	18.2
tension	21	15.9
anxiety, fear	15	11.4
uncertainty	12	9.1
anger	11	8.3
dreariness	8	6.1
pessimism	7	5.3
aggression	5	3.8
joy, cheerfulness	5	3.8
illness	5	3.8
feeling unhappy	3	2.3
nervousness	3	2.3
frustration	3	2.3
fatigue	3	2.3
feeling unsafe	2	1.5
loneliness	2	1.5
being emotional	2	1.5
feeling good, happy	2	1.5
other	7	5.3

\* Respondents could give more than one answer.

Emotions that do not go well with cannabis are mentioned by 132 respondents, who mention on average 1.5 emotion (table 6.5). Most often mentioned is “feeling down” (32 respondents) followed by “sorrow” (27 respondents), “depression” (24 respondents), “tension” (21 respondents) and “anxiety” (15 respondents).

We may safely conclude that positive feelings are normally seen as fit for cannabis use and that negative feelings are seen as unfit. We found exactly the same for cocaine users.<sup>4</sup> The importance of this finding is that for a large majority of experienced cannabis users, cannabis is conceptually not associated with depression of negative feelings, but with enhancement of positive feelings. Although we do not know how strongly this type of functional conceptualisation of cannabis use is correlated to factual behaviour, this may be an important protective mechanisms against patterns of use that could turn out dysfunctional. Dysfunctional use patterns are driven by motivations for use that in many cases are not (very) useful in the long run, for instance depression of fears and insufficiencies, or depression of subjective effects of social marginalisation. However, in a context that allows no other escape from fear or marginalisation, daily ‘depressing’ use may be very functional and life sustaining. A good example is cannabis and heroin use of US soldiers during the Vietnam war, or particular types of drug use in urban ghetto environments or other deprived areas. Context is the essential variable here.

So, we should be cool headed and not prejudiced about cannabis use with the function of suppressing negative feelings. Like the use of aspirin against headache, not all ‘depressing’ use of drugs is potentially dysfunctional or a symptom of dysfunctionality. Managing tension or stress is a common task for many people, and cannabis may well be used-even daily- for this without risks for dysfunctional use

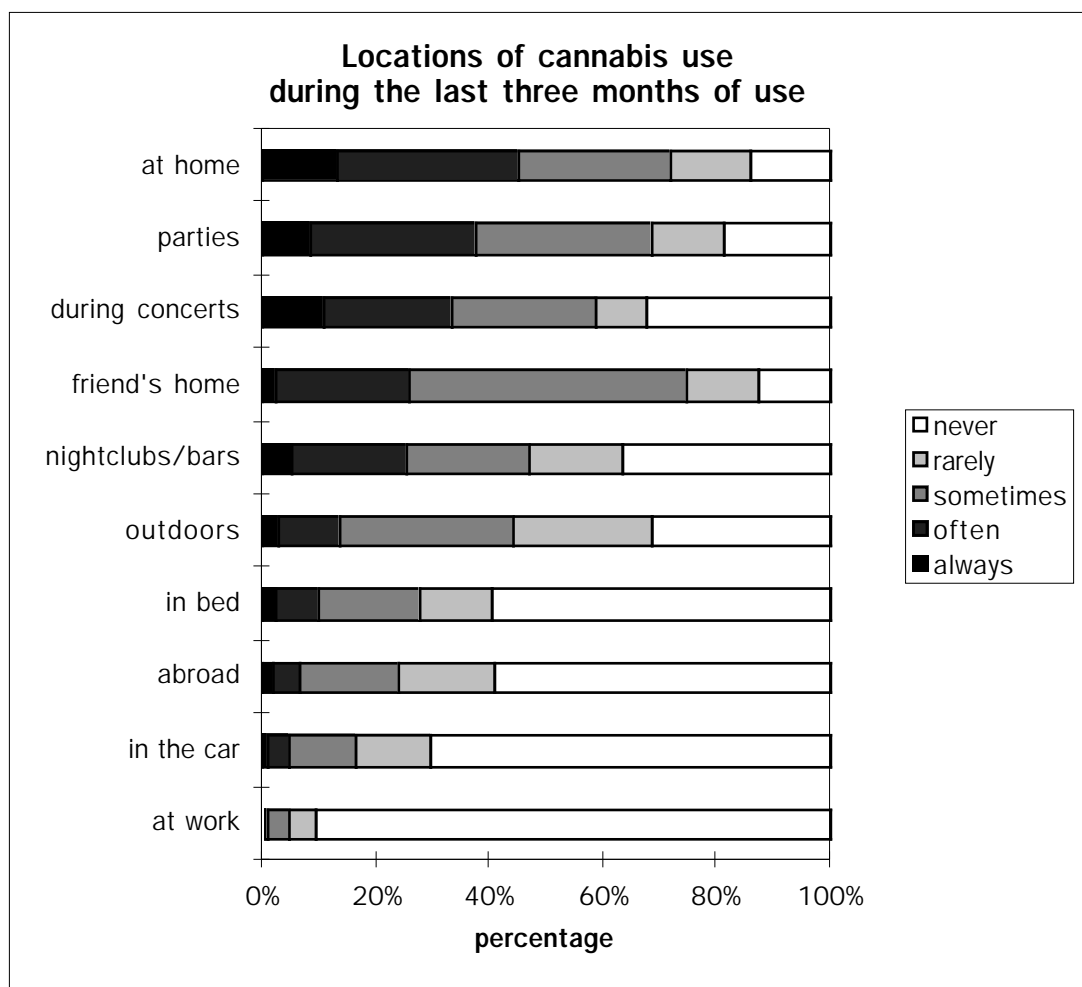
patterns. Our finding that cannabis use is seen as enhancing positive feelings shows, that cannabis is perceived as a recreational drug. However, probing into advantages, disadvantages and effects of cannabis shows that for many users cannabis also has an important relaxing function (see chapter 7). Relaxation is not different from active suppression and or management of nervousness and tension.

It would be very interesting to confirm in other cultural contexts these findings of a strong correlation between positive feelings and motivations for cannabis use and the equally strong correlation between motivations to *not* use and negative feelings and to try to explain this. Is this massive reporting of positive feelings as 'suitable' for cannabis use and negative feelings as 'unsuitable' a result of some sort of social convention not related to actual use patterns? Or does it result from use related learning within the practice of cannabis use in the many cultural contexts in Amsterdam? We may even look further, and hypothesise that alcohol use gives a model for all other drug use. Since alcohol use in Amsterdam is so closely associated to social, hedonistic, outgoing and relaxing behaviour, it may well serve as an example. Empirical evidence for alcohol as a model for other drug use may be found in comparisons with other 'alcohol cultures'<sup>5</sup>, where other drug use may follow the patterns of this 'other' alcohol use. Sweden or Anglo-Saxon environments may serve here as comparison.

## *6.6 Locations of use*

We explicitly asked for locations where respondents used cannabis during the last three months before interview (and the frequency of use in that location, worded on a printed card as: never, rarely, sometimes, often and always). Or, if they had quit, where they used with which frequency during the last three months of their use of cannabis. We see roughly the same results as when we ask for "situations" (table 6.2): smoking cannabis at home, or at a friends home occurs frequently. But also 'parties' and 'concerts' are frequently reported to have been a location of cannabis use during the last three months of use. By far the least common locations are in the car, and work.

**Figure 6.1.** Locations of cannabis use during the last three months of use. N=216



There are six persons out of 216 (2.7 percent) who report to use (or to have used) often or always in the car. Robbe found in his innovative 'real traffic' experiments that compared to the effects of alcohol, the effects of THC, the principal active compound in cannabis, are 'relatively small'<sup>6</sup> although not harmless. However, long monotonous driving under the influence of THC, or when cannabis use is combined with alcohol, 'dangerous' situations might result. The probability of this latter risk is not so small, because 24% of all respondents report to have been driving under the influence of cannabis combined with alcohol. The prevalence of driving under the influence of cannabis alone is much larger, at 42 percent.

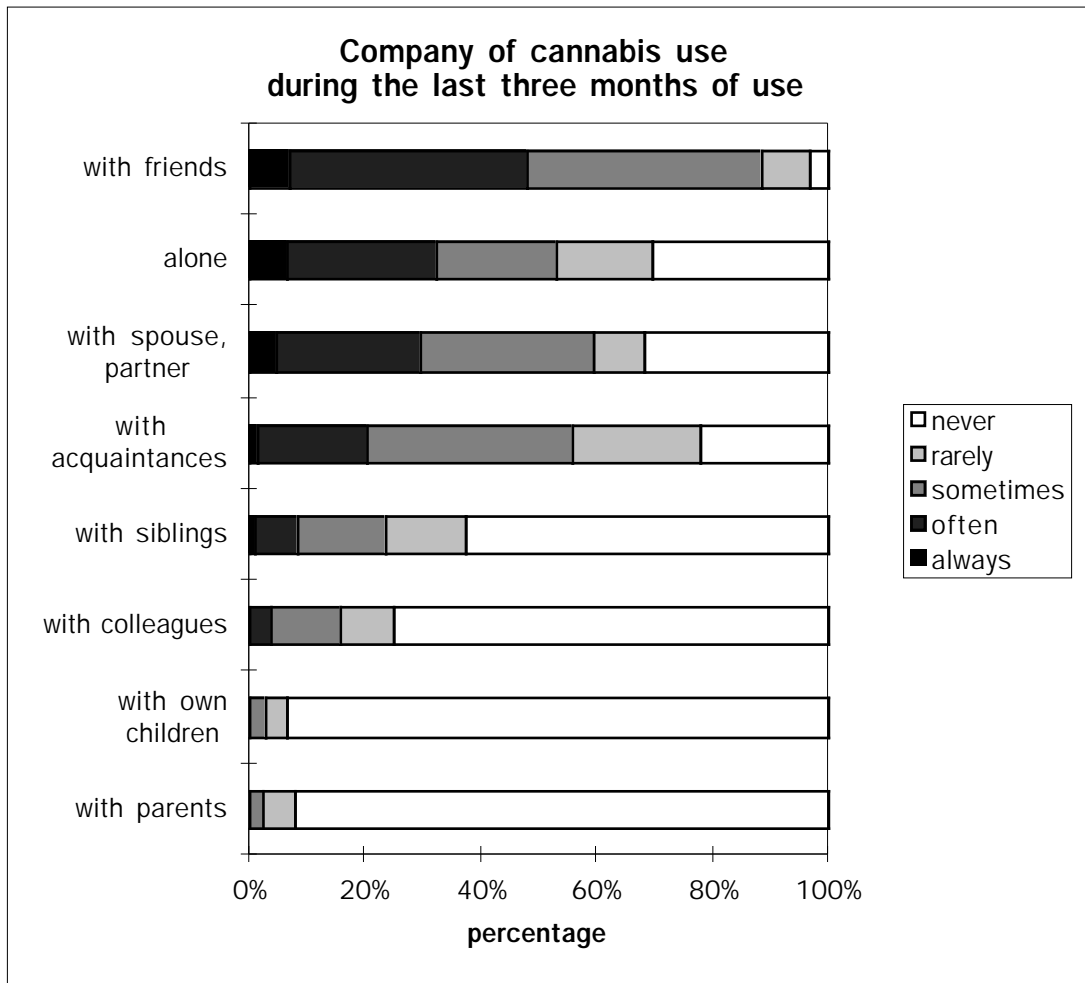
Traffic situations are rarely mentioned as unfit for cannabis use when we ask specifically for 'unfit' situations (16 persons or 7 percent). More information about cannabis and driving (and accidents) is given below in a section dedicated to this topic.

### *6.7 Company with which to use cannabis*

We also asked explicitly about company with whom respondents have used cannabis. The results are presented in figure 6.2



**Figure 6.2.** Company with whom respondents have been using cannabis during the last three months of use.



Combining the data from figure 6.2 and table 6.6 (persons in whose company respondents do not want to use cannabis) makes it clear that cannabis use is mostly done alone or in company of friends and not done with (close) family members.

**Table 6.6** Persons in whose company respondents do not want to use cannabis (N=174).\*

<i>persons</i>	<i>n</i>	<i>%*</i>
parents	95	55
family members	52	30
colleagues	34	20
non-users, opponents of cannabis use	21	12
children	17	10
strangers	15	9
grand-parents	10	6
employer, chef	10	6
siblings	9	5
acquaintances	6	3
parents-in-law	5	3
customer, business contacts	5	3
authorities	4	2
teachers	3	2
partner	3	2
other	9	5

\* Respondents could give more than one answer.

Hiding one's use for others is reported by 113 respondents 52 percent. Again parents are most often mentioned (77 times) and some members of the family (57 times). Others from whom use is hidden are employer and/or colleagues (32 times), teachers (14 times), children (9 times) and authorities (4 times).

### *6.8 Persuading or dissuading cannabis use in others*

Apart from people with whom respondents consider cannabis fit or unfit, they may also have more general notions about who can or can not use cannabis. So we asked a series of questions about dissuasion or persuasion. Only 74 respondents out of 216 (34.3 percent) had ever in their careers as cannabis users dissuaded others from use. These others were 'friends' ( 37 respondents), 'members of the family' (21 respondents), '(young) children' (11 respondents ) and 'partner, girlfriend, husband' (7 respondents). 'Everybody' was answered by two respondents, and 'people who quit using' by one.

Most often mentioned reason among these 74 respondents who had dissuaded use of cannabis was 'psychological lability' (17 respondents, 24 percent). 'Because of my own experience with negative effects' was answered by 15 respondents, 'too young' by 11 and 'would not be able to handle it' by 10 respondents. 'Creates dependence' as a reason for dissuasion was given by 6 respondents. 'Too expensive' was answered by three respondents and 'brings into contact with other drugs' by two. Another two mention 'too expensive'.

**Table 6.7** Persuading or disuading others to use cannabis

<i>Have you ever disuaded someone to try cannabis?</i>	<i>n</i>	<i>%</i>
yes	74	34
no	142	66
total	216	100

<i>Who did you disuade to try cannabis?</i>	<i>n</i>	<i>%*</i>
friends	37	51
family members	21	29
young children	11	15
partner/husband/wife	7	10
acquaintances	6	8
colleagues	4	6
pupils, students	2	3
persons who said they cannot stand it	2	3
everyone	2	3
patients	2	3
other	2	3
total	96	133

<i>Have you ever persuaded someone to try cannabis?</i>	<i>n</i>	<i>%</i>
yes	64	30
no	152	70
total	216	100

<i>Who did you persuade to try cannabis?</i>	<i>n</i>	<i>%*</i>
friends	41	64
family members	18	28
partner/husband/wife	12	19
strangers	4	6
colleagues	3	5
fellow students	3	5
someone who underwent chemo-therapy	3	5
acquaintances	3	5
total	87	136

*\* Respondents could give more than one answer.*

Encouraging use occurs less often than dissuasion: 64 (30 percent) had ever during their career encouraged others to use cannabis. Most often this encouraging goes towards friends (41 respondents, 64 percent) and family members (18 respondents). ‘Lovers or partners’ are mentioned by 12 respondents. ‘Chemotherapy clients’ were mentioned by three respondents.

Reasons for encouragement of cannabis use are given by 60 respondents, who mention 78 reasons. Most often they want to make others ‘enjoy the pleasure’ (16 respondents, 27 percent). ‘In order not to use by myself alone’ was given as the reason for encouragement by 8 respondents, and to ‘draw him/her into the group’ by six. ‘As a

replacement of sleeping pills' was a reason for 3 respondents, 'as an alternative for alcohol or cocaine' for four. 'Medical reasons' were given by two respondents.

### 6.9 Advice to novice users

One of our instruments to tap notions about rules and regulations around cannabis use was a series of questions concerning advice.

We asked what advice the respondent would give novice users regarding

- method of use;
- dosage;
- where and when to use;
- combinations of cannabis with other drugs;
- how to deal with possible disadvantages.

Regarding methods of use 199 respondents gave some advice. We found that a clear majority of 121 respondents (61 percent) tell the novice to use cannabis in a joint, mixed with tobacco. Only eight respondents tell the novice to *not* use cannabis with tobacco.

Smoking cannabis in a pipe was the next most mentioned method for novices to follow (20 respondents). Other advice is to use cannabis in a pure form (13 respondents), to use a waterpipe (12 respondents) not to use at all (ten respondents), or to eat cannabis (nine respondents)

About dosages the answers are very straightforward. Do not use too much, use with temperance was suggested by 151 respondents (75 percent). Use mild types of cannabis was given as an advice here by 19 respondents. Use a limited amount was suggested by 16 respondents, and only use more after you know the first effects, was given by 13 respondents. Most answers emphasise limited dosages or careful dosing.

Many different answers were given on the question of what advice to give concerning where or when to use. The most often mentioned advice was: 'in a trusted environment' (59 respondents, 29 percent). Next was 'with friends' (48 respondents). 'At home' was suggested by 33 respondents. 'Not at work or at school' was the advice of 15 respondents 'A coffeeshop' was mentioned by only five respondents, and 'parties' by 13 respondents. The general indication of these answers is that novices should use in friendly, trusted, quiet or feastly contexts.

Quite surprisingly experienced users tell novices to *not* combine cannabis with other drugs (138 respondents out of 201 who answered, 69 percent). 'Do not combine with alcohol' is the advice of 40 respondents (20%) 'Combine with alcohol' is answered by 16 respondents. 'Use with ecstasy' or 'with amphetamine' or 'with coffee' is answered by one respondent for each of these substances. Five respondents say 'be careful with combinations'. So, combinations are suggested, but by only a small minority. Over two thirds of all respondents opt for the advice to not combine cannabis and other substances.

The last topic on which we solicited advice from these experienced users is how to deal with bad effects or disadvantages. No clear advice emerged. Most often given

advise was 'do not use too much' (25 respondents or 13 percent) which is a repetition of the dose related advice. All kinds of suggestions were given as situations where to use or not use, what sort of juice to drink, not to make debts, pull out if you feel problems, etc., all given by a few (and sometimes only one) respondents.

We saw earlier (table 7.2) that respondents mentioned many different disadvantages of cannabis, but that most were mentioned by small groups of respondents. The same pattern emerges here, which means that there are many disadvantages perceived, but quite diffused .

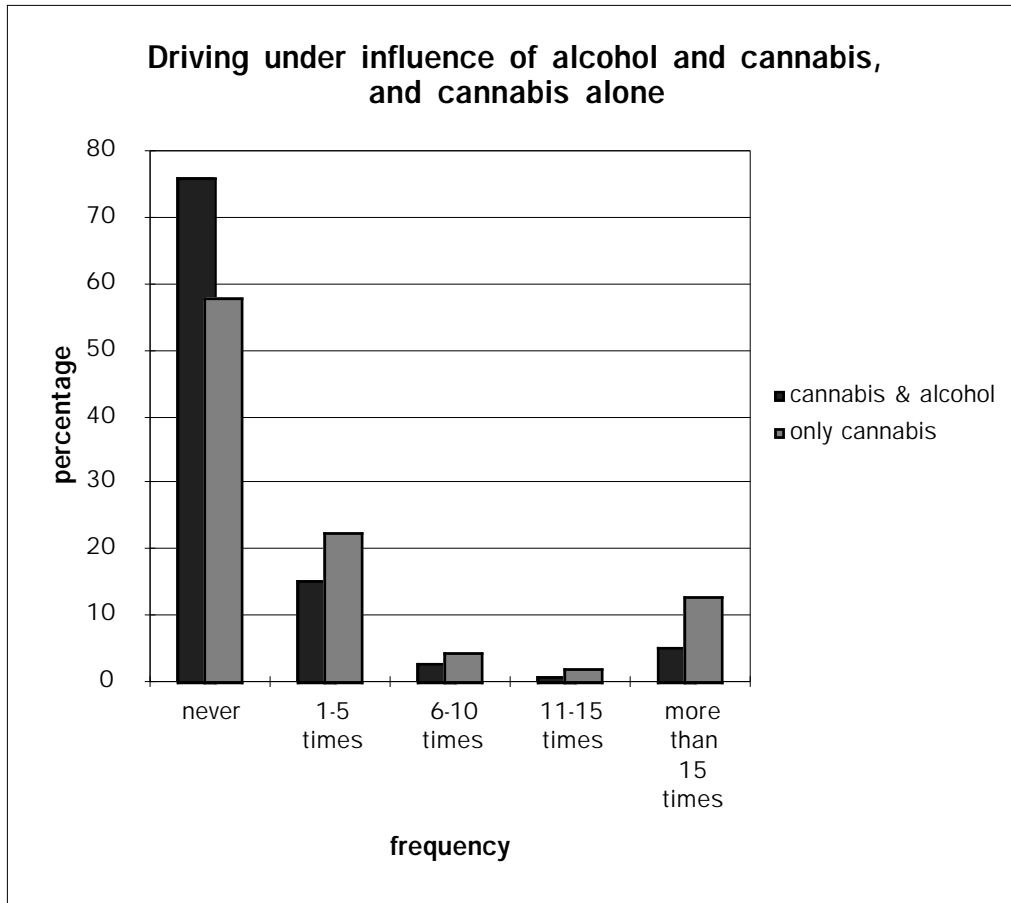
### *6.10 Driving under influence of alcohol and/or cannabis*

A setting for cannabis use that rarely occurs is the car. Figure 6.1 showed that during the last three months prior to the interview, 71 percent of the respondents reported not having used cannabis in their car. Another 13 percent says it happened rarely. Just six respondents report frequent use of cannabis in their car. This is evidence that cannabis smoking in cars is not considered proper by most respondents which is an important regulatory mechanism.

