EMCDDA SCIENTIFIC REPORT

Methodological study to compare the effect of different methods of data collection on the prevalence of self-reported drug use in General Population Surveys

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Methodological study to compare the effect of different methods of data collection on the prevalence of self-reported drug use in General Population Surveys

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Methodological differences

in general population surveys

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Executive Summary

* Introduction

This report describes the affect of using different survey modes on the measurement of substance use prevalence figures. Three different modes were included in the design of this study: a telephone, a postal, and a face to face survey-mode. The study has been conducted in three European countries: Greece, Sweden and the Netherlands. These countries were selected because they recently conducted a national study on drug use, which laid the foundation for the face-to-face section of this study.

Figure 1 gives an overview of the drug and background variables that were included in each of the surveys per country and which have been used for the analysis. Other questions were also asked, but do not return in the analysis section of our study. Either the number of observations on these variables were too low to be able to draw reliable conclusions, or they did not deliver any new perspectives on mode-effects, other than the ones that already resulted from the analysis of the main variables. The variables 'age of initiation' (the Netherlands and Greece) and 'frequency of use' and 'amount of use' (the last two only for Greece) have also been checked on mode-effects. Through the inclusion of different background variables in the data sets, the effects of differential response populations could be partially neutralized.

The initial objective was a comparison between modes within each country, as well as a comparison between countries of each individual mode, therewith separating mode-effects from contextual or cultural effects. For the latter--a comparison between countries--all other than interview-mode differences should be avoided. However, the exact form of implementation of each study varied between the three countries, due to the national variation in the already existing face-to-face prevalence surveys, the possibilities to adjust to project preferences, sampling frame differences and logistic limitations. Because of this variation, which unwontedly resulted in a series of differences other than mode of administration, we have focussed on the comparison of modes within each individual country solely.

To improve cross-national comparability of drug survey outcomes, the last section of the report describes the technical aspects that should be taken into consideration, and possibly made uniform. In addition, recommendations for follow-up research in the field of methodological comparisons are included in the conclusion section of the report.
On the basis of the outcomes of this study we argue that mode-effects are small, and do not point into a specific direction. We can not conclude that mode-effects will influence the comparability of results within a country and therefore it is possible to use a mixed mode method.

However, we argue that our results should be checked in a study that tries to do exactly the same, but with a different set of participating countries, and hence, investigators.

* The surveys

The Greek face-to-face drug and substance use data are taken from a 1998 survey that deals extensively with topics of mental health. The Swedish face-to-face drug use data are derived from a 1998 Omnibus, which explores a wide range of other than drug topics. The Dutch face to face

survey data are from the first National Prevalence Study (1997) which uses an elaborate drug and substance use questionnaire including individual background and life-style variables[1].

For the telephone and the postal questionnaires in each of the three participating countries the main drug use questions were copied. Questions were added to the telephone and the postal survey questionnaires to recreate the context of the face to face questionnaire to some degree. Hence, differences in answering patterns on drug use questions due to differences in questionnaire context were in this way avoided. Similar introductions were used for each of the three surveys.

[1] Abraham, M. P. Cohen, R. van Til, M. de Winter (1999) Licit and Illicit Drug Use in the Netherlands, 1997, METS, Amsterdam

Figure 1: The main analysis variables per country.

x = existing in all three datasets (telephone postal and face to face), grey= in all three countries
ltp= life time prevalence, lyp=last year prevalence, lmp= last month prevalence, lfb= age of initiation,
ltpn lypn lmpn lwpn= frequency of use ever, last year, last month, last week,
lmpa= amount of use last month, x*= derived from other variable

Tobacco	Greece	the Netherlands	Sweden
LTP	x	x	
LYP		x	
LMP	x	x	
LFB	x	x	
LMPA	x		

Alcohol	Greece	the Netherlands	Sweden
LTP	x	x	
LYP	x	x	x
LMP	x	x	x*
LFB	x	x	
LMPN	x		
LWPN	x		

Cannabis	Greece	the Netherlands	Sweden
LTP	x	x	x
LYP	x	x	x
LMP	x	x	x
LFB	x	x	
LTPN	x		

Cocaine	Greece	the Netherlands	Sweden
LTP	x	x	x
LYP	x	x	x
LMP	x	x	x
LFB	x	x	

Amphetamines	Greece	the Netherlands	Sweden
LTP	x	x	x
LYP	x	x	x
LMP	x	x	x
LFB	x	x	

Ecstacy	Greece	the Netherlands	Sweden
LTP	x	x	x
LYP	x	x	x
LMP	x	x	x
LFB	x	x	

Background	Greece	the Netherlands	Sweden
Age	x	x	x
Sex	x	x	x
Education	x	x	x
Population density /urbanisation variable	x	x	x
Household composition			x
Mode	x	x	x

* The sampling procedures

Figure 2: Sampling methods of participating countries

	sample frame	*sample technique*	*sample population*	*oversampling*
Greece				
face-to-face	self-created	multi-stage stratified	12-64	age 20-24
telephone	telephone book	random digit dialling	15-60	no
postal	self-created	multi-stage stratified	15-60	no
Sweden				
face-to-face	population registry	two-stage stratified	15-75	no
telephone	telephone directory	random digit dialling	15-75	no
postal	population registry	non-stratisfied	15-75	no
the Netherlands				
face-to-face	population registry	two-stage stratified	> 12	age 12-18, large cities
telephone	population registry	two-stage stratified	15-60	no
postal	population registry	two-stage stratified	15-60	no

Figure 2 shows information about the sampling methods applied for each survey mode in each of the three countries. For the Dutch face-to-face survey, a two-stage sample was drawn from a national population registry. Only the four largest cities provided and are represented by their own samples. The sampling frame for the first stage consists of the complete list of Dutch municipalities, which are divided into five separate address density strata. The frame for the second stage consists of the local population registries of Dutch municipalities. Youth between 12 and 18 of age and the largest cities (Amsterdam, Rotterdam, The Hague and Utrecht) are oversampled. For the telephone and the mail surveys a similar two-stage sample is applied. In the sampling procedure it was avoided that the same people would be addressed more than once. There is no oversampling in both the postal en the telephone survey.

