



EMCDDA

**IMPROVING THE COMPARABILITY OF
GENERAL POPULATION SURVEYS ON
DRUG USE IN THE EUROPEAN UNION**

EMCDDA Project CT.96.EP.08

DECEMBER 1997

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THE AMSTERDAM BUREAU OF SOCIAL RESEARCH AND STATISTICS

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Table of Contents

<i>Acknowledgements</i>	i
<i>Preface</i>	iii
EXECUTIVE SUMMARY	v
Chapter 1 General Population Surveys on Drug Use	1
1.1 Introduction	1
1.2 Prevalence Surveys on Drug Use	1
1.3 Limitations of General Population Surveys on Drug Use	2
1.4 Objectives of Cross-National Comparability	3
1.5 Problems of Cross-National Comparability	4
1.6 Structure of the Report	6
Chapter 2 Overview of General Population Surveys on Drug Use in Europe and the USA	9
2.1 Introduction	1
2.2 Tabulated Overview	1
Chapter 3 Items and Questions of Surveys in Europe and the USA	17
3.1 Introduction	17
3.2 Tabulated Overview	18
Chapter 4 Analysis and Reporting in Selected Surveys in Europe and the USA	29
4.1 Introduction	29
4.2 Studies Examined	29
4.3 Reporting on Illicit Drugs	30
4.3.1 Prevalence	30
4.3.2 Drug careers and patterns of use	32
4.3.3 Trends in drug use	34
4.4 Characteristics Related to Drug Use	35
4.4.1 Sociodemographic variables	35
4.4.2 Socioeconomic variables	36
4.4.3 Geographical variables	36
4.4.4 Subgroups and types of users	37

4.4.5 Lifestyle	38
4.4.6 Health	39
4.4.7 Availability	40
4.4.8 Attitudes and opinions	41
4.4.9 Data not used for analysis	41
4.5 Levels of Analysis: Descriptive, Exploratory and Explanatory Qualities	41
4.5.1 Prevalence and patterns of use	42
4.5.2 Trends	44
4.5.3 Sociodemographic variables	44
4.5.4 Socioeconomic variables	47
4.5.5 Geographical variables	48
4.5.6 Drug use and social environment	49
4.5.7 The concept of lifestyle	49
4.5.8 Health	51
4.5.9 Availability	53
4.5.10 Attitudes and opinions	53
4.6 Summary and Conclusions	53
Chapter 5 Modes of Interviewing	55
5.1 Introduction	55
5.2 Principal Characteristics of Interviewing Modes	55
5.3 Strengths and Weaknesses of Interviewing Modes	58
5.4 Conclusion	67
Chapter 6 Questionnaire Biases	69
6.1 Introduction	69
6.2 Semantics	70
6.3 Syntax	72
6.4 Response Formats	73
6.5 Context Bias	75
6.6 Design Bias	76
6.7 Conclusion	80

Chapter 7 Towards an European Model Questionnaire on Drug Use Prevalence among the General Population	81
7.1 Introduction	81
7.2 Licit Drugs	84
7.3 Illicit Drugs	86
7.4 Attitudes and Opinions	89
7.5 Attributes	93
Chapter 8 Analysis and Reporting	97
8.1 Introduction	97
8.2 Survey and Data Accountability	98
8.3 Guidelines for Analysis and Standardised Prevalence Estimates Tables	99
8.4 Miscellaneous	106
8.5 Conclusion	106
References	109
Annexes	115
Model Questionnaire	115
Core Item List	125
International Standard Classification of Education	143
List of Expert Group Members	147

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PREFACE

General population surveys are a key method to obtain information on the extent and patterns of the consumption of different drugs in the population, the characteristics and behaviours of the users, and the attitudes of different sections of the population. They are a powerful tool for identifying policy priorities and planning responses. In the past, national surveys have used a plethora of different instruments, reporting formats and methodologies, and this has made comparisons between countries difficult and misleading. This lack of reliable findings forms a major obstacle to the harmonisation of European drug policies and prevention strategies.

In late 1996, the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) therefore launched its Project to Improve Comparability of General Population Surveys in Member States (project no. CT.96.EP.08), which was subsequently contracted to O+S Amsterdam. The project has been carried out with the assistance of an expert group formed in cooperation with the national focal points of the EMCDDA's REITOX network (see Annexe 4 for a list of participants). Four expert meetings were convened in Amsterdam to discuss instrumental and methodological aspects of population surveys.

The report presented here is the output of this project. In line with the objectives stated in the call for tender, the project has focused primarily on the harmonisation of instruments (core items, questionnaires) and report formats. However, it proved necessary to address related methodological issues in addition. Hence, the present report is wider in scope than initially envisaged, now including methodological discussions and guidelines for survey and sampling methods. Broadening the scope of the project has furthermore made it clear that many issues need additional investigation, testing and validation. The contractor and the expert group have therefore decided to label this report as an initial *prototype* for a manual on conducting national general population surveys on the prevalence of drug consumption. Beyond providing a useful instrument to countries that plan to conduct surveys of this type, such a manual should help us to harmonise survey practices in EU member states, making it easier to compare their findings. After trial implementations in national surveys and the completion of the methodological substudies to be promoted by the EMCDDA, this prototype could ultimately result in a European standard for general population surveys on drug prevalence.

EXECUTIVE SUMMARY

This report presents the results of a European project to improve the comparability of general population surveys on drug use prevalence. The project was commissioned by the EMCDDA and carried out by O+S Amsterdam, in close cooperation with a team of key experts from European Union member states. The findings have been elaborated here into a prototype manual for conducting national-level drug use prevalence surveys. For the short term, the manual is designed to promote the harmonisation of survey practices in EU countries, in order to facilitate comparison of national findings. In the longer term, after trial implementations in national surveys and the completion of some methodological substudies ordered by the EMCDDA, the manual could ultimately result in a European standard for general population surveys on drug use prevalence. Such endeavours are necessary because national surveys still use a plethora of different instruments, reporting formats and methodologies, and that makes comparisons between countries difficult and misleading. Even when identical instruments are used, comparability can still be problematic due to differences in sampling frames, sampling methods, modes of interviewing or research context.

The results presented here are wider in scope than was initially envisaged. The original focus of the project was on the harmonisation of questionnaires (core items and questions) and the standardisation of reporting formats. However, it soon proved necessary to address related methodological issues as well. Broadening the scope of the project has also made it clear that many matters need additional investigation, testing and validation. All the findings reported here are the result of a collaborative and iterative process of decision-making among the members of the expert team. Obviously some compromises were necessary due to divergent national interests.

In accordance with the principal task of the project, this report presents a model questionnaire designed to be applicable throughout Europe. In addition, it proposes guidelines for the design and implementation of general population surveys on drug use prevalence and for the analysis and presentation of the findings.

Current State of the Art

We first provide a schematic overview of thirteen recent drug use surveys in Europe and the USA, taking note of some of their general characteristics and reviewing the sampling and interviewing methods applied. We then examine the questionnaires and analyses in seven of these surveys, done in France, Germany, the Netherlands, the four Nordic countries (Denmark, Norway, Sweden and Finland) and the USA. These were selected mainly for practical reasons, such as availability and language accessibility to the researchers in our project.

General Survey Characteristics

Our overview reveals that various modes of interviewing are applied in Europe. Face-to-face interviewing, sometimes in combination with mail or telephone questioning, is still the form most commonly applied in drug use prevalence surveys. Computer-assisted personal interviewing has not yet been widely implemented, except in the Netherlands and the UK, but telephone interviews generally are computer-assisted (CATI). The overview plainly shows the difficulty of drawing any general conclusions about which method is best suited to general population surveys on drug use. The relative strengths and weaknesses of the methods vary in conjunction with the different aspects of survey methodology, the cultural and political context in which a survey takes place, and the time and funding available. One very important point for further investigation is whether particular methods yield lower or higher prevalence rates than others. Some such differences have already been detected, but these vary from country to country and can be attributed to a wide range of factors (such as >privacy= or >technophobia=). Such differentials also change over time (as seen, for example, in the Netherlands, UK, Germany and USA).

Depending on which mode of interviewing is chosen, different *sampling frames* are applied, ranging from telephone directories and central population registers to postal code address files and household address registers. The most common sampling methods are simple random selection and multistage stratification; however varying techniques are employed at different stages (e.g. to select a person within a household). The majority apply some kind of weighting technique, usually to adjust for age, gender and/or region.

Few studies in Europe report on *oversampling*, and when they do it is mainly with regard to age and gender. An exception is the UK with its ethnic booster samples. In most cases, younger age groups B where greater drug use is likely B are oversampled, but the age ranges of such groups vary, and so does the total age range of the respondents. Bottom age limits range from 12 to 18; upper cut-off points are between 59 and 74, with no upper limit in some cases.

Reporting on sampling and response

Sample sizes vary from country to country, both relatively and absolutely, and there are many differences in how response rates are reported. They are calculated in different ways or they are ambiguously defined. Important information on the characteristics of non-responders is often lacking.

Analysis

The most commonly reported indicators of illicit drug use are *lifetime prevalence* (LTP), *last-year prevalence* (LYP) and *last-month prevalence* (LMP). However, not all studies employ all three prevalence measures, and some (e.g. England and Wales) use additional measures. Some but not all give reasons for their decisions. One such rationale (e.g. in the USA) is that, especially for heroin, only LTP makes sense, given the low numbers of drug users among respondents.

The *number of illicit drugs* dealt with also varies, ranging from 2 to 15 different drugs in the studies examined. Although all studies do differentiate between cannabis and other illicit drugs, the terminology used for this is inconsistent.

In addition to illicit drugs, at least some prevalences of *licit drugs* are investigated. The ways these enter into the analyses of illicit drug use differ widely, however. Alcohol use is commonly reported, but usually not the different kinds of drink (beer, wine, spirits). Tobacco use is less commonly reported. Prevalence of pharmaceutical drugs is often reported, usually differentiated between drugs with and without prescription. Comparison of these figures is nonetheless extremely complicated due to the many different pharmaceuticals dealt with and the different ways of conceptualising them.

Drug careers are operationalised and measured in different ways, such as age of onset or duration of drug use. Age of onset is reported only in the American and Dutch studies. *Frequency of use* may be employed as an indicator of either drug careers or patterns of use. Frequency measures differ greatly in terms of duration of drug use (lifetime, year, month) and intensity, and they use different indicators such as the number of times a drug was used or the number of days it was used on. The answer categories applied for these measures are not standardised. The *quantity* of illicit drugs taken within a set period of time is not reported in any of the studies analysed. Quantities of alcohol or tobacco consumed in a certain period (usually the past month) are sometimes given, mostly to identify >excessive= or >problem= use. Some studies report on *continuation and discontinuation* patterns for drug use, thus furnishing some general insights into drug careers. However, these rates are operationalised and measured in very different and not always correct ways.

Multiple drug use is reported in several publications, mainly for LTP and LMP. Some studies include a whole range of licit and illicit drugs in analyses, while others focus on multiple use of licit drugs (alcohol and pharmaceuticals), of licit drugs with cannabis, or of cannabis with other illicit drugs. Such data do not reveal whether the substances in question were combined on a single occasion (only the Dutch studies report *multiple simultaneous drug use* in the past year). *Routes of administration* (e.g. oral, nasal, intravenous) are rarely reported.

From the 1980s onwards, general population surveys with uniform methodologies have been conducted in England and Wales, France, Germany, the Netherlands, and the United States in order to analyse *trends in drug use* (allowing for regional variations and differences in survey methods and target populations). In this respect the USA clearly stands at the top with its time series extending from 1979 to 1996.

Predictive and Intermediate Variables

Age is commonly treated as the most basic predictor. As a standard practice, illicit drug use is reported for different age categories, but these categories vary between countries. Studies routinely report prevalence rates separately for males and females. However, any *gender* differences are often only mentioned in the margins, despite the manifest general tendency for males to use both licit and illicit drugs more than females (except for pharmaceuticals, which are more prevalent among females). Illicit drug use is commonly also reported in relation to *level of education, employment status* and *level of income*. Again, the categories used vary widely.

Geographical area is a variable not usually included in the analyses, although differences between urban and rural areas often are reported. When regions are included, they reflect national situations, and are thus not usable as categories for cross-national comparison. The

same is true of links between drug use and *social environment* and for data on *health conditions*. When these are included, very different indicators are used. Evidence is rarely provided for connections between the availability of illicit drugs (impossible/difficult/easy to obtain) and the prevalences in the use of various drugs (German studies being an exception).

Only a few studies report a statistically constructed *>lifestyle=* variable. The Dutch and British (England and Wales) reports apply multivariate techniques to compare drug use to sets of background (independent, predictor) variables, clustered together in some cases as lifestyle types, and for males and females separately. Type of household, ethnic background and marital status are occasionally included, but religion only rarely. Inclusion of the concept of lifestyle probably represents the highest analytical and theoretical level encountered in the publications on the population surveys. The concept is very complex, though, and it has certainly not been operationalised, analysed and tested in identical ways in all studies.

Some publications also investigate how attitudes or opinions concerning drug use are associated with prevalence. Such questions occupy a prominent place in French, German and Nordic publications, while being absent from the British and Dutch reports. In one American report, trends in risk perception are shown to be related to trends in drug use.

Like most studies in the fields of social epidemiology and criminology, the publications reviewed here are descriptive for the most part, and they focus mainly on prevalence rates. Some do include more analytic elements. The American, British and Dutch reports, in particular, lean more heavily on multivariate techniques, and the British publications are the most theoretically oriented. The most extensively tested theory is the gateway or stepping-stone theory, which was falsified in every case. The Dutch reports are the most thorough in exploring the concept of lifestyle in relation to drug use. American reports are characterised by their extensive use of statistical techniques, but they are largely empirically descriptive rather than theoretically interpretative. Nonetheless, they are the best example of studies that trace long-term trends in drug use. All these observed differences between countries still form a major complication in cross-national comparisons.

Model Questionnaire

The main thrust of the questionnaire we are proposing here is to measure drug use *prevalence* in face-to-face interviews. This premise has influenced our selection of the topics, items and questions to be covered. If other interviewing modes are to be applied, the model questionnaire will need to be adapted to the specific requirements of that mode. The present version of the model questionnaire is in standard everyday English, but it will be translated into other European languages as required. This may entail some alterations in wording to accommodate linguistic and cultural differences. In the long term, modifications may be made to this tentative model questionnaire; ideally these will be based on evaluations of the current version. The questionnaire should also be understood as a minimum standard. It can be embedded in country-specific drug use questionnaires and/or serve as part of a multipurpose questionnaire.

The items addressed and their sequence in the questionnaire have been determined by design. *Licit drugs* are intended as a starter and a warm-up for the respondents; however, such variables can also be employed as predictors of illicit drug use. They are followed by the *illicit drugs* section. These questions are intended to measure illicit drug use among the general population and to identify potential risk groups. The illicit drugs included in the model

questionnaire are cannabis, amphetamines, ecstasy, heroin, cocaine, Relevin (a dummy drug) and LSD. Identical questions are asked for each of these drugs, covering sometime use (LTP), recent use (LYP) and current use (LMP). Subsequently, *attitudes and opinions* about the health risks and social risks of drug use and about drug policy are recorded. These types of questions are regarded by the experts as important sources of information, generating a frame of reference for targeted actions such as drug policies and prevention strategies. They can also be used (albeit to a lesser extent) as a sort of predictive or intermediate variable to roughly estimate drug use prevalence. Yet the formulation of valid and reliable attitude questions is one of the most difficult tasks of questionnaire design. It is influenced by technical as well as ideological and political considerations that impinge on the sensitive issue of drug use. Such differences of opinion already exist within nations, and they only multiply in a transnational, European context. The questions proposed in this section therefore invite further discussion. *Attribute questions* occupy the final section of the questionnaire. Their purpose is to record background variables, which in turn can enhance the comparability of prevalence rates.

Guidelines to Overcome Problems of Comparability

The second part of the report examines in more detail some potential biases and some ways to overcome these with a view to European comparability. Various modes of interviewing are discussed in their relation to different elements of survey practice. The chapter on the design of the proposed model questionnaire is preceded by an overview of biases that can be caused by the design, wording and phrasing of questionnaires. Such biases can arise from individual questions and answer categories, from groupings of questions and answer categories, or from the overall structure of the questionnaire. Our final chapter reviews some basic and more complex requirements for analysis and reporting.

The principal requirements contained in the guidelines proposed here are:

Standardised Reporting Tables

Prevalence estimates should be presented in standardised tables for:

1. Lifetime Prevalence of Illicit Drug Use
2. Last-Year Prevalence of Illicit Drug Use
3. Last-Month Prevalence of Illicit Drug Use
4. Last-Month Frequency of Illicit Drug Use
5. Age of Onset of Cannabis Use
6. Prevalence of Tobacco and Alcohol Use
7. Public Opinions and Attitudes about Drug Use
8. Gender-by-Age Distribution
9. Type of Household by Age by Gender
10. Employment Status by Age by Gender
11. Education Level by Age by Gender

Survey accountability

The following information should be included in a survey report :

1. Organisations commissioning and contracting the survey and those doing the fieldwork
2. Objectives of the survey

3. Definition and estimated size of the target group
4. Context of the survey (e.g. single-, multi- or general-purpose)
5. Frequency in which surveys are conducted (ad hoc, periodic or tracking)
6. Geographical areas covered
7. Total time span of the study
8. Mode(s) of interviewing and duration of data collection
9. For periodic or tracking surveys, notification of any methodological changes
10. Information about interviewers (characteristics, training, supervision)

11. Sampling design, including sampling frame(s) and sampling methods, mention of oversampling and any booster samples used
12. Sample size (N) and net response (n), number of cases (persons and/or households) at various stages of selection
13. Description of any estimation methods applied (e.g. weighting, reweighting, raising or synthetic estimation) and to which sample characteristics
14. Information on how sample design was implemented and on any problems experienced in the fieldwork (e.g. multistage sampling attempted but quota sampling ultimately employed)
15. Precise indication of response-nonresponse distribution. The reporting of response rates in many survey reports is ambiguous or imprecise, often not indicate the initial response rate, sometimes resulting in artificially created high response rates
16. Mention of any methods applied to impute missing values and to which variables they were applied

Reporting the survey analysis

1. Report gender distributions not just in the standardised tables, but include them in the discussion when relevant.
2. Specify clearly in the analysis which variables are considered risk predictors for higher drug use, presumed to account for a large share of the variation in prevalence.
3. Apply time indicators such as LTP, LYP and LMP consistently in the analysis.
4. If variations in drug use prevalence are found within the sample or in samples compared over time, clearly state whether such changes are statistically significant.
5. If typologies have been constructed (such as lifestyle, drug careers, patterns of use), describe the indicators they are based on and how these have been measured. Report on such concepts in a consistent fashion.
6. If frequency measures are used, specify what indicators these are based on (e.g. number of times, number of days, duration of drug use) and apply the measures consistently in the analysis.
7. Report any estimates of sampling errors that were calculated, particularly for the prevalence measures, and state which calculation methods were applied.
8. Describe the steps undertaken to minimise non-sampling errors (e.g. in drug use prevalence estimates).
9. Use standard statistical classifications and definitions whenever applicable and appropriate.
10. Report standard deviations for estimation procedures.
11. Note any data collected but not reported or analysed, and explain why not.
12. Provide an analysis of non-response.

CHAPTER 1

GENERAL POPULATION SURVEYS ON DRUG USE

1.1 Introduction

Social surveys are a key source of information for many social actors, from policymakers and academics to the general public. Surveys support policymakers in setting priorities (as for prevention campaigns aimed at the general public), they provide insights into what the public thinks about policy proposals or policies already implemented, and they aid in resource allocation. In combination with other sources of data, they may also be useful in evaluating policy interventions such as prevention campaigns, including their cost-effectiveness. Social surveys are less suitable for assessing more specific interventions such as treatment facilities.

In this chapter we will discuss briefly the main characteristics of drug use prevalence surveys among the general population, including their strengths and weaknesses. Subsequently, we will investigate the objectives of cross-national comparisons and problems encountered in doing so. The last part of this chapter provides an overview of the chapters to follow.

1.2 Prevalence Surveys on Drug Use

Over the past decade, general population surveys on drug use have been conducted, albeit with different intensities, in most European Union member states. These were predated and influenced by surveys in the USA. Studies of this nature are important epidemiological tools for investigating illicit drug use among the general population at some designated point in time. In contrast to surveys of specific target groups, they are based on representative cross-sections of the general population, so as to allow extrapolation from the survey findings to that population. Although they vary in scope, the common objective of general surveys is to estimate drug use prevalence and identify other phenomena related to drug use. Thus, in addition to prevalence, surveys also investigate issues such as public attitudes toward drug use and drug policy, public knowledge about specific types of drugs, consequences of drug use, and the frequency and intensity of use (amounts being consumed). In some cases, drug prevalence questions are embedded in broader studies, such as health or crime surveys. Most commonly, standardised questionnaires are used, which are administered by different modes of interviewing (face-to-face, mail, telephone, or combinations of these). Such an approach allows ready administration and statistical analysis, coupled with high cost-effectiveness. Ideally, surveys are based on

consistent, internally coherent methodologies and are repeated regularly, to monitor trends over time.

Surveys on drug use are not done in a vacuum. They are dependent on the political and economic climate in which they are undertaken. They are influenced by many interrelated factors, such as basic assumptions about drug use, the organisations commissioning and carrying out the surveys, and the available funding. Such factors affect not only the results of the survey, but also the dissemination and the accessibility of the research findings. Drug use survey practice is a dynamic activity, characterised by an expanding body of knowledge, increasing collaboration between researchers, and tendencies towards multidisciplinary approaches in survey practice.

Although prevalence surveys can be very powerful tools, they are subject to some constraints. These derive from various aspects of survey practice. Some limitations are common to social surveys in general, while others are peculiar to the topic of drug use itself.

1.3 Limitations of General Population Surveys on Drug Use

It would be beyond the scope of this report to discuss the role of surveys within different theoretical schools of thought; criticisms have been explored extensively elsewhere. As yet, though, there are no alternatives for surveys, nor is there a wish to replace them. One particular criticism should be taken very seriously, however. The focus in surveys of the type discussed here is on *individual* respondents, and the research thus produces limited information about the *social contexts* these individuals live in. These very social contexts are crucial to the understanding of drugs in our society. Drug use is deeply entwined with them, and changing social contexts are difficult to explore by means of surveys. Increasingly, surveys are overcoming part of this problem by collecting and analysing information on the structural and contextual attributes of respondents. But the fact remains that, if we are to make the most of surveys, they must be integrated into a broad range of research activities and other sources of information. Only then can we create a detailed picture of drug use as it occurs in different groups in society.

Illicit drug use, in the form and on the scale it assumes today, is a relatively new social phenomenon. It is bound up with delicate issues such as illegality and social disapproval, and it further involves a complex array of attitudes towards individual and social responsibilities, ethical principles and pleasures of life.

General population surveys are comprised of a heterogeneous mass of people, undifferentiated by group characteristics or drug-taking habits. Because of this, surveys may *exclude* certain subpopulations that exhibit distinct drug-taking behaviours (either above or below average). Such exclusion may be intentional, as when active military personnel or institutionalised people (prisons, hospitals) are left out of the target population. But it may also be *unintended*, as with the so-called

'hidden' populations - groups difficult to reach due to their lifestyles (vagrants or homeless people, who presumably have higher rates of drug use) or because they do not speak the language the survey is conducted in.

Because illicit drug use is not a mainstream social activity, a further consequence of taking the general population as a target group is that the numbers of *problematic users* and users of *certain drugs* (such as heroin or cocaine) included in the survey will be relatively tiny. This severely hampers any attempt to generalise the findings to these subpopulations (due to the risk of over- or underestimation) or to use the data to find causes of problematic use.

General population surveys rely almost entirely on *self-reported behaviour*. Though ostensibly based on the target group as defined and accessed, the findings also depend on the willingness within that group to disclose information on drug-taking behaviour. What information respondents do divulge may be flawed by recall difficulties, answer reluctance or social desirability (especially when illicit substances are involved).

In view of all these limitations, general population surveys are poorly suited for detecting *new trends*, for use as *early-warning monitoring systems* for new drugs, or for *explaining problematic use*.

1.4 Objectives of Cross-National Comparability

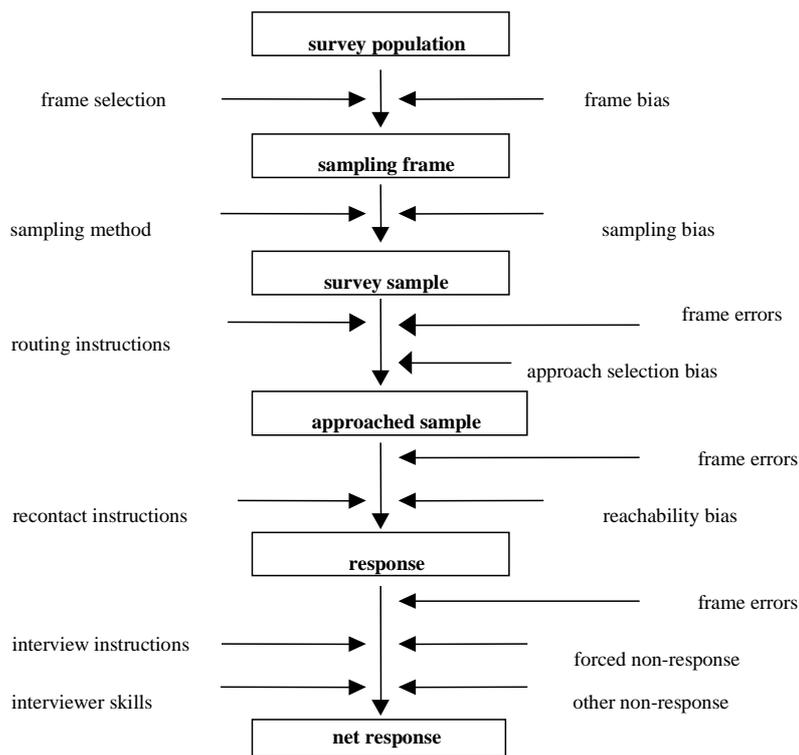
The multifaceted and changing nature of illicit drug use, and its intercontinental and European character, imply that it transcends political, economic and geographical boundaries. European collaboration on drug policy has intensified since the Maastricht Treaty (1993), which for the first time specified comprehensive anti-drug objectives and instruments at a European level. The strategy includes efforts to combat the production and trafficking of illicit drugs, to mobilise resources, and to curb consumption through cooperative action in the field of public health (Estievenart, 1994). Various European working parties and programmes have been established by the European Community and the Council of Europe to promote a coordinated, cross-national European drug policy. This approach is recognisable in areas such as legislation, law enforcement, prevention, treatment, research and epidemiological data collection (Bless et al., 1993). It is within this context that our project was initiated. The reasons for improving the comparability of prevalence surveys in the European Union are manifold. Comparability is not an end in itself, but a means to broaden the scope of future EU action. Comparability of survey results at an aggregated level would make it possible to record and assess illicit drug use patterns at a European level, including similarities and differences between member states. This could be of reciprocal benefit, since European collaboration may improve national-level surveys and help us avoid reinventing the wheel over and over again. Actually, a good deal of knowledge is already available from drug use prevalence surveys, but it is unevenly distributed and unevenly applied in the

member countries. European comparison also opens opportunities to learn from different policy measures by comparing different approaches to illicit drugs.

1.5 Problems of Cross-National Comparability

The above objectives require both a general recognition of the importance of comparability and a willingness to steer national survey practices in accordance with European requirements (with due regard for the principle of subsidiarity). One difficulty is that cross-national comparison could run counter to the need for within-country comparability over time. Inevitably this will necessitate some compromises between member states, both as to what information is required and as to survey design, methodology and the reporting of results.

Figure 1.1
Potential Errors and Biases in the Process between
Target Population and the Net Survey Response

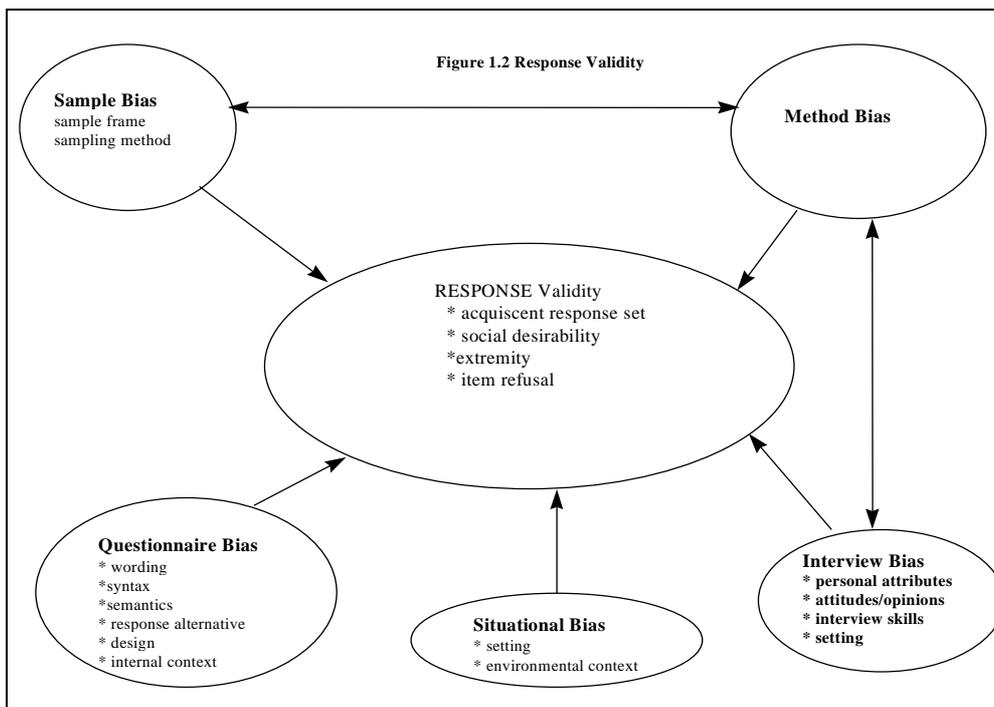


Improving the comparability of European surveys necessarily involves many people - all with their own needs and ideas on the practice of survey design. The various perspectives may often coincide, but they will inevitably be in conflict now and then, and that will require creative coordination and organisation. All such efforts have to be developed in a context of divergent cultural, political and

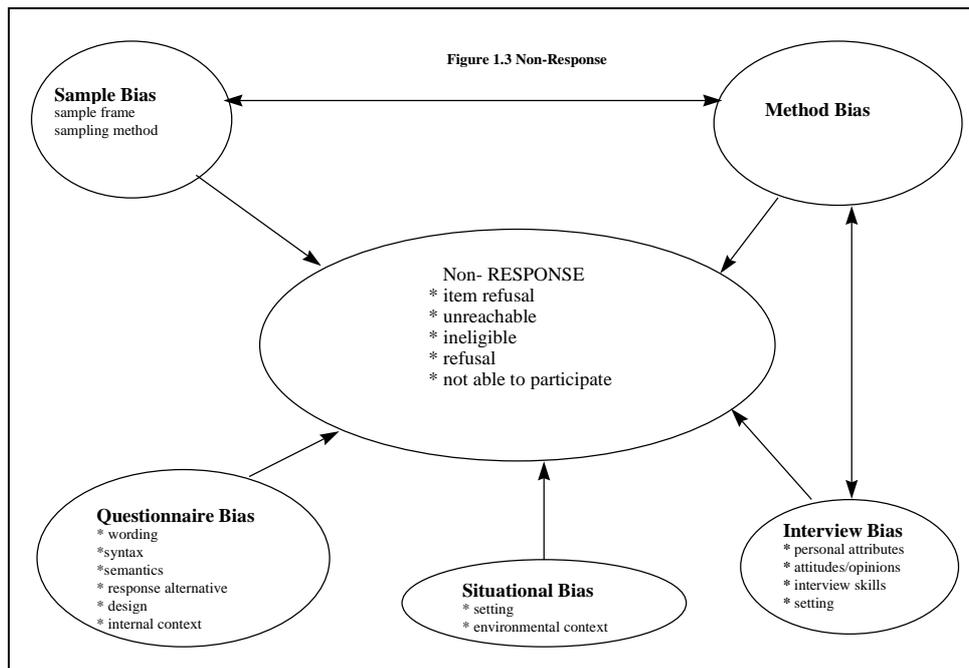
economic climates, and with an eye to what is feasible. Such an endeavour is not without its problems.