On the other hand, life time prevalence of driving under the influence of cannabis is found with 91 persons or 42%. The rest, 58% report to never drive under the influence of cannabis. (In a recent study among current heavy users of cannabis in Australia, 38 percent reports to never drive under the influence of cannabis.<sup>7</sup>)

Of those who report driving when under influence, 28 respondents (13 percent) report to have been driving more than 15 times under the influence of cannabis alone. See figure 6.3. The differences between the prevalence of driving under the influence of alcohol plus cannabis and cannabis alone are significant.<sup>8</sup> Apparently, when it comes to driving a car or motorcycle, our respondents apply stricter limits to their use of alcohol than to their use of hashish or marihuana. Possible reasons might be found in both internal and external regulations:

- In the Netherlands, driving under the influence of alcohol is not allowed if the level of alcohol in the blood exceeds 0.8‰. The Dutch police performs (but not very often) alcohol checks on locations that they expect will show a high percentage of drivers under influence. There are however no official rules for cannabis. Although in the Netherlands hashish and marihuana can be bought and used without the risk of being prosecuted, technically the possession of the substance remains illegal. Therefore it is not possible to define legal intoxication levels for cannabis in the traffic laws. The police only checks the alcohol blood level at checkpoints. They have no instruments to measure the level of intoxication by hashish or marihuana, altho some experiments are underway. But, under the wide and non specific phrasing of article 8 of the Roads and Traffic Law (1994) it is prohibited to use any substance in such a way that driving ability is affected.<sup>9</sup>
- Smoking marihuana does not influence driving as much as alcohol does. Extensive experiments on driving under the influence of both substances, at different levels of intoxication, showed that alcohol impairs driving much more than cannabis does in experienced users (the category of users we interviewed).<sup>10</sup> This might mean that, in practice, the threshold for driving under the influence of cannabis is lower than for alcohol because people are able to handle cannabis impairment better than alcohol impairment.



In our questionnaire we asked how many traffic accidents the respondent had had that involved the use of both alcohol and cannabis and cannabis alone. In either case 95 percent of our respondents did not report any traffic accidents. In the Australian study<sup>11</sup> 23% of their sample report LTP of motor vehicle accidents under the influence of cannabis.<sup>12</sup>

We asked how many accidents the small minority of five percent in Amsterdam reports (table 6.8). We questioned the interviewer who interviewed the person that reported 30 accidents due to cannabis use if this could be interviewer error. The interviewer told us this was not an error, but that she had the impression this respondent was exaggerating.

**Table 6.8** Number of traffic accidents involving cannabis and alcohol, and cannabis alone.

<i>number of accidents</i>	<i>cannabis &amp; alcohol</i>	<i>only cannabis</i>
none	204	206
1	6	6
2	1	2
3	-	-
4	1	-
5	2	1
10	2	-
30	-	1
Total	216	216

Four respondents report having made traffic accidents under both cannabis as under the combination of cannabis and alcohol. These four report the following:

- one respondent reports one traffic accident under cannabis, and one under the combination;
- one respondent reports 30 traffic accidents under influence of cannabis, and one accident under influence of the combination;
- one respondent reports one cannabis accident, and four under influence of the combination;
- one respondents reports five cannabis accidents and ten under influence of the combination.

### *6.11 Rules related to buying cannabis*

Cannabis users may not only adjust their occasions of use or amounts of use to certain situations, locations, or emotions. One third of the respondents indicated that they had rules consisting of limits applied to the amount of money they spend on hashish or marijuana. The average financial limit to cannabis purchases was 94 guilders per month. The answers ranged from 0 guilders (seven respondents) to 600 guilders (two respondents) per month. The median limit was less than half the average, at 40 guilders.<sup>13</sup> This limit will act as a kind of general ceiling under which respondents want to stay. We have no idea about the relative importance of the rules and regulating mechanisms we found, neither do we know how the existence of this general ceiling of amount purchased acts on use occasions or levels. We may however find clues about this in the chapter on advantages and disadvantages of use, and on the functions of use. Impairment of advantages, and boosting of disadvantages will be experienced as counterproductive, and in accordance with the notions of Schneider and Zinberg, we may assume that respondents will utilise specific combinations of rules and regulating mechanisms that help them optimise drug use.

Of the seven respondents who said that they did not want to spend any money on cannabis, six indicated in an other part of the questionnaire that they had at some time bought hashish or marihuana from a coffeeshop (four respondents) or a grower (one

respondent) or housedealer (one respondent), and thus had actually spent money on cannabis. Only one respondent reported that he received cannabis for free from a friend.

Table 6.9 shows that during the last twelve months prior to the interview, three quarters of respondents that have not quit using reported have bought their hashish or marihuana in one or more coffeeshops. Twenty persons (16 percent) bought cannabis from one or several friends. Housedealers or street dealers play no role in Amsterdam, as evidenced by table 6.9.

**Table 6.9** Source of cannabis during the last twelve months prior to the interview among respondents who still used cannabis at time of the interview (N=123).

<i>source</i>	<i>n</i>	<i>%</i>
close friend with connection to a dealer	2	2
several friends with connection to a dealer	14	11
directly from friend who deals	4	3
from street dealers	-	-
directly from growers	6	5
grow it myself	3	2
one coffeeshop	53	43
several coffeshops	39	32
housedealers	-	-
other	2	2
unknown	-	-
total	123	100

Only 3 respondents reported that their own self grown cannabis is their source of cannabis during the last 12 months prior to interview. But, 13 respondents report that they actually were growing marijuana at the time of the interview. We also asked the respondents if they had ever grown their own marihuana. One-third of them (71 respondents) said that they indeed had grown their own marihuana during some period of their career.

### *6.12 Price and use level*

If people put a financial limit to their use of cannabis, one could expect that changes in the price of cannabis will cause the limits on the level of cannabis use to shift.

We asked questions about the effects respondents would attribute to changes in price regarding changes of their own use, and of others. First we asked if cannabis had ever been too expensive in the sense that they could not afford what they would like to use. Only 38 out of 216 respondents affirmed this (18 percent). Then we asked current users if they would use more cannabis if it were to become 'much cheaper'. Just seven out of 138 affirmed (5 percent).

Another question was if respondents who stated that they considered themselves as having quit, would restart if cannabis were to become cheaper. Only one person out of 76 who answered this question affirmed. The others said no. Of equal importance is what influence respondents think much higher prices would have on their own amount of use.<sup>14</sup>



Out of 134 respondents who answered the question if they would lower the amount of use of cannabis if cannabis would increase ‘much’ in price, 49 (37 percent) said they would. A majority of 85 (63 percent) said they would not lower their amount of use. We see that very few respondents (5 percent) state that lower prices would help increase their amounts of use, but that ‘much higher’ prices would help decrease use level for many more (37 percent).

We confronted all respondents with the question of what would happen to their own use level if cannabis prices were to drop to about half of their current prices: would they increase amounts of use? Just over one third affirmed, two thirds denied.

In all cases where we ask questions about the impact of price on use levels (either up or down), we see that a majority consistently answers that price would have no influence on amounts of use. The only exception to this is where we asked what would happen if cannabis prices would double: would users in general decrease their amounts of use? A small majority of 57 percent says they would. So, respondents think that price has more influence on the amounts of use of others, than on the amounts of use of one self.

### *6.13 Other drugs at source of cannabis*

In the Netherlands the sale of other illicit drugs than cannabis is strictly prohibited in coffeeshops. Once it is found out that other illicit drugs are sold, the owner of a coffeeshop receives an official warning, and at recidive the shop is closed — permanently or for a certain period. This regulation is clearly an external one, and we tried to obtain some information on how it works.

In order to find out if our respondents know about the sale of other drugs at their cannabis source, we explicitly asked if any other drugs were for sale at the point of cannabis retail during their last year of use. This resulted in affirmative answers of 29 respondents (14 percent) who could buy one or more other drugs at their source of cannabis during a 12 month period; 167 respondents (77 percent) could not, and four respondents (2 percent) did not know. Coffeeshops can be involved in selling other drugs through the owner/official seller, or via clients that can be met in a coffeeshop. Cocaine availability at the source of cannabis is mentioned 13 times, of which in four cases a coffeeshop cannabis retailer is involved. Ecstasy is mentioned 7 times, three of which involve the coffeeshops retailer himself. Heroin, LSD, ‘pills’ and amphetamine are also mentioned once, each in connection with the coffeeshop retailer. This allows the inference that the Dutch policy intention of separating the supply markets of cannabis and other drugs is fairly well met. This does not mean, that the separation of the cannabis supply market from other drug supply markets is caused by a differential treatment of the cannabis market by means of allowing coffeeshops to exist. We should try to get information about the actual overlap or non overlap of these markets in other cities/other countries.

**Table 6.10** Availability of other drugs at source of cannabis for respondents who buy in coffeeshops (n=92), and for respondents who do not buy in coffeeshops (n=31) for respondents who still used cannabis at the time of the interview (N=123).

<i>Other drug</i>	<i>Coffeeshop</i>		<i>Other sources</i>	
	(1)	(2)	(1)	(2)
cocaine	4	3	3	3
LSD	1	1	1	1
heroin	1	-	2	2
mushrooms	3	2	-	-
'pills'	1	-	1	1
amphetamine	1	-	1	1
ecstasy	3	1	2	1

(1) = available at location

(2) = available from the person who sells the marijuana or hashish

### Notes

- <sup>1</sup> Wolfgang Schneider (1997), Umgang mit Cannabis. Zum Stand der Sozialwissenschaftlichen Forschung. In: Lorenz Böllinger (Eds) (1997), *Cannabis Science/Cannabis Wissenschaft*. p. 96. Translation from German by Peter Cohen.
- <sup>2</sup> Zinberg, N.E., W.M. Harding, & M. Winkelier (1977), A study of social regulatory mechanisms in controlled illicit drug users. *Jnl of Drug Issues*, Vol.7, No 2, pp 117-132.
- <sup>3</sup> For example, some people have rules about drinking coffee, such as 'I never use coffee at midnight'.
- <sup>4</sup> Cohen (1989), *Cocaine use in Amsterdam in non deviant subcultures*. Amsterdam: Department of Human Geography, University of Amsterdam. pp 77-78.
- <sup>5</sup> Levine, Harry Gene (1979), The discovery of addiction: Changing conceptions of habitual drunkenness in America. *Journal of Studies on Alcohol*, 15(1979), pp. 493-506. Online: <http://www.lindesmith.org/library/tlclevin.html>
- <sup>6</sup> Hindrik W.J. Robbe (1997), Cannabis and car driving. In: Lorenz Böllinger (Ed.) *Cannabis Science / Cannabis Wissenschaft*, p. 136.
- <sup>7</sup> Peter Didcott, David Reilly, Wendy Swift and Wayne Hall (1997), *Long term cannabis users on the New South Wales North Coast*. National Drug and Alcohol Research Center Monograph #30. p 33.
- <sup>8</sup>  $\chi^2=17.43$  (p<0.005), df=4.
- <sup>9</sup> In neighbouring Germany, under Par. 315c or 316 StGB (Crim Code) even the smallest amount of cannabis use can be enough for a drivers license to be revoked for reason of unfitness for driving "Ungeeignetheit zum Führen von Kraftfahrzeugen", Par. 69 CC). Some one can even be barred from obtaining a new license from 6 months to five years. At least he will receive an interdiction to drive from 1 to 3 months ("Fahrverbot", Par. 44 CC). We thank prof. Pieter Wiewel, Law School of the University of Amsterdam, and prof. Lorenz Böllinger, BISDRO, University of Bremen, for their information.
- <sup>10</sup> Robbe, H.W.J. (1994), *Influence of marijuana on driving*. Maastricht: Institute of Human Psychopharmacology, University of Limburg. Robbe, Hindrik W.J. (1997), Cannabis and car driving. In: Lorenz Böllinger (1997) *Cannabis science / Cannabis Wissenschaft. From prohibition to human right / Von der Prohibition zum Recht auf Genuß*. Frankfurt am Main: Peter Lang Europäischer Verlag der Wissenschaften. pp. 127-137.
- <sup>11</sup> Didcott et al. (1997).

- <sup>12</sup> It is unknown if these accidents occurred under the influence of alcohol and cannabis together, cannabis alone, and if intoxication was causally related to the accident.
- <sup>13</sup> If we omit from this computation the seven respondents who say they have a ceiling of zero guilders, the remaining 56 respondents have an average ceiling of f106,- and a median of f50,-.
- <sup>14</sup> We did not specify what we meant by “much higher prices” in our question to respondents who were still using at the time of interview.

## 7 ADVANTAGES, DISADVANTAGES, AND EFFECTS OF CANNABIS

### *7.1 Introduction*

Our questionnaire contained a series of open and closed questions that should provide data about regulatory mechanisms, functions and consequences of drug use. The sociological concepts of 'regulatory mechanism' or 'function' may not be easily accessible or understandable to our respondents, so we spoke of rules, advantages, disadvantages, reasons for and effects of cannabis use. Another means of finding out what knowledge and perceptions users have about rules, functions and consequences of drug use is to ask about what advice users would want to give to novice users. In chapter 6 we supplied a wealth of the latter type of information. In this chapter we will focus on the answers respondents gave us on questions about advantages of cannabis use, disadvantages and effects. These data are interesting in their own right, but as with other data, we consider them as having relevance for understanding which instruments users apply to regulate their use. Advantages of use, disadvantages and effects all relate to recognition of sensory parameters in a complicated system of regulatory information management. At the end of this chapter we will try to describe the theoretical relevance and interpretations we attach to the data we present here.

### *7.2 Advantages*

We asked the respondents in an open question to name up till four advantages of cannabis use. We also asked them to rank them in order of importance. The results are shown in table 7.1.

**Table 7.1** Advantages of cannabis use, rank order and frequency.

<i>Advantage of cannabis</i>	<i>Rank order</i>				<i>total</i>	<i>Rank order total</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>		
relaxing	65	21	8	4	98	1
good feeling	27	15	6	-	48	2
social	20	13	11	1	45	3
amplifies senses	12	19	13	-	44	4
deep thinking	6	8	10	-	24	5
creativity	6	10	4	4	24	6
laughter	9	6	4	1	20	7
good sex, erotically arousing	1	10	5	3	19	8
good communication	5	3	7	3	18	9
pleasure	9	6	1	2	18	10
feeling of intoxication	7	6	2	1	16	11
induces (deep) sleeping	1	10	3	1	15	12
forget worries	1	8	5	-	14	13
disinhibiting, unrestraining	3	6	3	-	12	14
deepens feelings	5	4	2	-	11	15
improves concentration	3	3	2	2	10	16
positive thinking	4	4	1	1	10	17
see things in perspective	3	2	2	2	9	18
no hangover	1	-	3	2	6	19
stimulating	2	1	1	1	5	20
good combining with alcohol	2	1	1	-	4	21
intimacy	2	-	2	-	4	22
creates other reality	3	1	-	-	4	23
enjoy dancing more	-	2	-	-	2	24
tastes good	1	1	-	1	3	25
excitement	2	1	-	-	3	26
easy to dose	-	1	-	1	2	27
against boredom	-	1	1	-	2	28
not addictive	-	-	2	-	2	29
belong to a group	1	1	-	-	2	30
other					35	
Total					529	

Average number of advantages per respondent: 2.5

All respondents (216) mention advantages, with a total of 529 advantages. This means that respondents mention on average is 2.5 advantage per person. By far the most frequently mentioned advantage of cannabis use is relaxation. It is mentioned by 98 respondents (45 percent), of which 86 mention it in first or second rank (on a scale of four). This means that cannabis is primarily associated to its relaxing function by a large part of its users. This also means that experiencing relaxation is at the same a recognition of structuring information. A user who wants his cannabis use to function as relaxation, will adjust his intake until he recognises it. Then he will stop or mitigate, because his main intention is satisfied. Of course the learning process to recognise the optimal level of attainable relaxation takes time. During this learning process users may take too little, or too much, or cannabis of the wrong type, etc.

The recreational element of cannabis use is clearly visible as well. Advantages that are high in the list are 'the good feeling' that cannabis gives to the user, and the sociable properties of cannabis. Advantages that are often mentioned are the amplifying effect

on the senses, the stimulation of creativity and the sexual stimulating properties of cannabis. All these advantages do not take place, if the user does not titrate the dosage in a rather exact way. Empirical evidence for this is that more than half of the respondents (n=120) recognise that *the dosage influences the occurrence of the advantages*. The circumstances of use are even more important: 167 respondents indicated that experiencing the advantages is influenced by the circumstances of use.

In many of our analyses in this report we treat cannabis as one drug, but in fact there is a clear distinction between hashish and marihuana. As mentioned in Chapter 5, about half of the respondents (100 persons) prefers marihuana above hashish. A quarter of the respondents (56 persons) prefers hashish. The rest has no special preference for hashish or marihuana.

If three quarter of the respondents have a preference for either hashish or marihuana we must assume that they have reasons for this. Differences between drugs on the advantages they have for the user are an obvious reason why people prefer one substance above another. In fact, 134 respondents indicated that there are differences in advantages between hashish and marihuana. Marihuana is often perceived (by 54 respondents) as lighter, softer, more pleasant and more stimulating than hashish which is perceived as causing a more 'stoned' feeling and 'makes you more passive and dozy' (mentioned by 23 respondents). Ten respondents say that the taste of hashish is better than marihuana, against three respondents saying that marihuana tastes better than hashish. Over all we see that the choice between hashish and marihuana is related to attaining some of the main functions of cannabis.

### 7.3 *Disadvantages*

As any drug, the use of hashish and marihuana has disadvantages as well. Table 7.2 shows that the disadvantages that are mentioned most frequently are associated with some undesirable influence on daily life. Out of 204 respondents who answer this question, 76 report that smoking hashish or marijuana makes them dull, dozy or less active (38 percent). More than half of them report this as the most important disadvantage of cannabis use. Also fatigue (12 percent), loss of concentration (9 percent), paranoia and confusion (9 percent) are reported among the first four disadvantages. Respondents mention on average 2.2 disadvantages per person. In contrast with cocaine, cannabis users mention less disadvantages than advantages.

**Table 7.2** Disadvantages of cannabis use, rank order and frequency.

<i>Disadvantage of cannabis</i>	<i>Rank order</i>				<i>total</i>	<i>Rank order total</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>		
makes dull, less active, lazy	37	16	20	3	76	1
fatigue	6	10	4	4	24	2
loss of concentration	6	9	2	1	18	3
makes paranoid, confused	11	6	1	-	18	4
smoking tobacco	8	4	1	3	16	5
introvert	5	7	4	-	16	6
forgetfulness	7	6	2	-	15	7
financial consequences	1	7	4	2	14	8
makes easy-going, negligent	5	6	1	1	13	9
sore throat, coughing	7	3	3	-	13	10
fear	8	2	2	1	13	11
unsteadiness	6	2	4	-	12	12
bad communication, talk too much	3	6	1	2	12	13
sleepiness	6	3	-	2	11	14
bad for health	4	4	2	-	10	15
hangover	7	2	1	-	10	16
thinking less clear	4	2	3	-	9	17
unpredictable	5	2	1	-	8	18
dry mouth or throat	2	5	1	-	8	19
loss of control over oneself	3	3	2	-	8	20
amplifies feelings	3	3	1	-	7	21
loss of sense of reality	4	2	-	1	7	22
headaches	3	2	1	-	6	23
addiction	2	1	2	1	6	24
bad with alcohol	2	3	1	-	6	25
red or dry eyes	2	1	2	1	6	26
it's not accepted everywhere	2	3	1	-	6	27
long lasting after-effects	2	2	1	-	5	28
nausea	1	4	-	-	5	29
dejection, depression	1	2	1	-	4	30
loneliness	2	1	-	1	4	31
raises appetite	1	3	-	-	4	32
indifference	1	2	1	-	4	33
restless, nervous	1	2	1	-	4	34
problems w. parents, school	2	-	1	-	3	35
dirty taste in mouth	2	1	-	-	3	36
leads to eating sweets	2	-	1	-	3	37
disrupts rhythm of your life	1	2	-	-	3	38
other					43	
Total					453	

Interesting is that the use of tobacco is seen as a disadvantage of cannabis use by eight percent. In Amsterdam, hashish and marihuana are usually smoked together with tobacco in a 'joint' (see chapter 3). Some respondents regard tobacco as more hazardous than hashish or marihuana. Many disadvantages are mentioned, but there is not much agreement between respondents. Most disadvantages are mentioned by a small number of respondents

We asked the respondents to grade on a ten point scale several drugs, weighing their advantages and disadvantages. In the Dutch educational system grades are also in a ten

point scale so respondents usually have no problem using this scale. In our survey, 1 meant 'all disadvantages, no advantages' and 10 meant 'all advantages, no disadvantages'.

Although scores ranged from 1 to 10 on almost every drug, the average rating for the drugs was relatively low. Marihuana scored highest with an average grade of 6.5. Hashish scored a 6.0 and alcohol a 6.1. In the Dutch educational system a 6 means you passed a test with a small margin. For table 7.3 this means that in the eyes of our respondents, marihuana, hashish and alcohol have more advantages than disadvantages, *but just barely*. Cocaine, tobacco, amphetamine and ecstasy are all below grade 5, meaning more disadvantages than advantages.

**Table 7.3a** Average appreciation of different drugs by cannabis users

marihuana	6.5
hashish	5.9
alcohol	6.1
cocaine	3.5
tobacco	4.8
ecstasy	3.6
amphetamine	2.8
N	216

**Table 7.3b** Average appreciation of different drugs by cannabis users

	<i>LTP cocaine</i>	<i>no LTP cocaine</i>	<i>LTP ecstasy</i>	<i>no LTP ecstasy</i>	<i>LTP amph.</i>	<i>no LTP amph.</i>
marihuana	6.5	6.4	6.7	6.4	6.5	6.5
hashish	5.8	6.1	5.6	6.1	5.8	6.0
alcohol	5.9	6.2	6.0	6.1	5.7	6.3
cocaine	4.4	2.6	4.3	3.2	4.2	3.1
tobacco	4.9	4.7	5.1	4.7	4.6	4.9
ecstasy	4.1	3.2	5.3	3.0	4.2	3.3
amphetamine	3.1	2.4	3.3	2.6	3.5	2.2
N	104	112	55	161	81	135

In table 7.3 scores for other drugs than cannabis are differentiated by drug experience between these users. People who, for instance, have experience with cocaine value cocaine with a score of 4.4. Those who have no experience with cocaine give no more than a score of 2.6, considerably lower. We could explain these large differences with prejudice or moral convictions. Those who choose to not use cocaine, will do this on the basis of a judgement, that gives it a low 'score'. This score is constructed in a completely different way than is the score of those who have experience with cocaine. Striking is though, that even with respondents who have experience with cocaine value it consistently lower than cannabis, although not as low as those who lack cocaine experience.