The Swedish face to face survey sample is a stratified random sample, drawn from the central population registry. No oversampling is done. The Swedish mail survey sample is a non-stratified sample taken from the Swedish central population registry, and thus, uses a similar frame as the face-to-face survey. The sample of the Swedish telephone survey is drawn from a base of households derived from the telephone directory. Secret numbers are included through the creation of synthetic numbers: adding one to the last figure of the number.

Since a population registry is not available in Greece, for the Greece face to face survey the sampling frame first had to be created. The country is first divided in substrata representing different population density areas. From each stratum a selection of municipalities is made, based on the 1991 census data. Within this selection a number of residential 'blocks' is selected randomly using the maps of the Greek statistical service. Addresses within these blocks are screened completely on several background characteristics of the inhabitants. Where no information is available the addresses are excluded from the frame. From the sampling frame respondents were selected, using a random numbers table. Oversampling was used in the age category 20-24.
For the Greek postal survey the same frame as for the face-to-face survey was used, but people who had already been approached for a personal interview were excluded. The households were randomly selected. A random digit dialing method was used for the for the Greek telephone survey. This was done within areas that run parallel to the area stratification of the face-to-face

survey.

Residents of mental institutions, hospitals, prisons and so forth are not included in the net samples of any country.

Figure 3 shows the gross samples, the valid gross samples and the response rate of each country's surveys.

Figure 3: gross and net samples for each country's surveys

	gross sample total	*valid gross sample**	*response*	*response rate*
Netherlands				
face-to-face	31,068	27,149	16,200	59.7
telephone	1,733	1,599	833	52.1
postal	3,386	3,226	1,250	38.7
Greece				
face-to-face	?	5,501	3,759	68.3
telephone	4,243	3,654	854	23.4
postal	?	?	530	25.0**
Sweden				
face-to-face	2,600	2,435	1,483	60.9
telephone	2,962	1,653	1,005	60.8
postal	1,500	1,483	1,018	68.6

* = gross sample minus frame-errors and non used addresses/numbers
** Calculated by UMHRI

For the analysis of the data of each country, the population response group of people between 15 and 60 years of age has been selected. The response of the Swedish surveys after this selection is 1,245 for the face to face survey, 792 for the telephone survey and 748 for the postal survey.

The selection of respondents aged 15-60 in the Greek face-tot-face survey resulted in a respondent population of 3,036.

* Fieldwork procedures

Bilateral and collective meetings were held to discuss differences in fieldwork procedures between each respective country and to discuss if and how these differences could be bridged. Attention has been paid to number of reminder letters (in the postal surveys) and visits (in the face-to-face surveys), the number of call backs for a telephone interview and the way the survey is conducted (using a pen and paper method or CAPI/CASI), and the introductions. In all surveys that did not rely on a sampling frame of persons, the interviewer asked for the person in the household who most recently had his/her birthday to conduct the interview. The confidentiality and anonymity of the information was stressed in all letters, as well as by the (telephone) interviewers. The Greek telephone interviews were conducted by the Dutch fieldwork organization and tapes of all interviewers were sent to Greece to screen for accents that might influence answering patterns. The Dutch fieldwork was conducted in several phases spread out over the period December 1995 (the first very small section of the face-to-face interview) through October 1998 (the telephone and the postal interview). The Greek interviews

for the face-to-face survey were conducted in May and June 1998. The telephone surveys were conducted at the end of September, start of October 1998. The last reminder of the postal survey was sent out in the first week of July 1998. The Swedish face-to-face survey was conducted between February and April 1998, the telephone survey was conducted the first week of April and the last reminder for the Swedish mail survey was send out in May 1998.

* The data

The results of each of the three surveys have been integrated in one data set for the analysis per country. Inconsistent elements, for instance where no answer was given to the ever-use question, but where a positive answer was given to the last-month use question, were excluded from the analysis.

The distribution of the response population was compared to the distribution of the sample population on the background characteristics gender, age, and--in the Dutch cases--urbanity. Neither in the Swedish telephone and face-to-face survey, nor in each of the three Greek surveys, gross sample information was available, and therefore the response population distributions were compared to the general population distribution of these countries instead. Significant differences between the response group and gross sample population existed on the variables age, gender and urbanity in the Dutch face-to-face-survey, the variables gender and urbanity in the postal survey, and the variables age and gender in the telephone survey. Significant difference between the response- and the general population occurred in the Greek face-to-face- and telephone surveys on the variables age and gender. In the Greek postal survey a significant difference was found between the age distribution of the response- and of the general population. The three Swedish surveys were representative for the general Swedish population on both the age- and gender variable.

* Analyses technique

All of the analysis have been conducted by Statistics the Netherlands (SN).

Differences in sampling frames and procedures create biases when outcomes on drug use estimates are compared. The direction of this bias depends on the personal background characteristics of the non-sampled population and on the correlation with the dependent variable. Another source of bias may be rooted in the composition of the non-response population. In order to neutralize the effect of sampling and non-response biases on the prevalence figure outcomes, it has been decided to run the analysis on comparable net response-group samples. For the Greek and the Dutch face-to-face surveys, where oversampling was used, subsamples were therefore taken. To check if there would be differences in the results of the analysis with different population subsamples, these subsamples were drawn several times and each time the analysis outcomes were compared (the so called Monte Carlo simulation). No differences were found in both countries, indicating a reliable method.

a) Kruskal Wallis

The first section of the analyses focuses on the question whether modes affect prevalence reports.