Conducting national prevalence surveys of high quality and sufficient quantity is no easy task. The potential distortions are numerous, given the complexities of survey practice and in view of the gap between textbook requirements and the unruliness of the real world. We thus have to live with an imperfect reality. Figures 1.1 –1.3 provide a schematic overview of potential biases at different levels of survey practice. Figure 1.4 illustrate how these biases can multiply when conducting cross-national comparisons.

In attempts to compare European survey results, such distortions can easily multiply, because member states use different survey designs, methods (and variations of the same method), sample sizes, geographical areas, time periods of study, and even different definitions and classifications of drugs. The purposes and objectives of surveys also differ.



The comparability of surveys, both in quantity and quality, is still far from optimal. Besides the difficulties just mentioned - which are the main concern of our project - there are many other factors that could impede cross-national comparison. It should also be borne in mind that differences and similarities between nations must always be explored against the cultural, political and economic backgrounds of the countries involved and the survey methods applied (Klijzing, 1996).

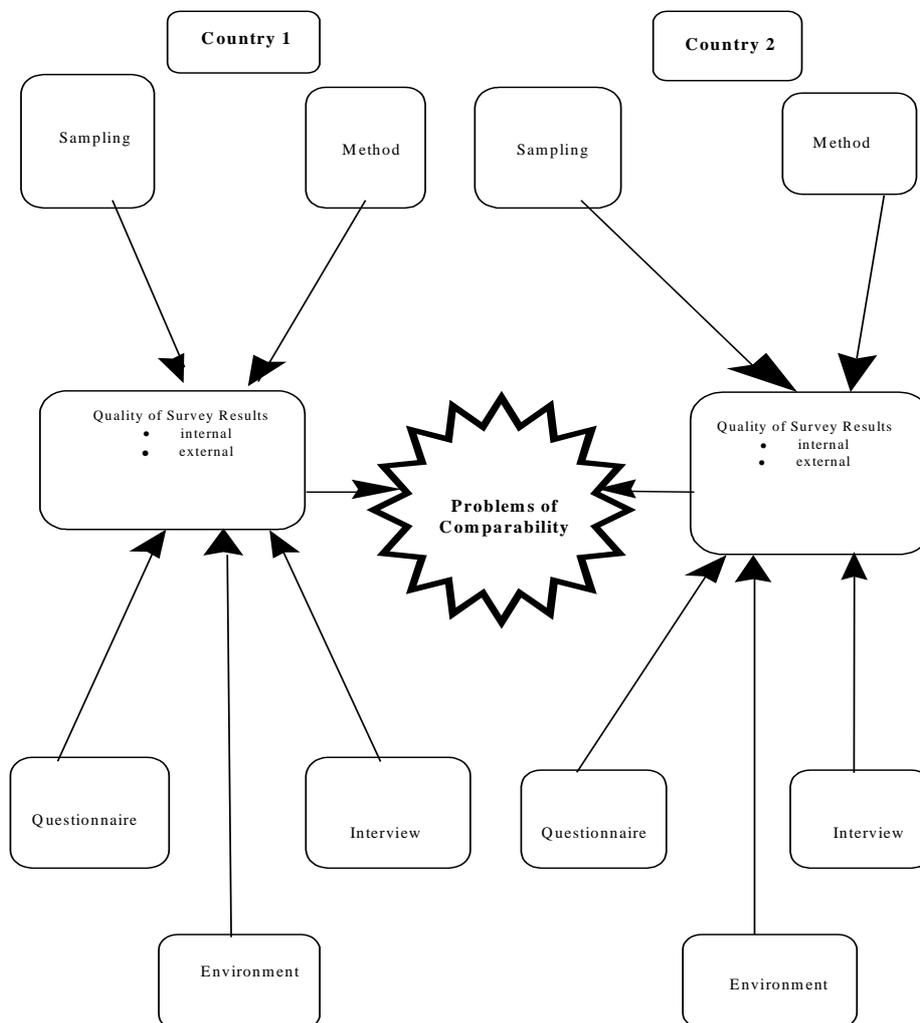


Modesty and caution are the watchwords, and full comparability is a long-term prospect. Our aim is not to clone survey practices, but to find *compatible* methods that permit the *harmonisation* of survey results.

1.6 Structure of the Report

Our efforts to harmonise population surveys began with an inspection of recent survey instruments and survey reports. The evolution of survey practices reveals that some degree of spontaneous harmonisation has already occurred, since researchers usually consult the work of others before designing their own surveys. Methods and instruments which many surveys have in common may often be deemed to reflect an established consensus among survey experts. Questions on lifetime, last-year and last-month use of drugs, for example, are already classical measures of prevalence. Only minor adjustments in the wordings of questions should be needed to arrive at standard measures. Analysing past surveys thus seems an effective way to initiate a process of harmonisation. That does not mean, however, that harmonisation should stop at a common denominator approach. Some items may have undeservingly found general acceptance because of a tendency to copy from other surveys, rather than through careful assessment of what the item really means in the survey context. Alternatively, an item unique to one single survey may nevertheless qualify as a common-core item, on the grounds of its analytical potential and methodological strength.

Figure 1.4 Problems of Comparability



The general structure of our report is as follows. Chapter 2 provides a schematic overview of thirteen recent drug use surveys in Europe and the USA, making note of some general characteristics and the sampling and survey methods applied. This is followed in Chapter 3 by a detailed analysis of the questionnaires used in seven of these surveys. Chapter 4 is an in-depth study of the ways the results of these seven surveys were reported and analysed. In chapter 5 various modes of interviewing will be discussed and compared with regard to the different elements of survey practice. Chapter 6 examines more closely the biases caused by the design, wording and phrasing of questionnaires, and Chapter 7 describes the framework and contents of a model questionnaire for general population surveys on drug use in Europe (an outcome of four expert meetings). The last chapter (8) discusses a number of basic and also more elaborated requirements for analysing and reporting within the context of European comparability of drug use prevalence surveys. The model questionnaire and core items actually proposed are presented in the annexes.

CHAPTER 2

OVERVIEW OF GENERAL POPULATION SURVEYS ON DRUG USE IN EUROPE AND THE USA

The information in this chapter is presented in table format to provide a convenient overview. For some surveys our sources were unable to furnish all the relevant information; such is indicated by *n.a.* (not available) in the cell.

A brief description of the categories in the tables is provided.

All Tables

country country surveyed; for surveys not covering the entire country, the region or city is specified in *italics*

year year in which the survey was conducted

sources Baudier and Arènes (eds.) (1997), CAN/Folkälsoinstitutet (1997), EDIS/ PND (1995), Van de Goor et al. (1996), Hakkarainen et al. (1996), Hales and Stratford (1997), Herbst, Kraus and Scherer (1996), Kokkevi and Stefanis (1994), Kontula (1995), Madianos et al. (1994), National Institute of Public Health (1997), Noels and Wydoodt (1996), Quataert and Van Oyen (1995), Ramsay and Spiller (1997), SAMHSA (1996b), Sandwijk et al. (1995).

Table 2.1
General Characteristics
of General Population Surveys on Drug Use in Europe and the USA

COUNTRY	YEAR	CONTEXT	FREQUENCY	LEVEL OF ANALYSIS
Belgium Flanders	1995	single	ad hoc	descriptive
Finland	1992 ¹	single	regular	causal inference
4 Nordic Countries: Denmark Finland Norway Sweden	1994 1993 1993 1995	single	ad hoc	causal inference
France	1995	multi health survey	tracking	descriptive + causal inference
Germany	1995	single	regular	descriptive + causal inference
Greece	1984	single	ad hoc	descriptive + explanatory
Greece Greater Athens	1993	single	ad hoc	descriptive + explanatory
Netherlands Amsterdam	1994	single	tracking	causal inference + explanatory
Netherlands Rotterdam	1994	single	ad hoc	causal inference + explanatory
Spain	1995	single	tracking	descriptive
Sweden	1996	general omnibus study	tracking	descriptive
United Kingdom England and Wales	1996	multi crime survey	tracking	causal inference + explanatory
United States	1994	single	tracking	descriptive + causal inference

Table 2.1 General characteristics

context 'single' if survey dealt with drugs (and/or alcohol) prevalence only; 'multi' if measuring drugs prevalence was part of a survey with a wider scope; 'general' if prevalence questions were embedded in a multipurpose survey (e.g. omnibus)

frequency 'ad hoc' for a unique survey; 'tracking' if survey was part of a continuous series oriented to identifying trends; 'regular' if same survey had been done before, but not as part of a continuous series

level of analysis 'descriptive' if the analysis of results primarily described current situations or trends; 'causal inference' if attempts were made to assess links between drug use and respondent's characteristics; 'explanatory' if analysis was oriented to systematic explanation of the phenomenon of drug prevalence. We have assessed the level of analysis on the basis of each survey report as published; it does not necessarily coincide with the intended aim of the survey.

¹ Only the 1992 Finnish questionnaire has been included in our overview. The results of the 1996 Finnish survey have been published only in Finnish and therefore both questionnaire and report have been omitted in our overview (see also Chapter 4).

Table 2.2
Agencies and Authors of Report Publications
on General Population Surveys on Drug Use in Europe and the USA

Country	Year	Commissioned by	Responsible Agent	Authors of Report Publications
Belgium Flanders	1995	Ministry of the Flemish Community, Department of Health / Instituut voor Hygiëne en Epidemiologie (IHE)	Instituut voor Hygiëne en Epidemiologie (IHE) / Vereniging voor Alcohol- en andere Drugproblemen (VAD)	Quataert and Van Oyen (1995) Noels and Wydoort (1996)
Finland	1992	Department of Public Health, University of Helsinki / Ministry for Social Affairs and Health	Department of Public Health, University of Helsinki	Kontula (1995)
4 Nordic Countries: Denmark Finland Norway Sweden	1994 1993 1993 1995	Nordic Council of Ministers	Nordic Council for Alcohol and Drug Research (NAD)	Hakkarainen et al. (1996)
France	1995	Ministry of Social Affairs and Health	Comité Français d'Education pour la Santé (CFES)	Baudier and Arènes (eds.) (1997)
Germany	1995	Bundesministerium für Gesundheit	Institut für Therapieforschung (IFT)	Herbst, Kraus and Scherer (1996)
Greece	1984	Ministry of Youth	Department of Psychiatry, University of Athens	Madianos et al. (1994)
Greece Greater Athens	1993	E.U., D.G. 5	University Mental Health Research Institute (U.M.H.R.I.)	Kokkevi and Stefanis (1994)
Netherlands Amsterdam	1994	Ministry of Health	Institute of Human Geography (ISG), University of Amsterdam/ School for Env. Science	Sandwijk et al. (1995)
Netherlands Rotterdam	1994	Instituut voor Verslavingsonderzoek (IVO) (Addiction Research Institute Rotterdam)	Instituut voor Verslavingsonderzoek (IVO) (Addiction Research Institute Rotterdam)	Van de Goor et al. (1995)
Spain	1995	Delegación del Gobierno para el Plan Nacional sobre Drogas (PND) (State Delegation for the National Plan on Drugs)	Delegación del Gobierno para el Plan Nacional sobre Drogas (PND) (State Delegation for the National Plan on Drugs)	Equipo de Investigación Sociológica (EDIS) / PND (1995)
Sweden	1996	Centralförbundet för alkohol- och narkotikaupplysning (CAN) (Swedish Council for Information on Alcohol and other Drugs)	Folkälsöinstitutet (FHI) (National Institute of Public Health)	CAN/ Folkälsöinstitutet (1997) National Institute of Public Health (1997)
United Kingdom England and Wales	1996	Home Office	Home Office, Research and Statistics Directorate	Ramsay and Spiller (1997) Hales and Stratford (1997)
United States	1994	US Department of Health and Human Services	Substance Abuse and Mental Health Service Administration, Office of Applied Studies (SAMHSA/ OAS)	SAMHSA (1996b)

Table 2.2 Agencies and authors of report publication

commissioned by

authority or institute that initiated and commissioned the survey

responsible agent

institute or organisation responsible for the organisation and analysis of the survey

authors

authors of report containing the survey results studied in the project

Table 2.3
Survey Methods Applied
in General Population Surveys on Drug Use in Europe and the USA

COUNTRY	YEAR	MODE OF INTERVIEWING	SURVEY METHODS SPECIFICATIONS	QUESTIONNAIRE COMPLETION	
				INTERVIEWER	RESPONDENT
Belgium Flanders	1995	telephone	CATI	yes	no
Finland	1992	mail	P & P	no	yes
4 Nordic Countries: Denmark Finland Norway Sweden	1995 1993 1993 1994	mail	P & P	no	yes
France	1995	telephone	CATI	yes	no
Germany	1995	drop-off	P & P	no	yes
Greece	1984	face-to-face	P & P	yes	no
Greece Greater Athens	1993	face-to-face	P & P	yes	no
Netherlands Amsterdam	1994	face-to-face	P & P ^a CAPI ^a	yes yes	no yes
Netherlands Rotterdam	1994	mail ^a face-to-face ^a	P & P P & P	no yes	yes no
Spain	1995	face-to-face	P & P	no ^b	yes ^b
Sweden	1996	face-to-face	P & P	yes	no
United Kingdom England and Wales	1996	face-to-face	CAPI	no ^b	yes ^b
United States	1994 ^c	face-to-face	P & P	no ^b	yes ^b

^a = same questionnaire

^b = for drug section only; others sections completed by interviewer

^c = sample 1994-B questionnaire (new methodology)

Table 2.3 Survey methods applied

<i>survey method</i>	survey method used (sometimes different methods were used in same survey)
<i>survey methods specifications</i>	indicates whether interview completion was by pen and paper (P & P) or by computer: computer-assisted telephone interviews (CATI) or computer-assisted personal interviews (CAPI) (sometimes different methods were used in same survey)
<i>questionnaire completion</i>	indicates whether interviewer or respondent recorded the answers to survey questions. Where both interviewer and respondent completed parts of questionnaire, it may be assumed that respondent completed the more sensitive questions about drug use

Table 2.4
Target Population Characteristics
of General Population Surveys on Drug Use in Europe and the USA

COUNTRY	YEAR	TARGET POPULATION	OVERSAMPLING
Belgium Flanders	1995	18-65 years Flemish Region, Flemish-speaking	no
Finland	1992	18-74 years	no
4 Nordic Countries: Denmark Finland Norway Sweden	1995 1993 1993 1994	19-70 years 18-69 years 19-70 years 18-69 years	no
France	1995	18-75 years	no
Germany	1995	18-59 years German-speaking	no
Greece	1984	12-64 years Aegean and Ionian Islands excluded (4.5% of total Greek population)	yes age group 12-24 years
Greece Greater Athens	1993	12-64 years	yes age group 12-24 years
Netherlands Amsterdam	1994	12+ years	no
Netherlands Rotterdam	1994	16-69 years Dutch nationality	no
Spain	1995	15+ years	yes age group 15-39 years
Sweden	1996	15-75	no
United Kingdom England and Wales	1996	16-59 years (for drug section)	yes inner-city postal sector ethnic booster (n=1995)
United States	1994	12+ years US civilian, non-institutionalised population	yes people under 35 years blacks and Hispanics people from rural areas current cigarette smokers aged 18- 34 years

Table 2.4 Target population characteristics

target population population to be approached in survey, usually defined in terms of age groups

oversampling indicates whether specific target groups were oversampled for some specific reason

Table 2.5
Sampling Characteristics
of General Population Surveys on Drug Use in Europe and the USA

COUNTRY	YEAR	SAMPLING FRAME	SAMPLING METHOD(S)	WEIGHTING
Belgium Flanders	1995	randomised dial	simple random within household: birthday	no
Finland	1992	central population register	simple random	no
4 Nordic Countries: Denmark Finland Norway Sweden	1995 1993 1993 1994	central population registers	simple random	no
France	1995	randomised dial	simple random within household: birthday	yes age, gender, geographical region, kind of dwelling
Germany	1995	household addresses	face-to-face stratified: electoral districts, 1050 sampling points, random route within household: birthday	yes age, gender, federal state, household size
Greece	1984	household addresses	face-to-face: town, block, dwelling unit within household: random, using Kish selection grid	yes age
Greece Greater Athens	1993	household addresses	four-stage systematic	yes* age
Netherlands Amsterdam	1994	municipal population register	simple random	yes age, gender, ethnicity
Netherlands Rotterdam	1994	municipal population register	simple random	yes age, gender
Spain	1995	household addresses	multistage: electoral districts within autonomous communities quotas and random walks	yes age, gender, region
Sweden	1996	population register (DAFA/SPAR)	simple random	yes
United Kingdom England and Wales	1996	postcode address file (PAF)	stratified face-to-face within households: simple random	yes inner city, dwelling unit, individual, ethnic minority I, ethnic minority II (ethnic booster)
United States	1994	dwelling units/ household addresses	multistage: geographical areas within households: simple random	yes dwelling unit non-response, person weight trimming adjustment, person non- response/ roster adjustment, post-stratification 1990 census

* This applies only to the comparisons of the 1987 survey with surveys of after 1987.

Table 2.5 Sampling characteristics

sampling frame

sampling method(s)

weighting

frame(s) used to sample the target population

method(s) applied to sample within the sampling frame(s)

indicates whether survey results were weighted to correct for sampling and response biases. If 'no', that could mean either that the response was considered representative of the target population, or that the results may not correctly reflect that population; if 'yes', survey results were representative of the target population.

Table 2.6
Sample Characteristics
of General Population Surveys on Drug Use in Europe and the USA

COUNTRY	YEAR	ESTIMATED SIZE OF TARGET POPULATION (MILLIONS)	SAMPLE SIZE (N)	NET RESPONSE	RESPONSE RATE (%)
Belgium Flanders	1995	4.0	n.a.	2259	n.a.
Finland	1992	3.5	4892	3458	70.7 %
<i>4 Nordic Countries:</i>			original size (minus frame errors):		
Denmark	1995	3.5	D: 2000 (2000)	D: 1390	D: 69.5 %
Finland	1993	3.5	F: 2000 (1954)	F: 1275	F: 65.3 %
Norway	1993	3.0	N: 3000 (2957)	N: 1618	N: 54.7 %
Sweden	1994	6.0	S: 3000 (2969)	S: 1912	S: 64.4 %
France	1995	40.0	original size: 4116 minus frame errors 3484	1993	75.5 %
Germany	1995	48.9	12052	7833	65 %
Greece	1984	9.1	4410	4297	96.5 %
Greece <i>Greater Athens</i>	1993	2.4	original size: 2500 minus frame errors: 2263	2110	93.3 % refusals: 6.2 % invalid: 0.5 % 20.4 % substituted
Netherlands <i>Amsterdam</i>	1994	0.6	original size: 10000 minus frame errors: 8686	4364	50.2 %
Netherlands <i>Rotterdam</i>	1994	0.4	8000	3537	44.2 %
Spain	1995	31.0	10000	9984	80 % of people selected 20 % after substitution
Sweden	1996	6.4	±1000-1500	±1000-1500	~ 70 %
United Kingdom <i>England and Wales</i>	1996	35.0	core sample: 19808 drug section: 11244	16348 10940	82.5 % 97.3 %
United States	1994 ^a	209.0	22785	17809	78.2 %

^a = Sample 1994-B questionnaire (new methodology)

Table 2-6 Sample characteristics

estimated size of target population figures are presented in millions of people; in many cases the exact size of the target population was unknown or was not assessed.

sample size sample size as indicated in the survey reports; survey reports are not always clear on this subject: size may refer to the sample drawn from the frame, the sample actually questioned in the field work or the sample that was approached, and in all cases it may either include or exclude known frame errors

net response number of people that responded to the survey questionnaire

response rate percentage of sample size that responded to the survey questionnaire. Differences in rates between countries may be due to different concepts of sample size rather than real differences in response!

CHAPTER 3

ITEMS AND QUESTIONS IN SURVEYS IN EUROPE AND THE USA

3.1 Introduction

The previous chapter summarised thirteen recently conducted surveys in Europe and the United States. In this chapter we provide a detailed overview in table format of the *questionnaires* applied in 7 of them. Not all questionnaires used in recent European general population surveys on drug use have been included here, as we were primarily dependent on questionnaires available in English. We have also included the French, German and Dutch questionnaires, since these languages were familiar to the project team. Despite this limitation, the selected questionnaires provided clear insights into the current practice of questionnaire design in Europe and the USA. Not surprisingly, the questionnaires differed both in the total number of questions included and in the items covered. For surveys in which the questions on drugs were part of a multipurpose questionnaire, such as the French and the British survey, we have analysed only those questions pertaining to drug use prevalence and related topics.

3.2 Overview of Tables

We have grouped the questions around the following themes:

1. Prevalence of Drug Use
2. Prevalence Measures
3. Frequency of Illicit Drug Use
4. Frequency of Licit Drug Use
5. Quantity of Drug Use
6. Other Items Related to Illicit Drug Use
7. Attributes
8. Environment
9. Attitudes and Opinions
10. Lifestyle

Table 3.1 Prevalence of Drug Use

Country	Year	ILLCIT DRUGS							LICIT DRUGS		
		Cannabis	Ecstasy	Cocaine	Heroin	Amphetamines	LSD	Other illicit	Alcohol	Tobacco	Pharmaceuticals
Finland	1992	yes	no	yes	no ^c	yes	yes	yes	yes	yes	yes
4 Nordic Countries	1993	yes	no	no	no	no	no	yes ^d	yes	no	no
France	1995	yes	no ^a	yes	yes	yes ^a	yes ^b	yes	yes	yes	yes
Germany	1995	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Netherlands Amsterdam	1994	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
United Kingdom England and Wales	1996	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes ^e
United States	1997	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes

^a = one category for both amphetamines and ecstasy

^b = one category for hallucinogens, including e.g. LSD, psychedelic mushrooms

^c = one category for both heroine and morphine

^d = one category for heroin, amphetamine, cocaine or other hard drugs

^e = only for tranquillisers and methadone (not prescribed by a doctor)

ILLCIT DRUGS

cannabis

whether prevalence of cannabis use was included as a separate question²

ecstasy

whether prevalence of ecstasy use was included as a separate question

cocaine

whether prevalence of cocaine use was included as a separate question

heroin

whether prevalence of heroin use was included as a separate question

amphetamines

whether prevalence of amphetamine use was included as a separate question

LSD

whether prevalence of LSD use was included as a separate question

other illicit

whether prevalence of any other illicit drug (e.g. 'magic mushrooms' or 'crack cocaine') or a group of several illicit drugs (e.g. 'heroin or cocaine', 'hallucinogens', 'some drug') was included as a separate question

LICIT DRUGS

alcohol

whether prevalence of alcohol use was recorded, using either one term (e.g. 'alcohol', 'alcoholic beverages') or several exclusive categories (e.g. 'beer', 'wine', 'spirits')

tobacco

whether prevalence of tobacco use was recorded, using either one term (e.g. 'tobacco', 'smoking') or several exclusive categories (e.g. 'cigarettes', 'cigars', 'pipe')

pharmaceuticals

whether prevalence of the use of pharmaceuticals was recorded, using either one term (e.g. 'pharmaceuticals', 'medicines') or several exclusive categories (e.g. 'sedatives', 'hypnotics'). For practical reasons we have made no distinctions between pharmaceuticals prescribed by a doctor and those not prescribed, nor between pharmaceuticals used for medicinal purposes and those used for recreational or other purposes.

² Most questionnaires speak of 'hashish' and/or 'marijuana'.

Table 3.2 Prevalence Measures

		Prevalence Measures											
		Illicit Drugs			Alcohol			Tobacco			Pharmaceuticals		
Country	Year	LTP	LYP	LMP	LTP	LYP	LMP	LTP	LYP	LMP	LTP	LYP	LMP
Finland	1992	all	all	all	yes	no	yes	yes	no	no ^c	some	all	all
4 Nordic Countries	1993	all	no ^a	no	yes	no	no	no	no	no	no	no	no
France	1995	all	all	no	yes	yes	no	yes	no	no	yes	yes	no
Germany	1995	all	all	all	yes	yes	yes	yes	yes	yes	no	all	all
Netherlands Amsterdam	1994	all	all	all	yes	yes	yes	yes	yes	yes	all	all	all
United Kingdom England and Wales	1996	all	all	all	no ^b	no	no	no	no	no ^c	all ^d	all ^d	all ^d
United States	1997	all	all ^e	all	yes	yes ^e	yes	yes	yes ^e	yes	all	all ^e	all

'all' and 'some' refer to number of drugs recorded (see also Table 3.1)

^a = past 6 months prevalence for cannabis only

^b = only "how often usually alcohol drinks?", including answer category "never"

^c = only current smoking ("smoking nowadays or "at present"); this will be close to LMP, but lower than LMP (LMP includes also 'occasional' smokers)

^d = only for tranquillisers and methadone (not prescribed by a doctor)

^e = i.e. "more than 30 days ago but within the past 12 months"

ILLCIT DRUGS

LTP whether lifetime prevalence (e.g. 'use at some time in your life') was recorded for some or all specified illicit drug(s)

LYP whether last-year prevalence (e.g. 'use in the past twelve months') was recorded for some or all specified illicit drug(s)

LMP whether last-month prevalence (e.g. 'use in the past four weeks' or '... past 30 days') was recorded for some or all specified illicit drug(s)

ALCOHOL

LTP whether lifetime prevalence (e.g. 'use at some time in your life') of alcohol was recorded

LYP whether last-year prevalence (e.g. 'use in the past twelve months') of alcohol was recorded

LMP whether last-month prevalence (e.g. 'use in the past four weeks' or '... past 30 days') of alcohol was recorded

TOBACCO

LTP whether lifetime prevalence (e.g. 'use at some time in your life') of tobacco was recorded

LYP whether last-year prevalence (e.g. 'use in the past twelve months') of tobacco was recorded

LMP whether last-month prevalence (e.g. 'use in the past four weeks' or '... past 30 days') of tobacco was recorded

PHARMACEUTICALS

LTP whether lifetime prevalence (e.g. 'use at some time in your life') was recorded for some or all specified pharmaceuticals

LYP whether last-year prevalence (e.g. 'last twelve months') was recorded for some or all specified pharmaceuticals

LMP whether last-month prevalence (e.g. 'use in the past four weeks' or 'last 30 days') was recorded for some or all specified pharmaceuticals

Table 3.3 Frequency of Illicit Drug Use

		Frequency of Illicit Drug Use		
Country	Year	Lifetime	Last Year	Last Month
Finland	1992	all ^a	all ^a	all ^a
<i>4 Nordic Countries</i>	1993	no	no	no
France	1995	no	no	no
Germany	1995	all ^a	all ^a	all ^b
Netherlands <i>Amsterdam</i>	1994	all ^c	no	all ^b
United Kingdom <i>England and Wales</i>	1996	no	no	no
United States	1997	all ^b	all ^b	all ^b

^a = number of times

^b = number of days

^c = less or more than 25 times

lifetime frequency whether some measure of frequency of use during respondents 'lifetime was recorded for some or all specified illicit drug(s). The operationalisation of frequency varies enormously (e.g. an exact 'number of times' or a range, an exact 'number of days' or a range, 'more than 25 times', etc).

last-year frequency whether some measure of frequency of use during the past year was recorded for some or all specified illicit drug(s). The operationalisation of frequency varies enormously (e.g. an exact 'number of times' or a range, an exact 'number of days' or a range, 'more than 25 times', etc).

last-month frequency whether some measure of frequency of use during the past month was recorded for some or all specified illicit drug(s). The operationalisation of frequency varies enormously (e.g. an exact 'number of times' or a range, an exact 'number of days' or a range, 'more than 25 times', etc).

Table 3.4 Frequency of Licit Drugs Use

Country/ Year	Frequency of Licit Drug Use											
	Alcohol				Tobacco				Pharmaceuticals			
	Life time	Last Year	Last Month	Other	Life- time	Last Year	Last Month	Other	Life- time	Last Year	Last Month	Other
France (1995)	no	no	no	yes ^h	no	no	no	no	no	no	no	yes ^h
Germany (1995)	no	yes ^a	yes ^c	yes ^d	no	no	yes ^b	no ^e	no	yes ^d	yes ^d	no
Netherlands Amsterdam (1994)	yes ^f	no	yes ^b	no	yes ^f	no	no	no	yes ^f	no	no	no
Finland (1992)	no	no	yes ^a	no	no	no	no	no ^e	yes ^a	no	no	no
4 Nordic Countries (1993)	no	no	no	yes ^g	no	no	no	no	no	no	no	no
United Kingdom England and Wales (1993)	no	no	no	yes ^d	no	no	no	no	no	no	no	no
United States (1997)	no	yes ^b	yes ^b	no	yes ^b	no	yes ^b	no	yes ^b	yes ^b	yes ^b	no

^a = number of times

^b = number of days

^c = both number of times and number of days

^d = average frequency, sometimes referring to a certain period (different operationalisations)

^e = "regular smoker/ occasional smoker/ non-smoker" (not operationalised)

^f = less or more than 25 times

^g = average frequency of beer consumption

^h = number of days last week

ALCOHOL

lifetime frequency

whether some measure of frequency of alcohol use during respondents= lifetime was included. The operationalisation of frequency varies enormously (e.g. an exact >number of times= or a range, an exact >number of days= or a range, >more than 25 times=, etc).

last-year frequency

whether some measure of frequency of alcohol use during the past year was included. The operationalisation of frequency varies enormously (e.g. an exact >number of times= or a range, an exact >number of days= or a range, >more than 25 times=, etc).

last-month frequency

whether some measure of frequency of alcohol use during the past month was included. The operationalisation of frequency varies enormously (e.g. an exact >number of times= or a range, an exact >number of days= or a range, >more than 25 times=, etc).

TOBACCO

lifetime frequency

whether some measure of frequency of tobacco use during respondents= lifetime was included. The operationalisation of frequency varies enormously (e.g. an exact >number of times= or a range, an exact >number of days= or a range, >more than 25 times=, etc).

last-year frequency

whether some measure of frequency of tobacco use during the past year was included. The operationalisation of frequency varies enormously (e.g. an exact >number of times= or a range, an exact >number of days= or a range, >more than 25 times=, etc).

last-month frequency

whether some measure of frequency of tobacco use during the past month was included. The operationalisation of frequency varies enormously (e.g. an exact >number of times= or a range, an exact >number of days= or a range, >more than 25 times=, etc).

PHARMACEUTICALS

lifetime frequency

whether some measure of frequency of use during respondents= lifetime was included for some or all specified pharmaceuticals. The operationalisation of frequency varies enormously (e.g. an exact >number of times= or a range, an exact >number of days= or a range, >more than 25 times=, etc).

last-year frequency

whether some measure of frequency of use during the past year was included for some or all specified pharmaceuticals. The operationalisation of frequency varies enormously (e.g. an exact >number of times= or a range, an exact >number of days= or a range, >more than 25 times=, etc).

last-month frequency

whether some measure of frequency of use during the past month was included for some or all specified pharmaceuticals. The operationalisation of frequency varies enormously (e.g. an exact >number of times= or a range, an exact >number of days= or a range, >more than 25 times=, etc).