## 7.4 Reasons for cannabis use

**Table 7.4** Reasons to use cannabis

	<i>very important (1)</i>	<i>important (2)</i>	<i>neutral (3)</i>	<i>unimportant (4)</i>	<i>very unimportant (5)</i>	<i>average score</i>
for medical reasons	2	3	4	32	59	4.4
against fatigue	0	7	9	41	44	4.2
to challenge authority	2	7	12	32	46	4.1
to feel less anxious	2	7	12	38	42	4.1
to get through the day	2	9	13	34	42	4.1
against depression	4	11	12	33	41	4.0
to slow myself down	2	9	14	44	31	3.9
to feel less shy	3	8	19	35	35	3.9
to communicate better	3	16	22	36	23	3.6
to see the world clearly	3	17	24	34	22	3.6
to forget worries	7	15	22	35	21	3.5
against boredom	6	20	23	28	23	3.4
for better sex	4	22	22	34	18	3.4
to let off steam	3	27	21	37	12	3.3
as a hypnotic	8	27	16	29	20	3.3
to get inspiration	6	32	22	26	14	3.1
to feel good	7	41	30	18	4	2.7
to enjoy music, movies, tv	10	49	21	14	6	2.6
for company with friends	17	42	27	9	5	2.4
to relax	17	43	25	14	2	2.4

Next to asking about advantages and disadvantages we presented the respondents a list of 20 possible reasons for using hashish or marihuana. The reason for doing so is that asking about advantages and disadvantages may not disclose all possible reasons and functions of cannabis use, since we constrained the respondents to only the four most important advantages and disadvantages. By introducing multiple ways of indicating what grounds underly consumption, we made it possible to both create some internal validation of answers, and a widening of our observations. We asked respondents to indicate the importance of each of the reason for their cannabis use we presented to them. In table 7.4 we show the categories of importance we offered respondents on a printed card. It shows again that relaxation is the most important reason for cannabis use, and that the most frequently mentioned reasons for cannabis use are of a recreational nature. It also appears that *not even one reason* has an average score of 1 (very important) or 2 (important). Only four reasons score on average below 3 (neutral), and they are in order of importance, 'to relax' (average score 2.4) 'for company with friends' (average score 2.4) 'to enjoy music, movies, tv' (average score 2.6) and 'to feel good' (average score 2.7). All other reasons are seen as even less important than neutral. The least important reason for using cannabis is 'medical reasons' (average score 4.4)

Apart from the 20 reasons mentioned in our questionnaire, we added an open question to be able to tap other reasons of use. Other reasons were given by 66 respondents. Other reasons for their cannabis use are: belonging to a certain group (16 respondents), the mind-widening effect of cannabis (nine respondents), or escaping reality (six respondents).

### *7.5 Effects of cannabis use*

In the previous chapter we learned that cannabis users apply rules to their use. They might have experienced some disadvantages or unpleasurable effects, or have heard about it, and take precautions to avoid this happening or happening again. Ideas about the balance between disadvantages and advantages determine the average appreciation for cannabis, and other drugs, as shown in table 7.3. For better insight into the prevalence of effects and disadvantages of cannabis we offered extensive standard lists of potential effects to our respondents, as an alternative way to trace the prevalence of negative and positive effects of cannabis in our sample. The reason we offered this alternative way of tracing effects is, that we do not know to which degree respondents underestimate or under report positive or negative effects in the open question set up.

Altogether we presented 4 lists of effects to our respondents. Three of these lists were identical to the lists we used in our survey of experienced cocaine users. The other list we copied from a German/Swiss cannabis survey.<sup>1</sup> To begin with we mentioned 28 effects that are often associated with the use of drugs. We asked the respondents to indicate if they experienced this effect never, seldom, sometimes, often or always after they use cannabis. The results are shown in table 7.5. An average score of 1.0 (=experienced always) or of 5.0 (experienced never) does not occur for any of the mentioned effects. The effects with the highest scores of occurred frequencies are 'relaxed' (2.1), 'comfortable' (2.2) and 'merry' (2.4). The lowest frequency is reported for 'aggressive' (4.7), followed by 'serious' (4.1) and 'mentally weak' (4.0).

**Table 7.5** After I use cannabis I become... (percentages, N=216)

	<i>always</i>	<i>often</i>	<i>sometimes</i>	<i>seldom</i>	<i>never</i>	<i>average score</i>
aggressive	1	3	4	9	83	4.7
suspicious	1	7	24	24	45	4.1
mentally weak	1	6	26	33	35	4.0
pessimistic	-	6	31	34	29	3.9
lonely	1	7	30	38	26	3.8
awake	1	9	28	40	22	3.7
intelligent	4	14	27	25	30	3.6
nostalgic	1	12	39	22	26	3.6
productive	2	14	29	40	16	3.5
better able to solve problems	3	18	32	23	24	3.5
active	3	14	32	37	13	3.4
mentally strong	2	21	39	20	18	3.3
introvert	3	21	39	20	17	3.3
extrovert	2	25	35	24	13	3.2
serious	3	19	48	17	13	3.2
horny	3	21	53	13	11	3.1
passive	2	29	42	21	6	3.0
gentle	3	32	41	13	12	3.0
intuitive	6	36	31	13	14	2.9
absent minded	2	25	56	12	6	2.9
optimistic	4	35	40	13	8	2.9
talkative	7	37	39	13	5	2.7
lazy	5	43	41	7	4	2.6
sensitive for beauty	10	44	30	10	6	2.6
slow	9	41	38	7	5	2.6
cheerful	6	54	37	3	1	2.4
comfortable	11	63	22	2	2	2.2
relaxed	20	58	18	3	1	2.1

We also looked in detail at other effects of the use of hashish or marihuana. We presented our respondents another 3 long lists with possible effects, adapted from our cocaine user surveys. Table 7.4 shows list 1, some effects and their relation (according to the respondents) to cannabis use. Some effects frequently associated to cannabis use are 'a strong appetite', 'anxiety', 'being physically unfit for longer than one month', 'insomnia', 'restlessness' and 'throat problems'.

**Table 7.6** Physical effects and their relation to cannabis use (N=216).

<i>effect</i>	<i>ever experienced</i>		<i>due to cannabis</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
strong appetite	183	85	165	76
anxiety	101	47	64	30
physical unfit > 1 month	106	49	40	19
insomnia	91	42	38	18
restlessness	117	54	37	17
throat problems	112	52	27	13
lack of sexual interest	69	32	23	11
respiratory problems	72	33	19	9
overdose of some drug	34	16	19	9
reduced orgasms	53	25	18	8
serious accidents/wounds	82	38	9	4
depression > 1 month	60	28	9	4
high blood pressure	29	13	6	3
streetfight wounds	34	16	2	1
pneumonia	28	13	2	1
impotence*	11	9	1	1
minor operations	89	41	1	0
gynaecol. problems**	26	29	-	-
ontstekingen	60	28	-	-
skin infections	37	17	-	-
venereal diseases	27	13	-	-
ulcer	7	3	-	-
heart diseases	1	0	-	-

\* Only applicable to men, N=127.

\*\* Only applicable to women, N=89.

This way of asking does not exclude the possibility that described symptoms or effects are consequences not of the drug used, but of the circumstances of the user. For instance, reporting that use of cannabis 'makes one physically unfit for longer than one month' clearly relates to a certain a certain life style in which cannabis may figure prominently.

Tables 7.7 and 7.8 look deeper into the frequency of direct effects of cannabis use. We asked if the respondents experienced the effects after using marijuana or hashish, and if so, if they had experienced them between one and five times, or more than five times. The reason we ask for more often or less often than five times of occurrence, is that when effects are reported more often than five times the probability that some chance effect (due to e.g. context of mixtures with other drugs) is diminished.

**Table 7.7** Effects of cannabis use (percentages, N=216)

<i>effect</i>	<i>experienced</i>		
	<i>never</i>	<i>1-5 times</i>	<i>&gt; 5 times</i>
cotton mouth	6	10	85
mind wanders	18	29	54
forget worries	36	11	53
lack of concentration	24	24	53
self confidence	35	16	49
think faster	37	14	49
clear thinking	37	17	47
energetic feeling	30	24	46
forgetfulness	36	20	44
meaningless tasks	45	14	41
visual distortions	46	24	30
increased hartbeat	49	23	28
feeling detached	48	27	25
lack of motivation	51	25	25
dizziness	43	33	24
restless/nervous	50	26	24
mystic experiences	53	24	23
headaches	58	20	22
sweating	58	21	20
overly suspicious	58	23	19
fear	49	32	19
feeling cold, impersonal	63	22	15
tremor	63	24	14
change in breathing	72	14	14
nausea	47	39	13
lack of appetite	75	13	12
hallucinations	66	22	12
depressions	72	16	12
insomnia	70	20	11
megalomania	76	14	10
difficulty orgasms	84	10	6
convulsions	82	13	5
menstr. cycle change*	94	3	2
unconsciousness	87	12	2

\* Only applicable to women, N=89.

Both tables show that cannabis users ascribe a wide variety of effects to cannabis, but negative effects like ‘depressions’, ‘insomnia’, ‘difficulty reaching orgasms’, ‘convulsions’, ‘changes in the menstrual cycle’ and ‘unconsciousness’ are experienced by only a small minority of the respondents. The effects that are reported most frequently tend to be of a positive nature. This is even more clear in Table 7.6. The seven most frequently experienced effects are all positive. Negative effects like ‘violent behaviour’, ‘fleeing for an imagined enemy’, ‘allergies’, and ‘an urge to carry weapons’ are rarely experienced.

Some of the effects mentioned in the list are rather strange, like ‘fleeing for an imagined enemy’, or ‘urge to carry weapons’. The reason they figure here is that they were listed in our lists of cocaine effects, and we intend in the future to carry out comparisons between effects reported with different drugs. Just listing drug effects will provoke affirmations in a large group of drug users, and the low frequency of these

effects is an indication of either the low prevalence, or some sort of imaginative causal attribution.

**Table 7.8** Effects of cannabis use (in percentages, N=216).

<i>effect</i>	<i>never</i>	<i>experienced 1-5 times</i>	<i>&gt; 5 times</i>
fits of laughter	5	15	81
euphoria	16	17	67
no worries	17	17	67
talkative	14	23	63
sense of perfection	24	22	54
sexual stimulation	31	21	48
prolonged sex	44	18	39
lack of ambition	47	21	32
sensitive to light	51	20	29
panic	55	33	12
urinate more often	85	6	9
tightness in chest	73	19	8
indifference to pain	78	13	9
local numbness	76	17	7
urge to carry weapons	96	1	3
allergies	98	1	2
imagined enemy	86	13	2
violence	94	5	1
epileptic attacks	100	-	-

We gave respondents the possibility to list effects of cannabis use that were not mentioned in any of our lists. Only 48 respondents used this possibility, and most of the mentioned effects were very idiosyncratic (like alternation between feeling warm and cold (1 person), feeling psychotic (1 person), sensing ones own organs (2 persons) or reasoning in circles (2 persons). But 5 respondents said that for them a feeling of 'belonging to a group' was associated to using cannabis, and the same number mentioned 'being sensitive to colours/music.' In fact, using these multiple instruments to probe for cannabis effects shows how incredibly wide the range of effects is, and also how some effects (like occurrence of sexual stimulation) are relevant for a certain proportion, but seem to not occur for another.

## 7.6 Conclusion.

If measured in several ways with different instruments, one of the most important advantages and functions of cannabis use as mentioned by our random representative sample of 216 experienced cannabis users is *relaxation*. This finding runs parallel to findings elsewhere.

Kleiber et al. found relaxation ranking first as reason for use. An ample majority of 67 percent mention this reason for use in their recent snow ball sample of 1,458 german users.<sup>2</sup> In an Australian snow ball sample of 268 long term and current users Didcott et al. found that relaxation and relief of stress were 'the most popular reasons' to use cannabis for 61 percent of their sample.<sup>3</sup> In his New York snowball sample of 204

current and experimental users in the sixties, Goode found that 46 percent mentioned relaxation as reason for cannabis use, making this the most often mentioned one.<sup>4</sup> In spite of rather large differences between the sampling procedures of the here mentioned studies, relaxation comes out as the prime function or effect of cannabis use in all these groups of relatively highly educated users. Also in a Greek sample of 45 working class chronic cannabis users 23 mention relaxation as the usual and pleasant effect of cannabis.<sup>5</sup>

Other important functions in Amsterdam based users are related to improvement of leisure time and sensual experience. Social functions of use are mentioned, but they are not essential. Among the first five advantages of cannabis only one relates to social functioning. In a standard set of 'reasons' to use cannabis, social reasons also figure just once.

Like any other drug, cannabis use is associated to disadvantages and negative effects. A wide variety of negative effects is mentioned, and only one is more or less universal (cotton mouth with 85 percent). Some serious negative effects are reported as the possible outcome of cannabis use, but they do not figure prominently. The most often mentioned disadvantage is that cannabis makes one dull and inactive, which may not truly be a negative effect. There exists some ambiguity here. If the most important positive reason/function for use is relaxation, inactivity and dullness are closely related to the desired function. Relaxation and its associated phenomena may turn from a positive to a negative evaluation (dullness and inactivity) if the context in which it is experienced, *is not exactly right*.

That negative effects are many, but not very prominent, may not only be explained by the mild properties of the substance but also to the relative success of the learning process of how to use cannabis. Rules and other regulatory mechanisms act like prevention of negative effects, and our data clearly show that for most users the positive effects outnumber the negative effects. Learning how to prevent negative effects by 'listening' to sensory information and by relying on previous learning processes about what happens if this sensory information is not given its proper attention, may account for this.

The findings we report here, are important for a theory of how drug users control and structure their use. We show, that users have a keen sense of advantages, disadvantages and effects. In other words, they have instruments with which they can gauge if what they want of drugs (or definitely do not want) occurs or not. These sensory parameters act like directory beacons in a sea of sensations, and allow navigation. In that sense *the experience with advantages, disadvantages and effects may be the most important regulatory mechanisms of drug use*. People navigate to a course that gives them optimum advantages and acceptable disadvantages. This process is not unlike any other cost benefit consideration, regarding any type of behaviour. In order to reap benefits, one has to allow the occurrence of some cost. Looking at drug use this way defines the user as relatively autonomous; he is able to navigate and able to use navigational instruments. These instruments are internal regulatory mechanisms, results of individual and collective learning. We have no indication that the success of these mechanisms has much to do with external rules or institutionalised repression.

## Notes

<sup>1</sup> Arbeitsgruppe Hanf & Fuß (1994), *Unser gutes Kraut. Das Porträt der Hanfkultur*. Löhrbach: Arbeitsgruppe Hanf & Fuß / Werner Pieper's MedienExperimente. p. 183.

- <sup>2</sup> Kleiber, Dieter & Renate Soellner (1998), *Cannabiskonsum. Entwicklungstendenzen, Konsummuster und Risiken*. Weinheim: Juventa Verlag. p. 168.
- <sup>3</sup> Didcott, Peter, David Reilly, Wendy Swift & Wayne Hall (1997), *Long term cannabis users on the New South Wales North Coast*. National Drug and Alcohol Research Centre, University of New South Wales. p. 34.
- <sup>4</sup> Goode, Erich (1970), *The marijuana smokers* New York: Basic Books. p. 153.
- <sup>5</sup> Stefanis, Costas, Rhea Dornbush, & Max Fink (Eds.) (1977), *Hashish. Studies of long-term use*. New York: Raven Press. p. 40.



## 8 QUITTING AND DIMINISHING CANNABIS USE

### *8.1 Introduction*

Criterion for participating in our study was a life time experience with cannabis of 25 times or more. This criterion implies that one meets respondents who experienced cannabis use in the past, but who are no longer current users. One may also find users who have used very little and see themselves no longer as users. Studies that concentrate on 'current users' with particular levels of consumption<sup>1</sup> will not collect data on quitters and make it impossible to find out why people quit, or what their proportion is related to those who continue.

The concept of 'quitting' is not as straightforward as one might wish, something Kleiber et al. discuss as well.<sup>2</sup> In their study of cocaine use, Waldorf et al. entitled one chapter 'Making sense of cessation', there by illustrating the puzzling aspects of quitting. According to them quitting is 'a long and arduous process'<sup>3</sup>, although they also found examples of 'common sense quitting.' The study of quitting might be an important aspect of understanding drug use and its control. Also, quitting drug use has to be seen in relation to the pattern of use, its functions, and the social consequences of use. The most important reason why we introduced studying the process of quitting is to be able to give some depth to the phenomenon of 'non use' during last twelve and last three months (see chapter 4). Our main aim however was to establish what proportion of experienced users develop into non users over the long career period we studied.

In the following paragraphs we will discuss quitting, periods of abstinence, and diminishing amounts of use.

### *8.2 Quitting cannabis use*

Just measuring cannabis use during last twelve months prior to interview with our respondents shows, that 83 persons do not report use. Looking at last three months this grows to 107 persons. Can these respondents be seen as quitters? Although the use of the verb 'to quit' could mean an active and predetermined step towards abstinence from cannabis, we found that in reality the process of quitting cannabis use is not straightforward. Just over one fifth of the 83 respondents who report zero cannabis use during the last twelve months prior to the interview has the intention to use cannabis again, as is shown in table 8.1.

An experience many people may have is, that they simply do not consume any cannabis (or another drug) because the social situations or moods they need for cannabis use do not occur. This might even take a long time, like twelve months. If it takes longer, one might say that people have simply 'drifted' out of drug use, without ever intentionally quitting.

One of our questions was if respondents had ever intentionally quit cannabis use, but gone back to it. We got affirmative answers from 69 respondents (32 percent), of

which ten had quit more than six times. Quitting but going back had happened one or two times for 39 among them, and between three and five times for 20.

Most respondents (146 or 68 percent) have never had this experience of intentionally quitting and going back to cannabis afterwards.

**Table 8.1** Intentions to use cannabis among respondents who did not report any use during the last 12 months prior to the interview (N=83).

<i>Intention</i>	<i>n</i>	<i>%</i>
Decided intention to use in the future	18	22
Not sure	29	35
No intention to use in the future	36	43
Total	83	100

During our level use series of questions we found respondent who indicated they had not used cannabis during the last twelve months prior to interview. Those respondent (83) was asked if they intended to use in the future.

Only if respondents said that they had no intention to use marijuana or hashish in the future we asked them if they had any specific reasons for this. Of the 36 respondents who did not want to use cannabis in the future, 34 reported one or more reasons. The most important reason (mentioned by 13 respondents) is that the use of hashish or marijuana is no longer fun. They don't like it anymore. Eleven respondents indicated that they did not have a need for cannabis or that they did not see merit in it any longer. Changes in lifestyle and contact with other friends is mentioned by nine respondents as a reason for not using marijuana or hashish in the future. A wide variety of other more rare reasons is mentioned, ranging from the belief that using cannabis is unhealthy (one respondent), causes negative feelings (two respondents), leads to other drug use (two respondents), causes addiction (two respondents) to 'becoming a Christian' (two respondents) or more pleasant experiences with other drugs (one respondent).

We asked the 36 respondents who indicated that they had no intention of using cannabis in the future if they thought of themselves as having quit cannabis use totally. All 36 respondents regarded themselves as having quit totally.

Of the 18 respondents who indicated that they definitely would use hashish or marijuana in the future, 17 also said that they certainly would not quit cannabis use totally. Only one respondent did not rule out the possibility of quitting totally

Twenty-nine respondents did not know if they would use cannabis in the future, but when we asked them if they would ever quit cannabis use totally, ten said 'yes'. Another ten, however, ruled out the possibility of quitting totally. Nine respondents did not know whether they would quit cannabis use totally or not.

In our series of questions around quitting we asked as well if respondents considered themselves 'as having quit cannabis totally now'. Here 73 respondents say 'yes', considerably more than the 36 who state they will not use cannabis in the future. 'No need' is answered by 47 (66 percent), 'negative experiences' by 16 respondents, 'no longer my style of life' by eleven.

For practical purposes we combine a subjective aspect of quitting and an objective one in our definition of respondents who can be considered as quitters; we regard a respondent as having quit cannabis use:

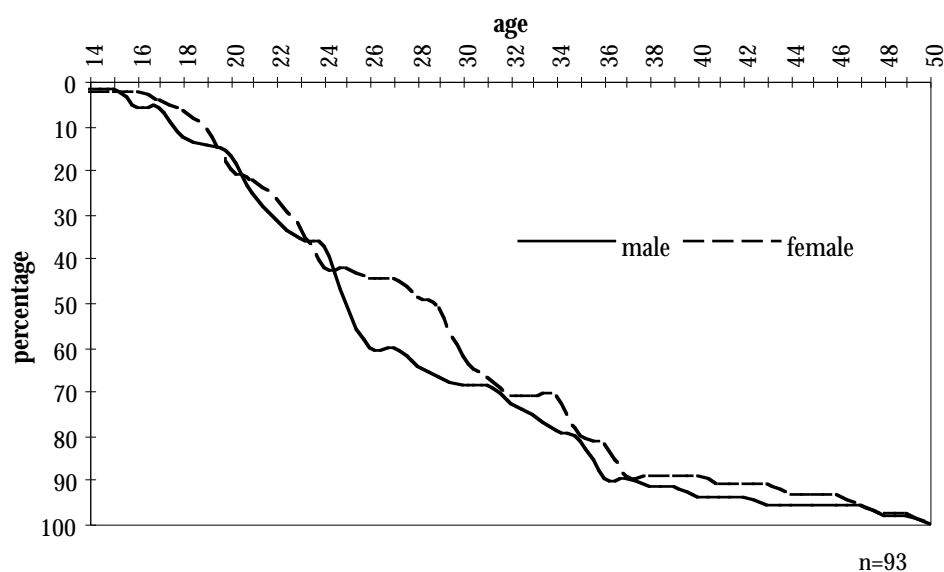
- if the respondent reports no use of hashish or marijuana during the last twelve months prior to the interview (the objective aspect), or
- if the respondent stated that he or she had totally quit the use of marijuana or hashish (the subjective aspect).

Of course this is a compromise in order to reach a usable definition. But ‘quitting cannabis use’ is not an unambiguous concept and for our quantitative analysis we wanted to define quitting in a way that we could take into account both actual use pattern and the opinion of the respondent.

Based on our definition we identified 93 respondents who either did not report any last twelve months prevalence of cannabis use (reported by 83 respondents), or had indicated having quit cannabis use (reported by 73 respondents).

Figure 8.1 shows the age at which the 93 respondents used cannabis the last time. Two respondents reported having quit their use at the age of 14. About ten percent of the respondents reported having quit before the age of 19. A very large majority (90 percent) reports having quit before the age of 38.

Figure 8.1 Age of last cannabis use by sex.