On the basis of the three main use questions (ever, last year, last month) a new variable has been created per drug by SN: never use, ever use but not last year, last year use but not last 30 days, last 30 day use. To answer the first question, a Kruskal Wallis test was used. In this test, all measurement errors are treated as one black box. The only thing we can establish is if all measurement errors together create differences between the three samples on our target variables.

The results of the Kruskal Walllis test used to answer this first question are presented in figure 4. Significant differences with $p < 0.05$ are bold.

The figures 4.1, 4.2. and 4.3 at the end of this summary, show the drug use figures by mode (unweighted) for each of the variables where a significant difference was found. The final conclusion we can draw is that no consistency can be found in the survey that delivered the highest or lowest prevalence figures. Only in the analysis of the Greek surveys the telephone survey consistently delivered the lowest scores, whereas the postal survey delivered the highest scores. However, the Greek observation should be treated with caution because of the low number of responses in the Greek postal survey data.

Figure 4: Kruskal Wallis test on scores of drug use prevalence questions in three samples per country, unweighted data (significant differences with $p<0.05$ are bold).

	The Netherlands	Greece	Sweden
	P-value	P-value	P-value
alcohol	0.785	**0.000**	**0.000**
amphetamines	0.272	0.149	0.073
cannabis	0.564	**0.000**	0.331
cocaine	**0.005**	**0.007**	**0.002**
ecstasy	**0.018**	**0.001**	0.225
tobacco	0.088	**0.000**	n.a.

b) ANOVA

More detailed analysis reveal whether there are any interaction effects of modes and respondent characteristics, such as age, gender, urbanity or educational level. By applying an ANOVA test we can compare variance of the target variables within factor categories with variance of the target variables between the categories. We do this simultaneously for all factors (mode and background characteristics age, gender, urbanity, educational level, household composition). This enables us to see what part of the total variance can be attributed to all factors together (expressed as R^2) and per specific factor (expressed as beta).

In table 5 we show the results of the ANOVA analyses. Significant differences with $p<0.05$ are bold.

Table 5: Significant mode effects with controls for other factor per country (ANOVA tests), unweighted data

	The Netherlands	Greece	Sweden
	P-value	P-value	P-value
alcohol	0.832	**0.000**	**0.000**
amphetamines	0.173	0.071	0.06
cannabis	0.558	**0.000**	0.166
cocaine	**0.035**	**0.013**	**0.028**
ecstasy	0.154	**0.008**	0.131
tobacco	**0.034**	**0.010**	_

For the Swedish data, again the only significant differences were found for alcohol and cocaine use. Multivariate analysis neither changes the result of the Greek data. In the Netherlands ecstasy use no longer differs significantly, but tobacco use this time does.

The tables 5.1, 5.2 and 5.3 indicate the total explained variance of the differences in prevalence outcomes and the contribution of each specific factor. In all cases we can point at the very low total variance explained, and the moderate contribution of the mode variable.

c) Other analysis

In addition to the Kruskal Wallis and ANOVA analysis of the main drug variables we have also looked at 'age of initiation' of all drugs in the Greek and Dutch studies. Some significant differences between modes were found with the results of the ANOVA analysis: In the Netherlands in the case of tobacco, alcohol and cannabis and in Greece only for tobacco.

Frequency of alcohol- and cannabis use and the amount of tobacco use has been analyzed for Greece only. The number of last month users for all other drugs was too small. In Sweden these questions were not asked and in the Netherlands they could not be used due to a routing error in the questionnaire. For Greece a mode effect was always found but did not point into a uniform direction: highest and lowest scores were obtained in different modes for all three variables.

Because of the small number of cases on most illicit drug variables (amphetamines, cocaine, ecstasy), we have also decided to create a combined 'stimulants' drug variable. A positive score on one or several of the drugs cocaine, ecstasy, and amphetamines, implies the use of a stimulant.

Priory, a reliability test was conducted to see if there was enough correlation between these three illicit drugs to be able to add them up. This was the case.

The results of this analysis are presented in tables 6.1 and 6.2 In the Netherlands we find a significant difference between modes on the combined variable with the results of the Kruskal-Wallis analysis. Since this was already the case for two of the three variables this is not a new finding.

The result of the ANOVA analysis on stimulants indicated no significant difference between modes, whereas it was significantly different for only the variable cocaine.

In Sweden, the Kruskal-Wallis test on stimulants shows a significant difference between modes, as was already the case with cocaine. Also the ANOVA test shows significant differences between modes.

In Greece significant differences between modes on cocaine and ecstasy disappeared in the

Kruskal-Wallis analysis of the bundled stimulant variable. The ANOVA test on stimulants resulted in a significant difference between modes, which priory only existed for ecstasy.

* Conclusions

In both the Kruskal-Wallis and the ANOVA test we found significant differences between modes for some of the variables. Because of the non-systematic directions of these differences--not one mode systematically shows the same rank (lowest, highest) when looking at drug use--these results do not lead to clear conclusions about mode effects. Important is also that the variables included in the ANOVA test together can not explain more than a few percent of the total variance of a drug use variable. Among these variables, the contribution of mode is relatively small. This shows that mode can not be an important source of bias in explaining scores on drug use variables.

Some studies in different countries (a few of them which will be mentioned in the last paragraph) do suggest significantly different outcomes according to mode of administration. In our study this conclusion is not supported. Mode effects will not influence the comparability of results within a country provided other methodological aspects (for instance sampling frame and survey context, administration and handling of non-response) are carefully controlled.

* The results in the light of the outcomes of other mode-effect studies

Here, we have concluded that significant differences between modes on our target variables do not point into a uniform direction. Still, a closer inspection of the tables shows that the telephone surveys many times have the lowest prevalence figures, especially for illicit drugs: for instance with cocaine- and ecstasy prevalence of use in the Dutch surveys, and with cannabis-, cocaine- and ecstasy prevalence of use in the Greek surveys.