Table 3.5 Quantity of Drug Use

Country	Year	Quantity of Drug Use Last Month									
		Cannabis	Ecstasy	Cocaine	Heroin	Amphetamines	LSD	Other illicit	Alcohol	Tobacco-	Pharmaceuticals
Finland	1992	no	no	no	no	no	no	no	no ^a	no	no
4 Nordic Countries	1993	no	no	no	no	no	no	no	no	no	no
France	1995	no	no	no	no	no	no	no	yes ⁱ	yes ^f	no
Germany	1995	no	no	no	no	no	no	no	yes ^b	yes ^c	no
Netherlands Amsterdam	1994	no	no	no	no	no	no	no	yes ^d	no	no
United Kingdom England and Wales	1996	no	no	no	no	no	no	no	no ^g	no	no
United States	1997	no ^h	no ^h	no ^h	no ^h	no ^h	no ^h	no ^h	yes ^{e h}	yes ^{f h}	no ^h

^a = number of times being drunk on average

^b = average number of drinks on the days you drink alcohol last month

^c = average number of cigarettes per day last month

^d = 6 or more alcoholic drinks in one day during the last 6 months; number of times 6 or more alcoholic drinks in one day last 6 months; average number of glasses alcohol per day recently only

^e = number of alcoholic drinks on days you drank last month; number of days 5 or more alcoholic drinks on the same occasion last month

^f = average number of cigarettes per day

^g = only average number of drinks on the days you drink alcohol

^h = used more often or in large amounts (yes, no)

ⁱ = number of glasses yesterday

ILLICIT DRUGS

whether some measure of quantity of use during the past month was included for some or all specified illicit drug(s)

LICIT DRUGS

alcohol

whether some measure of quantity of alcohol use during the past month was included. The operationalisation of quantity varies (e.g. an exact 'number of glasses' or a range, 'seven days', 'on average', 'number of days you drank 6 or more alcoholic drinks in the past month', etc).

tobacco

whether some measure of quantity of tobacco use during the past month was included. The operationalisation of quantity varies (e.g. an exact 'number of cigarettes' or a range, 'usually', etc).

pharmaceuticals

whether some measure of quantity of pharmaceuticals use during the past month was included

Table 3.6 Other Items Related to Illicit Drug Use

Country	Year	Age of Onset	Multiple Drug Use	Injecting	Availability	Health Effects of Use
Finland	1992	some ^a	no ^b	yes ^c	yes	yes
4 Nordic Countries	1993	no	no	no	no	no
France	1995	no	no	no	yes ^k	no
Germany	1995	all	no	yes ^d	yes	yes
Netherlands Amsterdam	1994	all	yes ^e	yes ^f	no	no
United Kingdom England and Wales	1996	no	no	yes ^g	no	no
United States	1997	all	no	yes ^h	yes ⁱ	yes ^j

^a = “some drug” (both first time and regularly)

^b = only medicine use in relation to alcohol use

^c = sometimes used drug intravenously and injecting for each substance

^d = heroin and cocaine (life time and last month)

^e = multiple *simultaneous* drug use, specified for each substances

^f = all illicit drugs and pharmaceuticals except for cannabis, cocaine, inhalants

^g = any drug not prescribed by a doctor (not specified)

^h = any drug not prescribed by a doctor, cocaine, heroin, (any) stimulant

ⁱ = for marijuana, LSD, cocaine, crack, heroin

^j = for each substance

^k = only “have you been proposed a drug?”, “what kind of drug?”

age of onset

whether the age of first use of some or all specified licit and illicit drugs was included

multiple drug use

whether the use of more than one licit and/or illicit drug (some or all) during a certain period was included as one or more separate questions, either as multiple drug use on different occasions or on the same occasion (multiple *simultaneous* use)

injecting

whether the injecting of some or all specified illicit drug(s) during a certain period was recorded

availability

whether the availability of illicit drugs was recorded in some way

health effects of use

whether the effects of illicit drug use on respondents’ health were recorded in some way

Table 3.7 Attributes

Country/ Year	Sociodemographic				Socioeconomic		
	Age	Gender	Household type	Ethnicity	Level of education	Employment status	Income
Finland (1992)	yes	yes	yes	no	yes	yes	yes ^e
4 Nordic Countries (1993)	yes ^a	yes	no	no	yes ^c	no	yes ^e
France (1995)	yes ^a	yes	yes	no ^b	yes	yes	yes ^d
Germany (1995)	yes ^a	yes	yes	no ^b	yes	yes	yes ^d
Netherlands (1994) Amsterdam	yes ^a	yes	yes	yes	yes	yes	yes ^f
United Kingdom (1996) England and Wales	yes	yes	yes	yes	yes	yes	yes ^d
United States (1997)	yes ^a	yes	yes	yes	yes	yes	yes ^f

^a = year/date of birth

^b = only nationality

^c = total number of school/study years and completion secondary-level or academic degree

^d = household/family income

^e = personal income

^f = both household/family income and personal income

SOCIODEMOGRAPHIC ITEMS

<i>age</i>	whether age was recorded, either in years of age or as date of birth
<i>gender</i>	whether gender was recorded, either as a question or as attributed by the interviewer
<i>household type</i>	whether household composition was recorded in some way (at least the position of all household members within the household)
<i>ethnicity</i>	whether ethnic origin was somehow included as a question (other than nationality only)

SOCIOECONOMIC ITEMS

<i>level of education</i>	whether the highest level of education completed by the respondent was recorded in some way
<i>employment status</i>	whether the employment status of the respondent was recorded in some way
<i>income</i>	whether personal income and/or household/family income was recorded in some way

Table 3.8 Environment

Country Year	Residential Characteristics	Confrontation	
		personal >knowing drug users=	neighbourhood >seeing drug users=
Finland (1992)	number of inhabitants typology of places	yes	yes ^b
4 Nordic Countries (1993)	number of inhabitants typology of places	yes	no
France (1995)	number of inhabitants	no	no
Germany (1995)	number of inhabitants typology of residential area	yes	no
Netherlands (1994) Amsterdam	duration of residence plans to move	yes ^a	no
United Kingdom (1996) England and Wales	duration of residence	no	yes
United States (1997)	plans to move	yes	no

^a = one of the parents, siblings, children ever used cannabis

^b = several problems related to drugs in one's own residential area

RESIDENTIAL CHARACTERISTICS

whether residential characteristics were recorded in some way

CONFRONTATION

personal ('knowing drug users')

whether personal acquaintance with users of an illicit drug (e.g. family, friends, colleagues) was recorded

neighbourhood ('seeing drug users')

whether the seeing or observing of users of an illicit drug in one's own neighbourhood was recorded in some way

Table 3.9 Attitudes and Opinions

		ATTITUDES and OPINIONS				
		Risk Perception		Opinion	Opinion Drug Policy	
Country	Year	health	social	drug addicts	legal status	interventions
Finland	1992	yes	yes	yes	yes	yes
4 Nordic Countries	1993	yes	yes	yes	yes	yes
France	1995	yes	no	yes	yes	yes
Germany	1995	yes	yes	no	yes	yes
Netherlands Amsterdam	1994	no	no	no	no	no
United Kingdom England and Wales	1993	no	no	no	no	no
United States	1997	yes	no	no	no	no

RISK PERCEPTION

health whether perception of general physical and/or mental health risks of the use of one or more illicit drugs was recorded in some way (e.g. 'harm caused by illicit drugs', 'addictiveness of illicit drugs')

social whether perception of general social risks from the use of one or more illicit drugs was recorded in some way (e.g. for home life, social network, employment)

OPINION

drug addicts whether respondents' general opinions or attitudes about drug addicts were recorded (e.g. 'do you regard drug addicts as criminals or victims?')

OPINION ON DRUG POLICY

legal status whether respondents' opinions were recorded about drug policy as it pertains to the legal status of drugs (e.g. opinions on criminalisation vs decriminalisation, punishments, legalisation)

interventions whether respondents' opinions were recorded about drug policy as it pertains to interventions (e.g. opinion on care and treatment policies for drug addicts, prevention and education policies aimed at drug use)

Table 3.10: Lifestyle

		Lifestyle	
Country	Year	Entertainment	Social Contacts
Finland	1992	yes	yes
<i>4 Nordic Countries</i>	1993	no	no
France	1995	yes	yes
Germany	1995	no	no
Netherlands Amsterdam	1994	yes	yes
United Kingdom England and Wales	1996	yes	no
United States	1997	no	no

LIFE STYLE

entertainment

whether frequency of evening entertainment outside the home was recorded, either specifically or generally (e.g. 'number of evenings you visited a dance club last month', 'number of evenings usually spent at home')

social contacts

whether frequency of social contact was recorded in some way (e.g. 'number of friends', 'number of times you saw relatives outside your home last month')

CHAPTER 4

REPORTING AND ANALYSIS IN SELECTED SURVEYS

4.1 Introduction

The previous chapter has reviewed the items and questions contained the questionnaires of European and North American general population surveys on drug use. We will now go on to investigate how such items are used in statistical analyses and how the findings are reported. We should stress once again that not all questionnaires from recent European surveys have been included here. Our analysis is based mainly on English-language publications, supplemented by some French, German and Dutch ones. We believe these represent a suitable cross-section of national general population surveys in Europe and the USA.

After briefly reviewing the studies selected for this chapter, we will first investigate how drug use is reported and analysed - prevalence of use, patterns and frequency of use (in terms of concepts such as drug career and continuation) and trends in drug consumption. We will then examine how other variables are incorporated into the statistical analyses and how findings are reported; our criteria here are whether such variables are dealt with in their relation to drug use. We also take note of which variables are *not* included. In the third section we will view the level of analysis from a meta perspective: are findings merely reported descriptively or do the studies also have exploratory or explanatory value?

4.2 Studies Examined

Our first selection of studies for this chapter was made from the perspective of *trends* in drug use. Several series of surveys were chosen in which the prevalence of drug use was measured in successive years with the same methodology. Since not all studies were encountered that satisfied this criterion, some recent single studies were also selected, for a total of 18 studies: 12 reports, 2 book chapters, 3 scholarly articles and 1 conference paper. They reported on general population surveys in 9 countries, conducted between 1987 and 1996. For the Netherlands, we employed studies on Amsterdam, the only Dutch city for which a series of general population surveys is available³ (Table 4.1).

Questionnaires in ongoing surveys sometimes undergo modifications in the course of time (Chapter 3), and the analysis and reporting may also change as new

³ The Amsterdam questionnaire, frame of analysis and reporting design have now served as a model for a recently initiated nationwide general population survey.

concepts are introduced or new methods applied. We will make note only of the more substantial alterations⁴

Table 4.1
Publications on General Population Surveys in Eight European Countries and the USA

Country	Year of survey	Age of respondents	Publication	
			Author(s)	Kind
Finland	1992	18-74	Kontula (1995)	article in journal
4 Nordic Countries: Denmark Finland Norway Sweden	1994 1993 1993 1995	19-70 18-69 19-70 18-69	Hakkarainen et al. (1996)	chapter in book
France	1992 1995/96	18-75 18-75	Baudier et al. (eds.) (1993) Baudier and Arènes (eds.) (1997)	report report
Germany	1994 1995	18-59 18-59	Herbst et al. (1995) Herbst et al. (1996)	report report
Netherlands Amsterdam	1987 1990 1994	12+ 12+ 12+	Sandwijk et al. (1988) Sandwijk et al. (1991) Sandwijk et al. (1995) Cohen (1995)	report report report conference paper
United Kingdom <i>ENGLAND AND WALES</i>	1994 1996	16-59 16-59	Ramsay and Percy (1996) Ramsay and Percy (1997) Ramsay and Spiller (1997)	report article in journal report
United States	1993 1994 1995 1996	12+ 12+ 12+ 12+	Harrison (1995) Harrison et al. (1996) SAMHSA (1996b) SAMHSA (1996a) SAMHSA (1997)	article in journal chapter in book report report report

4.3 Reporting on Illicit Drugs

4.3.1 Prevalence

The most common indicators of illicit drug use are *lifetime prevalence* (LTP), *last-year prevalence* (LYP) and *last-month prevalence* (LMP) (Table 4-2). Most publications report all three, although one report concludes that, because of the low number of users among respondents, sometimes only LTP makes sense, especially for heroin (SAMHSA, 1996b). Some report only one or two of them. One study even reports 6-month prevalence. The 1994 and 1996 reports for England and Wales use different prevalence indicators, with LYP not reported in detail for 1994. The authors concentrate on LTP and LMP to achieve a maximum contrast between the larger group of ever-users (those with LTP), comprised

⁴ Both the British Crime Survey (BCS) and the US National Household Surveys on Drug Abuse began applying new methodologies in 1994. Since the US data from preceding years have been adjusted for these changes, comparison over time is possible. Such is not the case for the 1992 BCS data, which have therefore been omitted from our overview. The 1996 Finnish survey has been omitted, because the results have been published only in Finnish. The French Baromètre Santé 95/96 adultes compares its results with those of 1992. The results of the 1993/94 survey have not been included in this analysis, mainly because lifetime prevalence of illicit drug use was not asked for.

mostly of occasional users, and the group of last-month users (LMP), who are predominantly regular users (Ramsay and Percy, 1996: 11)⁵. In the Finnish article, prevalences of cannabis and ‘hard drugs’ are reported, but the analysis confines itself largely to cannabis and ‘some drug’.

In addition to illicit drugs, at least some prevalences of *licit drugs* are included (Table 4.2). Alcohol use is commonly reported, but usually not the different kinds of drinks (beer, wine, spirits). Prevalence of pharmaceuticals / medical drugs is often reported too, usually differentiated between those with and without prescription. Tobacco use is less commonly reported. From our perspective, the question is not so much which prevalences are reported, but to what extent and in what ways they figure in the analysis.

Table 4.2
Reported Prevalence Measures of Illicit Drugs and Number of Substances

Country	Prevalence measures of illicit drugs			Substances (number of items)			
	LTP	LYP	LMP	alcohol	tobacco	pharmaceuticals	illicit drugs
Finland	yes	yes	yes	1	no	3	2
4 Nordic Countries	yes ^a	no	no	no	no	no	2
France	yes	yes	no	1	1	1	7
Germany	yes	yes	yes	3	1	6 ^b	9-10
Netherlands Amsterdam	yes	yes	yes	1	1	3-5	8
United Kingdom England and Wales	yes	yes ^c	yes	1	no	2 ^b	15
United States	yes	yes	yes	1	2	1-4 ^b	6

^a = LTP and 6-months prevalence of cannabis; LTP of amphetamine, cocaine and heroin

^b = not prescribed by a doctor

^c = not reported in detail for 1994

The *number of illicit drugs* dealt with varies from 2 to 15. All studies differentiate between cannabis and other illicit drugs. The Finnish and Nordic reports distinguish only between cannabis and ‘hard drugs’. The remaining countries report the prevalence rates for all the different illicit drugs on their questionnaires. Unlike the wordings in the questionnaires, ‘cannabis’ is the most common term used in the publications for hashish and marijuana, but the French publications use the term ‘*haschich*’ and American reports speak of ‘marijuana’. Other illicit drugs are commonly categorised as ‘hard drugs’ (‘difficult drugs’ in the Dutch reports).

⁵ The 1994 BCS report does furnish basic LYP tables, and in the last chapter LYP is used in a multivariate analysis.

Sometimes the prevalence of 'hard drugs' is reported as a single category, or prevalence is even reported as cannabis versus 'any drug' (including cannabis).

Many publications include *estimates* of numbers of users - either ever-users, last-year users or last-month users. Some estimates are for specific substances, others distinguish cannabis users from hard-drug users; some refer to numbers of people taking any illicit drug, sometimes specified for the number of times they took them. Confidence intervals (lower and upper limits of estimates) are seldom provided. Applied terminology is also inconsistent. The term 'user' may refer to different time spans (lifetime, year, month), and 'current user' may refer either to someone who took a given drug in the past 12 months or in the past 30 days.

4.3.2. Drug careers and patterns of use

Drug careers can be measured in a number of ways, including age of onset (age at first use) and duration of drug use. Frequency of use can be employed as an indicator of either drug careers or patterns of use. Other indicators of drug use patterns are quantity, multiple drug use and routes of administration.

Reporting on *drug careers and patterns of use* is neither common nor standardised. It is by no means common practice to report *age of onset* or duration of use (nor is such data always recorded, see Chapter 3) (Table 4.4).

Frequency of use is not always reported either, and there is no standard way of expressing it - some publications provide lifetime, last-year and last-month frequencies, while others give lifetime and last-year frequency, or only one of the three (Table 4.3). This inconsistency in frequency measures forms a major complication in cross-national comparison. Not only do the reported frequencies differ in terms of duration of drug use (lifetime, year, month). Some surveys record the number of *times* a drug was used, while others record the number of *days* it was used on. The categories applied for this are likewise unstandardised - for example, 'up to 10 times' versus 'more than 10 times', 'lifetime' and 'in the past year' (Finland), 'up to 25 times' versus 'more than 25 times', 'lifetime' and 'number of days (5 categories) in past month' (Netherlands).

The *quantity* of illicit drugs taken in a given period is not reported in any of the studies analysed; quantities of alcohol or tobacco are sometimes given.

Some studies also report on continuation and discontinuation. Such rates give some general insights into drug careers. They are calculated by a simple arithmetical technique, combining LTP with LYP or LMP. *Recent continuation rate* can be defined as the proportion of respondents reporting lifetime use of a drug who also report last-year use of it; *recent discontinuation rate* is the proportion of respondents reporting lifetime use but *not* last-year use. (The latter could be defined as quitters.) *Current continuation rate* can be defined as the proportion with lifetime use of a drug who also report last-month use, and *current discontinuation rate* as the proportion reporting lifetime use but not last-month use. (We might define the latter as 'potential quitters'.)

Table 4.3
Reported Frequency and Quantity of Drug Use

Country	Frequency of Illicit Drug Use			Quantity of Licit and Illicit Drug Use
	Life Time	Last Year	Last Month	
Finland	yes	no	no	no
4 Nordic Countries	no	no	no	no
France	no	no	no	alc, tob
Germany	yes	yes	yes	alc
Netherlands Amsterdam	yes	no	yes	alc
United Kingdom England and Wales	no	no	no	no
United States	yes	no	yes	alc, tob

In the Dutch surveys, all four of these rates are reported for various drugs (Table 4.4). In Germany only the recent continuation/discontinuation rates are reported for cannabis and ecstasy. In the Finnish and the English/Welsh studies, continuation rates are used which are different from those just defined. ‘Continuation’ refers there to the proportion of last-year users who also reported last-month use. Since in this case continuation/discontinuation rates predominantly measure differences within the group of recent users, they can better be taken as indicators as *patterns* of drug use than of drug careers.

Multiple drug use - the use of more than one substance within a given period of time - is reported in several publications for both LTP and LMP, and sometimes for LYP as well. Some studies include a variety of licit and illicit drugs in this analysis, while others focus on the multiple use of different licit drugs (alcohol and pharmaceuticals), of licit drugs with cannabis, or of cannabis with other illicit drugs. Though such data do show how many illicit drugs have been taken by respondents in the course of a certain time period, they do not reveal how often the substances have been *combined on one occasion*. Only the Dutch studies report *multiple simultaneous drug use* in the past year. *Routes of administration* (e.g. oral, nasal, intravenous) are rarely reported.

Table 4.4
Other Aspects Related to Illicit Drug Use Reported

Country	(Dis)continuation of use	Age of Onset	Multiple Drug Use	Multiple Simultaneous Drug Use	Routes of Administration of Illicit Drugs
Finland	yes	yes	alc+med can+'hard drugs' ^a	no	yes
4 Nordic countries	no	no	can+alc ^b	no	no
France	no	no	drug+alc/tob/med ^c	no	no
Germany	yes	no	yes	no	no
Netherlands Amsterdam	yes	yes	yes	yes ^a	yes
United Kingdom England and Wales	yes	no	yes ^d	no	yes
United States	no	yes	yes	no	yes

^a = LYP

^b = cannabis (LTP) and frequency of beer (year/month/week)

^c = LTP

^d = LTP and LMP

4.3.3 Trends in drug use

For several years now, general population surveys with uniform methodologies have been carried out in England and Wales, France, Germany, the Netherlands, and the United States. In theory these should enable us to analyse trends in drug use. The French 1995 survey compares several results with those of 1992⁶. The American figures cover the longest period of time. The *Main Findings 1994* record trends in LTP, LYP and LMP for 12 licit and illicit drugs (or drug categories) in four age groups from 1979 onwards. The *Preliminary Results 1996* identify trends in LYP and LMP for 'any illicit drug', as well as for cannabis and cocaine, among the youngest age group. The Dutch figures cover a shorter period, 1987-1994; similarly to the American publications, they reflect trends in LTP, LYP and LMP for licit and illicit drugs, continuation rates and age of onset (per age group and per cohort). In the British Crime Surveys LTP is defined as the "crucial indicator" for measuring change,⁷ and developments over time are described for 'any drug' as well as for 'hallucinants' or 'dance drugs' (some hallucinogenic and stimulant drugs) among the cohorts aged 16-19 and 16-29. Because the 1994 German survey was conducted by telephone and the one in 1995 by dropping-off questionnaires at the respondents' addresses the results have to be compared cautiously.

⁶ In accordance with the analysis in the French Baromètre Santé adultes 95/96, results of the 1993/1994 survey are omitted in our analysis.

⁷ The British Crime Surveys of 1994 and 1996 are practically uniform, but their methodology differs from that in the 1992 survey.

In many of the countries examined, attempts have been made to analyse trends from the eighties onwards on the basis of different surveys, allowing for regional variations and differences in survey methods and target populations. Prevalence rates have been compared to those found in earlier surveys carried out on different target populations (such as students or regions).

4.4 Characteristics Related to Drug Use

Other respondent characteristics found in the publications studied here are sociodemographic, socioeconomic and geographical variables. To a lesser extent, data on health, leisure behaviour, and opinions on and attitudes towards drugs and drug policy are reported. The reports from the USA, England and Wales, and the Netherlands are the most comprehensive with regard to these aspects. Tables 4-5, 4-6, and 4-7 show which demographic, socioeconomic and geographical variables were reported in their relationship to illicit drug use.

4.4.1 Sociodemographic variables

As standard practice, illicit drug use is reported for different *age* categories and for males and females separately, but *gender* differences are sometimes only mentioned in the sidelines (Table 4-5). Age is commonly treated as the most basic characteristic, but the age categories that are reported vary. Type of household, ethnic background and marital status are occasionally included, but religion only rarely.

Table 4.5
Sociodemographic Characteristics Reported in Relation to Illicit Drug Use

Country	Age	Gender	Marital Status	Type of Household	Ethnicity	Religion
Finland	yes	yes	yes	no	no	yes
4 Nordic countries	yes	yes	no	no	no	no
France	yes	yes	no ^a	no	no	yes
Germany	yes	yes	no	no	no	no
Netherlands Amsterdam	yes	yes	no	yes	yes	no
United Kingdom England and Wales	yes	yes	yes	yes	yes	no
United States	yes	yes	no	no	yes	no

^a = whether divorced or not is reported

4.4.2 Socioeconomic variables

It is rather common to report illicit drug use in relation to *level of education*, *employment status* and *level of income*. However, the categories applied vary widely between countries (Table 4.6).

Table 4.6
Socioeconomic Characteristics Reported in Relation to Illicit Drug Use

Country	Level of Education	Employment Status	Level of Income
Finland	yes	yes	yes ^a
4 Nordic countries	yes	no	yes ^a
France	yes	yes	no
Germany	no	no	no
Netherlands Amsterdam	yes	yes	yes ^b
United Kingdom England and Wales	yes	yes	yes ^b
United States	yes	yes	yes ^b

^a = personal income

^b = household income

4.4.3 Geographical variables

Region is a variable not usually included in the analyses (Table 4.7). Those regions that are included reflect national situations, and are thus not applicable as categories for cross-national comparison. German studies report prevalence rates for Western and Eastern Germany separately; England and Wales are divided into five regions (London, South, Wales, North, and Midlands); and the USA is divided into four regions (Northeast, North Central, South and West). Not all reports include level of urbanisation or *population density* in the analyses. *Type of neighbourhood* is included only occasionally. The British Crime Survey is the only study that systematically employs a ‘classification of residential neighbourhoods’.

Table 4.7
Geographic Characteristics Reported in Relation to Illicit Drug Use

Country	Region	Population Density	Neighbourhood
Finland	no	yes	no
4 Nordic countries	no	yes	no
France	no	yes	no
Germany	yes	no	no
Netherlands <i>Amsterdam</i>	no ^a	no ^a	yes ^b
United Kingdom <i>England and Wales</i>	yes	no ^c	yes
United States	yes	yes	no

^a = data only refer to a local situation (Amsterdam)

^b = only applied in one publication (Sandwijk et al., 1988)

^c = only indirectly, via A Classification Of Residential Neighbourhoods (ACORN)

4.4.4 Subgroups and types of users

All publications differentiate between users and non-users of illicit drugs - sometimes on LTP, LYP or LMP only, in other cases on all three - and compare their sociodemographic and socioeconomic characteristics. Some differentiate these in greater detail, in terms of frequency of use (experimental versus frequent) or types of drugs (e.g. cannabis, hallucinogens, opiates). Typologies that combine prevalence with other characteristics are uncommon, however. In Finland, the group designated as 'sometimes experimented with drugs' is compared to those who 'used more than ten times' (LTP). The Dutch studies distinguish 'continuers' and 'experienced users' from other (ever-)users (Table 4.8).

Questions on the quantities of drugs consumed during a certain period (usually the past month) are mainly asked to measure 'excessive' or 'problematic' use (abuse, misuse). However, in the analyses this indicator is only applied to American, German, French and Dutch survey data, and then only to alcohol and tobacco (to distinguish light and heavy drinkers or smokers) (see also Table 4.3).

Typologies based on prevalence in combination with other variables are explicitly put forward only in the reports on England/Wales and the Netherlands (Table 4-8). The Dutch respondents are distinguished into twelve lifestyle types. For England and Wales multivariate analysis has been applied to the respondents aged 16 to 29 ('transitional models', 16-19 years; 'maturation models', 20-29 years). Three dependent variables ('response variables') were entered into the analysis (based on LYP: cannabis; 'dance drugs'; heroin, cocaine, crack and methadone).

Table 4.8
Subgroups of Illicit Drug Users Reported

Country	Types of users	Criteria
Finland	experimental/ 2-10x/ >10x	LTP, LYP, LMP
4 Nordic countries	users/ non-users	LYP
France	users/ non-users	LTP, LYP
Germany	experienced/ non-experienced	LTP
Netherlands Amsterdam	users/ non-users 12 lifestyle types	LTP, LYP, LMP lifestyle' and LTP, LYP, LMP
United Kingdom England and Wales	cannabis/ hallucigenics/ opiate users transitional and maturation models	LYP 'predictors variables' and LYP
United States	4 age groups; heavy (binge) drinkers / heavy smokers; LMP illicit drugs	age; frequency + amount alcohol and cigarettes; LMP illicit drugs

The vast majority of the other variables - socioeconomic variables, 'lifestyle variables' such as entertainment, heavy alcohol use, health were entered as 'predictor variables'. In the American reports, prevalence and independent variables or predictors have been used in multivariate analyses of four age groups to construct consumption profiles.

4.4.5 Lifestyle

Only in a few studies - the statistically constructed - variable 'lifestyle' is reported; those on the Netherlands and England/Wales have done so in the greatest depth (Table 4.9). The Dutch variable consists of twelve lifestyle types, constructed on three basic dimensions - household, socioeconomic and entertainment (visiting dance clubs and cafés). These lifestyle types are compared to the last-year use of five types of licit or illicit drugs. In the British publications, lifestyle (social activity patterns, in particular the frequency of visits to pubs, clubs and bars in the past month) is compared to LYP of illicit drugs and to 'heavy alcohol consumption'. In Finland, lifestyle is measured by means of several variables, including mobility, entertainment, marital status and 'importance of religion in daily life'. In the 1995 French report, life style is also presented, but in practice the report describes the variation in drug use explained by different individual characteristics from logistic regression analysis (e.g. sociodemographic and socioeconomic characteristics, level of urbanisation, change of job, religion, smoking). However, entertainment is not reported. Sometimes the concept of lifestyle is introduced without any specific operationalisation. In the Nordic study, the authors conclude that *"taking part in urban amusements on a weekly basis"* is linked to a lifetime prevalence of cannabis, and that *"experimenting with drugs is*

an element of adventurous lifestyles of urban city culture” (Hakkarainen et al., 1996: 140).⁸

Table 4.9
Lifestyle Characteristics Reported in Relation to Illicit Drug Use

Country	Entertainment	Social contacts	Other
Finland	yes	no	yes
4 Nordic countries	no	no	no
France	no	no	yes
Germany	no	no	no
Netherlands Amsterdam	yes	yes ^a	yes
United Kingdom England and Wales	yes	no	no
United States	no	no	no

^a = only reported for one year

4.4.6 Health

Data on health conditions are not systematically included in the analyses, and when they are, very different indicators are used (Table 4.10). In England/Wales and France, health is measured by respondents’ assessment of their own health status. The British 1994 publication reports also illicit drug use in relation to self-reported disability and the 1996 French report differentiates between physical and psychological health. In the Dutch series, health is included only once, measured by a standardised multipurpose general health questionnaire (SF-36 Health Survey). In Germany, Finland and the USA, prevalence of illicit drug use is analysed in relation to physical, psychological and social effects. Contacts with drug care services and treatment facilities are sometimes included as well.

⁸ The empirical basis of these conclusions remains unclear. The questionnaire in the publication includes no questions on entertainment behaviour. The term lifestyle is first used in a correlation between cannabis LTP and frequency of beer consumption.

Table 4.10
Health Characteristics Reported in Relation to Illicit Drug Use

Country	General	Effects of Use	Drug Care/treatment
Finland	yes	yes	yes
<i>4 Nordic countries</i>	no	no	no
France	yes	no	no
Germany	no	yes	yes ^a
Netherlands <i>Amsterdam</i>	yes ^a	no	yes
United Kingdom <i>England and Wales</i>	yes	no	no
United States	yes	yes	yes

^a = only reported for one year

4.4.7 Availability

Only the reports from Germany provide evidence on the relationship between availability of illicit drugs (impossible/difficult/easy to acquire) and the lifetime prevalences of various drugs (Table 4.11).

Table 4.11
Availability, Attitudes and Opinions Characteristics Reported in Relation to Illicit Drug Use

Country	Availability	Attitudes and opinions		
		Perception of harm	Users	Policy
Finland	no	no	no	no
<i>4 Nordic countries</i>	no	yes	yes	yes
France	no	yes	yes	yes
Germany	yes	yes	yes	yes
Netherlands <i>Amsterdam</i>	no	no	no	no
United Kingdom <i>England and Wales</i>	no	no	no	no
United States	no	no	no	no

4.4.8 Attitudes and opinions

Some publications also investigate how attitudes or opinions concerning drugs are associated with prevalence (Table 4.11). In one of the American reports, trends in risk perception (hazardousness of drugs) are shown to be related to trends in prevalence (SAMHSA, 1997; see also Harrison, 1997). This conclusion applies solely to general trends, however, and not to the correlation between risk perception and illicit drug use at an individual level. Attitudes and opinions are reported quite extensively for France, Germany and the Nordic countries, but are not always included in detail in the analysis of drug use prevalence.