Only if a respondent indicated that he or she had quit the use of cannabis altogether, we asked if they had used any specific actions or followed any specific strategies in order to quit. Eleven respondents out of 73 reported such strategies. Reported three times was ‘avoiding friends who still use hashish or marijuana.’ Two respondents said they received addiction treatment. Another three respondents reported that going abroad helped them quit cannabis use. Other strategies that were mentioned only once were ‘moving to a different environment’, ‘progressing to hard drugs’, and ‘drinking more alcohol.’

It would be good, if in the future we would ask all respondents who report no use in the last twelve months, why this happened. It would then be easier to distinguish ‘quitters’ from ‘drifters’ out of cannabis. With our current practical definition of ‘quitters’ we have been able to show that a fairly large proportion of experienced cannabis users (43 percent) shows very infrequent or even zero use of cannabis, after an average career of over ten years.

**Table 8.2** Level of cannabis use during period of heaviest use for current users and respondents who had quit cannabis use.

<i>Level of use during top period</i>	<i>Current users</i>		<i>Quitted cannabis use</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Low	26	22	26	32
Medium	50	42	29	35
High	44	37	27	33
Total	120	100	82	100
Unknown	3		11	

Mann-Whithney U=4,463; p=0.2324 (n.s.)

### 8.3 *Periods of abstinence*

Besides establishing if a respondent could be regarded as a quitter, we also asked if respondents ever had a period during their cannabis-using career in which they did not use marijuana or hashish for longer than a month. Three-quarters of our respondents reported one or more of such periods (see table 8.3).

**Table 8.3** Frequency of periods of non-use of cannabis

<i>Frequency</i>	<i>n</i>	<i>%</i>
None	53	25
1 - 2 times	34	16
3 - 5 times	44	20
6 - 10 times	25	12
More than 10 times	59	27
Unknown	1	0
Total	216	100

Most of the reasons given for not using cannabis during these periods were ‘no need for it’ (29 respondents) or ‘did not feel like it’ (29 respondents). Also responsibilities concerning work (21 respondents) or study (11 respondents) were mentioned. Going on a holiday (21 respondents) or going abroad (16 respondents) led to periods longer than one month in which no hashish or marijuana were used. Also other changes of environment or lifestyle, other circumstances or not coming into contact with certain persons who use hashish or marijuana led to periods of not using cannabis (25

respondents). Most of these reasons are very similar to the reasons that were given by the 36 respondents who said to would not use cannabis in the future.

Apart from periods of no cannabis use of one month or longer we also asked about the *longest* period of no use. For 56 respondents there is no period longer than one month, for the others there is.

Table 8.3 shows the length of the longest period of abstinence. The average length was 18.8 months, but median length was between five and six months. Reasons for not using hashish or marijuana during this period were ‘no need for it’ (34 respondents) or ‘did not feel like it’ (16 respondents), ‘holiday’ (10 respondents), ‘stay abroad’ (12 respondents), ‘work’ (10 respondents), ‘quit smoking tobacco’ (10 respondents), ‘pregnancy’ (11 respondents) and ‘not coming into contact with other cannabis users’ (15 respondents). It is striking that we find little evidence of negative reasons that underlie quitting, or periods of no cannabis use.

**Table 8.4** Length of longest period of non-use of cannabis

<i>Length</i>	<i>n</i>	<i>%</i>
Less than 1 month	56	26
1 to 2 months	20	9
2 to 3 months	12	6
3 to 4 months	21	10
4 to 5 months	9	4
5 to 6 months	4	2
6 to 12 months	47	22
12 to 24 months	21	10
24 to 36 months	5	2
More than 36 months	19	9
Unknown	2	1
Total	216	100

#### *8.4 Decreasing cannabis use*

Besides quitting cannabis use, or being abstinent for a certain period, cannabis users may decide to cut back on their use. Of our respondents, 86 (about 40 percent of the sample) indicated that they deliberately decreased their cannabis use at some point during their cannabis using career. In contrast to the absence of negative reasons given for quitting cannabis totally or temporary, the reasons given for diminishing use of hashish or marijuana tend into the direction of avoiding adverse effects of cannabis use.

Among these 86 respondents financial reasons were most frequently mentioned for decreasing the use of hashish or marijuana (mentioned by 15 respondents or 17 percent). The second reason is the perception that cannabis use is unhealthy (mentioned by twelve respondents or 14 percent). Other frequently mentioned reasons are ‘the feeling that one used too much’ (eight respondents), ‘being dependent, addicted’ (eight respondents), ‘did not feel like it’ (eight respondents), ‘did not like it anymore, did not reach the desired effect’ (seven respondents), and ‘study’ (nine respondents). A variety of other reasons was mentioned, each only a few times, like doyness, coughing, anxiety, feeling bad, smoking too much, negative effects on relations, lack

of concentration, and black outs. Most reasons for diminishing quantities or frequency of use are clearly expressed as negative personal experience with cannabis, and vary from loss of interest and the more context related reasons people report for quitting or being abstinent for some time.

Most of the 86 respondents who reported having decreased their cannabis use at some point did not report any problems doing that. 15 respondents (17 percent) reported problems like mood swings (three respondents), craving (four respondents), sleeplessness (one respondent), pressure of other users (one respondent), visual distortions (one respondent), smoking more tobacco (one respondent) or drinking more alcohol (one respondent). We tried to establish if these 15 had longer careers, or if they showed more frequently high level use during their top period. Average use career of the 15 with trouble diminishing was 12.9 years, of the 71 without trouble diminishing the career was 13.6 years, which means no significant difference.<sup>4</sup> The 15 with trouble had no more often a high level of use than those without trouble. We must assume individual reasons are responsible, of which we have no data.

### *Notes*

<sup>1</sup> Cf. Didcott, Peter, David Reilly, Wendy Swift & Wayne Hall (1997), *Long term cannabis users on the New South Wales North Coast*. National Drug and Alcohol Research Centre, University of New South Wales.

<sup>2</sup> Kleiber, Dieter & Renate Soellner (1998), *Cannabiskonsum. Entwicklungstendenzen, Konsummuster und Risiken*. Weinheim: Juventa Verlag. p. 77.

<sup>3</sup> Waldorf, D., C. Reinerman, & S. Murphy (1991), *Cocaine changes*. Philadelphia: Temple University Press. p. 213.

<sup>4</sup> (t=-0.27; df=82; p=0.789)

## 9 OTHER DRUG USE

### *9.1 Introduction*

We know from our analyses of data from two household surveys in Amsterdam that respondents who never used alcohol, only very rarely report the use of cannabis. And if respondents do not report experience with cannabis, the probability that they have some life time experience with other illicit drugs is almost zero.<sup>1</sup> We also found that with increasing experience and use levels of cannabis, the probability of having experimented with other illicit drugs increases. Frequent use of other illicit drugs however, even with heavy current users of cannabis, was very rare.<sup>2</sup>

### *9.2 Prevalence of other illicit drug use*

People who only briefly experiment with hashish or marijuana are likely not to have tried any other illicit drugs for various reasons. In Amsterdam, the threshold to use other illicit drugs than cannabis is higher than for cannabis. This means there is a different type of availability (cannabis can be bought openly in coffeeshops, other drugs are usually accessed via friends, or have to be found in disco's, particular cafe's, apartments, street dealers, etc.) There is no way of knowing how important the difference in availability is in determining the differences in prevalence.

The difference is almost certainly related to the perceived negative effects and disadvantages of other illicit drugs. All non cannabis illicit drugs score much lower on a rating scale than cannabis (see chapter 7).

In our present sample of experienced cannabis users we found that 65 percent have life time experience with one or more other drugs.<sup>3</sup> Lifetime prevalence of illicit drug use among our respondents (experienced users) is very much and (statistically significant) higher than in the general population of Amsterdam<sup>4</sup>, but also higher than in the group of all cannabis users (low experience and experimental users included). In the latter group we found that 25 percent has lifetime experience with other drugs, the majority does not.<sup>5</sup> The recent study by Kleiber et al. in Germany revealed that his sample showed 64 percent life time experience with one or other illicit drugs<sup>6</sup>, Goode reports 68 percent life time experience in his New York sample<sup>7</sup>, and Didcott et al. report almost 100 percent.<sup>8</sup>

Apparently we deal here with populations in which a majority has been experimenting with other illicit drugs during life time but in which current use of other illicit drugs is limited. Our Amsterdam sample of experienced cannabis users shows high discontinuation rates, expressing themselves in relatively low figures for last three months prevalence of other illicit drug use

When looking at last 3 month prevalence for non cannabis illicit drugs we see that only cocaine and ecstasy have been used to a limited degree (by about 10 percent). The use of other illicit drugs, like amphetamine or hallucinogens, is less than 5 percent among experienced cannabis users – last three month prior to interview.

**Table 9.1** Prevalence of other drugs.

<i>drug</i>	<i>life time prevalence</i>		<i>last 3 months prevalence</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
alcohol	214	99%	194	90%
tobacco	203	94%	163	76%
powder cocaine	104	48%	20	9%
amphetamine	81	38%	4	2%
hallucinogens	79	37%	8	4%
ecstasy	55	26%	20	9%
sedatives	54	25%	11	5%
hypnotics	53	25%	11	5%
opiates	47	22%	1	1%
solvents	17	8%	2	1%
crack	8	4%	1	1%

Table 9.2 shows in another way that our respondents' experience with other illicit drug use is modest when compared to their experience with cannabis. More than half of all respondents who report life time prevalence of illicit drugs like powder cocaine, amphetamine, hallucinogens<sup>9</sup>, ecstasy, or opiates like heroin, used these substances less than 50 times. This indicates that experienced cannabis users might tend to experiment with other drugs, or sometimes use other drugs on a regular basis (for instance ecstasy a few times per months, or on special occasions), but rarely engage in using these drugs frequently.

**Table 9.2** Frequency of other drug use.

<i>drug</i>	<i>1 - 10 times</i>	<i>11 - 50 times</i>	<i>51 - 100 times</i>	<i>101 - 1.000 times</i>	<i>over 1.000 times</i>	<i>not appl./ unknown</i>
alcohol	5	2	5	38	164	2
tobacco	-	2	2	11	188	13
powder cocaine	49	22	14	10	8	113
amphetamine	51	15	12	3	-	135
hallucinogens	57	12	7	2	1	137
ecstasy	40	11	2	2	-	161
sedatives	23	14	6	8	3	162
hypnotics	23	16	5	7	2	163
opiates	33	5	1	2	6	169
solvents	14	1	1	1	-	199
crack	3	1	-	1	3	208

The number of experienced cannabis users in our sample that reports over 100 times of other illicit drug use, is small. Largest number of 100 times and more users is found with powder cocaine, 32 persons out of all 103 cocaine users (32 percent) or 15 percent of all experienced cannabis users in the sample. For opiates it is eight persons, 4 percent of the sample.



There is some evidence that other drug use is largely experimental, in the sense that at relatively early age other substances are tried, but discarded after a certain period of experimentation. The role of age can be understood by comparing last three months prevalence of other drug use of young respondents with older respondents. We would expect to find that younger respondents have a higher last 3 month prevalence than older – they are more in the experimental age range – and that users who have quit cannabis use, have a lower last 3 month prevalence of other drug use than those who have not (yet) quit. Table 9.3 shows the results of this analysis.

**Table 9.3** Last three months prevalence of other drug use among four sub-samples of cannabis users.

<i>drug</i>	<i>respondents older than 30 years (N=144)</i>		<i>respondents younger than 30 years (N=73)</i>		<i>respondents who quit cannabis use (N=93)</i>		<i>respondents who still use cannabis (N=124)</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
alcohol	127	88	68	93	82	88	113	91
tobacco	107	74	57	78	64	69	100	81
powder cocaine	10	7	10	14	<b>2</b>	<b>2</b>	<b>18</b>	<b>15</b>
amphetamine	1	1	4	5	1	1	4	3
hallucinogens	<b>1</b>	<b>1</b>	<b>7</b>	<b>10</b>	-	-	8	6
ecstasy	<b>8</b>	<b>6</b>	<b>13</b>	<b>18</b>	<b>2</b>	<b>2</b>	<b>19</b>	<b>15</b>
sedatives	7	5	4	5	3	3	8	6
hypnotics	8	6	3	4	4	4	7	6
opiates	1	1	-	-	1	1	-	-
solvents	2	1	-	-	4	4	2	2
crack	1	1	-	-	1	1	-	-

Bold print indicates significant differences,  $\chi^2$  test,  $p < 0.01$ .

Alcohol and tobacco consumption is roughly the same for younger and older respondents, as for current users and non-users of cannabis. As we expected, among younger respondents and current users we see higher last three month prevalences of ecstasy and hallucinogens, than for older (than 30 years). For the other illicit drugs, significant differences can not be found. The number of respondents is too small for such detailed analysis.

Ecstasy, like hallucinogenic mushrooms, have only recently become popular in Amsterdam among younger persons, which might explain higher use rates (last three months) among our younger respondents than among older respondents. Younger persons are more willing to experiment than older, or use drugs in more settings than older users.

If we look at the prevalence of other than cannabis illicit drug use among our respondents during the last three months prior to interview, we see that the vast majority (over 90 percent) is not currently using other drugs.

Table 9.4 shows that the average age of first cannabis use is 17 in our sample of experienced users (versus almost 20 years among cannabis users in the Amsterdam population as a whole). The average age of first use for all other illicit drugs is higher. Table 9.5 shows that, of those who ever experienced illicit drugs other than cannabis, a majority started using these other drugs after they started using alcohol (average age of onset 14), tobacco (15) and hashish or marijuana (17).

**Table 9.4** Average age of onset of drug use among experienced cannabis users.

<i>drug</i>	<i>average age of onset</i>	<i>n</i>
alcohol	14	215
tobacco	15	204
cannabis	17	217
amphetamine	21	82
hallucinogens	22	79
solvents	22	18
opiates	23	47
sedatives	23	54
crack	24	8
powder cocaine	24	105
ecstasy	25	56
hypnotics	26	53

**Table 9.5** Onset of other drugs relative to onset of cannabis use.

<i>drug</i>	<i>started before cannabis use</i>	<i>started in same year as cannabis use</i>	<i>started after cannabis use</i>	<i>total</i>
alcohol	150	44	21	215
tobacco	131	53	20	204
powder cocaine	-	1	104	105
amphetamine	4	3	75	82
hallucinogens	-	6	73	79
ecstasy	-	-	56	56
opiates	1	1	45	47
crack	-	-	8	8

**Table 9.6** Average time interval between first cannabis use and first other drug use for respondents who started using the other drug in the same year, or after they started using cannabis.

<i>drug</i>	<i>average time interval in years</i>	<i>number of respondents</i>
alcohol	0.7	65
tobacco	0.8	73
powder cocaine	7.6	105
amphetamine	5.2	78
hallucinogens	5.0	79
ecstasy	9.3	56
sedatives	8.0	43
hypnotics	10.1	46
opiates	5.5	46
solvents	7.5	15
crack	6.9	8

### 9.3 Combining cannabis use with other drug use

We asked respondents if and how frequently they use other drugs in combination with marijuana or hashish. The results are shown in table 9.7.

For a good understanding of this table one must realise that we asked how frequently 'the drug' was used in combination with cannabis, and not how frequently cannabis was used with 'the drug.'<sup>10</sup> Looking at the use of powder cocaine in combination with marijuana or hashish we see that 18 respondents answered 'always.' This means that if they used cocaine, they also used cannabis. It does not mean that they never used marijuana or hashish without cocaine. This is, of course, a subtle but important difference<sup>11</sup>.

**Table 9.7** Combinations of cannabis use with other drug use

<i>drug</i>	<i>always</i>	<i>often</i>	<i>sometimes</i>	<i>seldom</i>	<i>never</i>	<i>not applicable/unknown</i>
tobacco	45	48	55	57	9	3
powder cocaine	18	14	15	13	43	114
amphetamine	16	8	7	17	33	136
hallucinogens	16	7	9	5	41	139
ecstasy	15	3	5	8	25	161
alcohol	10	35	69	87	14	2
opiates	6	6	5	7	23	170
sedatives	2	2	2	8	40	163
solvents	2	1	2	-	13	199
crack	1	1	2	1	2	209
hypnotics	-	3	1	2	47	164

Tobacco is a special case in this context. In the Netherlands, marijuana or hashish are usually smoked mixed with tobacco in a so called 'joint'.

After alcohol, powder cocaine is listed second in table 9.7 as a drug that-if it is taken-is always or often combined with marijuana or hashish. However, it is also listed as the second most reported drug that is *never* combined with marijuana or hashish.

Hallucinogens and ecstasy are reported relatively often on each of the two extremes of the scale of being fit 'to combine' with cannabis. When used, hallucinogens are taken 'always' or 'often' together with cannabis by 23 persons, but on the other hand 'never' together by 41 persons. Such counterpositions are intriguing and their explanation may be hidden in the specific functions both hallucinogens and cannabis have for their users. For some the combination may be functional, for others not at all or even dysfunctional. The same substance, completely different types of use.

#### 9.4 *Experience with iv use of drugs*

We explicitly asked if respondent had ever given herself or had received an injection of a drug. A list of drugs was read aloud. Altogether we found that 38 persons (18 percent) have experience with iv drugs, of which 21 persons with multiple drugs. Most often mentioned are tranquillisers (11 respondents), morphine (ten respondents), cocaine (six respondents) and heroin (three respondents).

#### *Notes*

- <sup>1</sup> Cohen, Peter & Arjan Sas (1996), Cannabis use as a stepping stone to other drug use: The case of Amsterdam. In: Lorenz Böllinger (1997) *Cannabis science / Cannabis Wissenschaft. From prohibition to human right / Von der Prohibition zum Recht auf Genuß*. Frankfurt am Main: Peter Lang Europäischer Verlag der Wissenschaften. pp. 49-82. Online: <http://www.frw.uva.nl/cedro/library/ASC95/ASC95.html>
- <sup>2</sup> Cohen, Peter, & Arjan Sas (1997), *Patterns of cannabis use in Amsterdam among experienced cannabis users. Some preliminary data from the 1995 Amsterdam Cannabis Survey*. Amsterdam: CEDRO, University of Amsterdam. Online: <http://www.frw.uva.nl/cedro/library/cannabis/florence.html>.
- <sup>3</sup> Experience with either cocaine, all opiates (morphine, heroin, opium, codeine, methadone), ecstasy, amphetamine, and hallucinogens (including mushrooms).
- <sup>4</sup> Cf. Sandwijk, J.P., P.D.A. Cohen, S. Musterd & M.P.S. Langemeijer (1995), *Licit and illicit drug use in Amsterdam II: Report of a household survey in 1994 on the prevalence of drug use among the population of 12 years and over*. Amsterdam: Department of Human Geography, University of Amsterdam. p. 17.
- <sup>5</sup> Cohen & Sas (1997).
- <sup>6</sup> Kleiber, Dieter & Renate Soellner (1998), *Cannabiskonsum. Entwicklungstendenzen, Konsummuster und Risiken*. Weinheim: Juventa Verlag.
- <sup>7</sup> Goode, Erich (1970), *The marijuana smokers*. New York: Basic Books.
- <sup>8</sup> Didcott, Peter, David Reilly, Wendy Swift & Wayne Hall (1997), *Long term cannabis users on the New South Wales North Coast*. National Drug and Alcohol Research Centre, University of New South Wales.
- <sup>9</sup> Including mushrooms.
- <sup>10</sup> Cf. question 23a-k in the appendix.
- <sup>11</sup> We instructed our interviewers extensively on the exact interpretation of this question and we checked the answers on this question regularly when the interviewers returned the completed questionnaires to us.

## 10 DEPENDENCE

### 10.1 Introduction

In a study about the use of drugs we should give some attention 'dependence'. In spite of all the difficulties this concept entails since many decades, we will offer some finding based on a few different types of operationalisations of this concept.

### 10.2 Special or deviant behaviour to obtain cannabis

We might assume that people who are in some way or another 'dependent' on a certain substance will reveal this by activities that show the importance of the substance for their daily life. This list, designed by Morningstar and Chitwood<sup>1</sup> was also used in our cocaine studies.<sup>2</sup> In table 10.1 we show how many respondents have never undertaken any of the listed behaviours to acquire the substance, and how many have done this 1 or 2 times, or more often.

Table 10.1 Ways to obtain cannabis.

	<i>Frequency of occurrence</i>			
	<i>Never</i>	<i>1-2 times</i>	<i>3-10 times</i>	<i>&gt; 10 times</i>
Taken on extra work	210	3	3	-
Borrowed money	210	2	2	2
Sold possessions	206	7	2	1
Stolen from family or friends to buy cannabis	212	3	1	-
Shoplifted	207	3	3	3
Sold cannabis to pay for my own cannabis	188	3	7	18
Committed burglary	211	3	-	1
Forged or passed bad checks to buy cannabis	213	2	1	-
Stolen cannabis	205	10	-	1
Engaged in prostitution to get money to buy cannabis	214	-	-	1
Stealing cars to buy cannabis	214	1	-	1
Trading sex for cannabis	213	3	-	-
Hung around with people or been in a situation I did not like in order to get cannabis	181	22	9	4

In this list of behaviours, we see that deviant or criminal behaviour to obtain (money for) cannabis is rare. Unknown is in how far this behaviour is limited to obtain cannabis, or extended to other needs as well. One person 'engages in prostitution' to obtain cannabis, in spite of the fact that cannabis is easy to get and cheap in Amsterdam. Two persons steal cars to obtain cannabis. There is good reason to assume, that these behaviours can not be considered as to serve acquiring cannabis only.

We asked if respondent had ever had recurring legal problems because of marijuana use. Five percent of our respondents (11 persons) answered confirmatively.

Other indications of the importance of cannabis consumption can be derived from the prevalence of strong subjective attachment to the substance. Experience during life time with craving- a strong desire- for cannabis was known by 65 percent of all respondents, and 15 percent report that cannabis has meant some form of 'obsession' for them during some period of their career. A very large majority (97 percent) reports that they have (had) cannabis use 'under control'.

### *10.3 Dependence according to DSM-IV criteria*

Besides questions about deviant or criminal behaviour, craving for cannabis, or cannabis being an obsession, we also asked questions about dependence that were derived from the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV).