This finding is in line with the outcomes of a 1992 publication on, amongst others, mode-effects in drug-use prevalence studies by the National Institute on Drug Abuse (chapter 7 and 11). Turner, Lessler and Devore (chapter 7, p. 216) conclude that six self-administered versus interviewer-administered measurements of the prevalence of marijuana and cocaine use yield lowest estimates for the latter. "The results indicate that having interviewers administer the questionnaire reduces the reporting of drug use". This finding, however, does not explain why telephone interviews would yield lower scores on drug use questions than face-to-face interviews.

Gfoerer and Hughes in this same publication (chapter 10, p. 278) list a number of studies that explored the effect of mode of interview on the data collected on sensitive issues such as the topic of our study. One conclusion (Aquilo and LoScuito, 1989) was that "regardles of collection of mode (telephone vs. face-to-face) estimates of drug use amongst whites were similar, for blacks however, estimates of marijuana and alcohol use based on telephone-collected data were significantly lower than estimates based on data collected during face-to-face interviews".

Generally, the conclusion was drawn that the limited amount of research addressing data on drug use suggests that personal-visit interviewing will lead to higher estimates of persons involved in illicit drug use than will telephone interviewing.

In the Netherlands, de Leeuw conducted a meta-analysis of fourteen studies in which social desirability was tested (de Leeuw, 1992). Nine of these studies published prior to 1980 show a small significant difference indicating less social desirability in face-to-face studies than in telephone surveys. The five studies published after 1980 show no significant difference in social desirability. The differences became more apparent when outcomes of telephone and face-to-face studies on the one hand were compared to outcomes on postal studies on the other hand. Postal surveys delivered the least number of 'desirable' answers.

A great awareness is necessary when comparing outcomes of studies conducted in different countries. Because of differing cultural attitudes towards the phenomenon, the questions of how 'sensitive' the topic really is, and what 'social desirability' actually implies become important. Also cross-cultural differences in familiarity with and acceptance of a certain interview mode exist. This may influence results no matter what the topic of a questionnaire will be.

A last interesting question is what we should consider to be the most reliable answers on questions about topics such as the use of drugs. Why is it often assumed that the highest estimates are more truthful than the lowest estimates? Why do we think that 'social desirability' automatically produces lower estimates than they should. This may well be different between, and should therefore be studied for different population groups. As long as questions as the ones mentioned above exist, we argue that the choice of (mixed) mode should first of all be based on financial and logistical arguments and on the objective to reach an optimal response-rate.

For further study on methodological issues in drug use measurement, we recommend the NIDA publication:

Turner, C.F., J.T. Lessler, J.C. Gfroerer (ed.) (1992), **Survey measurement of Drug Use, Methodological Studies.** DHHS publication : no. (ADM) 92-1929.

More specific information about the effect of mode of administration on reporting drug use can be found in the following chapters:

Chapter 7: Effects of Mode of Administration and Wording on Reporting of Drug Use. Turner C., J. Lessler and J. Devore.

Chapter 10: Effect of Mode of Administration on Reporting of Drug use in the National Longitudinal Survey. Schober S, M.F. Caces, M. Pergamit and L.Branden.

Chapter 11: Collecting data on Illicit Drug Use by Phone. Gfroerer J.C. and A. Hughes

Other study on mode effects in surveys of 'sensitive' topics:

Analysis of sexual behaviour in France (ACSF). A comparison between two modes of investigation: telephone survey and face-to-face survey. ASCF Principal Investigators and their associates. AIDS 1992, 6:315-323

Table 4.1: Drug use (coc and xtc) by mode, the Netherlands (unweighted data)

cocaine

	face to face	postal	telephone	total
	%	%	%	%
never	96.7	97.1	98.9	97.4
ever	2.6	2.3	1.1	2.1
last year	0.5	0.3	_	0.3
last month	0.2	0.2	_	0.1
Total N (=100%)	1,282	1,246	833	3,361

ecstacy

never	97.7	97.0	99.0	97.8
ever	1.5	1.9	0.7	1.5
last year	0.5	0.6	0.2	0.5
last month	0.2	0.3	_	0.2
Total N (=100%)	1,282	1,245	832	3,359

Table 4.2: Drug use by mode, Greece (unweighted data)

alcohol

	face to face	postal	telephone	total
	%	%	%	%
never	3.5	2.4	6.3	4.0
ever	6.9	3.1	3.7	5.6
last year	11.3	9.8	16.8	12.5
last month	17.7	17.9	20.2	18.3
last week	60.6	66.7	53.0	59.6
Total N (=100%)	2,159	457	821	3,437

cannabis

never	85.0	85.3	93.3	87.1
ever	10.4	8.3	4.1	8.6
last year	1.8	3.7	1.9	2.1
last month	2.7	2.7	0.7	2.2
Total N (=100%)	2,157	484	852	3,493

cocaine

never	98.6	97.8	99.6	98.7
ever	0.8	0.6	0.1	0.6
last year	0.3	0.8	0.2	0.3
last month	0.3	0.8	_	0.3
Total N (=100%)	2,148	491	854	3,493

ecstasy

never	99.8	98.6	99.8	99.6
ever	0.1	0.8	0.2	0.3
last year	_	0.2	_	0.0
last month	0.1	0.4	_	0.1
Total N (=100%)	2,148	493	854	3,495

tobacco

never	0.1	0.2	0.4	0.2
ever	27.1	22.5	31.9	27.6
last year	21.7	25.5	23.3	22.7
last month	51.0	51.8	44.4	49.5
Total N (=100%)	2,161	506	853	3,520