4.4.9 Data not used for analysis

Not all of the data collected in the surveys are actually reported or analysed. Some sociodemographic or socioeconomic variables had been included in the questionnaires primarily or exclusively to test the statistical representativeness of the sample, and to be employed, if necessary, in a weighting procedure to enhance representativeness. Questions may have been added to questionnaires for other purposes as well (such as cost-effectiveness), and have hence not been compared to prevalence and reported on specifically. In other cases, variables may have been analysed and reported in separate publications not included in our review.

The publications on England and Wales, the Netherlands, the Nordic countries and the USA do cover most of the data collected. The variables that have been omitted are disparate, and so are those in the other studies that have omitted many more variables from their analyses. For instance, the reports the German surveys omit a good many sociodemographic and socioeconomic variables, such as type of household, level of education and employment status. Most studies fail to analyse and report results on drug availability, health, attitudes and opinions in relationship with drug use.

4.5 Levels of Analysis: descriptive, exploratory and explanatory qualities

Most of the publications reviewed are predominantly descriptive. In this respect, reports on drug use prevalence are no different from many other self-report studies in the fields of social epidemiology and criminology (such as victimisation surveys). Publications can be purely descriptive, simply reporting the prevalence rates found in the survey, or rather more analytic, deriving prevalence rates for different simple categories of respondents (such as age and gender). Of a still more analytic character are those studies that apply multivariate techniques and analyse trends in drug use over time and differences between cohorts. From a more qualitative perspective, the analytic potential of a study is enhanced by the introduction of concepts like continuation, career and lifestyle, and by the construction of typologies. Such concepts are primarily exploratory, but sometimes explanatory. In both cases, the interpretations of the findings can result in hypotheses and theories. At the traditionally highest level of analysis, the studies test hypotheses deduced from theories.

4.5.1 Prevalence and patterns of use

The study on the four Nordic countries is rather descriptive, except for describing differences in prevalence rates between countries and comparing cannabis use to beer consumption. The 1995 French study is more analytical, but here the analysis of patterns of use is limited to comparisons with 1992 and comparing drug use to both alcohol and tobacco use. Although the American and German reports are also highly descriptive, they do make use of analytic concepts (patterns of use, continuation) and they identify and discuss trends in prevalence over time. Especially the American publications are characterised by detailed longitudinal presentations of prevalence rates, multiple drug use and age of onset.

From an explanatory perspective, the other publications go a step further, as illustrated by the application of concepts such as ‘experimental’ and ‘regular’ use⁹ and ‘continuers’ versus ‘quitters’. Authors may show themselves self-critical about such concepts: “*There is a clear risk that this latter type of use (LTP in the absence of LYP or LMP) can tip over into more persistent use, on a monthly basis*” (Ramsay and Percy, 1996: x). The Finnish article gives some ad hoc interpretations of the relatively low prevalence rates in Finland. “*A potential and important explanation (for) this is the fact that the number of economically and socially deprived has been fairly small, at least so far, due to adequate social welfare.... Another possible explanation is the meaning of the Finnish intoxicant culture which aims at drunkenness*” (Kontula, 1995: 1063).

The publications on the general population surveys in England and Wales and in the Netherlands contain the greatest number of conceptual and explanatory elements. Although the Dutch reports are similar to the American ones in their descriptive presentation, they differ by proposing many more concepts and interpretations. They critically try to avoid what they perceive as ‘ideologically based’ concepts. For instance, the Dutch reports consistently categorise all illicit drugs other than cannabis as ‘difficult drugs’ (in the sense of difficult to obtain), rather than using the internationally more common term ‘hard drugs’. In general the Dutch reports are more explanatory oriented than the American ones, although to a degree this might be interpreted as being ideologically oriented. One of the major conclusions of the Dutch researchers is that recent and current use of licit and illicit drugs, as well as age of onset, remained rather stable within the time frame studied (1987-1994). They go on to interpret this in terms of the Dutch decriminalisation of cannabis: “*The special position of cannabis, reflected by wide availability and low prices in relation to other drugs, is not reflected in an enormous percentage of (former or present) cannabis users*” (Sandwijk et al., 1995: 126). The Amsterdam prevalence rates for ‘difficult drugs’ in relation to those of cannabis are further interpreted as falsifying the so-called ‘stepping-stone’ or ‘gateway theory’ (Sandwijk et al., 1994: 127-128; Cohen, 1995).

⁹ The Nordic Drug Survey likewise speaks of ‘experimental use’.

Both of the British Crime Survey reports devote much attention to explaining their findings. The drug type 'opiates+' (heroin, methadone, cocaine and crack) is based on a "*social rather than scientific or medical classification*" and, with reference to Parker and Kirby (1996), applies mainly to "*habitual misusers*" (Ramsay and Spiller, 1997: 15). This drug type is very different from cannabis - the most widely used illicit drug - in that the latter is not injected and its use is not associated with property crime by dependent users, as is the case with heroin. According to the researchers, it would be difficult to verify that the level of recent and current crack use comes close to that of heroin - as was concluded by Parker and Bottomly (1996) from a Manchester field study - or that crack tends to be used only occasionally as a supplement to heroin, as found in a Home Office (1997) study in Leicester (Ramsay and Spiller, 1997: 12-14). The British Crime Survey reports also provide detailed analyses of trends in prevalence (for 1994-1996). They conclude that levels of use are rather stable, since no statistically significant increase is evident (Ramsay and Spiller, 1997: 29-31). Like the Dutch publications, the reports on England and Wales criticise the traditional view of cannabis as a 'gateway drug'. (Ramsay and Spiller, 1997: 15). The researchers argue that today's use of 'dance drugs' can be explained in large part by the 'rave culture', despite Power's (1995) finding that these drugs are also used in other settings (Ramsay and Percy, 1996: 32; Ramsay and Spiller, 1997: 15). Referring to Parker and Measham's (1994) hypothesis, Ramsay and Percy argue that "*there is a greater tendency for (young people) to 'pick 'n' mix', irrespective of whichever drug they happen to try first*" (1996: 30). On the other hand, the researchers also criticise the idea that cannabis use today has become normalised. "*Once again, this suggests that to talk of the 'normalisation' of drug use is something of an exaggeration*" (1996: 37). First of all, only one out of every seven ever-users is a regular user. Second, the proportion of young people that reports having ever used drugs is no larger than the proportion that reports having ever committed a crime (cf. Graham and Bowling, 1995). Third, young people do not by definition have a positive attitude towards the use of illicit drugs (Shiner and Newburn, 1996) and the majority of them still oppose legalisation (Ramsay and Spiller, 1997: x-xi, 51-52).

4.5.2 Trends

Several publications comment on the overall increase in lifetime prevalence of illicit drug use, cannabis in particular. Most such comments are exclusively descriptive: LTP does not increase among older respondents, who passed adolescence before cannabis use began spreading among the youth in the late sixties. In this context, American publications speak of *aging effects* (the influence that growing older has on the use of illicit drugs), *birth cohort effects* (the influence of the time period one is born in) and *period effects* (temporal influences independent of age) (Harrison, 1997; SAMHSA, 1996b: 20-21). The Dutch and French reports speak of *generation effects* (Sandwijk et al., 1994: 22; Baudier and Arènes, eds. 1997: 163), and the Nordic article refers to *cumulative effects of new birth cohorts* (Hakkarainen et al., 1995: 135-136). Both of the latter concepts are similar to the birth cohort effects just mentioned.

Consistent with American observations (e.g. Harrison, 1997), the publications on England and Wales suggest explanations for the period and cohort effects among 'post-war baby-boomers'. They use an adaptation of the 'Easterlin hypothesis' originally formulated with respect to level of income (Easterlin, 1987): "*The larger the age cohort, the higher the level of psychological and emotional stressors, scarcity of resources and the increased prevalence of drugs*" (Ramsay and Percy, 1996: 70-71).¹⁰ In the Dutch reports, the lower prevalence of tobacco use among older women is explained as an effect of the changing roles of women from the 1950s onwards; no such effect has been identified for illicit drugs (Sandwijk et al., 1987: 36; 1994: 34-35). According to the French researchers, the increase of lifetime prevalence of illicit drug use – while last year prevalence remained rather stable - can possibly be explained by a trend that experimenting with drugs has become more commonplace ("*Cette augmentation peut s'expliquer par une meilleure déclaration liée à une relative banalisation de ce type d'expérience.*") (Baudier and Arènes, eds. 1997: 163).

4.5.3 Sociodemographic variables

With regard to *gender*, the general finding is that males use licit and illicit drugs more than females, except for pharmaceuticals, which are more prevalent among females. One of the British reports points out similarities between gender differences in drug use and those in crime and deviant behaviour in general (Ramsay and Spiller, 1997). The article on the Nordic surveys cites the American researcher Kandel (1993): "*The research evidence shows that gender differences are accentuated with increasing degree of involvement*" (Hakkarainen et al., 1996: 133).

¹⁰ The researchers base themselves on evidence of period and cohort effects found in Menard & Elliot (1990) and Menard & Huizinga (1989).

All publications specify *age* as an important factor: younger respondents tend to have higher drug prevalence rates than older people. Some studies also report that the prevalence of pharmaceuticals is higher among older respondents, and they sometimes refer to several studies by Kandel et al. (1993) that have concluded that illicit drug use is typically a phenomenon among adolescents and young adults. As people grow older, it is superseded by an increasing use of alcohol and pharmaceuticals.¹¹ Given that age differences explain a large share of the variation in prevalence, the American reports describe in detail patterns of use for four different age categories. The British Crime Survey applied multivariate analysis to derive different age-related models: ‘transition models’ for adolescents (16-19 years) and ‘maturation models’ for young adults (20-29 years) (Ramsay and Percy, 1996: 66-67). In most cases, however, age differences are reported in a purely descriptive fashion, perhaps accompanied by a simple interpretation. The predominantly descriptive article on the Nordic countries concludes, for example, that “*in statistical terms, experimenting with cannabis is almost normal behaviour among younger cohorts in Denmark, whereas in other Nordic countries it is still clearly regarded as deviant behaviour*” (Hakkarainen et al., 1995: 160). The reports on the British Crime Survey are an exception, in that their statistical analysis of age in relation to prevalence is embedded in a more explicit theoretical framework (based largely on life course theories). They examine cannabis use in the light of theories linking drug use to other ‘criminal’ behaviour, or to age, such as the maturation reform theory (Ramsay and Percy, 1996: 65-66, 70; Ramsay and Spiller, 1997: 16; the authors refer to Elliot et al., 1989; Farrington, 1986; and Kandel and Logan, 1984). A similar theory on behavioural career (Blumstein et al., 1988), which also takes into account the influence of socioeconomic factors, is contrasted with theories by Gottfredson and Hirschi (1988) and Tittle and Ward (1993). These hold that “*the causes of criminal behaviour - including drug use - do not interact with age, but are constant across life course*” (Ramsay and Percy, 1996: 66).

With regard to *type of household*, the Dutch reports conclude that recent and current use of alcohol, cannabis and other illicit drugs is higher among singles and couples not living with children. Similar findings were made for England and Wales, but only for the single people do the researchers explicitly suggest explanations. Referring to Rutter and Smith (1995), they propose that “*young people today face an extended transitional period between childhood and full adulthood, when they are exposed to a wide range of stresses; ... such stresses may fall more heavily on those who are in some sense ‘single’*” (Ramsay and Percy, 1996: 50). From the results of multivariate analysis for the 20- to 29-year-olds, they conclude further that “*independence may be an important factor in the maintenance of drug use after initial experimentation*” (Ramsay and Percy, 1996: 71). (As a consequence, in the subsequent report on the 1996 survey, the

¹¹ The American Main Findings report (SAMHSA, 1996b: 92) cites a number of studies, including Yamaguchi & Kandel (1984) and Kandel & Yamaguchi (1993); the Finnish article (Kontula, 1995: 1063) cites Kandel, Kazou & Chen (1992); and the Nordic article (Hakkarainen et al., 1995: 134) cites Kandel (1993).

researchers incorporate the finding that most 16- to 29-year-olds are single into their analysis of the relationship between lifestyle and drug use. Ramsay and Spiller, 1997: 23).

The possible connection between *ethnicity* and drug use is explored in three of the studies. In view of the complexity of ethnic relations, however, and possibly because of the political sensitivity of the issue, researchers are generally cautious about drawing conclusions. According to American reports, LTP of illicit drugs is generally higher among 'whites', while LYP and LMP are higher among 'blacks'. However, these differences are not explained as directly ethnic ones. Especially in the case of ethnicity, the correlation may not be causal, because ethnicity is often closely interlinked with socioeconomic status, level of education and environmental variables (SAMHSA, 1996b: 7-8, 39-40; the authors refer to Flewelling et al., 1993; Wallace and Backman, 1991). Dutch reports suggest some inductive explanations for the far lower prevalence rates for both licit and illicit drugs found in the Netherlands among ethnic minority groups, notably Turks and Moroccans: there may be less tolerance of women smoking tobacco, and a lower use of alcohol due to Islamic proscriptions (Sandwijk et al., 1995: 34-35, 44). With reference to the lower prevalence of cannabis use found among ethnic minorities (again, the Turkish and Moroccan respondents in particular), they suggest that the cultural background of these groups, both in an agricultural and an anthropological sense, may not foster the use of illicit drugs (Sandwijk et al., 1988: 54). In striking contrast to this, the report on the 1994 survey in England and Wales - the only publication to offer inductive and deductive explanations - cites cultural background as an explanation for a *higher* prevalence of heroin use among Pakistanis and Bangladeshis. Although the researchers stress that the lifetime prevalence rate is only a few per cent and has been derived from a small number of respondents, they cite studies by Siddique (1992) and Patel et al. (1995) that link heroin use to local traditions of growing and taking opium in the countries of origin, via non-injecting routes of administration (Ramsay and Percy, 1996: 57-58). The British Crime Survey includes an ethnic booster sample "*to explore minority ethnic patterns of victimisation, which tend to be higher than those of whites (FitzGerald and Hales, 1996)*" (Ramsay and Percy, 1996: 55; Ramsay and Spiller, 1997: 42). Referring to Silbereisen, Robbins and Rutter (1995), they test the hypothesis that the rate of drug use among younger members of ethnic minority groups who were born and bred in the country of immigration will be higher than the rate among older immigrants. From their empirical findings, they conclude that "*whites have caught up with or rather overtaken Afro-Caribbeans, at least where cannabis and any drug are concerned*" but that this does not hold for heroin and crack cocaine (Ramsay and Percy, 1996: 59; Ramsay and Spiller, 1997: 46).

4.5.4 Socioeconomic variables

Interpretations of links between drug use and *level of education* are mostly descriptive. The studies on Finland and the four Nordic countries found little difference between ever-users and never-users on this point. The reports on England and Wales, the Netherlands and the USA all underline the importance of using more than one prevalence indicator (per drug). Generally speaking, people with more education report higher lifetime illicit drug use, while the less educated report higher recent and current use as well as heavy alcohol use. The article on the four Nordic surveys suggests that experimental cannabis use is more strongly related to age than to education: “...those who had tried cannabis once or more often typically belonged neither to a well educated class nor to school drop-outs, but their schooling was characteristic (of) their generation” (Hakkarainen et al., 1996: 138). The 1994 British Crime Survey report (Ramsay and Percy, 1996: 65) cites findings by Newcomb et al. (1986, 1992) that academic failure can trigger drug use among adolescents, but it warns that this association is not necessarily stable over time (Hawkins et al., 1992).

The reported linkage between drug use and *employment status* is similar to that for level of education, with the less educated being comparable to those not in full-time employment. However, both the Dutch and American reports conclude that current alcohol use is higher among people in full-time employment.

With regard to *level of income*, no relationship was found in the Nordic surveys. The 1994 British Crime Survey showed a U-curve, with higher prevalence rates on the low-income side. This compares to findings by Smith and Browne (1992) that poorer social groups smoke more, but that heavy drinkers are more strongly represented at higher income levels (Ramsay and Spiller, 1997: 18-19). In the light of the 1996 surveys, however, the British researchers later conclude that the differences are small and that “*income is not a powerful differentiator in terms of drug misuse*” (Ramsay and Spiller, 1997: 21). For the Netherlands it has been concluded that level of income has little influence on the probability of experimentation with cannabis (Cohen, 1995). Dutch survey researchers had already observed by the late 1980s that cocaine was no longer a jet-set drug (Sandwijk et al., 1988: 61-62).

The three socioeconomic variables just examined are often interrelated, so inductive and deductive explanations tend to be formulated in terms of the more general concept of ‘socioeconomic status’. The American conclusions remain descriptive in most cases, even if more complex multivariate analyses have been applied. “*Overall, welfare assistance, lack of health insurance, and family income below \$9,000 were associated with the highest past year prevalence on drug use*” (SAMHSA, 1996b: 137, 139). The Dutch reports offer more explanations. The relatively high LTP of cannabis use among higher income groups, as well as the relatively high *current* use of the drug by lower income groups, could possibly be explained by the lower incomes of young people ‘living on the dole’, with

'unemployed lifestyles'; higher income people might have experimented with cannabis as students, but ceased doing so after they found a job. As a rule, though, cannabis use in the Netherlands, especially in Amsterdam, has become diffused throughout society in a process of normalisation (Sandwijk et al., 1994: 52-53). British researchers tested earlier associations found between drug use and poverty, low income and lower social classes (Leitner et al., 1993; Hawkins et al., 1992). For adolescents (aged 16-19) in the UK multivariate analysis verifies such a connection only for 'opiates+' (which include cocaine and crack), and not for other drugs such as cannabis. The researchers explain this weak association by pointing out that most adolescents are still financially dependent on their parents. In the case of young adults (aged 20-29) socioeconomic variables apparently do begin influencing the use of cannabis, hallucinogens and stimulants. Drug use in this age group appears linked to financial problems and unemployment, while "*many traditional adult roles and responsibilities, such as entering the labour market and setting up home with a partner, appear to be associated with abstention from drug use*" (Ramsay and Percy, 1996: 71-73). The report on the 1996 British Crime Survey concludes that "*socio-economic strains and stresses, notably unemployment, do make a difference to drug prevalence patterns, but are still only part of a wider picture*" (Ramsay and Spiller, 1997: 23) - whereby this wider picture might be understood as 'lifestyles'.

4.5.5 Geographical variables

In cases where *region* is included in the studies, analysis is mainly restricted to describing differences in prevalence rates between regions. In Germany, relations between prevalence and many other variables are described for Western and Eastern Germany separately, but any regional differences are not explained. The 1997 British report observes that the rather stable prevalence rates from 1994 to 1996 are to an extent artificial, since the differences between the relatively high prevalence rates in one region (Greater London) and the lower rates in other regions have substantially narrowed (Ramsay and Spiller, 1997: 31-35).

The relation between *level of urbanisation* and prevalence rates is likewise reported largely at a descriptive level. US reports note convergence in drug use between urban and rural areas. A similar trend has been suggested for the Netherlands and interpreted in terms of changing lifestyles (Cohen, 1995).

Type of neighbourhood is explored most extensively in the British Crime Survey publications, and prevalence generally appears to be only weakly linked to problems in the neighbourhood, with cannabis users having a fairly neutral attitude towards their neighbourhood. As for the population composition of neighbourhoods, prevalence rates are highest in districts characterised by 'rising groups': young, working singles, possibly in academic or multi-ethnic town/city centre areas (Ramsay and Percy, 1996: 70, 74). One of the Dutch reports concludes that the purchase and consumption of illicit drugs usually takes place in the same neighbourhood respondents live in (Sandwijk et al., 1987: 105).

4.5.6 Drug use and social environment

The relationship between drug use and social environment is discussed in only two studies. One of the Dutch reports explores the *influence of parents'* behaviour on their children for the case of cannabis. *"It is possible that use by parents in itself stimulates use by children. On the other hand, levels of use by the children may be higher because of a certain cultural environment in the household that is not prohibitive towards cannabis use"* (Sandwijk et al., 1994: 51). The researchers conclude that *"a possible relation seems to exist between use by relatives and use by the respondent him/herself. Use by respondent often coincides with (knowledge of) use by a relative. The exact nature of the causal connection of this is not clear"* (Sandwijk et al., 1994: 51).

The French 1995 study concludes that, amongst other factors, not practicing a religion is associated with a higher probability of drug use at some time of life (Baudier and Arènes, eds. 1997: 170). British survey researchers refer to a study showing *religion* to be a protective factor against drug use (Evans et al., 1995) and to empirical evidence of a suppressant effect of religion on 'anti-ascetic' behavior such as drug use, but not on 'non-ascetic' behaviour like theft (Cochran and Akers, 1989). The British researchers point out, though, that later research by Cochran et al. (1994) *"found that when the arousal theory (that persons may vary in their predisposition to crime) and social control theory (the influence of peer and family) are taken into consideration, the effect of religion is no longer important"* (Ramsay and Percy, 1996: 66). From a bivariate analysis of the 1994 British Crime Survey data they conclude that respondents who belong to a church report significantly lower prevalence rates for illicit drugs than other respondents. However, the researchers add that the use of illicit drugs is so widespread today that even among church members, young ones in particular, the level of drug use is still quite high (Ramsay and Percy, 1996: 54). In the more recent British Crime Survey report, an example related to religion is given to point out that *"lifestyles reflect both personal choices and the differential availability of prohibited drugs in various settings": "drugs are more likely to be offered or purchased in pubs than places of worship"* (Ramsay and Spiller, 1997: 23).

4.5.7 The concept of lifestyle

Inclusion of the concept of lifestyle probably reflects the highest analytical and theoretical level encountered in the publications on the general population surveys treated here. However, the concept is very complex and it has certainly not been operationalised, analysed and tested in the same ways in all studies (see a previous section of this chapter). In the publications on three sets of surveys (England/Wales, Finland, Netherlands), the frequency of visits to bars, pubs and dance clubs is a key variable for testing (and verifying) the hypothesis that drug use can be largely explained by lifestyle. The paper on the four Nordic countries draws a similar (inductive) conclusion, albeit without clear empirical evidence. The authors do refer to another publication (Partanen, 1995), but without including entertainment behaviour in their own analysis, they conclude *"that*

experimenting with cannabis seems to be an element in the lifestyle of adolescents and young adults, which is also characterised by weekly consumption of beer” (Hakkarainen et al., 1996: 139-140).

The French 1995 report does not include entertainment as an element of lifestyle. However, the authors do distinguish between two types of users: young people from the lower class with a risky lifestyle (including tobacco and alcohol consumption), and sportsmanlike, healthy young people with a “*hedonistic*” nature (Baudier and Arènes, eds. 1997: 165).

Dutch and British publications are the ones that explore and test lifestyle most extensively in its relationship to drug use. The Dutch researchers motivate the inclusion of lifestyle in their multivariate analysis as follows: “*The reason for this exercise was that conventional relations between single demographic or sociocultural variables do not add much to our sociological understanding of drug use*” (Sandwijk et al., 1990: 81). They refer to several studies that employ the concept of lifestyle (Becker, 1963; Cohen, 1970; Jansen and Swierstra, 1982; Korf et al., 1990, 1991; Zinberg, 1984), but they also warn that a clear theoretical framework for the relationship between drug use and lifestyle has yet to be defined (Sandwijk et al., 1990: 65-67). They test the lifestyle hypothesis in a design with three ‘explanatory dimensions’, resulting in 12 lifestyle types (see above). LYP turns out lowest among ‘homestayers’ aged 50 or older, and highest among ‘outgoers’ under 50 with no children in their household. Entertainment behaviour proved to be the strongest single predictor of drug use (Sandwijk et al., 1987: 75, 1990: 73-73, and 1994: 81-83; Cohen, 1995).

The 1994 British Crime Survey report concludes that “*non-users are disproportionately ‘stay at homers’*” (Ramsay and Percy, 1996: 51-52). Multivariate analysis leads to some inductive explanations. Alcohol use is an important predictor of cannabis use among adolescents (16-19 years), and also of the use of hallucinogens and stimulants. However, the researchers do not believe that alcohol is taken simultaneously with the illicit drugs: ‘dance drugs’ are taken at raves, clubs and parties, while alcohol is drunk in other settings. A second important predictor is going out, which is probably related to lesser amounts of parental control and more peer group contact. The use of ‘opiates+’ (which include cocaine and crack), on the other hand, bears little or no relation to alcohol use and entertainment, and much more to socioeconomic variables (often economic deprivation). The latter variables become more important predictors of drug use among young adults (20-29 years), while lifestyle (going out) diminishes in importance. Recent and current drug use declines in this group (Ramsay and Percy, 1996: 67-73). The British researchers conclude: “*In the face of growing ‘poly drug’ misuse, which can for some people become the focus of a whole way of life (Power, 1995), it is unsurprising that systems of control have also become more complex and sophisticated.... What perhaps is new about contemporary drug misuse is that it has major roots in mainstream popular culture and entertainment*

aimed at young people.... Its more damaging forms would still be seem to occur particularly among those who are relatively disadvantaged” (Ramsay and Percy, 1996: 76). On the basis of the profiles of drug users, they reject the normalisation hypothesis. “Drug-taking may seem quite widespread, if one merely focuses on the ever/lifetime dimension. Despite arguments in the contrary (e.g. Parker et al., 1995), it falls well short of being normalised behaviour.... It is still apparently the case that the majority of young people have not taken prohibited drugs.... Drug-taking is associated with particular areas, social groups, educational and employment status, health characteristics, family setting, and lifestyles, yet the differences are always ones of degree: individually, such explanatory factors only account for a limited amount of variation” (Ramsay and Percy, 1996: 53-54). In 1996 British Crime Survey report, the authors cite further studies that indicate that young people “are exposed to a wide range of pressures, from their peer group as well as from socio-economic forces: pressures which, while they are perhaps relieved in some ways by ‘youth culture’, are also intensified by its very existence” (Ramsay and Spiller, 1997: 23-24). According to these studies (Rutter and Smith, 1995; Graham and Bowling, 1995), young people only leave their parents' home and become fully independent in their mid- or late twenties. Going out should be understood as part of a lifestyle, which makes it plausible, for example, that youth will have more chance of coming into contact with drugs in pubs than in the church. However, the BCS researchers further conclude that the connection between entertainment and drug use is not as strong as the one between alcohol use and drug use (Ramsay and Spiller, 1997: 23-24), and they emphasise that the majority of young people who make the ‘relatively risky’ choice of visiting a pub or club still report no recent or current use of illicit drugs. “Drug-taking is a multi-causal phenomenon, for which no individual factor offers an overriding explanation” (Ramsay and Spiller, 1997: 25).

4.5.8 Health

The relationship between drug use and health is reported most analytically for the British and Dutch surveys. Although the German studies incorporate extensive descriptive discussions of possible physical and mental health problems facing drug users, they fail to compare drug users with non-users as British, Dutch, American, Finnish and French studies have done.

One of the French reports concludes that users report a better health condition than non-users. However, this difference disappears when controlled for age (Baudier and Arènes, eds. 1997: 158). The Finnish paper concludes that ever-users of illicit drugs have more mental health problems than non-users (but not more physical problems). It leaves open whether this is a consequence of drug use or whether the drug use itself might be interpreted as ‘self-medication’ (Kontula, 1996: 1059-1060). The American *Main Findings 1994* extensively describes ‘drug dependence problems’ in users of alcohol, tobacco, marijuana and cocaine. For alcohol and marijuana users, such problems correlate negatively with age. “*This suggests that younger users were the least able (or considered themselves the*

least able) to 'manage' their use so as to reduce associated problems. This might also imply that users who had such self-management problems were more likely than other users to quit as they grew older". They add, however, that "neither possibility can be tested with these NHSDA data" (SAMHSA, 1996b: 123). Both adolescents and adults with psychological problems show higher prevalence rates than respondents without such problems, but the researchers were likewise unable to test the causality of this relationship from their survey data (SAMHSA, 1996b: 152).

One of the Dutch publications reports findings on the relationship between drug use and health (as measured by the SF-36 Health Status Scale). Because of their strong intercorrelation, age, gender and lifestyle were controlled for in the analysis. No linear causal relations were found. Users of pharmaceuticals, for example, scored higher (i.e., reported more health problems) than other respondents; users of 'difficult drugs' scored higher on the mental index than non-users; and no differences were found with regard to alcohol use. Since the inclusion of lifestyle as a variable in the analysis resulted in differences in health scores between drug users, the researchers conclude that the use of drugs must have many, and contradictory, functions. "An overall view does not allow for other hypothetical conclusions than that drug use can be supported by different lifestyles in which drugs either support depressing or stimulating functions. In other words, some drugs may be used as reactions to health impairing conditions by one group of users, but for pleasure (by) another group of users (cf. difficult drugs)... In our perspective, drug use does not cause the lower or higher health scores that we were able to measure. Drug use is a particular expression, or rather an adaptation, to general life condition (s). In this sense, the use of drugs is active behaviour, intentional in relation to the functions it is required to fulfil" (Sandwijk et al., 1995: 91).

The question of the causality of the relationship between drug use and health is also a core issue in the English/Welsh reports. The authors observe that this relationship is complex and not yet fully understood. From their own findings they conclude that the connection between drug use and self-reported health status is not very strong - and for instance weaker than the one between drug use and tobacco or alcohol use (Ramsay and Spiller, 1997: 19). From an analysis of existing theories and results of clinical studies and animal experiments, the British authors conclude that the use of drugs under certain circumstances can generate hazardous side-effects, just as substance purity, route of administration and simultaneous combined use can do. "The reverse of this has also been postulated by Moore and Polsgrove (1991) in which health problems and disabilities may actually act as risk factors for drug use" (Ramsay and Percy, 1996: 66). Multivariate analysis shows that cannabis use among adolescents can be associated with health problems. Since the variable 'disability' fits into the 'maturation' model (young adults), the British researchers cautiously conclude that cannabis is probably also used as self-medication. Among adolescents, use of

hallucinogens and stimulants is associated with ‘disability’ (as long as activity patterns are not affected by the handicap or extended illness) while for young adults the opposite is the case (Ramsay and Percy, 1996: 69, 71). The researchers could not find an explanation for this reversal.

4.5.9 Availability

Although the Dutch reports devote some (inductive) attention to the relationship between drug use and drug availability in terms of social context, only the German reports really explore this connection. Between 1990 and 1995, a growing proportion of respondents reported being able to obtain drugs, but the vast difference between ever-users and non-users remained. Statutory differences between Western and Eastern Germany appears to have no effect on people’s willingness to use cannabis when offered it. This finding leads the researchers to conclude that both personal interest in drugs and perception of physical and mental risks are probably more important determinants of drug use than the potential legal consequences (Herbst et al., 1994: 12, 29; 1995: 14-16).

4.5.10 Attitudes and opinions

Only the American, French and Nordic studies examine differences between users and non-users in their attitudes and opinions. One of the American publications reports that among 12- to 17-year-olds the decrease in risk perception with regard to cannabis use began two years before the increase in prevalence (SAMHSA, 1997: 29; see also Harrison, 1997). The French authors conclude that “*the young, women, people with higher education, those living in urban areas and those who have experimented with drugs have more tolerant views regarding drug use and more understanding views about drug addicts. Over the years these positions are tending to attract more support*” (Baudier and Arènes, eds. 1997: 170). In the Nordic study, “*the results show that attitudes towards the personal use of cannabis are negative among the vast majority of respondents, even among those who have tried the drug once or more often*” (Hakkarainen et al., 1995: 140). In Denmark, the Nordic country with by far the highest prevalence rates for cannabis, respondents have far more liberal attitudes towards drugs and drug users than those in the other three countries, and the researchers express surprise at the consistency of the restrictive attitudes among Swedes (Hakkarainen et al., 1995: 160).