DSM-IV describes 'substance dependence' as:

A maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by three (or more) of the following, occurring at any time in the same 12-month period:

1. Tolerance, as defined by either of the following:
  - a. A need for markedly increased amounts of the substance to achieve intoxication or desired effect
  - b. Markedly diminished effect with continued use of the same amount of the substance
2. Withdrawal, as manifested by either of the following:
  - a. The characteristic withdrawal syndrome for the substance
  - b. The same (or a closely related) substance is taken to relieve or avoid withdrawal symptoms
3. The substance is often taken in larger amounts or over a longer period than was intended
4. There is a persistent desire or unsuccessful efforts to cut down or control the substance use
5. A great deal of time is spent in activities necessary to obtain the substance (e.g., visiting multiple doctors or driving long distances), use the substance (e.g., chain-smoking), or recover from its effects
6. Important social, occupational, or recreational activities are given up or reduced because of substance use

7. The substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance (e.g., current cocaine use despite recognition of cocaine-induced depression, or continued drinking, despite recognition that an ulcer was made worse by alcohol consumption).

(American Psychiatric Association (1994), p. 181)

DSM-IV distinguishes between substance dependence with physiological dependence (evidence of tolerance or withdrawal, i.e., either item 1 or 2 is present) and substance dependence without physiological dependence (no evidence of tolerance or withdrawal, i.e., neither item 1 nor 2 is present). According to DSM-IV, neither tolerance nor withdrawal is necessary or sufficient for a diagnosis of substance dependence (p. 178). In fact, withdrawal is not a criterion that is associated with cannabis in DSM-IV. Tolerance has an ambiguous status according to DSM-IV, it may or it may not develop in cannabis users (p.178), reasons why we left both withdrawal and tolerance out from the list of criteria we derived from it.

Further, instead of asking for the prevalence of the criteria mentioned above during any twelve month period, we asked if the respondents ever experienced certain DSM-IV items during their entire use career. We did this for two important reasons:

- To increase the sensitivity of the items for signs of DSM-IV defined 'dependence'. Coupling these signs to a period of 12 months seems arbitrary. In our way of asking any occurrence of an item could be mentioned.
- To diminish artificial differences between respondents in this area. If we would have attached the items to any 12 month period one respondent might answer for 12 months long ago, another for 12 months before interview, another will have experience with these items but uncertain if this was during twelve months or less (and we risk that she negates these items). Moreover, we had to keep in mind that our inclusion criteria made it possible that experienced cannabis users who quit long ago would take part in our survey. By asking for any occurrence of these items during all of the cannabis using career we discard these differences between respondents and get a more reliable view on the general prevalence of these items. Multiple occurrence of the items will give an indication of the seriousness of problems respondents ever had during their entire use career, and an approximation of the DSM-IV concept of dependence. Of course the disadvantage of this procedure is, that we are not able to give proportions of dependence strictly according to DSM-IV and compare our data to e.g. Kleiber et al, 1998. However, we feel that this is not a serious problem because DSM-IV is a way of thinking – applied in a treatment setting. It is not a strict community standardised and validated test (like e.g. the SF 36 Health Status Questionnaire, or the Addiction Severity Index, with standardised item selection, translation, validation etc.). So, there is no way at all of using the DSM-IV items as if it were a standardised test that is valid within a survey like ours done among a quite special sample.<sup>3</sup>

In our questionnaire we included six questions based on the DSM-IV criteria, that resulted in the following results:

- Half of the respondents (97) had ever found him or herself using larger amounts of marijuana (or hashish) than he or she intended to, or used it for longer periods than he or she intended to, for more than a week.

- Thirty percent of the respondents (65) had ever felt a persistent desire to cut down on marijuana use or tried unsuccessfully to cut down, for more than a week.
- Twenty-four percent of the respondents (51) had ever given up or reduced social, recreational or work activities because of their marijuana use for more than a week.
- Seventeen percent (36 respondents) had ever kept using marijuana for more than a week when they had a recurring physical or psychological problem that was either caused by or worsened by marijuana use.
- Twenty-three percent (49 respondents) had ever failed to meet obligations at work or school or home for more than a week because of his or her marijuana use.
- Seventeen percent (37 respondents) had ever kept using marijuana for more than a week when he or she was having recurring social or interpersonal problems that were caused or worsened by marijuana use.

Table 10.2 shows that 51 respondents (24 percent) report a life time prevalence of three or more criteria (out of 6). We do not know if these items were experienced during the same time for each respondent. We can, however, use this table as an indication of trouble respondents attribute to cannabis.

**Table 10.2** Number of reported DSM-IV criteria.

<i>Number of criteria</i>	<i>n</i>	<i>%</i>
0	85	39
1	37	17
2	43	20
3	19	9
4	15	7
5	9	4
6	8	4
Total	216	100

We found a weak but significant correlation between amount of cannabis use (in grams) during top period of use, and the number of reported DSM-IV items (Pearsons  $r=0.1830$ ,  $p=0.009$ ).

#### *10.4 Treatment*

It is clear that many cannabis users experience one or more negative influences of cannabis use at some point in their cannabis using career. Most are able to deal with these themselves as we described in the chapters 4, 6 and 8. In order to know what proportion of this representative sample of experienced users runs into problems they think they can not deal with themselves, we did ask as well if respondents ever had contacted a treatment or counselling institution for a drug or alcohol problem in the last two years. Twelve persons (6 percent) reported having been in contact with treatment or counselling, but only one person reported that this contact was in connection with his cannabis use. The others sought help in relation to their use of



alcohol (4) , cocaine (2) , or heroin/other opiates (5) or they sought help for family members (2).

For our purpose it was relevant as well to ask if people had ever during their career 'considered' going into treatment or to ask for professional assistance in relation to their cannabis use. On top of the one person who indeed had treatment contacts for use of cannabis, nineteen respondents (9 percent) reported that they ever had considered treatment or other help in connection with their use of marijuana or hashish.

Reasons given were 'difficulty to quit on my own' (mentioned 9 times), 'sense that I was addicted' (mentioned 4 times), 'negative physical or psychological effects of cannabis' (mentioned 4 times), 'other unpleasant experiences' (mentioned 2 times), and 'the influence of parents' (2 times).

Thirteen of these nineteen respondents who had considered treatment reported lifetime prevalence of three or more DSM-IV items. But, of the 51 respondents who report life time prevalence of three or more DSM-IV items, 38 had never considered some form of assistance. This shows very clearly that in individual cases reporting 3 or more items does not necessarily lead to the subjective appraisal of 'needing' assistance. In fact, the majority of users who report three or more DSM-IV items, feel no need for assistance. And of the 19 respondents who did feel this need at one point in their life, six report less than three DSM-IV items. On the aggregate level however there is a significant correlation between reporting more than 3 items and 'considering' some form of treatment.<sup>4</sup>

The nineteen respondents who report to have considered asking assistance in connection with their cannabis use were almost never low or medium level users during their top period (3 respondents) Most were high level users (15 respondents, one respondent unknown). Their average amount of top period use was 63 grams a month (median 34 grams), considerably higher than top level use of those who never considered treatment for cannabis (average top level use 15 grams per month – median 7 grams, N= 184). However, the nineteen persons who ever considered some form of assistance for themselves report much lower use during last 12 months before interview. They have dropped from an average of 63 grams a month during top period, to 8 grams a months during last twelve months. Respondents who did not report to have ever considered treatment show a drop as well, but less spectacular, from 15 grams to 6 grams a month. So, in respect to amount of use these nineteen respondents differ greatly from the rest during their top period of use, but they are quite similar to the rest during their last twelve months. This datum is of great relevance, as we will illustrate later.

Another area where these nineteen respondents differ conspicuously from all others is in the type of cannabis related problems they report as most prominent.

In table 10.3 we show some data on 'ever having had problems' in a certain field of life associated to use of cannabis. It shows, that if problems occur, they occur mostly at school, or in personal relations. We do not know if the problems they refer to are caused by cannabis, aggravated or just associated (attributed) to it.

Out of the nineteen persons that ever considered asking for some kind of assistance 13 report to have had cannabis related problems in the area of personal relationships of which 6 say these problems were serious. Over two thirds of this small group of people have had cannabis related personal problems, and one third had school problems.

The others report life time prevalence of this type of problems as well, but to a much lesser degree (table 10.3b).

**Table 10.3a** Problems caused by cannabis use in certain situations for respondents who considered treatment for their cannabis use.

<i>Did cannabis use ever cause problems at...</i>	<i>No, no problems</i>		<i>Yes, serious problems</i>		<i>Yes, minor problems</i>		<i>Not Applicable</i>		<i>Total</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
School	12	63	4	21	3	16	-	-	19	100
Work	16	84	2	11	-	-	1	5	19	100
Personal relations	6	32	6	32	7	37	-	-	19	100
Public places	18	95	1	5	-	-	-	-	19	100

**Table 10.3b** Problems caused by cannabis use in certain situations for respondents who did not considered treatment for their cannabis use.

<i>Did cannabis use ever cause problems at...</i>	<i>No, no problems</i>		<i>Yes, serious problems</i>		<i>Yes, minor problems</i>		<i>Not Applicable</i>		<i>Total</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
School	137	70	19	10	39	20	2	1	197	100
Work	174	88	1	1	6	3	16	8	197	100
Personal relations	145	74	12	6	40	20	-	-	197	100
Public places	179	91	-	-	18	9	-	-	197	100

Because the 19 persons who report considering assistance for their cannabis use have a very high level of use during top period, we compared them on a number of other variables with respondents who do not report to have considered asking for some form of assistance. We compared the 19 on age at time of interview, country of birth, educational level, nett monthly income, length of cannabis using career, age at beginning of top period of use and length of this top period (table 10.4).

The most interesting difference we found is the average age at which top period of use has begun. The nineteen are older on average, 26 years versus 21 for the others. Could the reason for this be that the 19 started later with their first regular use? We reported in the introduction of chapter 4 that first year of regular use and top period are very close together in time, within 2 years. We did not find any difference between the 19 and the others in age of first regular use.

**Table 10.4** Characteristics of respondents who considered treatment for cannabis use vs. respondents who did not.

<i>Age at time of the interview*</i>	<i>Considered treatment</i>		<i>Did not consider treatment</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
16-19	-	-	9	5
20-24	2	11	15	8
25-29	1	5	45	23
30-34	6	32	39	20
35-39	1	5	35	18
40-49	8	42	47	24
50-59	-	-	6	3
60+	1	5	1	1
Total	19	100	197	100
Average age	37		34	
<i>Country of birth**</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Netherlands	11	58	174	88
Surinam	4	21	7	4
Indonesia	2	11	2	1
Other European countries	1	5	9	5
Other countries outside Europe	1	5	5	3
Total	19	100	197	100
<i>Educational level***</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Elementary school	3	16	14	7
Low level vocational school	2	11	6	3
Low level high school	3	16	18	9
Medium level vocational school	4	21	25	13
Medium & high level high school	4	21	40	20
High level voc. school & university	3	16	93	47
Other	-	-	1	1
Total	19	100	197	100
<i>Average nett monthly income in 1995****</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Less than f1,000	2	11	27	14
f1,000 - f1,500	4	21	37	19
f1,500 - f2,000	7	37	27	14
f2,000 - f2,500	4	21	27	14
f2,500 - f3,000	-	-	32	16
f3,000 - f4,000	2	11	29	15
f4,000 - f5,000	-	-	10	5
f5,000 - f6,000	-	-	3	2
More than f6,000	-	-	5	3
Total	19	100	197	100
Average income	f1,829		f2,325	

\*Students  $t = 1.41$ ,  $df = 214$ ,  $p = 0.159$  (n.s.)

\*\*  $\chi^2 = 21.24$ ,  $df=4$ ,  $p=0.00028$  (significant)

\*\*\* Mann-Whitney  $U = 1,098.5$ ,  $p = 0.0026$  (significant)

\*\*\*\* Students  $t = -2.55$ ,  $df = 29.79$ ,  $p = 0.016$  (significant, test for unequal variances)

**Table 10.4** (Continued)

<i>Length of cannabis using career*</i>	<i>Considered treatment</i>		<i>Did not consider treatment</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
2 years or less	1	5	19	10
3 - 5 years	4	21	28	14
6 - 10 years	3	16	53	27
11 - 15 years	4	21	44	22
16 - 20 years	1	5	20	10
21 - 30 years	5	26	28	14
More than 30 years	1	5	3	2
Unknown	-	-	2	1
Total	19	100	197	100
Average length in years	15		12	
<i>Age at beginning of period of heaviest use**</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
15 or younger	-	-	14	7
16-19	4	21	80	41
20-24	7	37	60	30
25-29	2	11	24	12
30-34	2	11	8	4
35-39	3	16	4	2
40-49	1	5	4	2
50-59	-	-	-	-
60+	-	-	-	-
Unknown	-	-	3	2
Total	19	100	197	100
Average age	26		21	
<i>Length of period of heaviest use***</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
1 month or less	-	-	3	2
2 - 6 months	2	11	20	10
7 - 12 months	2	11	38	19
13 - 18 months	1	5	21	11
19 - 24 months	2	11	38	19
25 - 36 months	5	26	24	12
37 - 48 months	2	11	10	5
5 - 10 years	3	16	31	16
More than 10 years	2	11	8	4
Unknown	-	-	4	2
Total	19	100	197	100
Average duration in months	54		37	

\* Students  $t = 1.59$ ,  $df = 212$ ,  $p = 0.113$  (n.s.)

\*\* Students  $t = 2.59$ ,  $df = 20.11$ ,  $p = 0.018$  (significant, test for unequal variances)

\*\*\* Student's  $t = 1.48$ ,  $df = 210$ ,  $p = 0.141$  (n.s.)

There are other differences – they are less often born in the Netherlands, they earn less and their level of education is lower. This may be – speculatively – interpreted as indicators of a more difficult social position, to which high level cannabis use might

be an adjustment. We should not forget however that, if this is true, the cannabis use behaviour of these nineteen during last year prior to interview is very similar to the others. So, we may have measured a temporal adjustment that passed away .

After our cocaine user surveys we formulated similar conclusions, where we said that high level users during top period have the same probability of reporting abstinence at time of interview as low level users during top period.<sup>5</sup>

### *10.5 Conclusion*

In this chapter we discussed some of the cannabis related problems users can run into. Deviance and criminality, related to obtaining cannabis occurs, but for very few respondents. We operationalised dependence more or less along the lines of DSM-IV, but asked for signs of 'dependence' for the full career, and not for a twelve month period (as DSM-IV does). For DSM -IV three or more signs of dependence legitimise the diagnosis of cannabis dependence. Out of 216 respondents, 51 (24 percent) report to have ever had experience on three or more signs of dependence. What comes out as well is, that during a career of cannabis use, average amount of use – during top period – can be very high, this top period may last 4 years or longer, and need for assistance can be felt so clearly that it is even memorised till much later. We found the combination of very high levels of use during top period, and a subjective need for some form of assistance with 19 respondents out of 216 (9 percent). But this does not mean that these very high level users that consider treatment for themselves can not change their behaviour without outside help. In fact, they can, and *all of these nineteen* lower their use level in drastic ways without calling in the assistance they at some time did consider.

### *10.6 Some other reflections and speculations on 'dependence' and the need for treatment*

Our data show that user careers are dynamic, but this can be seen only when reviewing a long stretch of career. Diagnostic tools, applied and followed up upon at just one moment of a use career, may give a distorted view. If that happens they can destroy potential for change that users themselves have. Our data also show that within an environment – as in Amsterdam – that does not marginalise heavy users and push them towards drug treatment institutions, such institutions are rarely used. Still without treatment use level does diminish ultimately. This means that results of a diagnostic tool, like DSM-IV, have to be interpreted with a great deal of background knowledge about cannabis use careers in general<sup>6</sup>.

Another prudent interpretation of these data is that some high level users perceive parts of their behaviour as signs of being 'in need of treatment'. These signs, and this need are socially constructed interpretations (or attributions, as Davies would put it.<sup>7</sup> These interpretations are continuously offered and reinforced by the very existence of these assistance institutions and the well known conventional drug use perspectives they are based on. Also, because our data show that cannabis related problem behaviours are felt and often located in the area of personal relations, we assume that intimate or close persons of high level users of cannabis will make the same inferences about the 'need for treatment' as some users do themselves. This causes extra pressure into the direction of treatment institutions on moments that do not look as if the 'problem' will be taken care of by the user herself! Also, we saw that top period of use averages

38 months (see chapter 4) and that this period averages 54 months for those who considered treatment for themselves. This is a long time. About ten percent of all experienced users run into this self perceived need for treatment

We might therefore hypothesise that under certain conditions of social imaging of drug use in the Netherlands, actual use of treatment institutions for cannabis related behaviour will rise. Since treatment organisations can not survive without a clientele, we can not expect them to say to potential clients that ‘data show that heavy use patterns are often mitigated or halted over time without any institutional involvement’.

If potential clients are not self referred but referred to treatment institutions by legal or other medical experts, they have to learn to see themselves in help-need terms, if they do not already do so. Also in third party referrals, treatment institutions do not have the nature to refuse such cases.

Once such a process of treatment growth has started, it becomes more and more a vicious circle. Because, more and more (high level, heavy or ultimately just frequent) users will be handled by assistance institutions, they will all learn to see and interpret themselves inescapably in terms of needing help. The data that register treatment will show rises. After some time there is no way out from the ‘conclusion’ that (high level) use of cannabis produces dependence and need for help. Users say so themselves! This type of artefactual ‘scientific’ conclusions will meet insufficient opposition in societies or professional circles where cannabis use is seen as deviance or potential pathology from the start. In *Diseasing of America, addiction treatment out of control* Stanton Peele says :

“People’s belief that they have a disease makes it less likely that they will outgrow the problem. For this reason, disease approaches are most inappropriate and dangerous for the young. Treatment programs for chemical dependence stress to young substance abusers that they will always have a drug-taking or drinking problem. This almost guarantees that relapses will be frequent, when under ordinary conditions the vast majority would outgrow their youthful excesses.”<sup>8</sup>

We have empirically shown that Peele, in the last phrase of this quote, is quite right in as far as we deal with outgrowing high use levels of cannabis.<sup>9</sup> The problem is of course, how long the ‘ordinary conditions’ that we still have in the Netherlands, will hold. Or, to be more precise, how long will Dutch society postpone or even not allow too early medicalisation of certain cannabis use patterns?

## Notes

<sup>1</sup> Morningstar, P. & D. Chitwood (1983), *The patterns of cocaine use. An interdisciplinary study*. Rockville: NIDA.

<sup>2</sup> Cohen, Peter (1989), *Cocaine use in Amsterdam in non deviant subcultures*. Amsterdam: Department of Human Geography, University of Amsterdam.

<sup>3</sup> In earlier research we introduced a standardised test in a survey. We used the SF 36 Health Survey as the standardised instrument to measure Health Perception of our respondents in the 1994 Amsterdam household survey.(cf. Sandwijk et al, 1995) When available, a standardised test is far superior to a list of items, because a test is validated for the

population in which it is used. No validation process is known for any type of DSM-IV related list of items for any type of community based population. This entails that whatever the concept of 'dependence' means, DSM-IV is not (yet) a proper instrument for measuring it.

<sup>4</sup>  $\chi^2 = 20.45$ ,  $p < .0001$

<sup>5</sup> Cohen, Peter, & Arjan Sas (1995), *Cocaine use in Amsterdam II. Initiation and patterns of use after 1986*. Amsterdam: Department of Human Geography, University of Amsterdam. p. 48.

<sup>6</sup> For instance, scoring cannabis 'dependence' with the help of DSM-IV should be done very cautiously. High level use, and negative influences of cannabis, may last on average 54 months and still disappear!

<sup>7</sup> Davies, John Booth (1992), *The myth of addiction*. Chur: Harwood Academic Publishers.

<sup>8</sup> Peele, Stanton (1989), *Diseasing of America. Addiction treatment out of control*. Lexington: Lexington Books. p. 27.

<sup>9</sup> For cocaine, see Cohen, Peter & Arjan Sas (1993), *Ten years of cocaine. A follow-up study of 64 cocaine users in Amsterdam*. Amsterdam: Department of Human Geography, University of Amsterdam.

## 11 DRUGS AND DRUG POLICY

### *11.1 Introduction*

We know little about the relation between drug use prevalence and drug policy. The complications of finding out if there is indeed any, are formidable.<sup>1</sup> Finding out on the basis of hard data if drug policy has any measurable consequences for variables like drug use prevalence, modes and fashions of drug use, or patterns of drug use over time is impossible for the time being. However, we feel that Reinerman and Levine may be right stating that criminalization of drugs has influence on types of drug use and their consequences.<sup>2</sup> Consequently, we may find that lack of criminalization has the same influence, only in different directions.

In designing our questionnaire we decided that we should at least ask a few questions about the perceived role of cannabis policy in the Netherlands on variables like other drug use, preferences for drug policy, and contacts with law enforcement. By contrasting the outcomes of these questions between respondents living under different drug policy regimes, we might at least shed some light on these highly complicated matters. Since these data about our respondents in Amsterdam will be compared to the same data collected by a sample of experienced users in Bremen and San Francisco, we will be able to do so in the near future.

### *11.2 Drug policy preferences*

Heroin is considered a drug with 'unacceptable risk' in the Netherlands, therefore its distribution system is clandestine, spread over apartment and street dealing contacts. In no way is heroin distribution comparable to the distribution system of cannabis, nor is its social and cultural image anywhere near the images of cannabis. However, it is not part of police policy to arrest users, buyers and small sellers of heroin as long as they refrain from staying highly visible or causing street level nuisance.

When asked if the current cannabis policy in the Netherlands should change in the direction of current alcohol policy or current heroin policy, or stay as it is, more than half of the respondents (56 percent) indicated that they would prefer cannabis being treated like alcohol. Another 77 respondents (35 percent) was satisfied with the current policy of quasi legal access to cannabis via the so called coffeeshops. Only 13 respondents (6 percent) said that they would prefer cannabis policy to change into the direction of current heroin policy. Because high level users may have been subjected to more negative effects of cannabis than users at lesser level during top period, we were interested in looking at policy preference per use level category. We found that level of use during top period does not influence policy preference (table 11.1).



**Table 11.1** Preferred drug policy concerning cannabis by level of use during period of heaviest use.

<i>Preferred drug policy</i>	<i>Level of use during period of heaviest use</i>							
	<i>Low</i>		<i>Medium</i>		<i>High</i>		<i>Unknown</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Remain the same	19	37	29	37	23	32	5	36
Cannabis treated like heroin	1	2	6	8	5	7	1	7
Cannabis treated like alcohol	32	62	42	53	41	58	7	50
Other	-	-	2	3	2	3	1	7
Total	52	100	79	100	71	100	14	100

Kruskal-Wallis chi-square= 0.3619, df = 2, p = 0.8345, n.s.