Table 4.3: Drug use (alcohol, cocaine) by mode, Sweden (unweighted data)

alcohol

	face to face	postal	telephone	total
	%	%	%	%
never or not last year	9.8	6.9	5.5	7.9
last year	1.5	2.2	0.3	1.3
last month	88.7	90.9	94.3	90.9
Total N (=100%)	1,248	591	785	2,624

cocaine

never	99.4	97.7	99.1	98.8
ever	0.5	2.0	0.6	0.9
last year	0.1	0.3	0.1	0.2
last month	_	_	0.1	0.0
Total N (=100%)	1,249	610	782	2,641

Table 5.1: Significant differences (cocaine and tobacco) between modes. ANOVA-test, the Netherlands (unweighted data)

		cocaine		*tobacco*	
Highest use reported in:		face to face		telephone	
Lowest use reported in:		telephone		postal	
		beta	sig	beta	sig
Factors:	gender	0.053	*	0.079	*
	age	0.077	*	0.060	
	urbanity	0.074	*	0.071	*
	education	0.031		0.102	*
	mode	**0.045**	*	**0.045**	*
		R-square=0.019		R-square=0.023	

Table 5.2: Significant differences (alcohol and cocaine) between modes, ANOVA-test, Sweden (unweighted data)

		alcohol		*cocaine*	
Highest use reported in:		telephone		postal	
Lowest use reported in:		postal		face to face	
		beta	sig	beta	sig
Factors:	gender	0.080	*	0.032	
	age	0.043		0.042	*
	urbanity	0.049	*	0.077	*
	education	0.077	*	0.019	
	household size	0.008		0.032	
	mode	**0.079**	*	0.052	*
		R-square=0.022		R-square=0.014	

Table 5.3: Significant differences between modes, ANOVA-test, Greece (unweighted data)

		alcohol		*cannabis*		*cocaine*		*ecstasy*		*tobacco*	
Highest use reported in:		face to face		postal		postal		postal		postal	
Lowest use reported in:		postal		telephone		telephone		telephone		telephone	
		beta	sig	beta	sig	beta	sig	beta	sig	beta	sig
Factors:	gender	0.234	*	0.18	*	0.067	*	0.036	*	0.166	*
	age	0.066	*	0.184	*	0.069	*	0.067	*	0.144	*
	urbanity	0.056	*	0.13	*	0.050	*	0.024		0.075	*
	education	0.101	*	0.040		0.030		0.027		0.067	*
	mode	**0.134**	*	**0.082**	*	**0.051**	*	**0.053**	*	**0.049**	*
		R-square=0.093		R-square=0.091		R-square=0.015		R-square=0.010		R-square=0.063	

Table 6.1: Kruskall Wallis test on scores of combined 'stimulants' variable in three samples per country, unweighted data (significant differences with $p<0.05$ are bold).

	the Netherlands	Greece	Sweden
amphetamines	0.272	0.149	0.073
cocaine	**0.005**	**0.007**	**0.002**
ecstacy	**0.018**	**0.001**	0.225
stimulants	**0.022**	**0.031**	**0.004**

Table 6.2: Significant mode effects with controls for other factors per country, ANOVA-tests, unweighted data (significant differences with $p<0.05$ are bold).

	the Netherlands	Greece	Sweden
amphetamines	0.173	0.071	0.06
cocaine	**0.035**	**0.013**	**0.028**
ecstacy	0.154	**0.008**	0.131
stimulants	0.717	**0.002**	**0.006**
highest score*	no significance	postal	postal
lowest score*	no significance	telephone / face-to-face	face-to-face

* Highest and lowest scores are corrected for all the other factors included in the model

1 Introduction

1.1 Introduction

Most EU countries collect data on drug use prevalence within their borders. Some countries have done so for many years, others have started only recently. Because instruments and research procedures were developed at the national level, great problems arise when an attempt is made to compare drug use statistics cross-nationally. Not only do countries use different methods to gather their information; research also differs in terms of timing and intervals of measurements or geographical scale (i.e. local, regional or national). This project is aimed at taking a step toward a greater understanding of methods and the way they influence resulting prevalence data. The outcomes of this study will highlight the items that need to be put on an agenda for follow-up research on comparative drug use surveys, and the conditions that need to be satisfied first to improve the usefulness of these studies. Designing a European drug use survey is a time consuming undertaking and can not be done overnight, without a thorough investigation of all different research aspects that may cause differences in drug use estimates. Only when these different influential aspects can be isolated from each other will such studies gain in relevance.

1.2 The project: face to face, telephone and mail surveys

In this project, three methods of data collection are compared in three countries: face to face surveys phone surveys and mail surveys. The exact form of implementation varies between the countries, due to the national variation in prevalence surveys, the possibilities to adjust to project preferences, available sampling frames, the countries own preferences and local logistic limitations. Differences are allowed to exist to a certain extent. The postal and the telephone survey questionnaires for each country are made as similar to each other as possible, taking into account the original wording of the drug use questions in the face to face versions. Moreover, in each postal and telephone questionnaire some specific national drug questions are repeated (e.g. last week alcohol use in Greece, or some attitude questions in Sweden).

Each data collection method has its own advantages and disadvantages, to be discussed in chapter 2.

1.3 The selection of countries

The selection of countries has been mainly pragmatic: four countries that planned a face to face survey in 1998 have been invited to join the project. These were Sweden, United Kingdom (England and Wales), Greece and the Netherlands. All four countries agreed to participate. In the end the UK was no longer involved in the comparison, for methodological reasons that are explained in chapter 3. This means that the real project involves only three countries.