4.6 Summary and Conclusions

Judging from the general population studies discussed and analysed in this chapter, illicit drug use has been investigated most extensively in the USA, the Netherlands (Amsterdam) and Germany. These studies not only register prevalence rates for a large number of licit and illicit drugs, but they also record other patterns of use, such as continuation and frequency of use. A drug career characteristic such as age of onset is reported only in the American and Dutch

studies. Multiple drug use is not reported in detail in the Finnish, French and Nordic studies.

England and Wales, France, Germany, the Netherlands and the USA have each conducted a series of general population surveys with uniform methodologies, thus enabling researchers there to analyse trends in prevalence. In this respect the USA clearly stands at the top with its time series extending from 1979 to 1996. German reports stand out when it comes to not reporting variables that were included in the questionnaires, or not correlating them with drug use.

Studies routinely report prevalence rates separately for males and females and for various age categories. In the publications on three series of surveys in the USA, England/Wales and the Netherlands, a relatively large number of sociodemographic, socioeconomic, geographical and lifestyle variables are reported in their relationship to drug use. The Dutch and British reports apply multivariate techniques to compare drug use to sets of background (independent, predictor) variables, clustered in some cases as lifestyle types.

Attitudes and opinions about drugs and drug policy occupy a prominent place in French, German and Nordic publications, but they are completely absent from the British and Dutch reports.

Although all the publications reviewed are predominantly descriptive, some include more analytic elements. The American, British and Dutch reports in particular lean more heavily on multivariate techniques, and the British publications are furthermore the most theoretically oriented, both in an exploratory and an explanatory sense. The most intensively tested theory is the gateway or stepping-stone theory, and it is falsified in all cases. The Dutch reports stand out in their use of concepts, have a higher than average theoretical orientation, and are the most thorough in their exploration of the concept of lifestyle in relation to drug use. American reports are characterised by the extensive application of statistical techniques, but are predominantly empirically descriptive rather than theoretically interpretive. Nevertheless, they are the only ones that can and do link long-term trends in attitudes to trends in drug use.

In sum, the American, German and Dutch publications are the most complete in their presentation of data on trends in illicit drug use among the general populations of their countries. Analysis of drug use in relation to background variables has been performed most extensively for England and Wales, followed by the Netherlands and then the USA. As for the interpretation of findings, the reports on England and Wales are the most analytic, followed by those on the Netherlands.

CHAPTER 5

MODES OF INTERVIEWING

5.1 Introduction

This chapter will review the characteristics of several different modes of interviewing, then discuss their relative advantages and potential biases. Given the scope of the present project, this will necessarily be a brief exercise. However, the EMCDDA has meanwhile launched a follow-up study focusing specifically on the effects modes of interviewing can have on the prevalence rates obtained for illicit drug use.¹²

Choosing which mode to apply is a crucial decision in survey practice. There are no simple rules for finding the 'best' interviewing mode. In practice one will always choose a 'best fit'. If an unsuitable mode is applied, a survey may even be doomed to failure before it gets started (Trochim, 1997). If a survey method is to derive an accurate picture of drug use among the general population, designing and implementing it will involve many complicated steps, any one of which can introduce bias into the final results. Thus, the type of mode chosen has implications for the quality of the results obtained. We can call the findings reliable to the extent that the data have been collected in a reliable way.

Many factors govern the choice of a mode of interviewing. They include the topic of investigation, the target population, sampling characteristics, the response rates required, types of questions to be asked, the role of the interviewer, the reliability of answers, estimated costs, size of the staff required, the facilities available, and the time period within which the results are needed. We will discuss all these elements in Section 5.3.

5.2 Principal Characteristics of Interviewing Modes

In general population research on illicit drug use, modes of interviewing can be distinguished into three basic categories: mail, face-to-face and telephone. We will note the principal features of each mode.

Mail Surveys

For years the mail interviewing mode was the best known interviewing mode. Standardised pen-and-paper questionnaires are distributed by post, and the responses are later entered manually into a database before analysis. In the course of the past decade, various automation techniques, such as advanced optical reading techniques, have been introduced to speed up the data entry. Another type

¹² It is project number C.T. 97.EP.02, contracted by CEDRO, Amsterdam (Dr Peter Cohen). The final report will be available in late 1998.

within the mail interviewing mode is the 'household drop-off' survey, whereby the questionnaire is delivered by hand to the respondent's home. Either the respondent is asked to mail it back or the sealed envelope is collected later.

Face-to-Face Surveys

A face-to-face survey is based on personal encounters between interviewers and respondents. In general population surveys, the interviews are structured by means of a standardised questionnaire. The interviewer asks the questions and fills in the pre-coded answers. When sensitive issues are involved, respondents may complete parts of the questionnaire themselves and hand it to the interviewer in a closed envelope or post it back later. Interviews may take place at different settings, depending on the sampling method applied. This could be in respondents' homes, or it might be 'on the fly' somewhere in the streets or in a shopping centre.

*CAPI and CASI*¹³

Since the early 1990s, this type of face-to-face interviews are increasingly being administered with the aid of notebook computers or personal digital assistants. Desktop surveys are not yet being used in general population surveys, since they still normally require respondents to report to a specified place.

The introduction of this type of electronic data collection has revolutionised survey practice. This form of interviewing is generally referred to by the concept of *computer-assisted personal interviewing* (CAPI) in case when the interviewer enters the data into the computer. The concept of *computer aided self-completed interview* (CASI) is used for interviews where respondents themselves enter the data into the computer. A combination of both is also possible. These two are both self-guided computerised questionnaires. Responses are entered directly by the interviewer or the respondent. CASI is especially useful when sensitive topics are involved. Recent research has shown that respondents are more likely to confide sensitive answers to a computer screen than to an interviewer or a sheet of paper. The development of user-friendly interfaces has proceeded rapidly, with techniques now available such as touch screens, colour graphic images, sound, and recordings of respondents' answers to open-ended questions. These are increasingly 'technology transparent', so that respondents need not be experienced computer users to operate the devices.

CAPI and CASI interviews differ in a number of ways from face-to-face interviews with pen-and-paper questionnaires. They can be administered in a shorter time; the role of the interviewer is more strictly controlled, yielding higher-quality data; and data is recorded and analysed faster, thus cutting costs.

Although at first the use of computers in face-to-face interviews was perceived mainly as a support tool, it is now more often regarded as a distinct interviewing

¹³ A whole variety of new interviewing modes have been developed in the past decade. As yet these are not being used for general population surveys, but it is important to keep an eye on their potentials and how they cross-fertilise one another. Examples are disk-by-mail, e-mail, Internet and video-by-mail surveys. Use of the Internet is still confined largely to a small high-tech elite, and Internet surveys cannot mirror the population as a whole. At this stage we do not recommend using the Internet for surveys, unless Internet users themselves are your target population. Such modes will gain importance as computer use increases.

mode. However, the debate still continues about what effects this mode might have on survey outcomes, in comparison to modes such as simple face-to-face interviews.

Telephone Surveys

Telephone surveys have attained enormous popularity in the past ten years. In the United States, with its nearly complete telephone density of 96%, surveying by telephone is now one of the most common modes. One reason for its popularity is the speed at which information can be gathered. Another reason is that it enables some form of personal contact between interviewers and respondents, a factor thought to have a positive influence on respondents' willingness to take part. Telephone surveys can be carried out either from a centralised facility or from dispersed locations, as when interviewers work at home. At present, virtually all large-scale telephone surveys in Europe are conducted from centralised facilities with computer-assisted telephone interviewing systems (CATI). One other mode of telephone interviewing is the completely automated telephone survey (CATS), but as far as we know it is not yet being employed for drug use surveys among the general population (it is gaining popularity in market research).

CATI interviewing is similar to regular telephone polling, but the interviewer uses a self-guided questionnaire on a computer screen instead of a pen-and-paper questionnaire. The interviewer enters the data (either precoded or verbatim) directly into the computer, bypassing the former data entry step. In the case of CATS, the complete survey is programmed and presented to the respondent automatically without an interviewer's mediation. Computerised telephone interviewing has made quantitative interviews more efficient and cost-effective, facilitating sample management, callback and quota control, the navigating of skip patterns, data entry and analysis, report generation and the supervision of interviewers.

Large-scale surveys conducted in more than one country often lose some of the potential advantages of CATI, because different fieldwork organisations are likely to use different operating systems. This problem has now been partially overcome by the implementation of international centralised CATI facilities (such as the IPSOS in London).

The future will tell whether telephone surveys will continue to be as effective as they appear to be at present. Just as with face-to-face home interviews, there are signs (such as declining response rates) in some countries that their popularity may be diminishing. Despite the virtual telephone saturation in the USA, about half the telephone owners there now often use answering machines to screen incoming calls, and that has an adverse impact on response rates. In Europe, too, there are signs that the novelty of being interviewed by phone is fading and that more effort is needed to persuade respondents to take part in interviews.

5.3 Strengths and Weaknesses of Interviewing Modes

We will now provide a schematic overview of the pros and cons of different interviewing modes in relation to various aspects of survey practice. This section should be read with a number of considerations in mind. Every mode has its strengths and weaknesses. These must be assessed in part in the overall cultural and social context in which a survey takes place. Whilst it is generally known, for instance, that mail surveys tend to produce lower response rates than face-to-face or telephone surveys, the average response rates can vary markedly between countries. In a comparison of general population surveys on HIV-related knowledge, attitudes and behaviour, Wellings (1994) noted far higher response rates in Norway and Sweden (around 60%) than in the UK and Germany (around 30%). She attributed this to a greater degree of social obedience in the former countries.

Not only cultural factors, but also more mundane ones can influence the success of a interviewing mode. Telephone surveys in the USA, with its phone density approaching 100%, could theoretically be very effective, but that is less the case in Greece, with just 65% density (IFAK, 1997). Comparing response rates when the same mode is applied in different countries can thus produce misleading outcomes.

Side-by-side comparisons of modes can likewise produce different outcomes in different countries. For example, when the response rates for computer-based and face-to-face interviews were compared in the US, the rates turned out almost identical [look for reference]. The anticipated lower response rates to CAPI interviews due to 'technophobia' among certain demographic groups failed to materialise (the difference was under 5%). That does not mean, however, that technophobia will not influence response rates in other countries. Differences have indeed been found in the UK, specifically between the older respondents and other age groups, though the differences appear to be narrowing. It should be taken into account however, that the BCS only covers the 16-59 age range) (Ramsay and Percy, 1996:81 and Ramsay and Spiller, 1995: 57).

In general population surveys on drug use, it is obviously very important to investigate whether given modes yield lower or higher prevalence rates. In the 1994 Amsterdam study, small but significant differences were detected between pen-and-paper and computer-assisted interviews administered face to face. These differences were difficult to explain, however; in any case they could not be attributed to the greater privacy of self-completion as compared to interviewer completion. At the same time, in the USA (Harrison, 1996) and the UK (White and Lewis, 1997), privacy issues do seem to figure more heavily when it comes to disclosing drug use. Higher prevalence rates have been found in those countries when questionnaires are self-completed. Herbst et al (1995 and 1996) found a similar discrepancy in Germany when they compared prevalence rates from a

1994 telephone survey with those from a 1995 mail survey. The telephone inquiry yielded lower prevalence rates. In the survey in the 4 Nordic countries (Hakkarainen et al, 1996) it was similarly concluded that mail surveys provide more reliable measures than face-to-face interviews when illegal drug use is the issue.

The strengths and weaknesses of interviewing modes also change over time, due to influences such as attractiveness to respondents or 'flavour of the month'. More and more surveys are being conducted each year, both among general populations and among specific target groups, and this could produce an 'overkill' that would undermine the reliability and validity of the results. There are influences such as consumerism ('time is money', 'life should be fun') and, in the case of face-to-face interviews, fear ('beware of strangers'). People want to benefit in some way or another from taking part an interview. The pressure this brings with it for continual innovation may threaten the consistency of survey demands over time, especially in tracking surveys. Converting from one mode to another requires extreme caution; previously collected data could become useless if not adapted.

Sampling Opportunities

Whatever mode is applied, general population surveys on drug use are always based on a sample from the entire target population, since it is neither practicable nor cost- and time-effective to survey every single individual (censuses are exceptions to this rule). General population surveys are almost always based on probability samples using random selection. Sampling in this manner requires a so-called sample frame. All frames entail some degree of bias, as no complete list of the general population exists. Telephone surveys seem the most subject to bias, since by their very nature they include only those people who have telephones and are listed in the directory (this holds not for random digit dialling, albeit it has other constraints). Mail surveys require lists of people's names and addresses. In both cases, lists are often out of date or incomplete, so some people (e.g. those with no home or no telephone) will be systematically excluded.

Face-to-face interviews at people's homes provide the broadest sample frame potentials because they are based on multistage clustering sampling methods. However, they also impose the greatest constraints with regard to sample size, because they are expensive and entail the highest relative costs of increasing the sample size. They are also less feasible in cases where the population is widely dispersed geographically. Due to considerations of both time and privacy, getting access to respondents also requires the most effort in face-to-face interviews, followed by telephone interviews. Mail surveys are the least difficult in this respect, but the problem with them is not knowing whether the questionnaire has reached the person intended, especially if the sample frame is inaccurate or there is high mobility within the population. In telephone surveys, sample bias can arise from factors such as the greater likelihood of women to answer the phone (even when a male partner is home). The growing numbers of women in paid

employment also means fewer people are at home during the day, which makes the timing of calls extremely important.

Table 5.1
Strength and Weaknesses of Interviewing Modes: Sampling Frames

	Face to Face <	CAPI + CASI < + 	Telephone + CATI 	Mail 
<i>Sampling Frames</i>				
frame variety	yes	yes	phone owners	addresses
access to frames	?	?	?	?
geographical dispersion (for national surveys)	important	important	not important	not important
access to respondents	difficult	difficult	easy	very easy
relative cost with increase of sample size	high	high	moderate	low

Adapted from Dillman, 1978 and De Vaus, 1993

Achieving Representativeness

Representativeness as general qualifier indicates that the sample used in a survey resembles the population to a high degree. Even in the optimum case there will be a standard error; furthermore, a sample is never fully representative of the total population, because in every case a limited number of factors are used as criteria for representativeness.

The response rate is one factor that influences the representativeness of a survey sample. It is dependent on factors such as the nature of the phenomenon under investigation, the interviewing mode applied, and the design of the questionnaire. Since these, in turn, are functions of the cultural context in which the survey is conducted, a response rate is also a culturally dependent factor. That said, though, even if response is high, that does not automatically mean the results are reliable. The face-to-face mode has long had the greatest potential for high response rates, followed by telephone surveys. Now that the latter are being used so often for research and marketing purposes, its response rates are likely to decline soon as a consequence of overkill. The rates for mail surveys are the lowest, and they appear to be declining further (especially in urbanised areas). Average rates of response would be very difficult to calculate, because different averages are reported per country and these change over time. Though one cannot say in general terms what response rate is minimally required, the aim is always to achieve a rate in the 95%-100% range.

Table 5.2 Representativeness

	Face to Face <	CAPI + CASI < + 	Telephone + CATI 	Mail 
Representativeness¹				
groups excluded due to mode characteristics	those not able to speak the language	those not able to speak the language	those not able to speak the language	illiterates + those who do not speak the language
expected response rates	(but ↓	((but ↓	⊗
identifying total non-response	good/easy ²	good/easy	satisfactory	difficult
dealing with item non-response	good	good?	satisfactory	none
dealing with refusal bias	good	good	satisfactory	none

Adapted from Dillman, 1978 and De Vaus, 1993

In practice, every survey will encounter non-response, even when all the quality criteria of the survey process have been satisfied. It is always important to investigate the characteristics of people who fail to respond, since it is generally assumed that non-responders differ from responders. If the former would have scored especially high or low on key dependent variables, their non-response is a source of bias for the sample, and hence for the survey results. It is generally easier to get information about non-responders in face-to-face interviews and telephone surveys than in mail surveys, since in the latter case the only reliable conclusion is that they failed to take part. Non-response can occur when targeted respondents do not belong to the target group, have no time or willingness to participate, cannot be contacted, or are too ill or otherwise unable to participate. Some knowledge is already available on which groups are less likely to take part, namely those at the lowest and highest socioeconomic levels of society. This can be partly overcome by oversampling or other corrective measures.

Many kinds of incentives and inducement strategies have been proposed over the years aimed at increasing survey participation. Computer-directed interviews are presently in vogue, as they are still quite novel and thus attractive to many people.

Representativeness can also be affected by partial non-response, that is, when respondents do not answer all the questions. This 'item non-response' can be monitored more effectively in face-to-face (especially CAPI or CASI) interviews and in telephone interviews, but in mail surveys little evaluation is possible.

Mail surveys require that respondents be able to read. Illiterate people either will not respond or will give unreliable answers. In addition, most countries are home to groups of people speaking a language other than the predominant one. In some cases this can be overcome by preparing questionnaires in various languages.

However, in mail surveys one does not know beforehand which language(s) a respondent can read. In computer-directed interviews, the language can be adapted more easily, but most other causes of non-response still apply.

Questionnaire Design

The particular characteristics of each survey mode impose certain constraints on the type, format and number of questions that can be asked. Telephone interviews, and to a lesser degree face-to-face interviews without self-completion, differ from mail and self-completed computer-directed interviews by relying solely on verbal communication. Questions must not only read well but also sound well. The heavy reliance on the respondents' retention of what they hear at a pace set by someone else can be problematic in some cases.

The total number of questions varies with the interviewing mode applied, and it also depends on the target sample and the topic of investigation. General population surveys deal with a cross-section of the general public. A rule of thumb is that the more specialised the target population is, or the more relevant the topic, the longer the questionnaire can be (De Vaus, 1993). Since the general population is unspecialised, only the most relevant questions should be asked. The general view is that the number of questions is the most severely limited in mail surveys; it can be greater in face-to-face and telephone surveys, because the interviewer can try to keep interest from flagging. The length of the questionnaire can influence both the response rate and the quality of the answers.

The interviewing mode also determines the type of questions that can be asked. Drug use surveys deal with sensitive issues of illicit drug use and the attitudes and opinions relating to it. The most reliable answers to sensitive questions are obtained in self-completed mail or computer-directed surveys, or in face-to-face interviews with partial self-completion. Face-to-face interviews offer the best opportunities to ask complex questions, because the interviewer can explain and give information on the spot.

Table 5.3 Questionnaire Design

	Face to Face <	CAPI + CASI < + 	Telephone + CATI 	Mail 
<i>Questionnaire design</i>				
number of questions	high	very high	restricted	restricted
sensitive questions attitudes use	constraint	high, if self completion	modest	high
complexity and length of response alternatives	high	high	limited	high
filter questions/skip patterns	easy	very easy	very easy	satisfactory
question sequence control	good	good	good	poor
open-ended questions	good	poor	good	poor
use of multiple materials/ visual presentations	high	high	none	limited

Adapted from Dillman, 1978 and De Vaus, 1993

Given the heterogeneity of the population, not all questions in general population surveys are relevant to all respondents. This necessitates the use of skipping patterns and filter questions. These are least practicable in mail and other pen and paper surveys, where respondents have no personal or technical support in navigating through them. Computer-directed interviews, either by telephone or face to face (self-completed or not), are especially suitable here, because the software automatically guides the interviewer or respondent through the questionnaire. Open-ended questions are less suited to mail surveys, because they are easier to answer verbally than in writing. Potentially, face-to-face, telephone and computer-directed interviews offer the greatest opportunities for applying new technologies.

Telephone surveys are entirely verbal, so they can make no use of visual representations. This restricts the numbers of answer alternatives and rules for ranking these alternatives. By contrast, mail surveys and face-to-face interviews, especially those applying CAPI, can use highly sophisticated images to clarify or illustrate questions.

The sequence in which people respond to questions can affect their answer reliability, especially when attitudes and opinions are being solicited. Mail surveys

provide no form of sequence control; each of the other modes has its own mechanism for controlling the sequence in which questions are answered. Each also has its own layout requirements for the questionnaire. In telephone surveys and non-self-completed face-to-face interviews, the layout is obviously designed primarily to support the interviewer; on self-completed forms the focus is on the respondent. The visual layout of a mail questionnaire has different requirements (such as paper quality, no questions back to front, readability and attractiveness) than computer-directed interviews. Mail questionnaires must truly be their own advocates, while for computer-assisted ones the user interface is exceedingly important.

Reliability of Answers

It is not only quantity that counts (response rates) but also the reliability of the respondents' answers. Again, each interviewing mode has its pros and cons on the issue of response quality. It hardly need be pointed out that respondents are not passive sources of information but active, responsive human beings (fortunately, one might say). Unconsciously, or even consciously, they can give answers inconsistent with their true behaviour, attitudes or knowledge. This is especially the case when sensitive issues are involved, as in drug use surveys. Many factors can affect the quality of respondents' answers. One of the best known factors is the role of the interviewer (as demonstrated in the famous Hawthorne experiments). Interviewer impact on outcomes such as drug use prevalence rates still needs further investigation.

Another well-known influence is social desirability, the desire to make a good impression on the person or organisation asking the questions or to give what oneself perceives as a socially or politically correct answer. Obviously the chance of this happening is greatest when an actual interviewer is either visually or verbally present, especially when the questionnaires are interviewer-completed. Influence may derive from the gender, race, class, accent or many other characteristics of the interviewer.

The presence of other people during the interview can certainly affect the reliability of answers. Mail surveys hold the greatest chance of others being present, but face-to-face interviews are also prone to this influence. Although other people could also be present during telephone interviews, they are less likely to influence the answers since they do not see or hear the questions asked. If consulting with others is an intended part of the survey, mail surveys furnish the most room for doing so, as there is no pressure to answer on the spot (although one cannot verify whether the consultation has actually occurred).

Table 5.4 Reliability of Answers

	Face to Face <	CAPI + CASI < + 	Telephone + CATI 	Mail 
<i>Quality of answers</i>				
potential social desirability	high	low, when self completion	satisfactory	very low
Control of influence of other people on respondent	satisfactory	good	good	poor
completion control (person)	good	good	good	poor
semantic flexibility	high	moderate	high	low
control boring questions	good	good	satisfactory	poor
opportunities to consult others when necessary	satisfactory	moderate	satisfactory	poor

Adapted from Dillman, 1978 and De Vaus, 1993

The reliability of answers is also influenced by the point in time at which the questions are asked. Mail surveys are the most comfortable to respondents in this respect, since they allow them to answer at a time convenient for them. Telephone interviewers have the greatest difficulty guessing what time is appropriate. Although face-to-face interviews are the most intrusive, when they are administered in respondents' homes they are usually prearranged at a time convenient for the respondents. Reliability of answering can also be affected when someone other than the presumed person completes the questionnaire. Face-to-face interviews provide the greatest (albeit not absolute) certainty here, since some basic characteristics such as gender and age can be verified by the interviewer. Mail surveys afford no control over who has actually answered the questions; telephone interviews afford slightly more, but some level of uncertainty remains, as one can never be sure that people are who they say they are. Because the interviewer is present, face-to-face interviews provide the best context for stimulating respondents to answer. However, since this type of interviews tend to last longer than telephone or mail surveys, respondents can also get tired or bored, which can bias the answers as the interview proceeds.

Interviewer Bias

Interviewers are active, responsive human beings, too. They can influence the reliability of answers in both positive and negative senses, and both consciously and unconsciously. As such they form a key element in face-to-face and telephone modes. Controlling interviewer bias is the most difficult in face-to-face interviews

not using self-completion or computers. Interviewers can explain questions or stimulate respondents to answer, but they can also bias the answers by asking different questions in different ways or by letting their own attitudes or prejudices influence how they ask questions or enter responses.

Table 5.5 Interviewer

	Face to Face <	CAPI + CASI <+ 	Telephone + CATI 	Mail 
Interviewer				
ability to avoid interviewer bias due to characteristics and personal attitudes	low	high?	satisfactory	n.a.
training of interviewer	high	high	moderate	n.a.
control/supervision interviewer	low	moderate	high	n.a.

Adapted from Dillman, 1978 and De Vaus, 1993

Mail surveys are unaffected by interviewer bias, and in centralised telephone surveys there is considerable potential for control by supervisors. Face-to-face interviews, however, are very much susceptible to this type of bias. Interviewers may not feel comfortable with asking certain questions, or they may not be happy with the answers provided and may betray this, even in very subtle ways. Although highly qualified interviewers are unlikely to do such things, potential bias always lurks. Computer-assisted personal interviewing can reduce this type of bias, because questions are asked every time in the same manner. Skip patterns, sequence formats, and error-checking routines are often built into the software, so interviewers can concentrate better on the interview. Moreover, programs have built-in checks on the logical consistency of answers.

Implementation/Administration

Not surprisingly, the different interviewing modes also have their consequences for the implementation (administration and management) of a survey. Face-to-face interviews, whether computer-supported or not, require the most sophisticated implementation procedures. They are usually the most expensive, due to the time each interview takes, the travel requirements, the need to engage highly skilled interviewers, and the security requirements both for interviewers and for respondents' privacy. Telephone interviews are less demanding in this respect. The training and supervision of face-to-face interviewers also require more time and staff than centralised telephone interviews. Mail surveys are the least demanding in terms of staffing, equipment and other costs. Unlike the former

types, their costs are also the least affected by relative increases in sample sizes or by the geographical dispersion of samples.

Table 5.6 Implementation/Administration

	Face to Face <	CAPI + CASI < + 	Telephone + CATI 	Mail 
<i>Implementing the survey</i>				
conducting (time)	high	high	quick	satisfactory
costs	high	high	middle	cheap
data entry (time)	slow	quick	quick	slow

Adapted from Dillman, 1978 and De Vaus, 1993

Telephone surveys with large or dispersed samples can be carried out in particularly short time spans, and callbacks are easy. Face-to-face surveys are the slowest, followed by mail surveys. CAPI, CASI and CATI now furnish powerful means of data entry and analysis, which drastically reduce both the time required for conducting surveys and the final costs (although initial investments have to be made). The costs of general population surveys using face-to-face modes are up to five times those of telephone surveys and up to twenty times those of mail surveys. As a consequence, the available budget is a major consideration in choosing an interviewing mode.

Facilities also play an important part. A telephone survey may be the preferred mode when the results need to be produced very quickly. However, if no high-tech telephone facility is available, it may be better to opt for another mode. The same applies to computer-aided interviewing, which ideally requires highly sophisticated software (and notebooks). Different modes also require different interviewer skills.

5.4 Conclusion

This overview of interviewing modes has demonstrated the difficulty of drawing any general conclusions about which mode is best suited to general population surveys on drug use. The relative strengths and weaknesses of the modes vary, depending on the different aspects of survey methodology, the cultural and political context in which a survey is conducted, the time and funding available and the topic of investigation. One important rule is to be aware of the potential biases inherent in any interviewing mode chosen.

Future research should investigate how the various modes influence the quantity and the quality of respondents' answers. This is particularly important in the case of the present study, whose principal goal is to achieve comparability of results in general population surveys on illicit drug use. We need to experiment with applying different interviewing modes to the same or different samples, or with combining different modes within the same survey. Such projects can open challenging opportunities to investigate the effects that different interviewing modes can have on response rates and drug use prevalence rates in general population surveys.

CHAPTER 6

QUESTIONNAIRE BIASES

6.1 Introduction

Whatever mode of interviewing is chosen, questionnaires are the chief survey instrument used in general population surveys on drug use prevalence. Designing a questionnaire is a complex process, comprised of different elements such as question content, types of questions, response formats, and sequence of questions. Each of these elements can introduce biases, thereby affecting the quality of the responses obtained. The most important task in questionnaire design is to achieve the highest possible fit between the types of information required and the types of questions asked to obtain it. This may sound trivial, but in practice it is easy to go wrong here. Too many questions, the wrong types of questions (e.g. an attitude question when one wants to measure behaviour) or biased questions may be asked, all of which can make for unreliable survey results. The primary biases to avoid in drug use surveys are those that occur when answers that do not reflect the respondents= actual drug use (see, for example, Turner et al. 1992). For each of the elements in the design process, it is essential to have a thorough understanding of both the actual target population B in our case the general population, which is very heterogeneous B and the topic of investigation B in our case illicit drug use and its various related aspects. The questionnaire must also be compatible with the mode of interviewing, since biases can also arise here (see Chapter 5).

For many people, illicit drug use is a sensitive issue. Asking people whether they use illicit substances may well produce higher than average rates of refusal, underreporting and socially desirable answers. Some of these issues have already been discussed in Chapters 5. In this chapter we concentrate on those biases deriving from various elements of the questionnaire design process. Questionnaire bias can arise at three levels: 1) the *individual questions and answer categories*, 2) *clusters of questions and answer categories*, and 3) the *total questionnaire*, including its structure and layout. We can further distinguish four main types of biases:

- Phrasing of questions and answer categories, including semantics (meanings of words and sentences) and syntax (sentence construction)
- Format(s) of answers
- Context of questions
- Design of the questionnaire

In the paragraphs to follow we will examine the various elements of the questionnaire design process and the potential biases that can occur there (see Tables 6.1 and 6.2). The reader should bear in mind that all these elements are interrelated; we discuss them here separately for the sake of clarity.

6.2 Semantics

Semantics refers to the meanings of words and sentences. In our case the meanings of questions and of answer alternatives. Language in written or spoken form is one of the most basic of human features. It enables cooperation and coordination, because of the high degree of shared meaning that people attach to words and sentences. But the meanings attached can also differ. Individuals or groups of people can interpret words or sentences differently depending on their own frame of reference. In the designing of questionnaires, it is therefore of the utmost importance to find a common plane of understanding between designers, interviewers and respondents concerning the questions asked. This makes it crucial to subject questionnaires to pilot testing, enabling the researchers to identify differences in meanings attached to questions and to answer alternatives (see Section 8.6 below).

Thus, the actual choice of words for formulating questions is not as easy as it may seem at first glance. Though it may sound bizarre, Dillman (1978, p. 95) made a very true point when he observed, >Writing questions would be a lot easier if we did not have to use words.= Semantic biases can cause misunderstanding, misinterpretation or multi-interpretation, which in turn may produce response biases.

There are many guidelines in existence for wording questions and avoiding semantic biases, from Payne's *The Art of Asking Questions* (1951) to more recent works such as Schuman and Presser's *Questions and Answers in Attitude Surveys* (1996). One should still take into account, however, that these are no more than guidelines, and that their implementation requires a lot of creativity. Uncritical application may generate more problems than it solves. Many recommendations for >good practice= can be counterproductive. For example, the use of simple wording is highly recommended, if it is too simple, respondents may feel talked down to. Moreover, sometimes the guidelines for avoiding bias need to be turned upside down, as when purposely leading questions are asked (for example, in probing for certain attitudes or developing attitude scaling).

Some of these guidelines are presented here. Stated very generally, one should *avoid* incorporating, consciously or unconsciously, any meanings that would steer respondents towards answering in some way that does not reflect their real behaviour or attitudes. Thus *loaded* questions such as >Do you favour heroin on prescription, even if this leads to a huge increase in the number of heroin addicts= should be avoided. This sometimes applies to *leading* questions, too, as they may encourage respondents to report socially desirable behaviour. On the other hand, they can also be used to purposely increase the chance that *undesirable* behaviour will be reported. The use of a particular substance can be asked about with a hint that >many people do it=, but also with a suggestion that it is deviant behaviour (>Cannabis is a forbidden drug. Did you ever take it?="). Questions can also be

misleading, for instance when opinions are solicited about the >health hazards of illicit drugs= in general, whereas scientifically established differences exist between the different substance categories. Biased answers can result from the inclusion of a *prestige* element in a question, for example >Even President Clinton tried marijuana as a student. Do you think that young people should be able to experiment with marijuana?=-

Questions formulated in ways that might lead the overwhelming majority to respond in the same way (low variation questions) should be avoided, since they do not produce very rich or useful information. This is particularly the case for attitude questions. If we look carefully at the question >Do you agree or disagree that taking heroin more than 6 times a day can cause health problems?=- it will come as no surprise when most respondents are found to agree with the statement.