In our cocaine study we had found that users who had been abstinent for a year or longer had somewhat less liberal views on cocaine policy than those not abstinent. In our present sample of experienced cannabis users having quit (no use during last 12 month prior to interview, see chapter 8) does not influence the cannabis policy preference (table 11.2).

**Table 11.2** Preferred drug policy concerning cannabis for respondents who still used cannabis at the time of the interview, and for those who had quit cannabis.

<i>Preferred drug policy</i>	<i>Not quitted cannabis use</i>		<i>Quitted cannabis use</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Remain the same	41	33	35	38
Cannabis treated like heroin	6	5	7	8
Cannabis treated like alcohol	75	61	47	51
Other	1	1	4	4
Total	123	100	93	100

$\chi^2 = 4.70$ , df=3, p=0.19506, n.s.

We also asked respondents whether they regarded the current legal situation advantageous, disadvantageous or indifferent for them. The majority (136 respondents, 63 percent) said that the current legal situation was indifferent to them. Another 28 percent (60 respondents) expressed that the current legal situation indeed was advantageous for them. However, 20 respondents (9 percent) said that the current drug policy was disadvantageous. We did not ask for explanation of these answers.

### *11.3 Legal complications.*

When asked how much time respondents would need to get at least one gram of cannabis, 99 percent answered: less than one hour and 95 percent answers less than 0.5 hour. This confirms the easy accessibility of cannabis in Amsterdam via a system of municipality licensed shops (so called coffeeshops).

Of the 216 respondents, 212 had never been arrested in the Netherlands for the use or possession of cannabis. Four persons reported that they had been arrested for possession. Two of them actually got convicted on this charge.<sup>3</sup>

Since getting convicted for possession of cannabis is almost impossible nowadays, we assume this must have happened long ago, or must be attached to trafficking or other distribution charges.

Contacts with the justice system due to other drugs than cannabis is rare as well. A majority of 206 respondents (98 percent) had never been arrested or convicted in the Netherlands for use or possession of other drugs than cannabis. Seven respondents had been arrested or convicted for possession of other drugs, two respondents had been arrested or convicted for use of other drugs and one respondent had been arrested or convicted for both possession and use of other drugs. Looking only at respondents who actually have life time experience with other drugs, we still find that 93 percent had never been arrested or convicted in the Netherlands for use or possession of other drugs than cannabis.

Most respondents (207) report that they are not afraid to be arrested for the use or possession of cannabis in the Netherlands. Eight say they are sometimes afraid for being arrested, and two say they are often afraid. Most (200) don't take any special precautions for avoiding being arrested for the use of cannabis. Seventeen respondents, however, take certain precautions, like paying good attention to the environment (3 respondents), not leaving any proof (3 respondents), only carry the amount of cannabis for personal use (4 respondents), hiding it, or not leaving it in the open (2 respondents), buying anonymously (1 respondent), not using it in public (2 respondents), and other precautions (4 respondents).

#### *11.4 Gateway effects of cannabis use*

We have shown (chapter 9) that a sizeable majority of 68% of our respondents have life time experience with other drugs. We asked five simple questions about the perceived relevance of the role of cannabis for other drug use. These questions could be answered with a mere yes or no.

For instance, in political debates about cannabis one sometimes hears that the use of cannabis engages users to look for 'stronger kicks'. So we explicitly asked our respondents if this was the case for them. A minority said yes (13 percent) while 88 percent said no.

**Table 11.3** The role of cannabis for other drug use.

	<i>Life time prevalence of other illicit drugs</i>					
	<i>Yes</i>		<i>No</i>		<i>Total</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
<i>Did the use of cannabis makes you curious for other drugs?*</i>						
Yes	44	30	11	16	55	26
No	102	70	58	84	160	74
Total	146	100	69	100	215	100
<i>Did the use of cannabis prepare you for the use of other drugs?*</i>						
Yes	57	39	5	7	62	29
No	90	61	64	93	154	71
Total	147	100	69	100	216	100
<i>Did cannabis make you acquainted with people who use other drugs?</i>						
Yes	87	59	32	46	119	55
No	60	41	37	54	97	45
Total	147	100	69	100	216	100
<i>Did your cannabis use make you look for stronger kicks?*</i>						
Yes	25	17	2	3	27	13
No	122	83	67	97	189	88
Total	147	100	69	100	216	100
<i>Would you have tried other drugs if you never had used cannabis?*</i>						
Yes	72	51	9	13	81	39
No	68	49	60	87	128	61
Total	140	100	69	100	209	100

\* The difference in LTP of other illicit drugs between respondents who answered 'yes' and those who answered 'no' is significant ( $p < 0.05$ ).

In Table 11.3 we show how respondents (dichotomised according to having used other drugs and not having used other drugs) respond to the five items.

The first 4 items can theoretically be answered affirmatively by all respondents, the fifth only by those who indeed have used other drugs. On most items a variable minority of the users who know other drugs reports that cannabis has had a function. Item five shows that half of the respondents who have experience with other drugs reports that they would not have used other drugs if they had not used cannabis. For the other half cannabis use apparently played not a big role. However, of respondents who did not use other drugs a large majority negates the functions of cannabis for other drug use on each item.

**Table 11.4** The role of cannabis for other drug use.

<i>Number of positive answers</i>	<i>Respondents with LTP of other drugs</i>		<i>Respondents with no LTP of other drugs</i>		<i>All respondents</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
0	24	16	3	4	27	13
1	41	28	31	45	72	33
2	40	27	27	39	67	31
3	15	10	7	10	22	10
4	20	14	1	1	21	10
5	7	5	-	-	7	3
Total	147	100	69	100	216	100
Mean	1.91		1.59		1.81	
Student's <i>t</i>	2.10, df=207.69, p=0.037					

Pretending that the five items are a scale we can compute the score per person on this scale (table 11.4). The highest possible score is 5 if a respondent reports that on all five items cannabis plays a role for using other drugs. Three percent of all respondents have a score of five. More users of other drugs than non users report the use of cannabis as important, and also as more important (higher score). The difference is small but significant. Still, average score on this 'scale' for those who have experience with other drug users is not more than 1,91.

The conclusion is not so straightforward. Cannabis plays a role for using other drugs, in varying degrees for different persons, and almost only for those who indeed have used other drugs. For those who have not used other drugs, cannabis is almost always perceived as not 'pulling them' into other drug use.

Most respondents deny a role of cannabis in the sense that they want to acquaint themselves with 'stronger' substances or that cannabis made them curious for other drugs. However, cannabis use as a social activity occurs among drug users in general, and just over half of our respondents report to have learned to know other drug users via cannabis. This social process may still remain one of the most important avenues into learning to know about other drugs and developing a motive for trying them. Knowing about drugs from users themselves is an important part of the initiation route, as we saw with cannabis itself (see chapter 3) and with cocaine.<sup>4</sup> This implies there may be some spurious relation in play here where we discuss the perceived importance of cannabis use for the occurrence other drug use experience. We know that the probability to have used illicit drugs increases with education, and with outgoing behaviour (visiting cafe's, bars, disco's, theatre). Cannabis users are far more outgoing than non cannabis users, so their chance to see and meet other drug users is much larger than of non outgoing people. So, outgoing behaviour- and not cannabis use per se- may be the common determinant of the probability of any drug use experience. Dominant local drug policy may play a role here: the more drug use is marginalised and concentrated into definite sub cultural groups, the higher the probability that cannabis users meet users of other drugs. This may result into higher prevalence levels of other drug use experience.

Moreover, the importance of life time experience with other drugs should not be exaggerated. Trying other drugs than cannabis happens relatively often among our sample, but frequent use of other drugs is far less prevalent. We repeat here our finding in chapter 9 that "the number of experienced cannabis users in our sample that reports

100 times or over of other illicit drug use, is very small.” So, independently of the role of going out, or of cannabis use is for creating cultural and physical possibilities to try other drugs, other drug use remains largely experimental.

Another topic is in what degree the decriminalization of cannabis sales in coffeeshops invites coffeeshop owners and other cannabis distributors to sell other drugs to customers. So, we asked all respondents where they bought their cannabis during the last 12 month of their use period, and whether they were able to buy other drugs at their point of sale. We found that 29 persons (or 13 percent) were indeed able to buy other drugs at their point of cannabis sale. Cocaine was mentioned by 13 persons, LSD by 10, heroin by 6 and MDMA (ecstasy) by 5. For more information on this topic, see chapter 6.

### *Notes*

- <sup>1</sup> Reuband, Karl-Heinz (1995), Drug use and drug policy in Western Europe. epidemiological findings in a comparative perspective. *European Addiction Research* 1995; 1 pp. 32-41.  
Cohen, Peter (1997), The relation between drug use prevalence estimation and policy interests. In: European Monitoring Center for Drugs and Drug Addiction, *Estimating the prevalence of problem drug use in Europe*. Luxembourg: Office for Official Publications of the European Communities. pp. 27-34. MacCoun, Robert & Peter Reuter (1997), Interpreting Dutch cannabis policy: Reasoning by analogy in the legalization debate. *Science*, 3 October 1997, Vol. 278, pp. 47-52.
- <sup>2</sup> Reinerman, Craig & Harry G. Levine (Eds.) (1997), *Crack in America. Demon drugs and social justice*. Berkeley: University of California Press.
- <sup>3</sup> We have no data about one person
- <sup>4</sup> Cf. Cohen, Peter (1989), *Cocaine use in Amsterdam in non deviant subcultures*. Amsterdam: Department of Human Geography, University of Amsterdam.

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# Cannabis questionnaire

Respondent number: \_\_\_\_\_

Interviewer number: \_\_\_\_\_

Participation in survey?

- 1 yes
- 2 no

Reason for no interview:

- 1 person does not live at given address
- 2 refusal
- 3 illness
- 4 right address, not at home
- 5 wrong phone number
- 6 respondent had no time for interview
- 7 other: .....

Date of interview .... / .... / .....

Begin interview at... : ... (A.M./P.M.)

Where did the interview take place?

- 1 at the respondent's home
- 2 at the interviewer's home
- 3 in a cafe or coffeeshop
- 4 at the university
- 5 other, *specify*:

Was the respondent noticeably under the influence of alcohol, hashish or marijuana?

- 1 not under influence
- 2 under the influence of alcohol
- 3 under the influence of hashish or marijuana
- 4 other, *specify*:

## I Initiation of use

1a How old were you when you first used marijuana (or hashish)?

- .... years  
99 don't know

1b Did you use marijuana (or hashish) that first time?

- 1 marijuana
- 2 hashish
- 9 don't know

2 With whom did you use your first marijuana (or hashish)?

- 1 alone
- 2 with one friend
- 3 with a group of friends
- 4 with one or more co-workers
- 5 with others: .....
- 9 don't know

3a When you first used marijuana (or hashish), was it offered to you, did you ask for it or did you buy it?

- 1 offered
- 2 asked for it
- 3 bought it myself
- 9 don't know

3b Prior to that first time, had anyone offered you marijuana (or hashish), or had you ever asked for marijuana (or hashish)?

- offered?*  
1 yes  
2 no  
9 don't know

*asked for it?*

- 1 yes
- 2 no
- 9 don't know

4a Which of the following four statements about the first time of use applies to you?  
**read answer categories**

- 1 I found it a pleasant experience
- 2 I found it an unpleasant experience
- 3 I did not perceive any effect
- 5 other: .....
- 9 don't know

4b Would you describe the circumstances of your first use as positive, negative or neutral?

- 1 positive
- 2 negative
- 3 neutral
- 9 don't know

4c How did you feel right before you used marijuana (or hashish) for the very first time?

## II Level of use

5 The next several questions are about how frequently you used marijuana (or hashish) during four periods, i.e.,

- a your first year of regular use - "regular" meaning at least once per month
- b your period of heaviest marijuana (or hashish) use,
- c in the past year,
- d in the last three months.

### show card 1

This card shows these *frequencies of use*. Which frequency of marijuana (or hashish) use best applied to you ...

a during your first year of regular use?

- 1 daily
- 2 not daily, but more than once a week
- 3 once a week
- 4 less than once a week, but at least once a month
- 5 did not ever use at least once per month during this period

b during your period of heaviest use?

- 1 daily
- 2 not daily, but more than once a week
- 3 once a week
- 4 less than once a week, but at least once a month
- 5 did not ever use at least once per month during this period

c during the past 12 months?

- 1 daily
- 2 not daily, but more than once a week
- 3 once a week
- 4 less than once a week, but at least once a month
- 5 never used at least once a month during this period
- 6 none

d during the last three months.

- 1 daily \_\_\_\_\_ 7b
- 2 not daily, but more than once a week \_\_\_\_\_ 7b
- 3 once a week \_\_\_\_\_ 7b
- 4 less than once a week, but at least once a month \_\_\_\_\_ 7b
- 5 less than once a month \_\_\_\_\_ 7b
- 6 none \_\_\_\_\_ 6a

6a Do you think you will use marijuana (or hashish) in the future?

- 1 yes, definitely ----- **7b**
- 2 maybe / don't know -----
- 3 no, definitely not ----- **7b**

6b Why not?

7a Do you think of yourself as someone who has stopped using marijuana (or hashish) permanently?

- 1 yes ----- **8a**
- 2 no -----

7b Do you think you will finally stop using marijuana (or hashish) in the future?

- 1 yes
- 2 no
- 9 don't know

8a **Show card 2**  
Which method of using marijuana (or hashish) is the one you *generally* used when you started to use it regularly?

**1 answer possible**

- 1 smoking with tobacco in a cigarette
- 2 smoking without tobacco in a cigarette
- 3 smoking in (dry) pipe
- 4 smoking in wet (water) pipe
- 5 smoking in chillum
- 6 eating as a sweet (cake, cookie)
- 7 eating as salty food (omelette, in soup, etc)
- 8 drinking, as tea or otherwise
- 9 does not apply
- 0 other: .....

**Show card 2**

8b Which method of using marijuana (or hashish) is the one you *generally* used during your period of heaviest use?

**1 answer possible**

- 1 smoking with tobacco in a cigarette
- 2 smoking without tobacco in a cigarette
- 3 smoking in (dry) pipe
- 4 smoking in wet (water) pipe
- 5 smoking in chillum
- 6 eating as a sweet (cake, cookie)
- 7 eating as salty food (omelette, in soup, etc)
- 8 drinking, as tea or otherwise
- 9 does not apply
- 0 other: .....

**show card 2**

**if no marijuana (or hashish) use during last 12 months goto 8c**

8c Which method of using marijuana (or hashish) is the one you *generally* used during the past 12 months?

**1 answer possible**

- 1 smoking with tobacco in a cigarette
- 2 smoking without tobacco in a cigarette
- 3 smoking in (dry) pipe
- 4 smoking in wet (water) pipe
- 5 smoking in chillum
- 6 eating as a sweet (cake, cookie)
- 7 eating as salty food (omelette, in soup, etc)
- 8 drinking, as tea or otherwise
- 9 does not apply
- 0 other: .....

**show card 2**

**if no marijuana (or hashish) use during last 3 months goto 8b**

8d This card shows various *methods of use*. Which method of using marijuana (or hashish) is the one you *generally* used during the last 3 months?

**1 answer possible**

- 1 smoking with tobacco in a cigarette
- 2 smoking without tobacco in a cigarette
- 3 smoking in (dry) pipe
- 4 smoking in wet (water) pipe
- 5 smoking in chillum
- 6 eating as a sweet (cake, cookie)
- 7 eating as salty food (omelette, in soup, etc)
- 8 drinking, as tea or otherwise
- 9 does not apply
- 0 other: .....

**show card 3**

9 On what parts of the day were you high on an average day you used hashish or marijuana...

**if the respondent was high for only an hour or two in one part of the day, code that part of the day**  
**circle part of the day. if several parts of the day, circle the ones that apply**

a during your first year of regular use?

- 1 morning
- 2 afternoon
- 3 evening
- 4 night
- 5 all day
- 9 don't remember

b during your period of heaviest use?

- 1 morning
- 2 afternoon
- 3 evening
- 4 night
- 5 all day
- 9 don't remember

c during the past 12 months.

- 1 morning
- 2 afternoon
- 3 evening
- 4 night
- 5 all day
- 8 does not apply
- 9 don't remember

d during the last three months.

- 1 morning
- 2 afternoon
- 3 evening
- 4 night
- 5 all day
- 8 does not apply
- 9 don't remember

10

**show card 4**

10 Please tell me which pattern best describes your use of marijuana (or hashish) .....

a during your first year of regular use?

- 1 only on weekends
- 2 more on weekends than during the week
- 3 equally on weekends and during the week
- 4 more during the week than on weekends
- 5 only during the week
- 9 don't remember

b during your period of heaviest use?

- 1 only on weekends
- 2 more on weekends than during the week
- 3 equally on weekends and during the week
- 4 more during the week than on weekends
- 5 only during the week
- 9 don't remember

c during the past 12 months?

- 1 only on weekends
  - 2 more on weekends than during the week
  - 3 equally on weekends and during the week
  - 4 more during the week than on weekends
  - 5 only during the week
  - 6 I did not use any marijuana (or hashish)
  - 9 don't remember
- 11

d during the last three months?

- 1 only on weekends
- 2 more on weekends than during the week
- 3 equally on weekends and during the week
- 4 more during the week than on weekends
- 5 only during the week
- 6 I did not use any marijuana (or hashish)
- 9 don't remember

11

**show card 5**

Next I want to ask you, again for each of the four periods we've been talking about, how high or how stoned you generally got when you used marijuana (or hashish). **circle the answer, only whole numbers permitted!**

a During your first year of regular use, about how high or how stoned did you generally get?



9 don't know

b During your period of heaviest use, about how high or stoned did you generally get?



9 don't know

c During the past 12 months, about how high or stoned did you generally get?



9 I did not use any hashish or marijuana ----- 12

9 don't know

d During the past three months, about how high or stoned did you generally get?



9 I did not use any hashish or marijuana ----- 12

9 don't know

12 When you used marijuana (or hashish), for about how long would you generally be high or stoned ...  
**during the full occasion, not per joint**

a during your first year of regular use?

- 1 only for an hour or so
- 2 for 2 or 3 hours
- 3 for four or more hours
- 9 don't know

b during your period of heaviest use?

- 1 only for an hour or so
- 2 for 2 or 3 hours
- 3 for four or more hours
- 9 don't know

c during the past 12 months?

- 1 only for an hour or so
  - 2 for 2 or 3 hours
  - 3 for four or more hours
  - 4 I did not use any hashish or marijuana
  - 9 don't know
- 13**

d during the past three months?

- 1 only for an hour or so
  - 2 for 2 or 3 hours
  - 3 for four or more hours
  - 4 I did not use any hashish or marijuana
  - 9 don't know
- 13**

13 About how much marijuana (or hashish) did you use on average per month

a during the first year of regular use?

- ..... gram
- ..... 10 guilder bags
- ..... 25 guilder bags
- 99 don't know

b during your period of heaviest use?

- ..... gram
- ..... 10 guilder bags
- ..... 25 guilder bags
- 99 don't know

c during the past 12 months?

- ..... gram
- ..... 10 guilder bags
- ..... 25 guilder bags

88 I did not use marijuana or hashish

**14**

99 don't know

d during the last three months?

- ..... gram
- ..... 10 guilder bags
- ..... 25 guilder bags

88 I did not use marijuana or hashish

**14**

99 don't know

### III Patterns of use over time

- 14 Now let me back up to your *very first use* of marijuana (or hashish). How long was the period between your very first use and the next time you used marijuana (or hash)?
- ... years
  - ... months
  - ... weeks
  - ... days

- 15 How old were you when you started to use marijuana (or hash) regularly? We define regularly as at least once a month.

... years old  
99 not applicable

- 16a How old were you when you used the most marijuana (or hashish)?
- ..... years old (begin year)

- 16b How long was this period?

...years  
... months  
77 less than one month  
78 less than one week

#### show card 6

- 17 To get some idea about your marijuana (or hashish) use over the full period in which you used, I will show you a card with some statements and graphs. Could you tell me which one most closely resembles your *overall pattern of use* in terms of regularity and frequency?

- Pattern 1 I immediately started using large amounts after I first tried marijuana (or hashish) but gradually decreased since then.  
Pattern 2 My marijuana (or hashish) use has gradually increased over the years.  
Pattern 3 I started using marijuana (or hashish) at the same level that I still use, and the amount and frequency have not changed.  
Pattern 4 My use increased gradually until it reached a peak, then it decreased.  
Pattern 5 I have started and stopped using marijuana (or hashish) many times.  
Pattern 6 My use pattern has varied considerably over the years.

#### show card 7

- 18 Please tell me which response on this card best describes how you have used marijuana (or hash) most recently (*last 30 days*):

- 1 I use until I reach a certain level of effect and then I stop
- 2 I use only a specific amount and then I stop
- 3 I use until I reach a certain level of effect and I continue to use as needed to maintain that level for a certain amount of time

### IV Cessation and periods of temporary abstinence

- 19a Since you started to use regularly, was there ever a period in which you did not use marijuana (or hash) for longer than a month?

1 yes  
2 no ----- 21a

- 19b How many times did this happen?

- 1 1 or 2 times
- 2 between 3 and 5 times
- 3 between 6 and 10 times
- 4 more than 10 times

- 19c Can you tell me the most important reasons why you did not use marijuana (or hashish) for one month or longer?

- 20a What was the *longest period* in which you did not use marijuana (or hashish) once you started using regularly?

....months  
77 less than 1 month  
78 less than 1 week

- 20b Why did you temporarily stop using marijuana (or hashish) during that longest period?



21a Since you first used marijuana (or hashish) regularly, did you ever consciously cut back on how much you used?

- 1 yes
- 2 no ----- **22a**

21b Why did you cut back?

21c Did cutting back on your use create any problems?

- 1 yes
- 2 no ----- **22a**

21d Tell me what problems cutting back created for you.

22a Have you ever consciously quit marijuana (or hashish) but gone back to it?

- 1 yes
- 2 no ----- **22c**

22b How many *times* have you *consciously* quit marijuana (or hashish)?