1.4 Sampling

The methods of sampling are not identical for each of the three participants in this research. Each country has its own way of survey sampling, usually influenced by specific local possibilities and limitations. In the description of the countries (chapter 3) detailed information is given on the sampling methods per country and on the possible biases resulting from these methods. Mentioning biases is very important. In case a certain section of the population is excluded from the sample, this may lead to either an overestimation or an underestimation of the dependent variable. The direction of this bias depends on the personal background characteristics of the 'excluded' population section and on the correlation of these characteristics with the dependent variables (the use of a certain type of drug in this study). In the ideal situation, sampling bias should be quantifiable. In reality however, information of the excluded population is often not available, and therefor quantification of eventual bias is often impossible. To correct for known or estimated sampling bias (as well as a non-response bias), weights are calculated to make the response population representative for the national (registered or estimated) population. In the succeeding chapter the calculation of these weight factors will be explained for each country.

The net sample size for the postal and the telephone surveys was calculated to be 850. This number of responses would allow us sufficiently reliable estimates of drug use prevalence for comparative purposes. Depending on the response rates of these surveys the final net sample size either exceeds this number or is lower. In this mode-effect study the main target has been to study the effect of using different interviewing modes on drug use estimates. By minimising the differences in sampling strategies of the three surveys within each country we have tried to minimise the differences in bias within each participating country.

1.5 Questionnaires in the three countries and in the three modes

The following table 1.1 present the items that have been included in each of the three surveys of each individual country. The items marked x exist in the face to face survey and have also been asked in the additional postal and telephone surveys. The grey areas represent availability of the item in all three countries. This does not necessarily imply that these questions are asked in the same way and are placed in the same order in each country. Differences still exist in semantics, question order, and answering categories, which may have led to differences in the answering patterns (see the appendices with the questionnaires of each country). International comparisons are therefore still hindered. The use of a European model questionnaire should be a priority in future mode comparison projects to prevent biases resulting from questionnaire differences.

Table 1.1: Variables available in each of the countries, in each of the questionnaires, for comparative purposes

Tobacco	Greece	the Netherlands	Sweden
LTP	x	x	
LYP		x	
LMP	x	x	
Indication of lifetime frequency	x	x	
Indication of last month frequency	x	x	
Age of onset	x	x	

Alcohol	Greece	the Netherlands	Sweden
LTP	x	x	
LYP	x	x	x
LMP	x	x	x*
Indication of lifetime frequency	x		
Indication of last year frequency	x		
Indication of last month frequency	x	x	
General indication of frequency			x
Indication of last week quantity			x
General indication of quantity		x	x
Frequency of drinking 6 glasses or more		x	x
Age of onset	x	x	
Drunkeness last year	x		
Drinking of homemade spirits			x
Quantity of consumption homemade spirits			x
Drinking of smuggled spirits			x
Quantity of consumption smuggled spirits			x

* The alclmp variable in the Swedish data sets is a derivative of the frequency question 6 in appendix 1

Cannabis	Greece	the Netherlands	Sweden
LTP	x	x	x
LYP	x	x	x
LMP	x	x	x
Age of onset	x	x	
Frequency ever	x		
Last year frequency	x		
Last month frequency	x	x	

Cocaine	Greece	the Netherlands	Sweden
LTP	x	x	x
LYP	x	x	x
LMP	x	x	x
Age of onset	x	x	
Frequency ever	x		
Last year frequency	x		
Last month frequency	x	x	

Ecstacy	Greece	the Netherlands	Sweden
LTP	x	x	x
LYP	x	x	x
LMP	x	x	x
Age of onset	x	x	
Frequency ever	x		
Last year frequency	x		
Last month frequency	x	x	

Background	Greece	the Netherlands	Sweden
Age	x	x	x
Sex	x	x	x
Education	x	x	x
Marital status			
Population density/urbanisation variable	x	x	x
Household composition		x	x
Respondent position in household		x	
Employed/Unemployed?	x	x	
Income household			
Income respondent			
Occupation	x	x	x

1.6 Questionnaire context

An important type of differences in questionnaires is differences in drug use question context. The faces to face questionnaires of the countries are quite lengthy and include questions about other subjects than drug use. Because of the length of the questionnaires, it was not possible to fully replicate them in a telephone or a mail survey. Telephone and mail survey methods are only suitable for relatively short questionnaires. In the Dutch and the Swedish case, the context effects are probably not so large. The Swedish face-to-face survey starts with the alcohol and the drug questions before exploring a wide range of other topics. We expect these other topics not to influence the

answers to the alcohol and the drug questions. Therefore, the other topics do not need to be 'represented' in the postal and the telephone survey questionnaires. However, the Swedish postal and telephone surveys include a relatively large number of questions on alcohol use, thus replicating the face to face context to a large extent.

The Dutch survey is a drug use prevalence survey with only a limited number of questions about other topics. This is different in the case of Greece. The questionnaire is longer, and deals extensively with the topic of mental health. This may influence answering patterns to drug use questions.

In order to deal with this possibility we have decided to include some questions in the Greek postal and telephone surveys that represent the most important aspects of the mental health context.

All questionnaires can be found in the appendix section of this report (appendix 1 through 3).