Some words in a questionnaire can also be *offensive* or *degrading* to all or some respondents. For instance, speaking of drug use solely in terms of >abuse= or >misuse= can be insulting to users themselves, especially those who have only taken drugs infrequently or for recreational purposes. Respondents should also not be asked questions that are difficult to answer because the respondents *lack a frame of reference*, as in >Do you agree with government policy?=- Nor should questions be *too direct* (>What is your exact income after taxes?=-), as this can cause item refusal, total refusal or unreliable answers. Wording can also be too complex or unclear, as when academic language, jargon or street slang is employed in a general population survey. However, it may sometimes be advisable to include slang words as exemplifiers in a general questionnaire (to supplement the more general wording), in order to make particular questions more understandable to the respondents they apply to. Finally, questions should not include *unequal comparisons* (>Who is responsible for the increase in drug use, drug cartels or the junkie in the street?=-). Clearly, a good questionnaire will avoid all such biasing elements as much as possible.

These considerations about the wording of questions and of answer alternatives, and about the meanings attached to them, need even more attention when, as in our European case, a *cross-national* model questionnaire is at issue. Attitude questions in particular require very sensitive wording. This became clear, too, in our expert group meetings (for a more detailed discussion, see Chapter 7). Ødegård=s (1997) study is illustrative in this regard. Four randomly chosen respondent samples were asked what punishment they would prescribe for an identical drug offence, but the questions and answer options were worded differently for each sample. Respondents chose heavier punishments when the *consequences* of the drug trade were made more explicit in the questioning, or when response options placed greater emphasis on higher penalties (see Table 6.1)

Table 6.1 Attitudes to Penalties for Drug Violations

	300g of heroin	3600 user doses of heroin	heroin with a street value of 1.8 million crowns
	%	%	%
N	1043	1041	1072
No punishment	1.0	0.0	0.4
Caution or waiver of prosecution	0.2	0.1	0.1
Fine	2.1	1.0	0.7
Imprisonment up to 6 months	3.3	1.0	0.5
Imprisonment 6 months to 1 year	6.0	2.5	1.5
Imprisonment 1 to 2 years	8.4	4.4	3.2
Imprisonment 2 to 5 years	18.0	13.9	12.0
Imprisonment 5 to 8 years	15.8	14.9	14.6
Imprisonment 8 to 10 years	11.3	13.7	12.9
Imprisonment 10 to 15 years	29.1	46.4	51.2
Don't know	4.8	2.1	2.9

Source: Ødegård (1997)

6.3 Syntax

Bias can also be caused by ambiguities or errors in syntax. Syntax refers to the way words are structured into sentences so that questions and the answer alternatives are correctly formulated. As with semantics, many recommendations have been made for avoiding bias due to syntactic ambiguities or errors. We will discuss some of them here.

Double-barrelled questions, that is, ones that ask more than one question once, should be avoided. A question like >How do you feel about hard and soft drugs?= *is ambiguous, since it assumes respondents perceive these two categories as a single one. Negatively phrased questions* should also be avoided as much as possible, since they inject unnecessary complexity into the question. >Marijuana use should remain illegal= *is a better formulation than >Marijuana should not be decriminalised.= This is even more true of questions containing double negatives. A statement like >I'm not convinced hashish is without risks= can easily be replaced by a far more simple one like >I think hashish may carry risks= or >I believe hashish is risky= or, better still, by a neutral question like >Do you think hashish is risky?= *It goes without saying that such a rephrasing of the question also requires a restructuring of the answering categories.**

A high level of *complexity* in sentence construction can also generate question bias. For example, in a study of heavy alcohol use in relation to illegal drug use, a question phrased as >The last 30 days, on how many occasions outside your home did you drink more than 6 glasses of alcohol of any kind other than beer?= *would be difficult to understand; respondents could get confused or bored, and unreliable*

answers would result. Simple language and short questions are therefore strongly advised, especially in general population surveys. *Ambiguous* questions are those which, for example, raise certain expectations with respondents which are not borne out in a careful reading. If a question first asks whether the respondent agrees that >the government should take stronger action Ψ=, respondents will likely expect a tough follow-up such as >Ψ in the fight against drugs=. If the question then turns out to read further as >Ψ in easing the criminalisation of drug use=, respondents are not surprisingly put on the wrong track.

It is also recommended that *subject matter be put before answer alternatives*, thus directing the attention to the issue at hand, placing the answer alternatives in a context, and thus helping the respondents to remember them. For example, a question like >In your opinion, which of the following B cannabis, heroin, cocaine or LSD B causes the most social problems?=
can be better rephrased as >In your opinion, which of the following causes the most social problems B cannabis, heroin, cocaine or LSD?=
=

Table 6.2 Types of Questionnaire Biases

Syntax	Semantics	Answer Alternatives
<ul style="list-style-type: none"> double-barrelled double negative complexity ambiguous subject matter follows alternatives 	<ul style="list-style-type: none"> loaded ambiguous prestige offensive multi-interpretable lack of reference context slang / jargon/ abbreviations too direct low variation unlike comparisons 	<ul style="list-style-type: none"> imbalance between positive and negative alternatives double options in one alternative answer categories not mutually exclusive ranking format too long or too short too many or too few answer alternatives arrangement of alternatives artificially created answers lack of variation in answer format and sequence of answer alternatives

6.4 Response Formats

The potential biases of semantics and syntax, as discussed in the previous sections, can obviously arise, too, in the formulation of answer alternatives. There are also some additional biases inherent to response format design.

The *response format* is the way answer options are designed. One of the more common distinctions made is that between structured (multiple choice, numeric open-end) and unstructured formats (text open-end, verbatim). This distinction is generally expressed as >closed format= versus >open format=

questions. Questionnaires in general surveys on drug use prevalence usually contain a variety of structured response formats. In contrast to the diversity of structured response formats, unstructured formats offer few options, namely texts or transcripts (Trochim, 1997).

When structured response formats are applied, they should be suited to *all* respondents; that is, all possible answers should be covered by the alternatives provided. If this is not the case, respondents will artificially create answers. Consider a question like >In your opinion, who is primarily responsible for solving the drug problem?=*, accompanied by the following answer options: a) police, b) physicians, c) social workers, or d) family. This question forces respondents to choose between the four options, even if they do not know the answer, or may feel that some other person or organisation is responsible. A >don't know= and/or >not applicable= category should always be provided, unless respondents are expected to have a very clear-cut answer (e.g. >Are you male or female?=*). This will produce more reliable answers (albeit less exciting ones for researchers), and respondents will not feel they are being coerced into answering in certain directions (a frequent cause of partial or even total non-response).**

The *sequence of answer alternatives* also requires specific attention. It can influence respondents' answers so that these no longer reflect their actual behaviour or thinking. The phenomenon of central tendency, for example, whereby answers tend to group around a neutral point, is very well known. Another problem is that respondents are more likely to pick the first-mentioned alternatives. It is also advisable to follow the order that alternatives might logically take from the viewpoint of the respondent. For example, if respondents are asked to choose from a list of countries, the easiest way to order the sequence is that in which most of us learnt them at school.

Scaling questions (e.g. rating or agreement scales) or ranking formats are other types of formats that are prone to bias. The issue of scaling and which scales to apply is a topic of intense academic debate which we will not address here. But *if* scales are applied, the general rule is to avoid providing too many alternatives. What total number of scaling items is effective is related in part to the educational levels of the respondents. Since we are dealing here with general population surveys, the scale should be applicable in a very heterogeneous population.

When value alternatives are provided, they should represent a balanced scale. For example, the question >Do you think the number of soft-drugs coffeeshops in Amsterdam should be a) increased, b) kept the same, c) decreased slightly, d) decreased moderately, or e) decreased greatly?= *is out of balance, because the negative alternatives outnumber the positive ones.*

Answer alternatives should also be mutually exclusive, since respondents are otherwise forced to choose between alternatives that are both correct for themselves but which can bias the result. Take, for example, the question, >What is your age?=*,*

with choices between 18-25, 25-35, and 35-45 years of age. The alternatives here are not mutually exclusive. (This mistake is by no means uncommon.)

6.5 Context bias

Another type of potential bias lurks in context-related aspects of the questions asked. Such may arise when respondents do not have the necessary knowledge or information to answer a question. Consider the question, >Do you agree or disagree with the following statement: MDMA is becoming a mainstream drug for youngsters?=. If respondents do not know that MDMA is the pharmaceutical name for ecstasy, they have no clue to what is being asked. Context bias can also be induced when the question contains incorrect information that can be recognised as such by respondents, for example >Ecstasy is a so-called soft drug=. Incorrect information in one question may cause respondents to doubt the reliability of the whole questionnaire. If the questions on drug use are part of a multipurpose survey, the content of other, non-drug-related items forms a potential bias to the answers respondents provide about drug use. This is patently the case, for example, when the main topic of the survey is criminal behaviour.

Table 6.3 Context and Design Biases

Context Bias	Design Bias
<ul style="list-style-type: none"> • incorrect information contained in question • incorrect assessment of respondent's knowledge • questions asked in inappropriate context • absence of time frame • lack of sensitivity to respondent's frame of reference • temporary public mood • 	<ul style="list-style-type: none"> • poor start (boring or too threatening questions) • boring because of too much repetition • too many questions • sloppy layout • illogical clustering of questions and haphazard questioning • confusing skip patterns • lack of proper introduction

A further type of bias occurs when a time frame is not provided in inquiries about specific behaviour. A question like >Do or did you ever use drugs?=. lacks an appropriate time frame for respondents to refer to. The same applies to other frames of reference. People may be asked about their drug use behaviour on a questionnaire including other, seemingly unrelated questions about whether they have seen certain soap operas or whether they like dogs. These may well not be out of context for the researchers, but that should be explained to the respondents. Failure to do so could endanger the credibility of the entire questionnaire. Context bias can likewise be caused by temporary fluctuations in public mood. If people are asked their opinions about drug policy at a time when police have just incurred fatalities in confiscating large quantities of drugs, it will not come as a surprise that more people will favour repressive drug policies than would otherwise be the case.

6.6 Design bias

Up to now we have been examining the design of individual questions and their answer categories. But questionnaires are not just collections of individual questions; as we know, the whole is greater than the sum of its parts. In this section we will discuss some issues in the design of the *overall* questionnaire. We distinguish here a) the structure and sequence of questions, b) layout, c) how the questionnaire is introduced, and d) pilot testing.

Structure

The ordering of questions can bias the answers obtained. Strict guidelines are not possible, as they would vary with the topic of investigation and the target population. However, practice has produced some rules of thumb. Most researchers agree that *opening questions* are very important, setting the tone for the rest of the interview. Opening questions should be easy and non-threatening, but not boring. The most important questions, such as those about illicit drug use, should not be saved for the end of the questionnaire either. By that time, respondents may be bored, tired or running out of time; as a result they may pay insufficient attention to the most crucial questions. Questions that could be threatening to respondents should be carefully thought out. Often an introductory text can be helpful in moving from one cluster of questions to another. Any sensitive questions should fit into the overall questionnaire in a way that is logical to the respondents (that is, they should not seem irrelevant).

There is a growing consensus that *attribute questions* should be put at the end of a questionnaire, rather than as a warm-up at the beginning. If they are all asked at the beginning, the respondents may lose track of the aim and the importance of the questionnaire, and that could influence their willingness to respond. However, if such questions are used as *filter* questions (also called contingency or skip questions) such as age, which are needed to find out whether a respondent qualifies to answer certain questions, they may be used early in the questionnaire. If you are to ask about cannabis, check first whether a respondent knows what it is or has ever used it. If not, there will be no point in asking further questions. At the same time one should avoid using too many filter questions (too many jumps) at one go, as this can cause confusion or loss of interest among respondents, or more questions could even be skipped than was intended.

In Section 6.4 we touched on the tendency for answers to group around a neutral point. The ordering of questions can also evoke similar tendencies, for example an *acquiescence response set*, in which respondents answer all questions affirmatively, independent of the nature of the question. This can be provoked, for example, when all questions are posed in a positive or negative form, or when answer alternatives or formats are all identical, thereby causing boredom, loss of concentration or habituation. If this can be expected, or comes to light in pilot testing, one should consider introducing variation into the question formats or

groupings. Acquiescence response sets can also result from other factors, as when respondents are uncomfortable due to social differences between them and the interviewers (see also social desirability, Chapter 5).

The length of a questionnaire (its total number of questions) can also be a source of bias. The rule of thumb here is >the shorter the better=. This works as a double-edged sword, increasing the likelihood of getting reliable answers while curbing unnecessary costs. Many questions asked in surveys are ultimately not analysed or reported, having proved unimportant or irrelevant in retrospect. (Researchers seem to think, >As long as we are doing a survey, we might as well ask whatever seems interesting, then figure out later which questions to analyse and how.=) The sequence of questions and the clustering of groups of questions are also important because answers to specific questions can be influenced by questions asked previously. Previous questions can steer people towards answering in ways they would not have done otherwise.

Layout

The layout of a questionnaire is very important, and an unsuitable layout can lead to response bias and low response rates. This applies especially to self-completed questionnaires, and above all mail surveys, but also to those that are partly self-completed for reasons of sensitivity or privacy. Different modes of interviewing impose different quality constraints on questionnaire layout. A pen-and-paper questionnaire needs different features than one on a computer screen. Requirements also vary depending on who will be reading the questionnaire B the interviewer, the respondents or both (as well as the person doing the data entry). Thus, different quality criteria need to be considered, and these can sometimes clash. This requires carefully balanced assessment. From the respondents= point of view, a questionnaire first of all needs to be user-friendly, inviting them to take part in the survey. It should furthermore support them as they make their way through the questions. Some rules of thumb can be mentioned, which vary with the mode of questioning:

- each page should be numbered (pen-and-paper)
- preferably no questions back to front (pen-and-paper)
- readable font size (pen-and-paper and computer-assisted interviewing)
- return address also stated on the questionnaire (mail)
- in closed question format questionnaires, leave respondents some writing space in case they want to make comments or suggestions (all self-completed questionnaires)
- question and answer formats should have logical flows
- skipping patterns should be clearly delineated, preferably with graphic symbols.

For interviewer completion, the questionnaire should in the first place be supportive to the interviewer, and some of the guidelines listed above also apply to the interviewer. For all non-computer-completed questionnaires, one should also think beforehand about the method of data entry (e.g. manual or optical scanning), as this

has consequences for the layout of the questionnaire. User-friendly computer interfaces are developing rapidly. While these permit more complicated questioning structures than pen-and-paper questionnaires, they must be easy for respondents or interviewers to operate.

Introducing the questioning

The introduction that solicits the respondents' participation in the survey is very important indeed. This is particularly the case in mail surveys, where the introduction may determine whether the respondent responds at all. Many guidelines are available for stimulating respondents' willingness to take part in a survey. Practice also reveals some further considerations. The sticking point in mail surveys is that respondents may not finish completing the questionnaire, while in telephone interviews it lies in gaining their willingness to cooperate in the first place (once started they will usually not stop before the interview has finished). In all cases the survey's objectives should be very well explained, the privacy of respondents assured, the organisation conducting the survey mentioned explicitly, a contact address provided for any questions respondents might have later, and some guidelines furnished on filling in the questionnaire.

Pilot testing

The final, and extremely important, phase of questionnaire design is the assessment of the reliability and validity of individual questions and the questionnaire as a whole before the actual survey is begun. This is called pilot testing or pretesting the questionnaire (De Vaus 1993; Converse and Presser 1986). Questionnaire *validity* refers to whether the questions measure the issues they are meant to measure. Questionnaire *reliability* (repeatability) refers to whether the questions produce similar answers from respondents on repeated occasions. Pilot testing can detect the presence of potential questionnaire biases, as described in this chapter, and can ideally help researchers to overcome them. Another advantage of pretesting is that one can measure the time required for completing the questionnaire. Respondents can then be informed accordingly, and time is also an important factor in budgeting, particularly in the cases of telephone and face-to-face interviews (due to interviewer costs). The concepts of validity and reliability are discussed in this chapter in relation to questionnaire design. They also apply to the overall survey results.

De Vaus (1993, pp. 99-100) has recommended a three-stage pilot testing process (see also Converse and Presser, 1986). The first is the *question development* stage. During it, questions are still under construction and different forms and wordings are explored and evaluated with a small number of respondents. This applies both to newly developed questions and to questions adapted from surveys already carried out (and which preferably had already been tested then). Questions that perform well in one survey are not automatically suitable for another (due, for example, to differences in target populations, time or scope). This stage may also be called a *declared* or *participating pilot test*, since respondents are informed about the

developmental nature of the questionnaire and asked to give constructive feedback on it.

The second stage is known as the *questionnaire development* process. It is undeclared B respondents are not informed that the questionnaire is still in a tentative version. They complete the entire questionnaire. For our purposes in this book, this pilot sample should resemble the general population as closely as possible on the principal specified characteristics (age, gender, geographical location etc). Theoretically one should test the questionnaire on as many respondents as possible; however, considerations of time, cost and population make this unrealistic. Although De Vaus (1993) suggests a range of 75 to 100 respondents, testing will in many cases be limited to lower numbers or omitted altogether due to the costs involved. For some of the questions used in general population surveys on drug use, pilot testing requires a more sophisticated approach. Some drugs, such as heroin, have relatively tiny numbers of users among the general population, and this makes pilot testing difficult. The solution is to test these types of questions in preselected target groups rather than in random samples. Perhaps needless to say, the results of such pilot tests should not be combined with the final survey results (see also Creative Research Systems, 1997).

Respondents= answers and interviewers= feedback are then analysed in order to further adjust the final questionnaire. This final stage is described as the *polishing pilot test*, which implements the results of stages 1 and 2. This may entail decreasing the total number of questions (in cases of redundancy, for example, when questions have been found to be measuring more or less the same thing), reordering the questions, deleting questions due to an expected high rate of non-response, finalising skipping patterns, and designing the final layout.

Pilot testing can help minimise the risk of asking unreliable and non-valid questions. These can be caused by the various types of biases explored in this chapter, but also by other factors, such as the interviewers (see Chapter 5). There are various methods to test the reliability of questions, such as the test-retest method. However, the methods for evaluating the reliability of *scales* (sets of questions measuring single concepts) appear to be more suitable than those for assessing single-item questions (De Vaus, 1993).

Questions are valid if they measure what they are intended to measure. De Vaus (1993) makes an interesting observation when he remarks that it is not the questions as such that are valid, but the use to which they are put. For example, if we use >lifestyle= to predict drug use, the issue is not whether we have measured lifestyle precisely, but whether it is a suitable measure for predicting drug use.

We can distinguish three methods to assess validity. *Construct validity* evaluates the extent to which a given measure corresponds to the theoretical concepts or >constructs= (Last, 1995) that underlie the topic under investigation. It may, for

instance, be assumed on general theoretical grounds that women take less illicit drugs but more licit drugs than men. If we have developed new questions about illicit and licit drug use which are then posed to men and women, and the gender differences show up in the analysis, then these questions have construct validity. *Content validity* assesses the degree to which questions measure the phenomenon under study. For example, questions about lifestyle should incorporate different activities related to leisure and entertainment patterns (pubs, theatres, sports etc). *Criterion validity* compares the answers to new questions with answers on existing, well-established questions. For example, if you decide to work with a new question, replacing the question >How much do you smoke?= by >Are you a smoker?=:, then you include in your next survey one or more questions from surveys previously undertaken (e.g. >How much did you smoke in the last 30 days?=:). This helps you learn more precisely just what the new question is measuring, and it also enables you to follow trends over time.

The methods for assessing the reliability and validity of questionnaires are not a 100 per cent guarantee for non-biased results. This can even be true of simple questions such as age or gender. A study by Schreiber (1976) showed that for questions on respondents= gender and birthplace, between 1 and 14 per cent replied differently when they answered the same questions on two different occasions (after a two-year interval). Questions about the size of the place they grew up in, their educational attainment and their father=s occupation yielded even higher levels of unreliability.¹⁴

6.7 Conclusion

In this chapter we have discussed various issues related to questionnaire biases. The questionnaire design is part of the overall survey process. It is linked to the object of study, the mode of interviewing and data analysis. A total elimination of questionnaire biases is not possible. However certain biases can be avoided. We have discussed here various ways to avoid questionnaire biases and thereby improve the reliability and validity of questionnaires. Pilot testing is one of the most effective ways to achieve this.

14 Cited in De Vaus (1993, p. 54).

CHAPTER 7

TOWARDS A EUROPEAN MODEL QUESTIONNAIRE ON DRUG USE PREVALENCE AMONG THE GENERAL POPULATION

7.1 Introduction

This chapter explains the working procedures and the rationale behind the proposed European model questionnaire. These are based on four expert meetings convened between April and December 1997 to discuss how to improve the comparability of general population surveys on drug use, and more specifically to design a model questionnaire suitable for application throughout Europe (see also Chapter 1). The questionnaire described below is the result of a collaborative, iterative process of decision-making within the expert team. Obviously some compromises had to be made there as a result of national differences in topics of interest. It hardly needs saying that the group has not started from scratch. It has built upon the experience and knowledge already gained in national, European and international research endeavours. For example, existing questionnaires from the WHO, Pompidou and ESPAD working groups have served as important sources of inspiration for our model questionnaire.

The model questionnaire proposed here should be seen as a step towards improving comparability, and not as a final answer to the problems encountered in drugs research. Modifications to the questionnaire will undoubtedly be made in the long term, and ideally these will be based on evaluations of the present version. This model should also be understood as a minimum standard which can be embedded into country-specific questionnaires and/or form part of a more extended questionnaire on drug use. The main focus of the present questionnaire is on the measurement of drug use *prevalence* and not on other phenomena such as drug career patterns. This criterion has influenced the selection of the topics, items and questions to be included in the questionnaire. The model questionnaire itself can be found in an appendix.

The working procedure followed in reaching decisions about the content of the questionnaire can be characterised as a progression from the general to the specific. We can roughly distinguish 3 stages in this process: *topics, items and questions*. We shall describe them here in sequence, but at the actual meetings they were intertwined, and could not always be clearly separated or chronologically structured.

First the experts had to decide which *topics* pertaining to drug use prevalence needed to be covered in the model questionnaire. Various topics were discussed,

but not all of them were retained for further analysis. There were different reasons for not selecting a topic. For example, some had no clear immediate relevance to drug use prevalence studies and some were too country-specific. The topics finally chosen were *illicit drugs, licit drugs, attitudes and opinions regarding drugs and drug policies* and *respondent attributes*. In retrospect we can say that consensus was relatively easily achieved at this stage of the questionnaire design process.

The debate intensified, however, in the second stage, when *items* needed to be distinguished within the selected topics. After some initial brainstorming, three different categories of items were defined. Items for which full consensus could be reached on their inclusion in the model questionnaire were designated as *core items*. However, full consensus could not be reached on all items. Some reasons for this were their complexity, their labour intensiveness, or their ambiguity in relation to drug use prevalence in the opinion of some experts. Items agreed upon as important for further discussion, but on which no full consensus had yet been reached, have been called *optional items*. These may be included in a general prevalence survey on drug use if country-specific considerations so require. For example, glue sniffing is an optional item, since it is a problem in some countries and not in others. Some items were also *excluded* in the course of the discussion; not only was there lack of consensus, but the experts agreed they should not be recommended for drug use surveys at the present stage. Several reasons led us to exclude items:

- After due consideration they were deemed unimportant, having no predictive or explanatory value in relation to drug use prevalence.
- They were considered important but too complex (e.g. lifestyle).
- They were too time-consuming or costly, as in cases where the conceptual development of an indicator is still in its infancy. (For example, the item >degree of urbanisation= was dropped because no coherent conceptualisation is yet available of how to measure urbanisation or urban density at a national, let alone a European level).

This is not to claim that such items are not important for further investigation. In fact, the contrary is the case for many of them.

The final stage of questionnaire development consisted of a debate on which *questions* to use for the selected core items and how exactly to phrase them. Questions for which full consensus was reached as to both their meaning and utility have been included in the model questionnaire and designated as *core questions*.

Questions considered important, but for which no consensus could yet be reached for whatever reason, as well as questions related to optional items, have been called *optional questions*. These were weighed by the group at varying levels of precision and with varying degrees of intensity. We have elaborated them here differently from core questions, one obvious reason being that there was no consensus on their actual formulation. Thus, for some questions we provide very specific formulations, while for others we only give advice. We had four interrelated reasons for labelling a question as optional:

- No consensus was reached about their significance in a prevalence survey.
- They were not of interest to all countries.
- They were not cost-effective, since too many questions make a survey too expensive.
- Since the questionnaire restricts itself to closed-ended answers, questions requiring open-ended answer options have been made optional rather than core questions.

Some questions were also discarded at this stage, for various reasons:

- They were deemed unimportant.
- Though they were deemed important, no consensus could ultimately be reached on their conceptualisation (e.g. what is a school dropout?) or on their answer categories (e.g. amounts consumed).
- They were expected to be too time-consuming (e.g. age of onset for drugs other than cannabis).
- The group had insufficient time to work them out.

The mode of interviewing was also a consideration in designing the questionnaire. The model questionnaire presented here has been designed for face-to-face interviews. For other interviewing modes, it needs to be adapted to the specific requirements of that mode (e.g. its structure, its layout or interface etc). The present version of our model questionnaire is in standard everyday English, but it will be translated into the other appropriate European languages. Some alterations in wording have been allowed for with a view to differences in language and culture. In some cases, however, we have explicitly deviated from this rule in order to preclude translation errors. For example, in the section on cannabis we have specified the use of the term *hashish/marijuana*, even though the term *cannabis* is widely applied in questionnaires in the UK. In most other countries the word *cannabis* is confined mainly to professionals. In some questions the most popular terms will be added in each country to help clarify the meaning of some categories of drugs.

The structure of the model questionnaire is based on some general principles. The sequence of items in the questionnaire has been determined by design. *Licit drugs* are used as a starter and a warmup for the respondents, but they are predictors for illicit drug use as well. They will elicit more affirmative answers than the questions on illicit drugs, thereby keeping respondents interested and avoiding having them feel threatened. The licit drugs section is followed by the illicit drugs section (which

addresses prevalence and other related variables aimed at detecting risk groups). Attitudes and opinions are then recorded, and questions on personal attributes make up the final section of the questionnaire.

7.2 Licit Drugs

Questions on licit drugs in the model questionnaire are intended primarily to measure background variables and/or the risk of illicit drug use. They are not meant to measure prevalence in any precise or detailed way. For this reason, the questions included are restricted to recent and/or current use.

‘Do you smoke tobacco such as cigarettes, cigars or a pipe?’
(A: yes/no)

Various questions on *tobacco use* were considered by the expert group, but only one of them ultimately became a core question. Although other routes of administration (e.g. the nasal use of snuff) were discussed, the question restricts itself to smoking. An alternative model question ‘Are you a smoker?’ was judged to be less objective than the preferred question, and more subject to changing general attitudes towards smoking. Different ways of smoking tobacco are mentioned to make the question more concrete. More detailed answer categories were considered (to investigate things like the frequency of smoking or the numbers of cigarettes smoked), but they were judged either unnecessary or too complex, and inquiring about past use was thought confusing. For example, one answer format was considered which allowed for ‘regular’ or ‘occasional’ smoking, leaving it up to respondents to categorise themselves. ‘Regular’ would then often mean daily smoking, but it might also include smoking several days a week. ‘Occasional’ would mean less frequent smoking, at least in the past year, and perhaps an intention of continuing to smoke the same or less. It was concluded that a simple yes/no answer format would be sufficient for our purposes at this stage.

‘During the last 12 months, have you drunk any alcohol, such as beer, wine, spirits or any other alcoholic drink (s)?’
(A: yes/no)

Of all the proposed questions on alcohol use, two were ultimately adopted as core questions in the questionnaire. Questions related to the distinction between frequent or heavy drinking and non-frequent or light drinking were judged to be important, since drinking patterns are known to be related to (predictors of) the use of illicit drugs.

Questions on the amounts of alcohol consumed (e.g. ‘During the last 30 days, how many glasses did you drink on days when you drank?’) were designated as optional items, rather than as core items, for a number of reasons:

- People might combine different kinds of alcoholic drinks on the same occasion, or drink one kind on one occasion and another at another occasion.
- The standard content of a glass differs between countries, or even within countries (as with beer in northern and southern Germany).
- In some countries, the use of alcohol is spread more over a whole drinking day, while in others it is concentrated in a certain part of the day.
- In many countries, drinking patterns on weekdays tend to differ from those at weekends.

As an alternative, the question ‘During the last 30 days, how many times did you drink 5 glasses of alcohol or more on one occasion?’ was considered. Clearly such a question is not without its problems; for example, in some parts of Europe, 5 glasses of beer would mean 5 litres and in others it would be just 1 litre. Other indicators of heavy alcohol use were also discussed, but no consensus was reached over their utility and they were discarded. Among them were last-week prevalence and frequency of use in the past week. Some experts also proposed measuring excessive drinking. However, excessive drinkers are not found in abundance in general population surveys.

Some experts preferred to work with open-ended questions, as this could yield insights into drinking patterns in different countries. Others proposed questions from a WHO project, the Alcohol Use Disorders Identification Test (AUDIT, Saunders et al., 1993), but the answer categories in it were judged too complex for telephone interviewing, a mode that will undoubtedly be applied.

Pharmaceutical drugs. The inclusion of pharmaceutical drugs in a model questionnaire on drug use was considered very important, and how this might be done was therefore discussed extensively in the limited time available. However, the vast diversity of substances, between and even within countries, and the very different names given to them, led the experts to conclude that it was not feasible to construct straightforward, cost-effective questions that would be comparable throughout Europe. Hence, for the time being questions about pharmaceutical drugs have been classified as optional.

If countries wish to add *licit* drugs that are not included in the model questionnaire, we recommend they use the same format as for the illicit drugs already included (see next section). For example, the use of inhalants (e.g. glue sniffing) is an important issue in some countries, while in others it hardly occurs at all. It is furthermore an activity confined almost exclusively to a narrow age range (young adolescents), so that a general household survey may not be an appropriate method to measure its prevalence. Consequently, no question on

inhalants has been included as a core question. The item has, however, been designated as optional; in countries where inhalants are a major issue, omitting a question on them could be interpreted, by policymakers and respondents alike, as a denial of the problem. In any event, if questions on >other= licit drug(s) are to be included, *open-format questions* should be avoided, for reasons already noted above (their poor cost-effectiveness and time-consuming nature).

7.3 Illicit drugs

Questions on illicit drugs in the model questionnaire aim at measuring illicit drug use among the general population. Questions about the following illicit drugs have been included in the model: cannabis, amphetamines, ecstasy, heroin, cocaine, 'Relevin' (a dummy drug) and LSD.

A number of possible questions were considered for breaching the subject of illicit drugs. 'Have you heard of (type of drug)?' was proposed as an optional filter question for each individual drug. Respondents who had not heard of a particular drug would have then been guided to the next applicable question. This was thought especially suitable for laptop self-completion, where posing this question could eliminate interviewer interference. A different format was also considered whereby respondents would be asked in one go at the beginning of the questionnaire whether they knew all the drugs included. For each drug known to the respondent, the specific sections would have then begun with 'You said you've heard of (type of drug)', followed by the questions related to it. Ultimately, though, the group decided to begin the section for each individual illicit drug with a *warming-up* question.