- 1 1 or 2 times
- 2 between 3 and 5 times
- 3 between 6 and 10 times
- 4 more than 10 times
- 9 don't know

22c Have you quit marijuana (or hashish) use totally now?

- 1 yes ----- **22e**
- 2 no

22d Why not?

22e Why? ----- **23a**

22f When did you quit marijuana (or hashish)?

month ..... in 19.....

22g Did you take any specific actions or follow any specific strategies in order to quit?

- 1 yes
- 2 no ----- **23a**

22h What were these actions or strategies?

## V Use with other drugs

23 The next questions are about the use of other drugs.

a1 Have you ever used **alcohol**?

- 1 yes  
2 no -> **b**

2 How old were you when you used **alcohol** for the first time?

..... years old

3 How many times have you used **alcohol**?

- 1 1-10 times  
2 11-50 times  
3 51-100 times  
4 101-1000 times  
5 >1000 times

4 Also during the last three months?

- 1 yes  
2 no

5 Have you ever used **alcohol** in combination with marijuana (or hashish)?

- 1 yes, always  
2 yes, often  
3 yes, regularly  
4 yes, but seldom  
5 no, never

b1 Have you ever smoked **cigarettes, sigars or pipe** (tobacco)?

- 1 yes  
2 no -> **b5**

2 How old were you when you smoked for the first time?

..... years old

3 How many times have you smoked?

- 1 1-10 times  
2 11-50 times  
3 51-100 times  
4 101-1000 times  
5 >1000 times

4 Also during the last three months?

- 1 yes  
2 no

5 Have you ever used **tobacco** in combination with marijuana or hash?

- 1 yes, always  
2 yes, often  
3 yes, regularly  
4 yes, but seldom  
5 no, never

c1 Have you ever used **tranquilizers or sedatives** (valium)?

- 1 yes  
2 no -> **d**

2 How old were you when you used **tranquilizers or sedatives** for the first time?

..... years old

3 How many times have you used **tranquilizers**?

- 1 1-10 times  
2 11-50 times  
3 51-100 times  
4 101-1000 times  
5 >1000 times

4 Also during the last three months?

- 1 yes  
2 no

5 Have you ever used **tranquilizers or sedatives** in combination with marijuana (or hashish)?

- 1 yes, always  
2 yes, often  
3 yes, regularly  
4 yes, but seldom  
5 no, never

d1 Have you ever used **sleeping pills**?

- 1 yes  
2 no -> **e**

2 How old were you when you used **sleeping pills** for the first time?

..... years old

3 How many times have you used **sleeping pills**?

- 1 1-10 times  
2 11-50 times  
3 51-100 times  
4 101-1000 times  
5 >1000 times

4 Also during the last three months?

- 1 yes  
2 no

5 Have you ever used **sleeping pills** in combination with marijuana (or hashish)?

- 1 yes, always  
2 yes, often  
3 yes, regularly  
4 yes, but seldom  
5 no, never

- e1 Have you ever used **ecstasy** (XTC, MDMA)?
- 1 yes  
2 no -> **f**
- 2 How old were you when you used **ecstasy** for the first time?
- ..... years old
- 3 How many times have you used **ecstasy**?
- 1 1-10 times  
2 11-50 times  
3 51-100 times  
4 101-1000 times  
5 >1000 times
- 4 Also during the last three months?
- 1 yes  
2 no
- 5 Have you ever used **ecstasy** in combination with marijuana or hash?
- 1 yes, always  
2 yes, often  
3 yes, regularly  
4 yes, but seldom  
5 no, never
- f1 Have you ever used **solvents** (ether, glue, paint thinners, etc.)?
- 1 yes  
2 no -> **g**
- 2 How old were you when you used **solvents** for the first time?
- ..... years old
- 3 How many times have you used **solvents**?
- 1 1-10 times  
2 11-50 times  
3 51-100 times  
4 101-1000 times  
5 >1000 times
- 4 Also during the last three months?
- 1 yes  
2 no
- 5 Have you ever used **solvents** in combination with marijuana or hash?
- 1 yes, always  
2 yes, often  
3 yes, regularly  
4 yes, but seldom  
5 no, never

- g1 Have you ever used **opiates** (heroin, opium, methadone, morphine, etc.)?
- 1 yes  
2 no -> **h**
- 2 How old were you when you used **opiates** for the first time?
- ..... years old
- 3 How many times have you used **opiates**?
- 1 1-10 times  
2 11-50 times  
3 51-100 times  
4 101-1000 times  
5 >1000 times
- 4 Also during the last three months?
- 1 yes  
2 no
- 5 Have you ever used **opiates** in combination with marijuana or hash?
- 1 yes, always  
2 yes, often  
3 yes, regularly  
4 yes, but seldom  
5 no, never
- h1 Have you ever used **LSD or other hallucinogens**?
- 1 yes  
2 no -> **l**
- 2 How old were you when you used **LSD or other hallucinogens** for the first time?
- ..... years old
- 3 How many times have you used **LSD or other hallucinogens**?
- 1 1-10 times  
2 11-50 times  
3 51-100 times  
4 101-1000 times  
5 >1000 times
- 4 Also during the last three months?
- 1 yes  
2 no
- 5 Have you ever used **LSD or other hallucinogens** in combination with marijuana or hash?
- 1 yes, always  
2 yes, often  
3 yes, regularly  
4 yes, but seldom  
5 no, never

11 Have you ever used **amphetamine or speed**?  
1 yes  
2 no -> *j*

2 How old were you when you used **amphetamine** (speed) for the first time?  
..... years old

3 How many times have you used **amphetamine**?  
1 1-10 times  
2 11-50 times  
3 51-100 times  
4 101-1000 times  
5 >1000 times

4 Also during the last three months?  
1 yes  
2 no

5 Have you ever used **amphetamine** in combination with marijuana or hash?  
1 yes, always  
2 yes, often  
3 yes, regularly  
4 yes, but seldom  
5 no, never

j1 Have you ever used **powder cocaine**?  
1 yes  
2 no -> **k**

2 How old were you when you used **powder cocaine** for the first time?  
..... years old

3 How many times have you used **powder cocaine**?  
1 1-10 times  
2 11-50 times  
3 51-100 times  
4 101-1000 times  
5 >1000 times

4 Also during the last three months?  
1 yes  
2 no

5 Have you ever used **powder cocaine** in combination with marijuana or hash?  
1 yes, always  
2 yes, often  
3 yes, regularly  
4 yes, but seldom  
5 no, never

k1 Have you ever used **crack or freebase cocaine**?  
1 yes  
2 no -> *l*

2 How old were you when you used **crack or freebase cocaine** for the first time?  
..... years old

3 How many times have you used **crack or freebase cocaine**?  
1 1-10 times  
2 11-50 times  
3 51-100 times  
4 101-1000 times  
5 >1000 times

4 Also during the last three months?  
1 yes  
2 no

5 Have you ever used **crack or freebase cocaine** in combination with marijuana or hash?  
1 yes, always  
2 yes, often  
3 yes, regularly  
4 yes, but seldom  
5 no, never

11 Have you ever used **hash-oil**?  
1 yes  
2 no -> **24a**

2 How old were you when you used **hash-oil** for the first time?  
..... years old

3 How many times have you used **hash-oil**?  
1 1-10 times  
2 11-50 times  
3 51-100 times  
4 101-1000 times  
5 >1000 times

4 Also during the last three months?  
1 yes  
2 no

24a Do you use hashish or marijuana in combination with other substances that have not been mentioned yet? \_\_\_\_\_

- 1 yes ----- **24b**
- 2 no ----- **24c**

24b What substances?

24c Is there a particular combination of hashish or marijuana with another substance that you like best?

- 1 no ----- **25**
- 2 yes ----- **24d**

24d Which combination?  
**only 1 answer possible.**

25 **show card 8**  
Have you ever used one of these drugs by needle or received an injection of any of them?

- 1 no
- 2 sleeping pills
- 3 tranquilizers (sedatives)
- 4 heroin
- 5 methadone
- 6 opium
- 7 codeine
- 8 palfium
- 9 morphine
- 10 hallucinogens
- 11 cocaine
- 12 amphetamine
- 13 ecstasy /MDMA
- 77 other .....
- 99 don't know

## VI Buying marijuana (or hashish)

26a Please tell me as accurately as possible the weight of the marijuana (or hashish) you yourself used in the past month. If you don't know the weight, you may also answer in 10 guilder bags or 25 guilder bags.  
**if used nothing: fill in 0**

..... gram

..... 10 guilder bags

..... 25 guilder bags

999 don't know

26b About how much did that cost, or (if not purchased) how much was that worth?

f.....

999 don't know

26c Over the course of your experience with marijuana (or hashish), has it become...

- 1 more expensive
- 2 less expensive
- 3 about the same
- 4 other, **specify:** .....
- 9 don't know

27a From whom did you usually buy your marijuana (or hashish) during the past 12 months or during your last year of use?

**only 1 answer possible**

- 1 from a close friend with a connection to a dealer
- 2 from any of several friends who have a connection to a dealer
- 3 directly from a friend who deals
- 4 from street dealers
- 5 directly from growers
- 6 grow it myself .....
- 7 1 coffeeshop
- 8 several coffeeshops
- 9 other, **specify:** .....

29a

27b Could you acquire other drugs from your marijuana (or hashish) source?

1 yes

2 no .....

28a

27c Which one(s)?

**List all available drugs. probe for answers**

27d From whom can you buy these other drugs?

- 1 from the hash or marijuana dealer
- 2 from other persons (other customers, etc.)

28a Do you grow your own marijuana now?

- 1 yes
- 2 no

28b Have you ever grown your own marijuana?

- 1 yes
- 2 no

29a Has marijuana (or hash) *ever been too expensive* for you to afford what you wanted to use?

- 1 yes
- 2 no
- 3 don't know / no answer

29b ***if respondent still uses (see 22c, page 17)***  
If marijuana (or hashish) became much cheaper, would you use more of it?

- 1 yes ----- **29d**
- 2 no ----- **29d**
- 8 I have quit
- 9 don't know / no answer ----- **29d**

29c ***if respondent has quit (see 22c, page 17)***  
If it became much cheaper, would you start using again?

- 1 yes ----- **29e**
- 2 no ----- **29e**
- 3 don't know / no answer ----- **29e**

29d ***if still using (see 22c, page 17)***  
If marijuana (or hash) became much more expensive, would you use less of it?

- 1 yes
- 2 no
- 9 don't know / no answer

29e In your opinion, if the current price of marijuana (or hash) dropped to about half what it now costs, would most users begin to consume more?

- 1 yes
- 2 no
- 9 don't know / no answer

29f In your opinion, if the current price of marijuana (or hash) increased to about twice what it now costs, would most marijuana users start using less?

- 1 yes
- 2 no
- 9 don't know / no answer

**show card 9**  
29g Over the period that you have used marijuana (or hash), obtaining it has become ...  
**maximum of 2 answers**

- 1 more dangerous / more of a hassle
- 2 more time consuming
- 3 less dangerous / less of a hassle
- 4 less time consuming
- 5 remained the same

## VII Sets and Settings of Use

The next set of questions are about the situations — circumstances, places, or events — in which you have generally used marijuana (or hashish).

30a I'd like you to name the most common *situations* in which you have used marijuana (or hashish) considering your whole career of use — for example, "At a football game," or "When I work in the garden" — and for each situation you name, please tell me how frequently you use or used marijuana in that situation (always, often, sometimes, seldom).

a situations                      b frequency

- 1. ....
- 1 always
- 2 often
- 3 sometimes
- 4 seldom

- 2. ....
- 1 always
- 2 often
- 3 sometimes
- 4 seldom

- 3. ....
- 1 always
- 2 often
- 3 sometimes
- 4 seldom

- 4. ....
- 1 always
- 2 often
- 3 sometimes
- 4 seldom

- 5. ....
- 1 always
- 2 often
- 3 sometimes
- 4 seldom

30b Are there any distinct situations — circumstances, places, events — in which you simply would *not* want to use marijuana (or hashish)?

- 1 yes ----- 30c  
 2 no ----- 31a  
 9 don't know / no answer ----- 31a

30c Specify the *two* situations in which you would most not want to use.

31a Are there certain *emotions* or feelings which go well with marijuana (or hashish) use for you? (For example: "When I feel poetic")

- 1 yes ----- 31c  
 2 no ----- 31c

31b Could you describe some of these emotions?

- 1 .....  
 2 .....  
 3 .....

31c Are there any emotions or feelings that definitely do *not* go well with the use of marijuana (or hashish) for you?

- 1 yes ----- 31d  
 2 no ----- 32  
 9 don't know / no answer ----- 32

31d Specify the two emotions of feelings that most not go well with the use of marijuana (or hashish).

**show card 10**

32 Next I'm going to go through of list of *locations*. For each one, please tell me how often in the last 3 months, you used marijuana (or hashish) there — always, often, sometimes, seldom, or never.

**if quit, during the last period in which you used**

	<i>always</i>	<i>often</i>	<i>sometimes</i>	<i>seldom</i>	<i>never</i>	<i>not appl.</i>
1. at home	1	2	3	4	5	8
2. at friend's home	1	2	3	4	5	8
3. at parties	1	2	3	4	5	8
4. at work	1	2	3	4	5	8
5. outdoors - park/beach/streets	1	2	3	4	5	8
6. in night clubs or bars	1	2	3	4	5	8
7. in my car	1	2	3	4	5	8
8. at concerts	1	2	3	4	5	8
9. in bed	1	2	3	4	5	8
10. abroad	1	2	3	4	5	8



**show card 10**

33 Now I'd like to read you a list of the *types of people* it is possible to use marijuana (or hash) with. For each one, please tell me how often in the last 3 months you have used marijuana (or hash) with them — always, often, sometimes, seldom, or never? **if quit, during the last period in which you used**

	<i>always</i>	<i>often</i>	<i>sometimes</i>	<i>seldom</i>	<i>never</i>	<i>not appl.</i>
1. alone	1	2	3	4	5	8
2. with spouse/partner	1	2	3	4	5	8
3. with friends	1	2	3	4	5	8
4. with acquaintances	1	2	3	4	5	8
5. with coworkers	1	2	3	4	5	8
6. with parents	1	2	3	4	5	8
7. with own children	1	2	3	4	5	8
8. with brothers/sisters	1	2	3	4	5	8

34a Are there people with whom you definitely would *not* use marijuana (or hashish)?

- 1 yes
- 2 no ----- **35a**

34b Which people?

35a Have you ever driven a motor vehicle (car, truck, or motor-cycle) under the influence of marijuana in combination with alcohol?

- 1 never
- 2 1 - 5 times
- 3 6 - 10 times
- 4 11 - 15 times
- 5 more than 15 times

35b Have you ever driven a motor vehicle (car, truck, or motor-cycle) under the influence of marijuana *alone*?

- 1 never
- 2 1 - 5 times
- 3 6 - 10 times
- 4 11 - 15 times
- 5 more than 15 times

35c How many *traffic accidents*, however minor, have you had that were related to the use of marijuana in combination with alcohol?

..... accidents

35d How many *traffic accidents*, however minor, have you had that were related to the use of marijuana *alone*?

..... accidents

**show card 11**

36a Next, I'd like to explore with you the *reasons why you use marijuana* (or hashish). I'd like to read you a list of possible reasons for using marijuana (or hashish), and for each one please indicate how important it is for you — very important, very unimportant, or somewhere in between.

	<i>very</i> important	important	neutral	unimportant	<i>very</i> unimportant
1. to be sociable with my friends	1	2	3	4	5
2. to relax	1	2	3	4	5
3. to feel good	1	2	3	4	5
4. to forget my worries	1	2	3	4	5
5. to "blow off steam"	1	2	3	4	5
6. to feel less anxious	1	2	3	4	5
7. to cope with depression	1	2	3	4	5
8. as a cure for boredom	1	2	3	4	5
9. to communicate better	1	2	3	4	5
10. to get inspiration	1	2	3	4	5
11. to get me through the day	1	2	3	4	5
12. to fight fatigue	1	2	3	4	5
13. as a symbol of defiance toward authority	1	2	3	4	5
14. to feel less inhibited	1	2	3	4	5
15. to enhance sex	1	2	3	4	5
16. to enjoy music, movies, or TV	1	2	3	4	5
17. to see the world with fresh eyes	1	2	3	4	5
18. to help me sleep	1	2	3	4	5
19. to slow myself down	1	2	3	4	5
20. for medical reasons (eg, nausea, glaucoma) <b>please specify</b>	1	2	3	4	5

36b OK, that list may not have included all the reasons for using marijuana (or hash) that are important to you. Are there other reasons that are important to you which you would like to add?

36c Are there any reasons for using marijuana (or hash) that used to be important to you but are no longer important?

- 1 yes
- 2 no ----- **37a**

36d Which reasons?

37a The next question is about *personal rules* people sometimes have about using marijuana (or hash). For example, some people have rules about drinking coffee such as "I use never coffee at midnight". Do you have any similar rules about marijuana (or hash) use?

- 1 yes
- 2 no ----- **38a**

37b Tell me about these rules.

37c **show card 12**  
Do you stick by these rules?

- 1 very rigorously
- 2 reasonably well
- 3 loosely
- 4 rarely
- 5 never

## VIII Advantages and disadvantages of use

38a Marijuana (or hashish) probably has certain advantages and disadvantages for you. What are the *attractive aspects or advantages* of marijuana ((or hashish))?  
**maximum of 4**

*advantage*

*rank*

.....  
.....  
.....  
.....

.....  
.....  
.....  
.....

38b Could you rank these attractive aspects or advantages in order of importance to you?

38c Does the amount of marijuana (or hash) you use affect the occurrence of these *attractive aspects or advantages*?

- 1 yes
- 2 no
- 9 don't know

38d Do the circumstances in which you use affect the occurrence of these advantages?

- 1 yes
- 2 no
- 9 don't know

38e Are there differences in advantages between hash and marijuana?

- 1 yes
- 2 no ----- **39a**
- 9 don't know ----- **39a**

38f What are these differences?

39a What are the *unattractive aspects or disadvantages* of marijuana (or hashish) for you?  
**maximum of four**

*disadvantage*

*rank*

.....  
.....  
.....  
.....  
.....

39b Could you rank these unattractive aspects or disadvantages in order of importance to you?

39c Does the amount you use affect the occurrence of these *disadvantages*?

- 1 yes
- 2 no
- 9 don't know

39d Do the circumstances in which you use affect the occurrence of these disadvantages?

- 1 yes
- 2 no
- 9 don't know

39e Are there differences in disadvantages between hash and marijuana?

- 1 yes
- 2 no ----- **39g**
- 9 don't know ----- **39g**

39f What are these differences?

Imagine a 10 point scale on which 1 was all disadvantages, 10 was all advantages, and 5 was an even balance of advantages and disadvantages. How would you rate marijuana overall?

**(resp. does not necessarily have to have used the substance personally)**

..... points  
99 don't know

How about hashish?

..... points  
99 don't know

How about alcohol?

..... points  
99 don't know

How about cocaine?

..... points  
99 don't know

How about tobacco?

..... points  
99 don't know

How about ecstasy?

..... points  
99 don't know

How about amphetamine?

..... points  
99 don't know

## IX Effects

### show card 10

40 Next I would like to read you a list of possible effects of marijuana (hash). For each one, please tell me if it occurs, always, often, sometimes, seldom, or never. When you use marijuana (or hash), do you become ...

	<i>always</i>	<i>often</i>	<i>sometimes</i>	<i>seldom</i>	<i>never</i>
1. slow	1	2	3	4	5
2. merry	1	2	3	4	5
3. productive	1	2	3	4	5
4. relaxed	1	2	3	4	5
5. aggressive	1	2	3	4	5
6. comfortable	1	2	3	4	5
7. optimistic	1	2	3	4	5
8. paranoid	1	2	3	4	5
9. intuitive	1	2	3	4	5
10. introverted	1	2	3	4	5
11. active	1	2	3	4	5
12. nostalgic	1	2	3	4	5
13. awake	1	2	3	4	5
14. serious	1	2	3	4	5
15. lazy	1	2	3	4	5
16. horny	1	2	3	4	5
17. soft	1	2	3	4	5
18. attentive to aesthetics	1	2	3	4	5
19. lonely	1	2	3	4	5
20. intelligent	1	2	3	4	5
21. pessimistic	1	2	3	4	5
22. weak (mentally)	1	2	3	4	5
23. more able to analyze and solve problems	1	2	3	4	5
24. talkative	1	2	3	4	5
25. passive	1	2	3	4	5
26. strong (mentally)	1	2	3	4	5
27. absent-minded	1	2	3	4	5
28. extroverted	1	2	3	4	5

41 OK, next I'm going to read you a list of *physical symptoms*. For each one, please tell me

- a whether or not you have *ever* experienced it;  
 b whether or not you regard it as a consequence of your marijuana (or hashish) use.

	<i>ever experienced</i>		<i>consequence of cannabis</i>	
	yes	no	yes	no DK
1	1	2	1	2
2	1	2	1	2
3	1	2	1	2
4	1	2	1	2
5	1	2	1	2
6	1	2	1	2
7	1	2	1	2
8	1	2	1	2
9	1	2	1	2
10	1	2	1	2
11	1	2	1	2
12	1	2	1	2
13	1	2	1	2
14	1	2	1	2
15	1	2	1	2
16	1	2	1	2
17	1	2	1	2
18	1	2	1	2
19	1	2	1	2
20	1	2	1	2
21	1	2	1	2
22	1	2	1	2
23	1	2	1	2

**show card 13**

42 The following questions are about the *direct effects of marijuana* (or hash) use. We'd like to know if you have experienced the following effects after using marijuana (or hash) and if so, have you experienced it between one and five times or more than five times.

	<i>never</i>		<i>1 to 5 times</i>		<i>&gt; 5 times</i>	
	1	2	2	2	3	3
1	1	2	2	2	3	3
2	1	2	2	2	3	3
3	1	2	2	2	3	3
4	1	2	2	2	3	3
5	1	2	2	2	3	3
6	1	2	2	2	3	3
7	1	2	2	2	3	3
8	1	2	2	2	3	3
9	1	2	2	2	3	3
10	1	2	2	2	3	3
11	1	2	2	2	3	3
12	1	2	2	2	3	3
13	1	2	2	2	3	3
14	1	2	2	2	3	3
15	1	2	2	2	3	3
16	1	2	2	2	3	3
17	1	2	2	2	3	3
18	1	2	2	2	3	3
19	1	2	2	2	3	3
20	1	2	2	2	3	3
21	1	2	2	2	3	3
22	1	2	2	2	3	3
23	1	2	2	2	3	3
24	1	2	2	2	3	3
25	1	2	2	2	3	3
26	1	2	2	2	3	3
27	1	2	2	2	3	3
28	1	2	2	2	3	3
29	1	2	2	2	3	3
30	1	2	2	2	3	3
31	1	2	2	2	3	3
32	1	2	2	2	3	3
33	1	2	2	2	3	3
34	1	2	2	2	3	3

**Show Card 13**

43 The next list contains *more effects of marijuana* (or hashish) use. Again, for each one, please tell me if you have ever experienced it yourself after using marijuana (or hashish), and if so, did you experience it less or more than five times.