1.7 Outline of this report

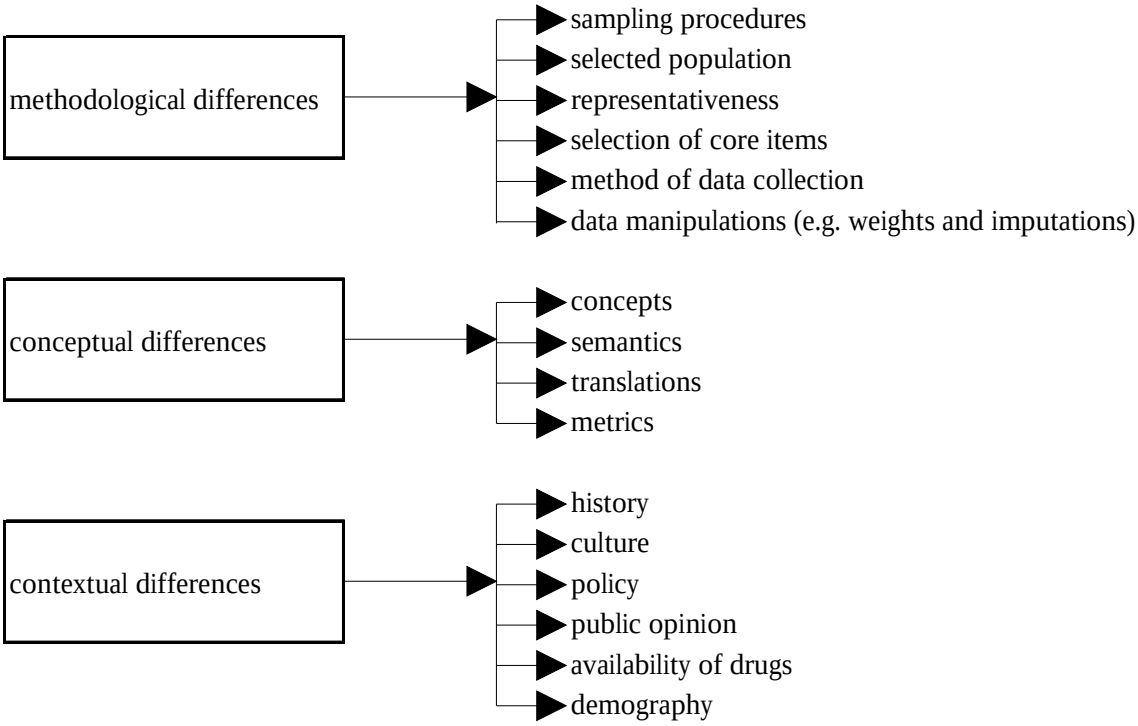
In chapter two of this report, mode-effects will be discussed in a larger framework of methodological issues in general population surveys. Also the advantages and disadvantages of each of the three modes will be discussed. Chapter three concentrates on the three participating countries. For each of them the methodological aspects and the fieldwork procedures will be described. The subsequent chapter 4 sheds light on the data preparation and the difficulties we encountered regarding the quality and completeness of the data. Chapter 5 will discuss the results of the analysis that were conducted by the Statistics the Netherlands (NS), and the concluding chapter 6 will entail an evaluation of the project and give recommendations for future mode-comparison projects.

Chapter 2 Mode effects in the wider framework of methodological studies

2.1 The wider framework

The main goal of this project is to study differences in prevalence estimates caused by variation in research methods used by different countries. But in order to uncover these differences it is important to realise that variation in drug use prevalence in cross-national research can have multiple causes. The first step, therefor, is to distinguish between various mechanisms that may lead to different drug use prevalence estimations and to take these into account when drawing the research plan.

There are three main sources of possible differences in cross-national research: methodological, conceptual and contextual.



Graph 1: sources of differences resulting from cross-national research

Methodological differences stem form different research methods that are used by separate countries and may result in biased data. Comparisons made with biased data may lead to a false interpretation of phenomena. For example, measurements of prevalence may be at the same level but actual levels are not or, conversely, differences in prevalence figures cannot be established by survey results because of differences in methodology.

Bias is not necessarily a constant factor. In other words, in one country, the effect of the use of different methods may be greater than in another country. Furthermore, the bias

of a certain method may result from completely different sources. The ‘mail’ survey’ method for example, can be biased in country A because this country has recently seen ten other mail surveys and thus a lower response rate and thus biased results. At the same time, country B can have low response rates (and biased data) due to a malfunctioning mail system. Though unlikely, the quantitative magnitude of the bias may be identical.

Conceptual differences have their roots in the tools of the researcher in the process of measuring levels of drug use: language, definitions and concepts. It was expected that, in this project, conceptual differences would play a minor role. The reason for this is that we expected European countries to use relatively similar terminology for conduction drug use surveys. In practice we found that conceptual differences between European countries still do exist. This has been illustrated by Bless et al. in the study 'Improving the comparability of general population surveys on drug use in the European union'.

The issue of semantics is complicated. Semantic equivalence is achieved when respondents across countries interpret concepts in the same way. Measuring the effect of semantics is not part of this project. However, it is important to be aware of this. Metric equivalence is a less complicated point that refers to the equivalence of measures of drug use: these must measure the same aspect (qualitatively and quantitatively) in the same way in different contexts.

Contextual differences are caused by country-specific differences in behaviour. The cause of this type of differences must be sought in a multitude of variable’s that influence people’s lifestyle and choices. Relations between these independent variables and drug use are very difficult to assess because it is difficult to operationalise concepts such as culture or history. The fact that contextual independent variables are interrelated complicates explanations of this type of differences even further. A second point is that contextual differences can only be assessed when methodological and conceptual differences are eliminated. Finally, the differences based on culture, history or policy do not necessarily follow national boundaries. This is an important point in cross-national comparisons because it highlights the fact that areas of research must be selected carefully. Because this project is in the first place a methodological comparison, no effort will be made to explain contextual differences. This does not imply that that they can be left out of the theoretical framework.