'Do you personally know people who take(type of drug)?'
(A: yes/no)

This core question has been intentionally phrased in the present tense and refers to respondents= personal, current acquaintance with users, in order to avoid old yarns and hearsay. The idea of changing the wording from 'personally know people' to 'have acquaintances or friends' was thought useful by some experts; others believed such a phrasing might put people on the defensive.

The answers to such questions could also be used to arrive at an additional or an alternative *prevalence estimate*, or to generate a rank order for cross-national comparison, as was done by Reuband (1995). Such would be particularly useful in the case of drugs taken by a small number of respondents, among whom non-response also tends to be high. The answers could further be interpreted as *risk factors* or *predictors* for drug use. In that case one should be very cautious in analysing the data, since users might also tend to choose their friends among users or

be dependent on them to have access to a supply of drugs. Correlations should therefore not automatically be interpreted as unidirectional causal relationships.

Warming-up questions are followed by questions about respondents' personal use of drugs. Identical questions are posed for each specific drug. In the event of self-completion, such a structure supports respondents in filling in the questionnaire, and it also shortens the time required for answering the questions.

'Have you ever taken(type of drug) yourself?'
(A: yes/no/don't know)

'Have you taken(type of drug) in the last 12 months?'
(A: yes/no)

'Have you taken(type of drug) in the last 30 days?'
(A: yes/no)

Because cannabis is the most widespread illicit drug in Europe and probably the least threatening to respondents, it is the substance to be inquired about first in the illicit drugs section. The ecstasy questions have been placed before the amphetamine questions, in order to minimise the chance of respondents perceiving ecstasy as a form of amphetamine. We have also decided not to mention 'crack' or 'crack-cocaine' as an example for cocaine in the cocaine question, since one can assume that all crack users also use(d) powdered cocaine, but that not all cocaine users take crack. Instead, questions on crack should be asked *after* the questions on cocaine have been completed. For each specific drug, questions are asked about lifetime, last-year and last-month prevalence. In order to avoid misunderstandings, 'last year' has intentionally been expressed as 'the last 12 months', and 'last month' as 'the last 30 days' preceding the interview.

'During the last 30 days, on how many days did you take(type of drug)?'
(A: daily or almost daily/several times a week/
at least once a week/less than once a week)

Frequency of use is always difficult to measure, and even more so for a life span than for a more recent time period. The model questionnaire therefore inquires about *last-month* frequency of use only (and not last-year or lifetime frequency). For

reasons of cost-effectiveness, it was decided to structure this core question with a limited number of closed-format answer categories instead of a numeric open-ended category (e.g. number of days/times). The category ‘never’ was deemed redundant, since respondents to whom that answer would apply would have already skipped the question as a result of their negative answer to the former one. In the opinion of some experts, questions that enable distinguishing between sporadic and more frequent use (containing, for example, answer categories such as ‘only once or twice’ and ‘more often’, or ‘only once’, ‘2-10 times’, ‘more often’) could be informative about the nature of the ‘drug epidemic’. This type of questions have therefore been included as optional.

‘When did you take hashish and/or marijuana for the first time?’
(A: before age 15/ between age 15-20/ between age 20-30/
after age 30/ don’t know, don’t remember)

Questions about *age of onset* are always problematic for respondents due to recall difficulties, and hence also for the researchers’ analysis due to the high chance of imprecise answers. Since first use tends to be concentrated within a limited period of life (adolescence, early adulthood), answers need to be rather precise. For these reasons and for reasons of cost-effectiveness, it was decided to include only the first use of cannabis as a core question, since it is the illicit drug most often taken and begun with. (This should not, however, be taken to imply endorsement of the stepping-stone theory). For the other drugs age of onset is to be optional. This question can also be used as a proxy for incidence measurement; the recall bias for it is unknown, but it is the best we have at present. Countries that wish to include questions on first use (age of onset) for drugs *other* than cannabis are advised to use the same phrasings as for cannabis.

The model questionnaire also includes one *dummy drug* (‘Relevin’), which is also used in the standard European School Survey (ESPAD). Such a question enables the researchers to evaluate the reliability and answer patterns of respondents. Preferably it should be placed between the other drugs investigated, as has been done in the model questionnaire; this makes it seem more like an existing drug. In principle this name can be replaced by any other name that sounds like an illicit drug. Obviously the interviewers should in no way hint that respondents’ reliability is being tested by this question. Preferably the interviewers should not even know it is a dummy drug. There are various ways to deal with respondents who actually report having used the dummy drug. It is not uncommon to exclude them from further analysis, since their answers to other questions may also be highly unreliable, and including them could bias the final results (particularly in view of the small numbers of people who use drugs other than cannabis). One reason not to exclude them from further analysis, however, is that they may simply be people who have tried numerous different drugs, including substances not mentioned in the questionnaire. They may therefore

think that they have come across Relevin sometime as well. Either way, the reported results should at least mention the number or proportion of respondents claiming to have taken the dummy drug and whether or not they have been included in the analysis.

As with licit drugs, countries that choose to include >other illicit drugs= in their questionnaires are advised to use a format identical to that used for the illicit drugs standardly included. If questions on >other illicit drugs= are indeed asked, *open-format questions* should be avoided, for the reasons already mentioned (their poor cost-effectiveness and time-consuming nature). Analysis could be further impaired by the inclusion of numerous little-known nicknames and slang terms, since that would make clustering very difficult (the same holds for licit drugs). Despite such considerations, some of the experts were very much in favour of an open question on other illicit drugs, believing this useful as part of an early-warning system. Others considered general population surveys to be an inappropriate method for collecting data on ‘new drugs’, since the numbers of respondents who have taken them are predictably very small. Researchers who wish to include such an open question on ‘other’ or ‘new’ drugs are strongly advised to phrase it as follows:

‘During the last 12 months (or ‘last 30 days’) did you personally come across any new drug (or ‘any other drug’) not mentioned before?’

(A:)

7.4 Attitudes and Opinions

Attitude and public opinion questions are commonly perceived as key sources of information for politicians, researchers and the public itself, providing a frame of reference for action in the area of drugs (see e.g. Hakkarainen et al. 1996). They can also be used (albeit to a lesser extent) as a kind of predictive or intermediate variable for drug use. However, the concepts of *attitude* and *public opinion* are not without their problems, since their actual conceptualisation and operationalisation can vary widely. Not surprisingly, the topic of attitudes and opinions and the questions about them generated heated discussions at the expert meetings. As is generally known, the formulation of valid and reliable attitude questions is one of the most difficult aspects of questionnaire design. This derives from technical causes,¹⁵ and in our case also from the ideological and political disputes surrounding the sensitive issue of drug use. Differences already prevailing at national levels seem to multiply within a European context. The same happened at our meetings (but that also made

15 For example, the umbrella concept of attitudes refers to different attitude elements which can be measured, including the direction of a respondent's attitude, the extremeness of their position and the intensity with which they espouse it. These different elements require different types of questions (see De Vaus, 1993). Moreover, in comparison with other types of questions used in general prevalence surveys on drug use, existing questions on attitudes have undergone little validation.

them more fun). Here we can only give a brief depiction of the many discussions that took place.

At the first meeting, conflicting opinions emerged. Some experts argued for excluding all attitude questions, considering them too complex and too ideologically charged for a European model questionnaire. Some even wondered whether attitude questions should be applied at all in a prevalence survey on drug use. Others took a diametrically opposite position, regarding attitude questions as a vital part of a questionnaire and arguing that such questions are an important means of legitimising any future surveys. At yet another level, the experts explored the bounds of scientific freedom, the political constraints on them, and their own role in the entire process. Despite all such difficulties, the group ultimately decided to include some attitude questions in the model questionnaire, since these can uncover important information about drugs and drug policy and contribute to an understanding of patterns in illicit drug use (Harrison, 1997).

To start with, a number of attitude-related items were selected, including health and social risk perception, legalisation versus criminalisation policies, responsible actors for intervention strategies, and public perceptions about drug addicts. Questions were formulated for each such item, and at the next-to-the-last meeting it appeared that consensus had reached about them. However, at the final meeting disagreement again arose about the questions (and it still exists), and it was decided that some questions were not sound enough to be put on the questionnaire. This does not mean, however, that the group felt they should be discarded entirely.

Of all the attitude questions proposed, the one investigating public perception of drug addicts (primarily as ‘patients’ or ‘criminals’) seemed the least problematic. After some modifications in wording, consensus was reached and it was included as *core question* in the questionnaire.

‘Do you perceive a drug addict more as a criminal or more as a patient?’
(A: more as a criminal, more as a patient, neither, don’t know)

The questions gauging opinions about the legalisation or criminalisation of drug use generated lively discussions. Ultimately two questions were included in the model, one relating to cannabis and the other to heroin.

'Do you agree or disagree with the following statement:
"People should be permitted to take hashish or marijuana"?'

(A: fully agree, largely agree, neither agree nor disagree, largely disagree, fully disagree)

'Do you agree or disagree with the following statement:
"People should be permitted to take heroin"?'

(A: fully agree, largely agree, neither agree nor disagree, largely disagree, fully disagree)

One problem concerned whether questions should be formulated generically or specifically. Each has its disadvantages. For example, if we ask a generic drugs question, do we then know what we are actually measuring, since so many different >drugs= exist? On the other hand, if we specify all the relevant drugs, we will end up with too many questions. If we choose a middle course by making a distinction between soft and hard drugs, we could provoke vehement political debate in some countries. Similar considerations also apply to issues surrounding risk perception. They apply less strongly to the issue of legal drugs like alcohol and tobacco.

Ultimately, the expert group opted for two questions, one pertaining to cannabis, because it is the most *widely used* illicit drug, and the other to heroin, because it is still perceived as the most *problematic* illicit drug. The distinction made between cannabis and heroin in these two questions was rejected by France because it might imply the presupposed distinction between cannabis as a soft drug opposed to heroin as a hard drug. In their opinion, this would mean that these questions are a priori biased in leading respondents. Some other experts held that the issue of legalising or criminalising drugs, and the general public's opinion on it, is at the core of the public debate. Some argued that not specifically distinguishing cannabis from heroin would carry ideological implications and would ignore scientific knowledge and public opinion. Many felt moreover that the question would be less powerful if it contained merely the generic term 'drugs', since the phenomenon being measured would then be rather vague. Some others had fewer reservations about a focus on drugs in general, saying that the purpose was to compare the moral climates in different societies, which would be sufficiently gauged by a general question on the legalisation of drug use. In the end, the majority agreed that a question about legalising or criminalising drugs, and what the public thinks about the issue, was very important for their countries and should therefore be included in the model questionnaire.

‘In your opinion, which one of these, alcohol or drugs, causes more health problems?’
(A: alcohol, drugs, the same)

‘Now, considering drugs as a social problem, are drugs in your neighbourhood a problem of.....?’
(A: no significance, minor significance, major significance)

‘Do you agree or disagree with the following statement: "If you try drugs even once, you can't get off them"?’
(A: fully agree, largely agree, neither agree nor disagree, largely disagree, fully disagree)

‘Do you agree or disagree with the following statement: "It is normal for young people to try drugs at some time"?’
(A: fully agree, largely agree, neither agree nor disagree, largely disagree, fully disagree)

No consensus could be reached on questions pertaining to health risk perception and social risk perception. The questions listed above were, on deeper reflection, judged too ambiguous or too vague. In order to overcome these difficulties and take a first step, the experts chose 5 preferred questions related to health risk and social risk perception from two ESPAD¹⁶ items on attitudes (q 31 and 32). This selection process resulted in the following preferences:

‘Individuals differ in whether or not they disapprove of people doing certain things. Do YOU disapprove of people doing each of the following?’
(A: don't disapprove, disapprove, strongly disapprove or don't know)

- Trying ecstasy once or twice
- Trying heroin (smack, horse) once or twice
- Smoking 10 or more cigarettes a day
- Having one or two drinks several times a week
- Smoking marijuana or hashish occasionally

The choices for the other question, on health risk perception, were more divergent. It should also be noted that heroin is not included in this list, whereas it is in the first one. Three members did express a preference for including questions on heroin. The attitude questions will be discussed in more detail at future expert meetings.

16 The 1995 ESPAD Report by Hibell et al. (1997).

‘How much do you think people risk harming themselves
(physically or in other ways) if they:
(A: no risk, slight risk, moderate risk, great risk, don’t know)’

- Try ecstasy once or twice
- Have five or more drinks once or twice each weekend
- Smoke marijuana or hashish regularly
- Try cocaine or crack once or twice
- Smoke one or more packs of cigarettes a day

The question that addresses public perceptions about the agents responsible in the first instance for acting against drug problems has not yet been adopted as a core question, because in its current form it is too vague and the answer alternatives are too constraining.

‘In your opinion, who should solve the drug problem in the first place: police,
physicians, social workers or the family?’
(A: police, physicians, social workers, family)

It is not quite clear, for example, what is meant by >drug problem=, which could be taken to refer either to care or treatment policies or to policies on drug trafficking. This question is important, however, and it is to be worked out better in the future. The group decided to give priority to attitude questions in the further development of general population surveys on drug use in Europe.

7.5 Attributes

Attribute questions are intended in the first place as background variables, but they are also important for enhancing the comparability of prevalence rates.

‘Are you a male or female?’
(A: male/female)

‘What is your age?’
(A: ...years)

‘What type of household do you live in, including yourself?’
(A: single-person household; with some kind of family; with others)

We have limited ourselves to two attribute items for the model questionnaire, demographic and socioeconomic. The demographic item consists of three core

questions (gender, age and type of household). The question on household was the most hotly debated of the three. Again this was not surprising, because questions about household types are rather complex. We eventually opted for type of household rather than for the position of the respondent within the household. We have limited the number of answer alternatives to three for reasons of cost-effectiveness. The exact formulation of this question is open to variation as long as it employs the proposed answer categories. The answer option 'some kind of family relationship' includes non-marital relationships. Hence, interviewers need to be carefully instructed about the meanings of the three different answer alternatives. This question can also be expanded to include an optional format in which an additional question further clarifies the answers to the core question. The question on age is numerically open-ended. It had been argued for reasons of cost-effectiveness that it could better be closed-ended, but the experts believed the open-ended format would be easier to answer.

The socioeconomic item consists of two core questions, one on employment status and one on level of educational attainment. The reason for limiting ourselves to two questions is that by analysing them in combination one can arrive at a fairly good categorisation of respondents while still minimising costs. The question on employment status was debated mostly as regards its answer alternatives. Again with an eye to cost-effectiveness, these have been kept to a minimum. Various answer categories were discussed (including military service), but these were not thought necessary for the model questionnaire. However, for some countries, such as those with military conscription, additional categories may be advisable, which can later be recoded into a category 'other' for cross-national comparison. The sequence of the answer alternatives also received special attention. For example, the category 'unemployed' has been deliberately put after 'employed' and 'student', for psychological reasons and to filter out students first. With regard to the level of education question, each country will have to use its own specific answer categories, provided they are equivalent to those in the model questionnaire. A suggestion to replace this question by one recording years of education, in order to sidestep the complex problem of comparing different educational systems, was not accepted by the group. Researchers in member states are free to formulate this question as they wish, as long as the answer categories conform with those of the International Standard Classification of Education (ISCED) (as listed in the appendix).

A number of possibilities for measuring income were also discussed, but they were not included as core questions. Measuring the total net income of the household was thought to present the greatest problems, since many respondents in larger households will not be well informed about this (e.g. children will not know their parents' income). Questions on income are usually rather sensitive anyway. One reason why market research companies increasingly use the general income data of the respondent's area of residence as an alternative.

Although we believe the two socioeconomic questions in the model questionnaire will generate an adequate indicator, those who wish to record income data are advised to use the following questions:

Question	Answer
Could you indicate the total net monthly income of the household to which you belong, all members together, accounting for all incomes from any source?	Categories equivalent to: < 50% of national modal net income 51-99% of national modal net income 1-2 times national modal net income >2-3 times national modal net income >3 times national modal net income No income
Do you have a regular income of your own from any source?	Yes No --> Go to question
Could you indicate your own total net monthly income, accounting for all incomes from any source?	Categories equivalent to: < 50% of national modal net income 51-99% of national modal net income 1-2 times national modal net income >2-3 times national modal net income >3 times national modal net income

Many studies, and in particular those in groups of problematic drug users, have shown that school dropout is a crucial indicator of illicit drug use. However, measuring school dropout in general household surveys is no easy task. Questions that seem appropriate for one country will be inadequate for another. As a consequence, we have included no question on school dropout in the model questionnaire.

CHAPTER 8

ANALYSIS AND REPORTING

8.1 Introduction

European comparability of general population surveys requires the harmonisation not only of what is investigated and how the questions are asked, but also of the analysis and presentation of the results. In previous chapters we have formulated guidelines to improve the planning, design and implementation of surveys on drug use prevalence. Our focus in this chapter is on improving the analysis and reporting in such studies. The meta analysis in Chapter 4 of how this has been done in various European and North American studies will serve as a framework.

The guidelines we propose here have not been developed in a vacuum. The process of harmonising survey practices and improving data comparability on the topic of drug use prevalence is part of a wider process affecting many areas of social, epidemiological and economic research. One result of such efforts has been the development of various guidelines for the delivery of data for monitoring purposes. The guidelines issued by the WHO pertaining to public health, those for HIV/AIDS drawn up by the monitoring centre in Paris, and the statistical code of the United Nations are some examples. In the area of drugs monitoring, a number of guidelines have already been published by the EMCDDA, such as the model tables to be used by the REITOX Focal Points (EMCDDA, 1997).

In this chapter we propose to go one step beyond the so-called >standardised tables= for drug use prevalence findings. Though some of our recommendations may seem patently obvious, a surprising number of surveys are still poorly or inconsistently reported, as we have shown in Chapter 4. This applies both to the design and implementation of the survey and to the analysis and reporting of the findings. Our aim is not to achieve identical survey analysis and reporting. Such would be neither realistic, practical nor cost-effective in the European context. We do propose a number of criteria aimed at enhancing the comparability and transparency of data and the analysis and applicability of the data by others.

In view of the present early stage of the project, we have opted for a modest start. Although our expert groups were inclined to focus on the most >ideal= practices, the guiding question for the present chapter is >What minimum standard analysis and reporting guidelines are required in order to compare prevalence surveys on drug use (assuming that all contain at least the same items)?= The resulting guidelines form a first step on the road to more elaborate guidelines, some of which will be explored further in the second part of our project.

We have structured this chapter as follows. We begin with several guidelines relating to survey and data accountability, and then go on to suggest guidelines for reporting on the data analysis, including some standardised tables for the reporting of prevalence, and some miscellaneous other guidelines.

8.2 Survey and Data Accountability

A description of the study design is always very important, but this is often forgotten or inadequately formulated. It is advisable to include the following information:

- The organisation commissioning the survey, the contractor and the fieldwork organisation(s)
- The objectives of the survey
- A definition of the target group (and age range), and specific mention of what people have been excluded and why
- An estimate of the size of the target population (as an indication of the appropriateness of the sample size)
- The context in which the questions on drug use were posed, i.e. within a single-, multi- or general-purpose survey
- The frequency in which surveys are conducted, i.e. ad hoc, periodic or tracking
- Geographical areas covered
- Total duration of the study
- Mode(s) of interviewing and period of data collection
- In periodic or tracking surveys, specific mention of any methodological changes, and of any adjustments made to the data to accommodate them
- Interviewer information (characteristics, training, supervision)

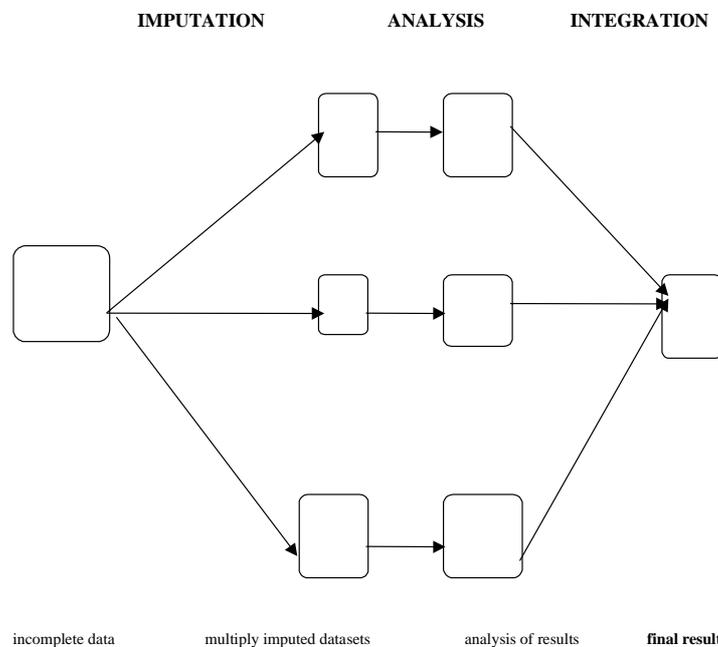
- Sampling design, including sampling frame(s) and sampling methods (with mention of the number of selection stages and clusters and of the selection method applied at each stage). Specific mention of any groups oversampled. Information about selection methods applied for any booster samples (since this often differs from that in the main sample)
- Mention of sample size (N), net response (n), and number of cases (persons and/or households) in the sample at various stages of selection
- Indication of the representativeness of the sample is and the key criteria applied
- If estimation methods have been used to adjust for differential sample selection probabilities, a description of the type of method applied (e.g. weighting, reweighting, raising or synthetic estimation) and to which sample characteristics it was applied
- Information on how the sample design has been implemented and on any problems experienced during the fieldwork (for example, one may have attempted multistage sampling and ended up with quota sampling)
- Specification of response-nonresponse distribution. The reporting of response rates is often ambiguous, unclear or imprecise, thus causing problems of

comparability. Reported rates may not be based on the initial sample and may therefore be higher than the original rates. This problem can be partly overcome by clearly indicating how the response rate has been calculated and what follow-up procedures, if any, have been applied. Response rates could be harmonised according to the following formula:

$$\text{Response Rate} = \frac{\text{Number of Interviews} \times 100}{N \text{ in sample B (ineligible + inaccessible)}}$$

- Identification of any imputation methods used to adjust for missing values (e.g. multiple imputation, reweighting or synthetic matching) and to which variables they were applied. We recommend imputation for independent variables and not for the dependent variable drug use. If cases or variables have been removed, this should also be mentioned (see Scheme 8.1).

Figure 8.1 Schematic representation of a multiple imputation process



Source: Van Buuren et al., 1995

8.3 Guidelines for Analysis and Standardised Prevalence Estimates Tables

The framework and focus of the analysis is *drug use prevalence*. This should be reflected in the way the analysis is reported, since the most important variables and the relationships between them are analysed in that light. Ideally, each analysis should contain an explanation of the basic assumptions applied. Prevalence estimates should preferably be reported in tables of standardised format, for which we propose the following requirements:

- Express estimates for illicit drug use in the following measures: lifetime prevalence (LTP, defined as >ever took the drug=); last-year prevalence (LYP, defined as the year / 12 months preceding the interview); and last-month prevalence (LMP, defined as the month / 4 weeks / 30 days preceding the interview).
- Report these estimates for each individual illicit drug, including as a minimum cannabis, amphetamines, ecstasy, cocaine, heroin, LSD and a dummy drug.
- Report estimates for each individual licit drug, minimally including tobacco (at least current use) and alcohol use (at least LYP and LMP).
- Report estimates in percentages, preferably also providing any population totals needed to reproduce the figures the percentages are based on.
- Report all data separately for the total population, as well as for the group of young adults aged between 15-34, and additionally for 4 broad age categories: 15-24 years; 25-34 years; 35-44 years and 45-54 years.
- Report all data both by gender and as totals.
- Report frequency measures for at least LMF for each individual illicit drug using the following categories: daily or almost daily; several times a week; at least once a week; less than once a week
- Report at least the age of onset of cannabis use, expressed in the following categories: before age 15; between ages 15-20; between ages 20-30; don't know/remember
- Provide a distribution of the sample by gender by age
- Provide a distribution by type of household by age by gender
- Provide a distribution by employment status by age by gender
- Provide a distribution by education level by age by gender
- Report attitude and public opinion data for at least a) perception of addicts as victims or criminals; b) public opinion on leniency towards drug-taking, distinguishing at least cannabis and heroin and using the following categories: fully agree, largely agree, neither agree nor disagree, largely disagree, fully disagree.
- Fully label and number all the tables

These guidelines will result in the following *11 tables*, with each age category distinguishing male (M), female (F) and total (T).

Table 1: Lifetime Prevalence of Illicit Drugs

ILLCIT DRUGS	Lifetime Prevalence %																	
	All Adults			Young Adults			Broad Age Groups											
	15-69 years			15-34 years			15-24 years			25-34 years			35-44 years			45-54 years		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
cannabis																		
ecstasy																		
amphetamines																		
cocaine																		
heroin																		
relewin																		
LSD																		

Table 2: Last-Year Prevalence of Illicit Drugs

Illicit Drugs	Last-Year Prevalence %																	
	All Adults			Young Adults			Broad Age Groups											
	15-69 years			15-34 years			15-24 years			25-34 years			35-44 years			45-54 years		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
cannabis																		
ecstasy																		
amphetamines																		
cocaine																		
heroin																		
relewin																		
LSD																		

Table 3: Last-Month Prevalence of Illicit Drugs

Illicit Drugs	Last-Month Prevalence %																	
	All Adults			Young Adults			Broad Age Groups											
	15-69 years			15-34 years			15-24 years			25-34 years			35-44 years			45-54 years		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
cannabis																		
ecstasy																		
amphetamines																		
cocaine																		
heroin																		
relewin																		
LSD																		

Table 4: Prevalence of Licit Drugs

Licit Drugs	All adults			Young adults			Broad Age Groups											
	15-69 years %			15-34 years %			15-24 years %			25-34 years %			35-44 years %			45-54 years %		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	tobacco current use																	
alcohol LYP																		
alcohol LMP																		

Table 5: Last-Month Frequency of Illicit Drug Use

Illicit Drugs	Last Month Frequency of Illicit Drugs %																	
	All Adults			Young Adults			Broad Age Groups											
	15-69 years			15-34 years			15-24 years			25-34 years			35-44 years			45-54 years		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
cannabis																		
daily or almost daily																		
several times a week																		
at least once a week																		
less than once a week																		
ecstasy																		
daily or almost daily																		
several times a week																		
at least once a week																		
less than once a week																		
amphetamines																		
daily or almost daily																		
several times a week																		
at least once a week																		
less than once a week																		
cocaine																		
daily or almost daily																		
several times a week																		
at least once a week																		
less than once a week																		
heroin																		
daily or almost daily																		
several times a week																		
at least once a week																		
less than once a week																		
relewin																		
daily or almost daily																		
several times a week																		
at least once a week																		
less than once a week																		
LSD																		
daily or almost daily																		
several times a week																		
at least once a week																		
less than once a week																		

Table 6: Age of Onset of Cannabis Use

	Age of Onset Cannabis Use %																	
	All Adults			Young Adults			Broad Age Groups											
	15-69 years			15-34 years			15-24 years			25-34 years			35-44 years			45-54 years		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
cannabis																		
before age 15																		
between ages 15-20																		
between ages 20-30																		
don't know/remember																		

Table 7: Public Opinions and Attitudes

	Public Opinions and Attitudes																	
	all adults			young adults			broad age groups											
	15-69 years %			15-34 years %			15-24 years %			25-34 years %			35-44 years %			45-54 years %		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
perception of drug addict																		
criminal																		
patient																		
don't know																		
leniency towards taking hashish or marijuana																		
fully agree																		
largely agree																		
neither agree nor disagree																		
largely disagree																		
fully disagree																		
leniency towards taking heroin																		
fully agree																		
largely agree																		
neither agree nor disagree																		
largely disagree																		
fully disagree																		

Table 8: Gender by Age Distribution

All Adults		Young Adults			Broad Age Groups												
15-69 years %		15-34 years %			15-24 years %			25-34 years %			35-44 years %			45-54 years %			
M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T

Table 9: Type of Household by Age by Gender

Household	All Adults		Young Adults			Broad Age Groups												
	15-69 years %		15-34 years %			15-24 years %			25-34 years %			35-44 years %			45-54 years %			
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
SINGLE/LIVING ALONE																		
FAMILY RELATIONSHIP																		
WITH OTHERS																		

Table 10: Employment Status by Age by Gender

Employment Status	All adults			Young Adults			Broad Age Groups											
	15-69 years %			15-34 years %			15-24 years %			25-34 years %			35-44 years %			45-54 years %		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
EMPLOYED																		
STUDENT																		
UNEMPLOYED																		
OTHER																		

Table 11: Education Level by Age by Gender

Education Level	All Adults			Young Adults			Broad Age Groups											
	15-69 years			15-34 years			15-24 years			25-34 years			35-44 years			45-54 years		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
primary																		
lower secondary																		
upper secondary																		
higher																		
other																		

In addition to these standardised tables, we are also proposing a number of additional guidelines for reporting on the survey analysis. These can be summarised as follows:

- Gender distributions should not only be reported in the standardised tables, but also included in the discussion of the results when relevant. This can be of particular interest, and it is often neglected in drug use surveys.
- Clearly specify in the analysis which variables are perceived as risk predictors for increased drug use, and which are expected to account for a large proportion of the variation in prevalence. We recommend analysing them in their relationship to drug use (e.g. age, tobacco consumption, lifestyle) and identifying groups that exhibit different patterns in the use of drugs or different types of drugs.
- Apply time indicators such as LTP, LYP and LMP consistently in the analysis.
- If differences in drug use prevalence are found within the sample, or if samples are compared over time, clearly note whether differences and changes are statistically significant, and specify which tests were applied to measure significance.
- Report whether adjustments have been made to compensate for presumed underreporting of drug use, and what adjustment methods were applied.

- If a dummy drug has been included, it is advisable to report at least the percentage of respondents who claimed to have taken it and whether or not they are still included in the analysis.
 - If typologies have been constructed (e.g. lifestyle, drug careers, patterns of use), describe the indicators these are based on and how the indicators have been measured. Report on these concepts in a uniform fashion.
 - If frequency measures are used, indicate what indicators they are based on (e.g. number of times, number of days, duration of drug use) and apply them consistently in the analysis.
 - The same applies to continuation-discontinuation estimates. If possible and appropriate, apply the calculation technique used throughout the study, or at least describe the technique applied. If a distinction is made between 'recent' and 'current' continuation rates, describe how the two have been defined, and distinguish different types of drugs if possible.
 - If multiple drug use is reported, clearly describe how this has been defined, for example which drugs have been used to measure multiple drug use and whether it includes licit, illicit or both types of drugs. The same applies for 'simultaneous' multiple drug use, in which case the time frame should also be specified.
 - If ethnicity is examined in relation to drug use, this should be done with great caution, especially if correlations are analysed.
-
- Provide any estimates of sampling errors that have been calculated, particularly for the prevalence measures, and specify the calculation method applied.
 - Describe the steps taken to minimise non-sampling errors (i.e. in drug use prevalence estimates).
 - Wherever possible and appropriate, use standard statistical classifications and definitions (e.g. International Standard Classification of Education ISCED [OECD, 1996]). When statistics are reported for which no such standards exist, the classifications and definitions chosen should support the broadest possible range of analytical uses of the data. Publications should specify any standard classifications and definitions used and provide appropriate references (from the UN statistical code).
-
- Provide standard deviations of estimation procedures.
 - Provide information about data collected but not reported or analysed, and the reasons for not doing so.
 - Analysis of non-response is important, as non-response can cause systematic underestimation of drug use. It is advisable to analyse whether total non-responders and item non-responders differ from the responders, whether the non-response is randomly dispersed, and whether it has caused bias in the sample. If methods have been applied to deal with non-response, the methods as well as the criteria applied (e.g. age, gender) should be stated.