	<i>never</i>	<i>1 to 5 times</i>	<i>&gt; 5 times</i>
1	1	2	3
2	1	2	3
3	1	2	3
4	1	2	3
5	1	2	3
6	1	2	3
7	1	2	3
8	1	2	3
9	1	2	3
10	1	2	3
11	1	2	3
12	1	2	3
13	1	2	3
14	1	2	3
15	1	2	3
16	1	2	3
17	1	2	3
18	1	2	3
19	1	2	3

44 Are there *any other effects* of marijuana (or hashish) — positive or negative — which I have not mentioned yet, but which you think are important?

45a Have you ever re-lived past marijuana (or hash) experiences or effects — as if you had just consumed marijuana (hash) — at a moment when you had *not* consumed any?

- 1 yes
  - 2 no
- 46

45b Could you tell me something about that?

46 What was the *single strongest effect* you ever experienced after using marijuana (or hashish)?  
*only one answer possible!*

47 **show card 14**  
 Next I'd like to read you a series of *statements* people sometimes make about how marijuana (or hash) affects them. Please think about how much each of these statements applies to you personally, and for each one tell me if you agree with it, disagree with it, or something in between.  
**read introduction, then statements**

As a result of using marijuana (or hashish)...

	strong agreement	agreement	dis-agreement	strong dis-agreement	don't know
1. I have become more balanced	1	2	3	4	9
2. I am happier with myself	1	2	3	4	9
3. I have come to know myself better	1	2	3	4	9
4. I have more fun in life	1	2	3	4	9
5. I go out more often	1	2	3	4	9
6. I am more open to other people	1	2	3	4	9
7. I am less ambitious	1	2	3	4	9
8. I take myself less seriously	1	2	3	4	9
9. I am more open to religious and spiritual matters	1	2	3	4	9
10. I have become less productive	1	2	3	4	9
11. my love/life has become more intense	1	2	3	4	9
12. I have more appreciation for beautiful things	1	2	3	4	9
13. I have become less efficient	1	2	3	4	9
14. I have become a better and smarter person	1	2	3	4	9
15. my social life has improved	1	2	3	4	9
16. I have become slower-thinking	1	2	3	4	9
17. I have less interest in normal life	1	2	3	4	9
18. I have serious problems	1	2	3	4	9

48a Do you prefer hashish or marijuana, or doesn't it matter?  
 1 hashish -----48b  
 2 marijuana -----48b  
 3 does not matter -----49a

48b Why?  
**maximum of 3 reasons**

49a How would you rate the *strength of the marijuana* (or hashish) you generally used during the last month?  
**read out categories**

- 1 very mild
- 2 mild
- 3 moderate
- 4 strong
- 5 very strong
- 6 does not apply, haven't used in past month
- 9 weat niet

49b What kind of marijuana (or hashish) do you prefer?  
**read out categories, except "does not matter", probe for answers**

- 1 very mild
- 2 mild
- 3 moderate
- 4 strong
- 5 very strong
- 6 does not matter
- 9 weet niet

49c In your overall experience, has the quality or strength of marijuana (or hash) available on the market, changed over the years?

- 1 yes, has become stronger
- 2 yes, has become less strong
- 3 no, the strength has remained the same
- 8 other, .....
- 9 don't know

49d On those occasions when you have used particularly strong or potent marijuana (or hash), do you generally smoke less, more or about the same?

- 1 less ----- 49f
- 2 more ----- 49f
- 3 the same ----- 49f
- 4 other/it depends (*record*) ----- 49f
- 9 don't know ----- 49f

*if less*  
49e Why?

49f If a much stronger breed of marijuana were available, would you use it over less strong breeds?

- 1 yes ----- 49g
- 2 no ----- 49h
- 9 don't know ----- 49h

49g *if yes*  
Why?

----- 49i

49h *if no*  
Why not?

49i Do you prefer a specific breed or type of marijuana (or hashish)?  
*write down name, maximum of 2*

- 1 no .....
- 2 yes, .....



## X Information/opinions about marijuana or hash and other marijuana/hash users

50 Over the course of your own use of marijuana, which sources of information about marijuana (or hashish) have you found particularly reliable?

51 What *advice* would you give a novice marijuana (or hashish) user in terms of:  
a method of use:

b dosage:

c where and when to use:

d combining marijuana (or hash) with other drugs:

e possible disadvantages of marijuana (or hash) & how to deal with them:

52a Have you ever persuaded someone who had never tried marijuana (or hash) *not* to try it?

- 1 yes
- 2 no ----- **53a**

**if yes**

52b *Whom* did you persuade not to try marijuana (or hash)?

- 1 friends
- 2 spouse/lover/partner
- 3 family members
- 4 coworkers
- 5 others, **specify!**

52c *Why* did you persuade them not to try marijuana (or hash)?

53a Have you *ever* encouraged someone who'd never tried marijuana (or hash) to do so?

- 1 yes
- 2 no ----- **54a**

53b *Whom* did you encourage to use marijuana (or hashish)?

- 1 friends
- 2 spouse/lover/partner
- 3 family members
- 4 coworkers
- 5 others, **specify!**

53c *Why* did you encourage them to try marijuana (or hash)?

54a The next question is about the Dutch policy on marijuana (and hash). Do you think our marijuana policy should remain as it is, or be more like the policy for heroin, or be more like the policy for alcohol?

- 1 as it is
- 2 like heroin
- 3 like alcohol
- 4 other, *specify:*

54b Do current laws on marijuana (and hash) have a positive or a negative influence on you, or do they make no difference?

- 1 positive
- 2 negative
- 3 no difference
- 9 do not know / no answer

55a Did your use of marijuana (or hash) make you more curious about other drugs?

- 1 yes
- 2 no

55b Did your use of marijuana (or hash) make you more inclined to try other drugs?

- 1 yes
- 2 no

55c Did your use of marijuana (or hash) bring you into contact with people who used other drugs?

- 1 yes
- 2 no

55d Did your use of marijuana (or hash) give you the desire for more powerful highs?

- 1 yes
- 2 no

55e Do you think you would have been likely to try other drugs if you had never used marijuana (or hash)?

- 1 yes
- 2 no

## XI Dependency

56a Have you ever found yourself *longing* for marijuana (or hash)?

- 1 yes \_\_\_\_\_  
2 no ----- **56d**

**if yes**  
56b How long had you been using marijuana (or hash) before you found yourself longing for it? (since the very first time of use)

- 1 less than 1 week  
2 1 to 4 weeks  
3 1 to 6 months  
4 6 months to two years  
5 longer than two years  
9 unknown / no answer

56c Has marijuana (or hash) ever been an *obsession* for you?

- 1 yes  
2 no

56d Do you believe that you are *in control* of your marijuana (or hash) use?

- 1 yes  
2 no

57a Do you *if no longer using, "Did you"* have a limit on the amount of money each month that you allow yourself to spend on marijuana (or hash) per month?

- 1 yes ----- **57b**  
2 no ----- **58**

57b What is that monthly limit?

\$ .....

### show card 15

58 Now I'd like to read you a list of different things people have done to get marijuana (or hash). For each one, please tell me if you've ever done it, and if so whether you did it only once or twice, 3 to 10 times, or more than ten times.

OK, in order to buy marijuana (or hash), have you ever ...

	never	1-2 times	3-10 times	>10 times
1 Taken on extra work	1	2	3	4
2 Borrowed money	1	2	3	4
3 Sold possessions	1	2	3	4
4 Stolen from family or friends to buy M...	1	2	3	4
5 Shoplifted	1	2	3	4
6 Sold marijuana (or hash) to pay for your own marijuana (or hash)	1	2	3	4
7 Committed burglary	1	2	3	4
8 Forged or passed a bad checks to buy marijuana	1	2	3	4
9 Stolen marijuana (or hashish)	1	2	3	4
10 Engaged in prostitution to get money to buy marijuana	1	2	3	4
11 Stealing cars to buy marijuana (or hashish)	1	2	3	4
12 Trading sex for marijuana (or hash)	1	2	3	4
13 Hung around with people or been in a situation you did not like in order to get marijuana (or hashish)	1	2	3	4

The next few questions concern some of the *difficulties* people can have with their marijuana (or hash) use. For each one, please tell me if, over the course of your marijuana (or hash) use, you've ever experienced it *for more than a week*.

59a Have you ever found yourself using larger amounts of marijuana (or hash) than you intended to or using it for longer periods than you intended to, for more than a week?

- 1 yes  
2 no

59b Have you ever felt a persistent desire to cut down on your marijuana (hash) use or tried unsuccessfully to cut down, for more than a week?

- 1 yes  
2 no

59c Have you ever given up or reduced social, recreational or work activities because of your marijuana (or hash) use, for more than a week?

- 1 yes
- 2 no

59d Have you ever kept using marijuana (or hash) for more than a week when you had a recurring physical or psychological problem that was either caused by or worsened by marijuana (hash) use?

- 1 yes
- 2 no

59e Have you ever not met your obligations at work or school or home for more than a week because of your marijuana (or hash) use?

- 1 yes
- 2 no

59f Have you ever had recurring legal problems because of your marijuana (hash) use?

- 1 yes
- 2 no

59g Have you ever kept using marijuana (or hash) for more than a week when you were having recurring social or interpersonal problems that were caused or worsened by marijuana (hash) use?

- 1 yes
- 2 no

## XII Using marijuana (or hashish) at work

Now I would like to ask you a few questions about work.

60a Are you *employed* at the moment (paid)?

- 1 yes, in full-time work
- 2 yes, in part-time work
- 3 yes, student & part-time work \_\_\_\_\_ 60c
- 4 no, student unemployed \_\_\_\_\_ 60c
- 5 no, unemployed \_\_\_\_\_ 60c
- 6 no, housewife/man \_\_\_\_\_ 61
- 7 other, *specify*: \_\_\_\_\_

60b How many *hours* do you usually work per week?

... hours \_\_\_\_\_ 62e

60c How many months were you unemployed during the last two years?

... months

60d What was during the last two years your occupation?

.....

*Check way of employment and business cluster that provides the largest amount of the income.  
If respondent is unemployed, check way of employment "unemployed" and check the business cluster for which the respondent is educated or in which the respondent wishes to be employed.  
If the respondent is a student without other jobs: check "student".  
If the respondent is a student with other jobs: check "student" plus the way of employment and the business cluster that applies to the jobs.*

00 student

**way of employment**

- 01 independent
- 02 family member of an independent worker
- 03 employed in private sector
- 04 intermediate (in a broad sense) in private sector (agents, directors of companies)
- 05 semi-governmental (in a broad sense, including education)
- 06 government
- 07 independent + any other category
- 08 temporary jobs through a private employment agency
- 09 unemployed/unfit for labour/retired/etc.
- 99 unknown

**position**

- 01 management
- 02 non-management

**business cluster**

**agriculture and industry**

- 01 agriculture
- 02 fishing
- 03 industry
- 04 construction
- 05 public utilities
- 06 (handi)crafts

**trade**

- 10 wholesale
- 11 retail

**transport and communication**

- 20 transport (incl. public transport)
- 21 (inland) navigation
- 22 aviation
- 23 travel agencies
- 24 PTT and communication companies

**services**

- 30 hotels, restaurants, cafés, dancings, etc.
- 31 repair and maintenance (garages, painters, other service providing companies)

**business services**

- 40 legal services (lawyers)
- 41 accountants, tax-services
- 42 technical consultants
- 43 economic and organisational consultants
- 44 advertising, marketing en pr-consultants
- 45 press agencies (news) independent journalists
- 46 design
- 47 architecture
- 48 banking and insurance
- 49 trade en exploitation of real estate
- 50 computerworld
- 51 other business services

**government and semi-government**

- 60 general government
- 61 legal power
- 62 international government
- 63 defense
- 64 other governmental services
- 65 semi-government

**other**

- 80 religion
- 81 education (basic-, lower- and secondary education)
- 82 university and higher professional education
- 83 medical world
- 84 social services
- 85 social or social-cultural organisations (politics)
- 88 publishers, press, radio, tv (news excluded)
- 89 research
- 90 art
- 91 culture other
- 92 sports
- 99 unknown

- 60e How many different jobs have you had in the last two years?  
**If 1 job (current job): 1**  
**If 2 jobs (current + previous): 2**  
 .... jobs

61 **If the respondent has been employed in the last three months, ask**  
 When at work, have you ever been under the influence of one of these substances?  
**Show card 15**

	never	1-2 times	3-10 times	> 10 times
a alcohol	1	2	3	4
b marijuana (or hashish)	1	2	3	4
c cocaine	1	2	3	4
d other drug: .....	1	2	3	4

62 Some people say that the use of marijuana (or hashish) will affect the way one performs at work and in other areas of life. I have a few questions about possible influences here. Just answer *yes* or *no*.

	yes	no	not applicable
a Did your use of marijuana (hash) ever improve the quality of your work?	1	2	3
b Did your use of marijuana (hash) ever reduce the quality of your work?	1	2	3
c Did your use of marijuana (hash) ever improve your relationship with your supervisor or coworkers?	1	2	3
d Did your use of marijuana (hash) ever harm your relationship with your supervisor or coworkers?	1	2	3
e Did your use of marijuana (hash) ever make you miss one or more days of work?	1	2	3
f Did your use of marijuana (hash) ever help you be more productive at work?	1	2	3
g Has your use of marijuana (hash) ever improved your relationship with your partner?	1	2	3
h Has your use of marijuana (hash) ever harmed your relationship with your partner?	1	2	3
i Has your use of marijuana (hash) ever been the cause of a break-up or divorce?	1	2	3
j Has your use of marijuana (hash) ever improved your sexual relationships?	1	2	3
k Has your use of marijuana (hash) use ever harmed your sexual relationships?	1	2	3
l Has your use of marijuana (hash) ever harmed you financially?	1	2	3
m Has your use of marijuana (hash) ever helped you financially?	1	2	3

## XII General information

63 How old are you?

.....years old

64 Write down sex

- 1 male
- 2 female

65a What is your marital status?

- 1 married
- 2 divorced
- 3 widowed
- 4 single/unmarried

65b Do you currently have a steady partner?

- 1 no
- 2 yes

65c What is your current living situation at home?

- 1 living alone
- 2 living with a partner
- 3 living without a partner, but with children
- 4 living with others, none a partner
- 5 commune
- 6 living with parents
- 7 other, specify:

65d Do you have children? If so, where do they live?

- 1 no children
- 2 children living with respondent
- 3 children living elsewhere
- 4 some children living with respondent, some elsewhere

66a In which *country* were you born?

66b And in which country was your father born?

66c And your mother?

66d Do you regard yourself as part of a particular *ethnic group*? If so, which one?

- 1 no
- 2 yes, *specify*:

67a Could you indicate how many *evenings per week you generally spend at home*? I mean evenings without regular activities out of the house (e.g. without courses, dates, or appointments with other people)?

- 1 5 to 7 evenings at home
- 2 3 or 4 evenings at home
- 3 1 or 2 evenings at home
- 4 almost never at home
- 5 it varies /it depends
- 6 respondent works in the evening

67b How many times did you go out to a *bar, café, or night clubs* in the *last four weeks*?

- 1 never
- 2 one time
- 3 2 or 3 times
- 4 4 to 9 times
- 5 10 times or more
- 6 unknown

67c How many times did you go out to restaurants during the *last four weeks*?

- 1 never
- 2 once
- 3 2 or 3 times
- 4 4 to 9 times
- 5 10 times or more
- 6 unknown

67d How many times did you go to the *movies* during the last *eight weeks*?

- 1 never
- 2 one time
- 3 2 or 3 times
- 4 4 to 9 times
- 5 10 times or more
- 6 unknown

67e How many times did you go to the *theater, opera, concerts or ballet* during the last *eight weeks*?

- 1 never
- 2 one time
- 3 2 or 3 times
- 4 4 to 9 times
- 5 10 times or more
- 6 unknown



68a How much formal *education* have you completed?

- 1 elementary school/8th grade
- 2 high school graduate
- 3 post-high school vocational school graduate
- 4 2-year or community college degree
- 5 4-year college or university degree
- 6 graduate degree (master's or doctorate or law school)
- 7 other, *specify:*
- 9 no answer

68b Are you *currently enrolled* in any formal educational program? If yes, what level?

- 1 no
- 2 completing high school
- 3 vocational training
- 4 community college
- 5 4-year college or university
- 6 graduate or professional school
- 7 other, *specify:*
- 9 no answer

68c Apart from what you have completed or are enrolled in, did you had any education you did not finish?

- 1 no
- 2 high school
- 3 vocational training
- 4 community college
- 5 4-year college or university
- 6 graduate or professional school
- 7 other, *specify:*
- 9 no answer

69a **show card 16**  
What was your average monthly *income* in 1994, net, after taxes?

- 1 < \$1,000
- 2 \$1,000 - \$1,500
- 3 \$1,500 - \$2,000
- 4 \$2,000 - \$2,500
- 5 \$2,500 - \$3,000
- 6 \$3,000 - \$4,000
- 7 \$4,000 - \$5,000
- 8 \$5,000 - \$6,000
- 9 more than \$6,000

69b Which social welfare benefits do you currently receive?

- 0 none
- 1 W W
- 2 R W W / b i s t a n d
- 3 W A O
- 4 A W W
- 5 s t u d i e f i n a n c i n g
- 7 other, *specify:*

70a Did you inquire about or receive any *treatment or counseling* for a drug or alcohol problem in the last two years, including any 12-step group?

- 1 yes \_\_\_\_\_ 70c
- 2 no \_\_\_\_\_ 70c

70b **if yes**  
For which substance(s)?  
**maximum of 3 answers**

- 1 yes, marijuana (or hash) \_\_\_\_\_ 71a
- 2 yes, alcohol \_\_\_\_\_ 70c
- 3 yes, heroin or other opiates \_\_\_\_\_ 70c
- 4 yes, cocaine \_\_\_\_\_ 70c
- 5 yes, for sleeping pills or tranquilizers \_\_\_\_\_ 70c
- 6 yes, for [other] ..... \_\_\_\_\_ 70c

70c Have you ever considered treatment in connection with your use of marijuana (or hashish)?

- 1 yes
- 2 no ----- 71a

70d **if yes** Could you tell me briefly why you did so?

71 Has your use of marijuana (hash) ever caused you problems ....  
**if yes, probe "minor or serious"**

a at school?

- 1 no
- 2 yes, serious problems
- 3 yes, minor problems
- 8 not applicable
- 9 no answer

b at your workplace?

- 1 no
- 2 yes, serious problems
- 3 yes, minor problems
- 8 not applicable
- 9 no answer

c in your personal relationships or with your family?

- 1 no
- 2 yes, serious problems
- 3 yes, minor problems
- 9 no answer

d in public places like bars or concerts or on the street?

- 1 no
- 2 yes, serious problems
- 3 yes, minor problems
- 9 no answer

72a Have you ever been arrested for possession or use of marijuana (or hashish) in the Netherlands?

- 1 no ----- 72c
- 2 yes, for possession
- 3 yes, for use
- 7 yes, **other:**

72b Have you ever been convicted for possession or use of marijuana (or hashish) in the Netherlands?

- 1 no
- 2 yes, for possession
- 3 yes, for use
- 7 yes, **other:**

72c Have you ever been arrested or convicted for possession or use of other drugs in the Netherlands?

- 1 no
- 2 yes, for possession
- 3 yes, for use
- 7 yes, **other:**

72d Are you sometimes afraid of being arrested for your possession or use of marijuana (or hashish) in the Netherlands?

- 1 no
- 2 sometimes
- 3 often

72e Do you take certain *precautions* regarding your use of marijuana (or hash) in order to avoid arrest in the Netherlands?

- 1 no
- 2 yes, **specify:**

**show card 17**

72f On a scale from 1 to 6, how likely do you think it is that you will get *arrested* for possession or use of marijuana in the Netherlands at some point? (1 is extremely unlikely, 6 is very likely).



72g In order to buy the marijuana (or hash) that you use (or have used if quit), do you (did you) sometimes have to have *contact with real criminals*?

- 1 yes
- 2 no

73 Do you *hide your use* of marijuana (or hashish) from some people? If you do, from whom?

**check all that apply**

- 1 no
- 2 yes, from my parents
- 3 yes, from my partner/spouse
- 4 yes, from some of my friends
- 5 yes, from my coworkers/employer
- 6 yes, from my teachers
- 7 yes, from some family members
- 8 yes, from **other:**

74 Have you ever been convicted of a felony during the last four years?

- 1 yes
- 2 no

75 Have you ever received any assistance from a psychotherapist or professional counselor?

- 1 yes
- 2 no

## XIII Immersion in the drug subculture

76a About what proportion of the people you spend the most time with socially ever use marijuana (or hash)?

- 1 all
- 2 almost all
- 3 a majority
- 4 about half
- 5 a minority
- 6 almost none
- 7 none
- 8 other, **specify:**
- 9 don't know

76b Among the marijuana (or hash) users you know, about what proportion use marijuana (hash) in a way you consider "risky"?

- 1 all
- 2 almost all
- 3 a majority
- 4 about half
- 5 a minority
- 6 almost none
- 7 none
- 8 other, **specify:**
- 9 don't know

77 About how long would it take you to get, say, an eighth of an ounce of marijuana (or hash) today or tomorrow?

- 1 less than half an hour
- 2 half an hour to one hour
- 3 an hour or two
- 4 half a day or so
- 5 1 or 2 days
- 6 3 days to 1 week
- 7 longer than 1 week
- 8 it would be very difficult
- 9 don't know

78 That is all the questions I have, but is there anything about the use of marijuana (or hash) not covered by this interview that you would like to mention?

End interview at ... : ... (A.M./P.M.)