8.4 Miscellaneous

- If at all possible, concepts should be consistently applied, using the meanings commonly recognised in scholarly research. Should a concept deviate from this meaning, the new meaning should be clearly explained.
- The report should contain full reference information and if possible a contact address.
- Clearly indicate all references and all sources of data used (such as additional databases).
- Include copies of the original questionnaire(s) and instructions to interviewees and interviewers.

8.5 Conclusion

In this chapter we have proposed a set of standardised tables and guidelines which can make European survey results more readily comparable and can enhance the transparency of working procedures and findings. Inconsistency in analysis and reporting impedes cross-national comparison.

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**EUROPEAN MODEL
QUESTIONNAIRE ON DRUG USE
IN THE GENERAL POPULATION**

TOBACCO and ALCOHOL

1. **Do you smoke tobacco such as cigarettes, cigars or a pipe?**
01 yes
02 no

2. **During the last twelve months, have you drunk any alcohol, such as beer, wine, spirits or any other alcoholic drink (s)?**
01 yes
02 no → go to question 4

3. **During the last 30 days, have you drunk any such alcoholic drinks?**
01 yes
02 no

CANNABIS

4. **Do you personally know people who take hashish and/or marihuana?**
01 yes
02 no

5. **Have you ever taken hashish and/or marihuana yourself?**
01 yes
02 no → go to question 10
03 don't know → go to question 10

6. **During the last 12 months, have you taken hashish and/or marihuana?**
01 yes
02 no → go to question 10

7. **During the last 30 days, have you taken hashish and/or marihuana?**
01 yes
02 no

8. **During the last 30 days, on how many days did you take hashish and/or marihuana?**
01 daily or almost daily
02 several times a week
03 at least once a week
04 less than once a week
9. **When did you take hashish and/or marihuana for the first time?**
01 before age 15
02 between age 15-20
03 between age 20-30
04 after age 30
05 don't know, don't remember

AMPHETAMINES

10. **Do you personally know people who take amphetamine ('speed', 'pep')?**
01 yes
02 no
11. **Have you ever taken amphetamine ('speed', 'pep') yourself?**
01 yes
02 no → go to question 15
03 don't know → go to question 15
12. **During the last 12 months, have you taken amphetamine ('speed', 'pep')?**
01 yes
02 no → go to question 15
13. **During the last 30 days, have you taken amphetamine ('speed', 'pep')?**
01 yes
02 no → go to question 15
14. **During the last 30 days, on how many days did you take amphetamine ('speed', 'pep')?**
01 daily or almost daily
02 several times a week
03 at least once a week

04 less than once a week

ECSTASY (XTC)

15. Do you personally know people who take Ecstasy ?
01 yes
02 no
16. Have you ever taken Ecstasy yourself?
01 yes
02 no → go to question 20
03 don't know → go to question 20
17. During the last 12 months, have you taken Ecstasy?
01 yes
02 no → go to question 20
18. During the last 30 days, have you taken Ecstasy?
01 yes
02 no → go to question 20
19. During the last 30 days, on how many days did you take Ecstasy?
01 daily or almost daily
02 several times a week
03 at least once a week
04 less than once a week

COCAINE

20. Do you personally know people who take cocaine?
01 yes
02 no
21. Have you ever taken cocaine yourself?
01 yes
02 no → go to question 25
03 don't know → go to question 25
22. During the last 12 months, have you taken cocaine?

01 yes

02 no



go to question 25

23. During the last 30 days, have you taken cocaine?

01 yes

02 no → go to question 25

24. During the last 30 days, on how many days did you take cocaine?

01 daily or almost daily

02 several times a week

03 at least once a week

04 less than once a week

HEROIN

25. Do you personally know people who take heroin?

01 yes

02 no

26. Have you ever taken heroin yourself?

01 yes

02 no → go to question 30

03 don't know → go to question 30

27. During the last 12 months, have you taken heroin?

01 yes

02 no → go to question 30

28. During the last 30 days, have you taken heroin?

01 yes

02 no → go to question 30

29. During the last 30 days, on how many days did you take heroin?

01 daily or almost daily

02 several times a week

03 at least once a week

04 less than once a week

RELEVIN

30. Do you personally know people who take relevin?
01 yes
02 no
31. Have you ever taken relevin yourself?
01 yes
02 no → go to question 35
03 don't know → go to question 35
32. During the last 12 months, have you taken relevin?
01 yes
02 no → go to question 35
33. During the last 30 days, have you taken relevin?
01 yes
02 no → go to question 35
34. During the last 30 days, on how many days did you take relevin?
01 daily or almost daily
02 several times a week
03 at least once a week
04 less than once a week

LSD

35. Do you personally know people who take LSD (*'trips'*, *'acid'*)?
01 yes
02 no
36. Have you ever taken LSD (*'trips'*, *'acid'*) yourself?
01 yes
02 no → go to question 40
03 don't know → go to question 40
37. During the last 12 months, have you taken LSD (*'trips'*, *'acid'*)?

- 01 yes
02 no → go to question 40

38. During the last 30 days, have you taken LSD ('trips', 'acid')?

- 01 yes
02 no → go to question 40

39 During the last 30 days, on how many days did you take LSD ('trips', 'acid') ?

- 01 daily or almost daily
02 several times a week
03 at least once a week
04 less than once a week

PUBLIC OPINIONS AND ATTITUDES

40. 'Do you perceive a drug addict more as a criminal or more as a patient?'

- 01 more as a criminal
02 more as a patient
03 neither
04 don't know

41. 'Do you agree or disagree with the following statement:

"People should be permitted to take hashish or marijuana"?'

- 01 fully agree
02 largely agree
03 neither agree nor disagree
04 largely disagree
05 fully disagree

42. 'Do you agree or disagree with the following statement:

"People should be permitted to take heroin"?'

- 01 fully agree
02 largely agree
03 neither agree nor disagree
04 largely disagree
05 fully disagree

Question 43 + 44 are still in progress, a sub-selection of the ESPAD questionnaire (question 31 + 32) functions currently as a starting point:

43 Individuals differ in whether or not they disapprove of people doing certain things. Do YOU disapprove of people doing each of the following?’ (Mark one box for each line)

	don't disapprove	disapprove	strongly disapprove	don't know
Trying ecstasy once or twice				
Trying heroin (smack, horse) once or twice				
Smoking 10 or more cigarettes a day				
Having one or two drinks several times a week				
Smoking marijuana or hashish occasionally				

44 How much do you think people risk harming themselves (physically or in other ways) if they ... (Mark one box for each line)

	no risk	slight risk	moderate risk	great risk	don't know
Smoke one or more packs of cigarettes per day					
Have five or more drinks once or twice each weekend					
Smoke marijuana or hashish regularly					
Trying ecstasy once or twice					
Try cocaine or crack once or twice					

DEMOGRAPHICS

45. Are you a male or female?

- 01 male
 02 female

46. What is your age?

01 years

47. In what type of household do you live, including yourself?

- 01 single or living alone
 02 with some kind of family
 03 with others

SOCIO-ECONOMICS

48. Which of the followingapplies to you best?

- 01 employed
- 02 student
- 03 unemployed
- 04 other

49. What is the highest level of education that you have completed (i.e. passed final exams)?

- 01 primary level of education
- 02 lower secondary level of education
- 03 upper secondary level of education
- 04 higher education
- 05 other, none of the above applies

CORE ITEM LIST

ITEM: TOBACCO AND ALCOHOL

variable:	SMOKING	Q1
model question:	Do you smoke tobacco e.g. cigarettes, cigars or a pipe?	
var label:	current smoking habit	
values:	codes categories	labels
	01 yes	smoker
	02 no	non-smoker
comments:	The variable describes the answer the respondent would give, when being asked in a social setting 'do you smoke'. The variable should not be considered as an exact prevalence measure.	
instructions:	The question should be formulated in a casual manner.	
variable:	LYP-ALCOHOL	Q2
model question:	During the last twelve months, have you drunk any alcohol, such as beer, wine, spirits or (an)other alcoholic drink(s)?	
var label:	last year prevalence of alcohol use	
values:	codes categories	labels
	01 yes	drunk alcohol during last 12 months
	02 no	not drunk alcohol during last 12 months
variable:	LMP-ALCOHOL	Q3
model question:	During the last 30 days, have you drunk any such alcoholic drinks?	
var label:	last month prevalence of alcohol use	
values:	codes categories	labels
	01 yes	drunk alcohol in last 30 days

02

no

not drunk alcohol in last 30 days

item: CANNABIS

variable: KNP-CANNABIS Q4

model question: Do you personally know people who take hashish and/or marihuana?

var label: knows people taking cannabis

values:	codes	categories	labels
	01	yes	know people who take hashish/marihuana
	02	no	do not know people who take hashish/marihuana

instruction: 'Personally' should be interpreted in a general way: everyone you know, friends, relatives, neighbours, etc.

variable: LTP-CANNABIS Q5

model question: Have you ever taken hashish and/or marihuana yourself?

var label: life time prevalence of cannabis use

values:	codes	categories	labels
	01	yes	ever use of cannabis
	02	no	never use of cannabis

variable: LYP-CANNABIS Q6

model question: During the last twelve months, have you taken hashish and or marihuana?

var label: last year prevalence of cannabis use

values:	codes	categories	labels
	01	yes	use of cannabis last year
	02	no	no use of cannabis last year

variable: LMP-CANNABIS Q7

model question: During the last 30 days, have you taken hashish and or marihuana?

var label: last month prevalence of cannabis use

values:	codes	categories	labels
	01	yes	use of cannabis last month
	02	no	no use of cannabis last month

variable: LMFR-CANNABIS Q8

model question: During the last 30 days, on how many days did you take hashish and/or marihuana?

var label: frequency of taking cannabis in last 30 days

values:	codes	categories	labels
	01	daily or almost daily	
	02	several times a week	
	03	at least once a week	
	04	less than once a week	

comments: The variable could only results in an exact number of days if we assume that respondents really know on how many of the last 30 days they took cannabis. However, in particular if they did not take cannabis on only a few or on all days, it's more likely that the number responded equals an estimate with an unknown margin of error. For this reason, preference is given to the above categories.

variable: AO-CANNABIS Q9

model question: When did you take hashish and/or marihuana for the first time?

var label: age of onset of cannabis use

values:	codes	categories	labels
	01	before age 15	
	02	between age 15-20	
	03	between age 20-30	
	04	after age 30	
	05	don't now, don't remember	

comments: Indicative ranges are preferred as we assume that respondents in reality cannot remember exactly at what age they took cannabis for the first time.

item: AMPHETAMINES

variable: KNP- AMPHETAMINES Q10

model question: Do you personally know people who take amphetamine ('speed', 'pep')?

var label: know people who use amphetamine

values:	codes	categories	labels
	01	yes	know people who take amphetamine
	02	no	do not know people who take amphetamine

instructions: 'Personally' should be interpreted in a general way: everyone you know, friends, relatives, neighbours, etc.

variable: LTP- AMPHETAMINES Q11

model question: Have you ever taken amphetamine ('speed', 'pep') yourself?

var label: life time prevalence of amphetamine use

values:	codes	categories	labels
	01	yes	ever use of amphetamine
	02	no	never use of amphetamine

variable: LYP-AMPHETAMINES Q12

model question: During the last twelve months, have you taken amphetamine ('speed', 'pep')?

var label: last year prevalence of amphetamine use

values:	codes	categories	labels
	01	yes	use of amphetamine last year
	02	no	no use of amphetamine last year

variable: LMP-AMPHETAMINES Q13

model question: During the last 30 days, have you taken amphetamine ('speed', 'pep')?

var label: last month prevalence of amphetamine use

values:

codes	categories	labels
01	yes	used amphetamine last month
02	no	did not use amphetamine last month

variable: LMFR-AMPHETAMINES Q14

model question: During the last 30 days, on how many days did you take amphetamine ('speed', 'pep')?

var label: frequency of taking amphetamine in last 30 days

values:

codes	categories	labels
01	daily or almost daily	
02	several times a week	
03	at least once a week	
04	less than once a week	

comments: The variable could only results in an exact number of days if we assume that respondents really know on how many of the last 30 days they took amphetamine. However, in particular if they did not take amphetamine on only a few or on all days, it's more likely that the number responded equals an estimate with an unknown margin of error. For this reason, preference is given to the above categories.

item: ECSTASY (XTC)

variable: KNP-ECSTASY Q15

model question: Do you personally know people who take Ecstasy?

var label: know people who use Ecstasy

values:	codes	categories	labels
	01	yes	know people who take Ecstasy
	02	no	do not know people who take Ecstasy

instruction: 'Personally' should be interpreted in a general way: everyone you know, friends, relatives, neighbours, etc.

variable: LTP-ECSTASY Q16

model question: Have you ever taken Ecstasy yourself?

var label: life time prevalence of Ecstasy use

values:	codes	categories	labels
	01	yes	ever use of Ecstasy
	02	no	never use of Ecstasy

variable: LYP-ECSTASY Q17

model question: During the last twelve months, have you taken Ecstasy?

var label: last year prevalence of Ecstasy use

values:	codes	categories	labels
	01	yes	use of Ecstasy last year
	02	no	no use of Ecstasy last year

variable: LMP-ECSTASY **Q18**

model question: During the last 30 days, have you taken Ecstasy?

var label: last month prevalence of Ecstasy use

values:	codes	categories	labels
	01	yes	use of Ecstasy last month
	02	no	no use of Ecstasy last month

variable: LMFR-ECSTASY **Q19**

model question: During the last 30 days, on how many days did you take Ecstasy?

var label: frequency of taking Ecstasy in last 30 days

values:	codes	categories	labels
	01	daily or almost daily	
	02	several times a week	
	03	at least once a week	
	04	less than once a week	

comments: The variable could only results in an exact number of days if we assume that respondents really know on how many of the last 30 days they took Ecstasy. However, in particular if they did not take Ecstasy on only a few or on all days, it's more likely that the number responded equals an estimate with an unknown margin of error. For this reason, preference is given to the above categories.

item: COCAINE

variable: KNP-COCAINE Q20

model question: Do you personally know people who take cocaine?

var label: know people who use cocaine

values:	codes	categories	labels
	01	yes	know people who take cocaine
	02	no	do not know people who take cocaine

instruction: 'Personally' should be interpreted in a general way: everyone you know, friends, relatives, neighbours, etc.

variable: LTP-COCAINE Q21

model question: Have you ever taken cocaine yourself?

var label: life time prevalence of cocaine use

values:	codes	categories	labels
	01	yes	ever use of cocaine
	02	no	never use of cocaine

variable: LYP-COCAINE Q22

model question: During the last twelve months, have you taken cocaine?

var label: last year prevalence of cocaine use

values:	codes	categories	labels
	01	yes	use of cocaine last year
	02	no	no use of cocaine last

variable: LMP- COCAINE Q23

model question: During the last 30 days, have you taken cocaine?

var label: last month prevalence of cocaine use

values: codes categories labels

01	yes	use of cocaine last month
02	no	no use of cocaine last month

variable: LMFR-COCAINE Q24

model question: During the last 30 days, on how many days did you take cocaine?

var label: frequency of taking cocaine in last 30 days

values: codes categories labels

01	daily or almost daily	
02	several times a week	
03	at least once a week	
04	less than once a week	

comments: The variable could only results in an exact number of days if we assume that respondents really know on how many of the last 30 days they took cocaine. However, in particular if they did not take cocaine on only a few or on all days, it's more likely that the number responded equals an estimate with an unknown margin of error. For this reason, preference is given to the above categories.

item: HEROIN

variable: KNP- HEROIN Q25

model question: Do you personally know people who take heroin?

var label: know people who use heroin

values:	codes	categories	labels
	01	yes	know people who take heroin
	02	no	do not know people who take heroin

instruction: 'Personally' should be interpreted in a general way: everyone you know, friends, relatives, neighbours, etc.

variable: LTP- HEROIN Q26

model question: Have you ever taken heroin yourself?

var label: life time prevalence of heroin use

values:	codes	categories	labels
	01	yes	ever use of heroin
	02	no	never use of heroin

variable: LYP- HEROIN Q27

model question: During the last twelve months, have you taken heroin?

var label: last year prevalence of heroin use

values:	codes	categories	labels
	01	yes	use of heroin last year
	02	no	no use of heroin last year

variable: LMP- HEROIN **Q28**

model question: During the last 30 days, have you taken heroin?

var label: last month prevalence of heroin use

values: codes categories labels

	01	yes	used heroin last month
	02	no	did not use heroin last

month

variable: LMFR-HEROIN **Q29**

model question: During the last 30 days, on how many days did you take heroin?

var label: frequency of taking heroin in last 30 days

values: codes categories labels

	01	daily or almost daily	
	02	several times a week	
	03	at least once a week	
	04	less than once a week	

comments: The variable could only results in an exact number of days if we assume that respondents really know on how many of the last 30 days they took heroin. However, in particular if they did not take heroin on only a few or on all days, it's more likely that the number responded equals an estimate with an unknown margin of error. For this reason, preference is given to the above categories.

item: RELEVIN

variable: KNP- RELEVIN Q30

model question: Do you personally know people who take relevin?

var label: know people who use relevin

values:	codes	categories	labels
	01	yes	know people who take relevin
	02	no	do not know people who take relevin

instructions: 'Personally' should be interpreted in a general way: everyone you know, friends, relatives, neighbours, etc.

variable: LTP- RELEVIN Q31

model question: Have you ever taken relevin yourself?

var label: life time prevalence of relevin use

values:	codes	categories	labels
	01	yes	ever use of relevin
	02	no	never use of relevin

variable: LYP- RELEVIN Q32

model question: During the last twelve months, have you taken relevin?

var label: last year prevalence of relevin use

values:	codes	categories	labels
	01	yes	use of relevin last year
	02	no	no use of relevin last year

variable: LMP- RELEVIN **Q33**

model question: During the last 30 days, have you taken relevin?

var label: last month prevalence of relevin use

values: codes categories labels

	01	yes	used relevin last month
	02	no	did not use relevin last

month

variable: LMFR-RELEVIN **Q34**

model question: During the last 30 days, on how many days did you take relevin?

var label: frequency of taking relevin in last 30 days

values: codes categories labels

	01	daily or almost daily	
	02	several times a week	
	03	at least once a week	
	04	less than once a week	

comments: The variable could only results in an exact number of days if we assume that respondents really know on how many of the last 30 days they took relevin. However, in particular if they did not take relevin on only a few or on all days, it's more likely that the number responded equals an estimate with an unknown margin of error. For this reason, preference is given to the above categories.

item: LSD

variable: KNP- LSD Q35

model question: Do you personally know people who take LSD ('trips' or 'acid')?

var label: know people who use LSD

values:	codes	categories	labels
	01	yes	know people who take LSD
	02	no	do not know people who take LSD

instructions: 'Personally' should be interpreted in a general way: everyone you know, friends, relatives, neighbours, etc.

variable: LTP- LSD Q36

model question: Have you ever taken LSD ('trips' or 'acid') yourself?

var label: life time prevalence of LSD use

values:	codes	categories	labels
	01	yes	ever use of LSD
	02	no	never use of LSD

variable: LYP- LSD Q37

model question: During the last twelve months, have you taken LSD ('trips' or 'acid')?

var label: last year prevalence of LSD use

values:	codes	categories	labels
	01	yes	use of LSD last year
	02	no	no use of LSD last year

item: PUBLIC OPINIONS AND ATTITUDES

variable DRUG ADDICT PERCEPTION Q40

model question: Do you perceive a drug addict more as a criminal or more as a patient?

var label: perception of drug addict

values:	codes	categories	labels
	01	fully agree	criminal
	02	more as a patient	patient
	03	neither	neither
	04	don't know	don't know

variable Legalisation Cannabis Q41

model question: Do you agree or disagree with the following statement:
People should be permitted to take hashish or marijuana?

var label: legalisation of cannabis

values:	codes	categories	labels
	01	fully agree	
			largely agree
			neither agree nor disagree
			largely disagree
			fully disagree

variable Legalisation Heroin Q42

model question: Do you agree or disagree with the following statement:
People should be permitted to take heroin?

var label: legalisation of heroin

values:	codes	categories	labels
	01	fully	
			largely agree
			neither agree nor disagree
			largely disagree
			fully disagree

Question 43 + 44 are still in progress Q43

Q44

item: DEMOGRAPHICS

variable: GENDER Q45

model question: Are you a male or a female?

var label: gender of respondent

values:	codes	categories	labels
	01	male	male
	02	female	female

instructions: Think about formulation of the question in a face to face interview.

variable: AGE Q46

model question: What is your age?

var label: age in years of respondent

values:	codes	categories	labels
	xx	valid range = 12-89	number of years

variable: HOUSEHOLD Q47

model question: In what type of household you live in, including yourself?

var label: type of household of respondent

values:	codes	categories	labels
	01	single or living alone	
	02	with some kind of family	
	03	with others	

comments: More detailed categories might be used as long as they can be unambiguously recoded into the core categories above.

Levels of Education According to the International Standard Classification of Education (ISCED) in the 15 countries of the European Union.

COUNTRY	ISCED 1 Primary Level of Education	ISCED 2 Lower Secondary Level of Education	ISCED 3 Upper Secondary Level of Education	ISCED 5, 6, and 7 Higher Education
<p>België/Belgique: Europese Gemeenschap</p> <p>Communauté française</p>	<p>Basisschool gewoon onderwijs</p> <p>enseignement primaire enseignement spécial</p>	<p>1^e graad: B (year 2: Beroepsvoorbereidend) gewoon onderwijs</p> <p>enseignement secondaire: Cycle II: Cycle inférieur year 1-2: Professionnel, Technique, Général Cycle I: Cycle d'observation (year 2: Professionnel) enseignement spécial</p>	<p>1^e graad: Algemeen, Kunst, Technisch, Beroeps 2^e graad: Algemeen, Kunst, Technisch, Beroeps 3^e graad: Algemeen, Kunst, Technisch, Beroeps gewoon onderwijs</p> <p>enseignement secondaire: Cycle II: Cycle inférieur year 3-5: Professionnel, Technique, Général; Cycle Cycle I: Cycle d'orientation: Général, Technique de transition, Technique de qualification, Professionnel; Cycle de détermination: Général, Technique de qualification, Professionnel, Année préparatoire enseignement à horaire réduit enseignement spécial</p>	<p>gewoon onderwijs buiten de universiteit: Type court, Lange type universiteit</p> <p>enseignement supérieur non universitaire: Type court, Type long université</p>
Denmark	<p>Grundskole year 1-6 Special education</p>	<p>Grundskole year 7-9 or year 7-10 (including year 10) (Efterskole) Special education Kunsthøjskole (part-time)</p>	<p>Individuele uddannelser: U, FUU Overvægsfaglige uddannelser: Overvægsuddannelser, social- og sundhedsuddannelser, landbrugs uddannelser, CCC Erhvervsuddannelser Kunsthøjskole (part-time)</p>	<p>Uddannelsesinstitutioner af videregående uddannelser Mellemlange og lange uddannelser Kandidatuddannelser Kunsthøjskole (part-time)</p>
Germany	<p>Grundschulen Mittelschulen</p>	<p>Mittelschulen Berufshilfsklassen Berufshilfsschulen Berufshilfsmittelschulen Berufshilfsmittelschulen year 1-6 (including year 1-2: Orientierungsstufe) Mittelschulen</p>	<p>Berufsschulen (Duales System) Berufsaufbauschulen Berufshilfsschulen Berufshilfsmittelschulen Berufshilfsfachschulen Berufshilfsmittelschulen Berufshilfsmittelschulen year 7-9</p>	<p>Berufshilfsschulen Hochschulen Universitäten Weiterbildung</p>
Greece	<p>Γενικό (primary school)</p>	<p>Γενικό</p>	<p>S: Technical and vocational school L: Technical and vocational lykeion L: Integrated lykeion L: General lykeion K: Institute of vocational training (1 year) L: Vocational training (1 year)</p>	<p>Technological education establishments: 14 institutions Universities: 18 institutions: Technical universities, Medical school, Dentistry schools, Agriculture schools, Other university schools Post-graduate studies</p>

Cont: Levels of Education According to the International Standard Classification of Education (ISCED) in the 15 countries of the European Union.

COUNTRY	ED 1 PRIMARY LEVEL OF EDUCATION	ED 2 LOWER SECONDARY LEVEL OF EDUCATION	ED 3 UPPER SECONDARY LEVEL OF EDUCATION	ED 5, 6, AND 7 TERTIARY EDUCATION
Spain	Grados de educación general básica (EGB) year 1-5	Grados de educación general básica (EGB) year 6-8	Grados de formación profesional (VTD): Formación profesional de primer grado Formación profesional de segundo grado Grados de bachillerato unificado y polivalente (BUP) Grado de orientación universitaria (COU): pruebas de acceso a la universidad	Grados universitarios: Grados Universitarios Grados Técnicas Superiores Grados de Altos estudios
France	Les élémentaires	Grades: 3e générale, 3e d'insertion, 3e technologique, Grados professionnels	Les spécialisées Grades: BAC général, BAC technologique, BT Grades professionnels: BEP ou CAP, BAC professionnel	Grados écoles Grados spécialisées Grados universités: UFR-Santé, UFR-Lettres-Arts-Sciences humaines-Sciences-droit-Sciences économiques
Ireland	First Level: National schools, Non aided private schools, Special schools	Junior cycle (Junior certificate): Vocational schools, Community & comprehensive schools, Voluntary secondary schools, Private schools, Special schools year 1-3	Junior Cycle (Leaving certificate): Vocational schools, Community & comprehensive schools, Voluntary secondary schools, Private schools year 4-6 (including year 4: transition year) Special schools year 4-5 Apprenticeship training: FAS, CERT, TEAGASC Leaving certificate Leaving certificate business schools	Grados Technical Colleges (and Dublin Institute of Technology) universités (including teacher training) Private third level
Italy	Grado elementari Grado licenza speciale	Grado medie Grado licenza speciale	Grado magistrali Grados istituti magistrali Grados istituti artistici Grados istituti d'arte Grados istituti professionali Grados istituti tecnici Grados istituti classici, scientifici, linguistici	Grados universitarie Grados università ed istituti universitari: Corsi di laurea, corsi di diploma universitario, scuole dirette a fini speciali
Grand-Duché Luxembourg	Enseignement primaire	Grados per secondary schools general: Grado général Grados per secondary vocational: Grado technique	Grados per secondary schools general: Grado général Grados per secondary vocational: Grado technique Grados de technicien Grados professionnel	Grados (other non-university): Grados S Grados /SERP/IEES Grados (other university): Grados supérieur universitaire: including Continuation of studies abroad
Netherlands	Basisonderwijs: year 3-8 Primaire onderwijs: year 3-8	Basisonderwijs: VBO, MAVO, HAVO year 1-3, MBO year 1-3 (all: year 1: Gemeenschappelijk brugjaar) Basisonderwijs: year 1-3	Basisonderwijs: LLW, MBO, HAVO year 4-5, VWO year 4-6 Basisonderwijs: year 4-6	Basisonderwijs: HBO, WO Basisonderwijs: Tweede fase, Post-doctoraal, AIO

Cont: Levels of Education According to the International Standard Classification of Education (ISCED) in the 15 countries of the European Union.

COUNTRY	ED 1 PRIMARY LEVEL OF EDUCATION	ED 2 LOWER SECONDARY LEVEL OF EDUCATION	ED 3 UPPER SECONDARY LEVEL OF EDUCATION	ED 5, 6, AND 7 HIGHER EDUCATION
Germany	Kinderschule Kinderschule year 1-4	Hauptschule Allgemeinbildende höhere Schulen Erststufe Kinderschule year 5-9	Technischer Lehrgang, Berufsschule und Lehrerbildende und Lehrerbildende mittlere Schulen Lehrerbildende und Lehrerbildende höhere Schulen Allgemeinbildende höhere Schulen - Oberstufe, Oberstufenrealgymnasium	Stiftung nichtuniversitärer Sektor Hochschulen Kunsthochschulen Universitäten
Spain	Compulsory basic school: general school: 1st cycle year 1-5 2nd cycle year 5-6 Escuela o especial	Compulsory basic school: general school: 3rd cycle Certificate of degree year 7-9 Escuela o especial	Vocational school courses Secondary courses: general and technological courses Escuela o especial	Technical higher education (Licenciatura, Bacharelato) University higher education (Licenciatura, Master's degree, Doctorado)
Finland	Primary: Peruskoulun ala-aste (comprehensive schools, lower stage) year 1-6	Lower secondary: Peruskoulun yläaste (comprehensive schools, upper stage) year 7-9	Upper secondary: Ammatilliset oppilaitokset (vocational and professional education), Lukio (upper secondary schools)	Upper tertiary: Ammattikorkeakoulu (AMK) (polytechnics) University (universities): Alempi Korkeakoulututkinto (bachelor's), Ylempi Korkeakoulututkinto (master's), Lisensiaatti (licentiate), Tohtorin tutkinto (doctorate)
Sweden	Grundskola year 1-6 Grundskolor, Sär- och Specialskola (Swedish schools abroad, special schools) Folkbildning och folkbildning (adult education)	Grundskola year 7-9 Grundskolor, Sär- och Specialskola Folkbildning och folkbildning	Specialskolor: Nationelle program, Specialkurser Grundskolor, Sär- och Specialskola Folkbildning och folkbildning	Higher education (Högskoleutbildning): Program, Fristående kurser Forskning: Licenciat, Doktor
United Kingdom: England and Wales	Primary schools (including special education) (key stage 1 and key stage 2): First schools, Middle schools year 1-2 State education	Primary schools (including special education) years 1-3 (key stage 3) (including Middle schools year 3-4) Primary and secondary schools years 1-3 (key stage 3) State education	Primary schools (including special education) years 4-5 (key stage 4): GCSE/ Foundation or intermediate GNVQs/ NVQ 1 or 2 Primary and secondary schools years 4-5 (key stage 4) Further education (FE) sector colleges years 1-2 School sixth forms Further education centres GCE A level/ advanced GNVQ/ NVQ3 State education	Further education (FE) sector colleges years 3-4: Sub-degree D/ HNC/ NVQ4 Higher education (HE) institutions (universities and colleges): Sub-degree HND/ HNC/ NVQ4, First Degree, Master's, Doctorate State education
Northern Ireland	Primary schools	Lower secondary schools general: Primary schools Secondary schools	Lower secondary schools general: Secondary schools Further education college Primary schools	Sub-degree higher education Post-graduate higher education
Scotland	Primary schools	Lower secondary schools general: Secondary schools	Lower secondary schools general: Secondary schools Further education college	Further education Higher education

Sources: OECD (1996), European Commission (1996).

SEE ALSO REMARKS NEXT PAGE

Remarks:

- ISCED 0 = Early childhood education not included.

Higher education:

ISCED 5 = Non-university tertiary level of education

ISCED 6 = University tertiary level of education: first stage

ISCED 7 = University tertiary level of education: second stage, post-graduate

For Grand-Duché Luxembourg, Northern Ireland (UK) and Scotland (UK) only less detailed information is available due to the use of another source, i.e. European Commission (1996), and not OESD (1997) as for the other EU countries. No clear references are made to the ISCED levels of education, so here only 'estimates' are presented.

1-3 years = Theoretical year(s) of study within the type of educational programme/institution (not the theoretical duration of total study career, e.g. from year 1 primary education to year 17 university).

Information about private education and special education is not available for each country

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