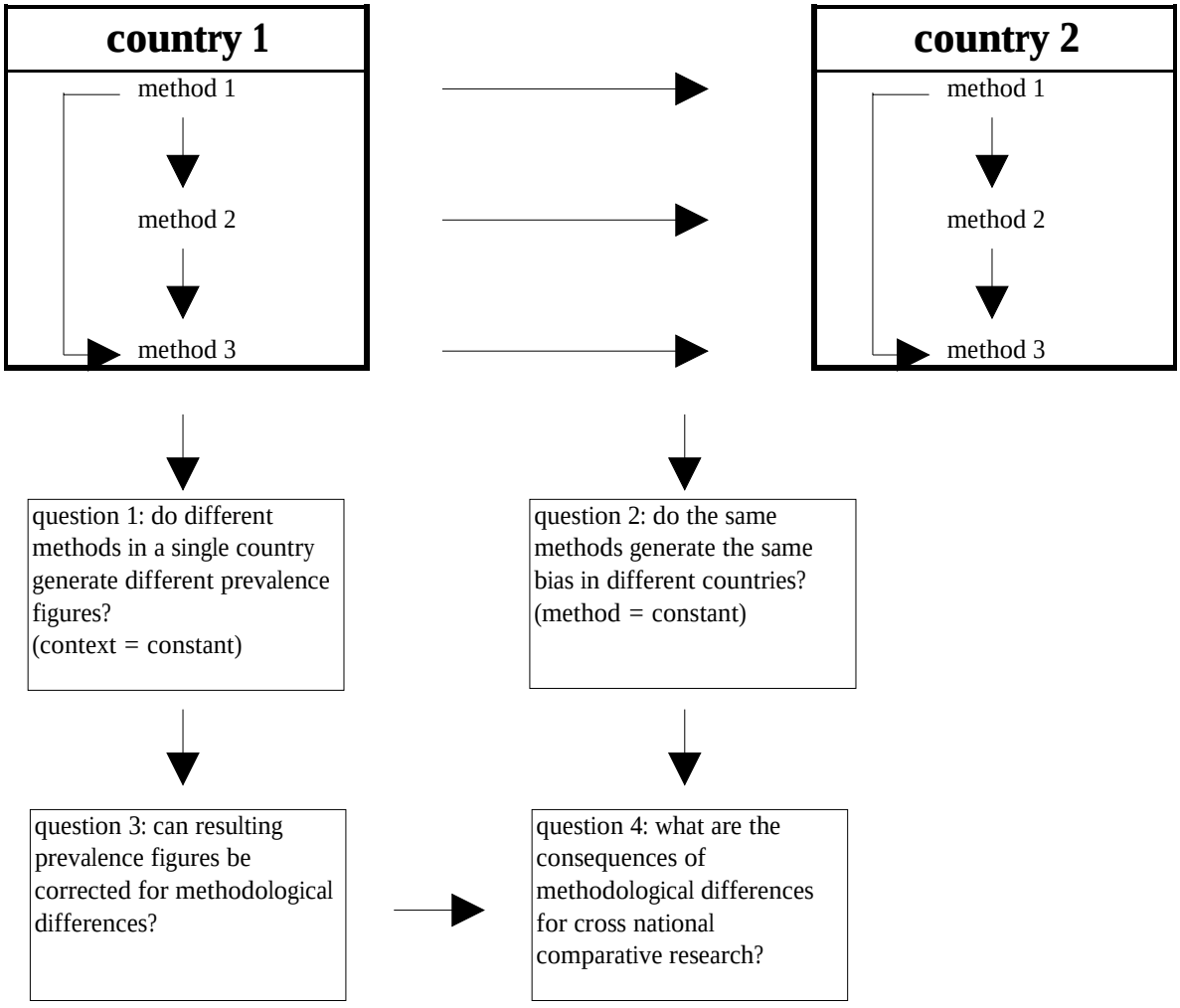
It is essential to note that even though contextual, methodological and conceptual differences all influence prevalence estimations, the way in which this occurs is fundamentally different. Contextual differences can be regarded as ‘real’ differences in drug use prevalence, as long as they do not refer to differences in the questionnaire context. Methodological and conceptual differences are caused by measurement procedures.

Apart from the three main sources of possible differences in cross-national research already mentioned, there is another bias source to be considered: the institute performing the data collection itself may influence the results of a survey. Respondents may react differently to a non-profit scientific fieldwork institute as to a commercial fieldwork- or a governmental fieldwork organisation. this might create systematic differencies that are connected with the institutes and not with the modes as such.

This project focused on differences that arise from measurement procedures. In order to be able to measure these kinds of differences, the other two categories--contextual and conceptual differences--needed to be minimised. In other words, methodological differences can only be measured when contextual and conceptual differences are constant.

Secondly, it is essential to find out if the effect of method is influenced by the cultural (national) context in which the method is applied. In order to be able to measure the effect of context, methodological and conceptual differences must be kept to a minimum. This can be achieved by using different methods in different countries. By systematically comparing methods and countries, the effect of methodological differences can be evaluated.

Graph 2 represents these questions schematically.



Graph 2: framework for comparisons of methods and countries

The main object of comparison has been interview mode: the way of communicating with respondents, with the purpose to record their self-reported drug use.

In order to be able to explore the impact of mode, it is necessary that all other methodological aspects were treated as constants as much as possible, both between countries as within countries. Sampling and fieldwork procedures should be identical because differences can not be explained when effects of interview mode can not be isolated from other effects. During the process of this research the goal of doing both cross national as intra-national comparison soon turned out to be too ambitious. Because of time- and financial limitations it was impossible to set up entirely new surveys in each of the participating countries. The methodological and conceptual aspects were more or less determined by the ways of conducting drug use surveys in each country. Since there are substantial differences in both respects between the countries (for an explanation of these differences, see chapter 3 and the questionnaires in the appendix), it was impossible to completely isolate the methodological (mode) differences. Therefore, the focus of this methodological study has shifted to a comparison of modes within each individual country. Wider questions as presented in graph 2 have to be answered in follow up research projects.

2.2 Different modes of survey research: the advantages and disadvantages of each mode

In this section we will focus on the three modes that have been applied in this study case study; mail surveys, telephone surveys and face-to-face surveys. Each of these modes has its distinctive advantages and disadvantages in terms of logistics, resulting data quality and costs. In this section 2.2 we will discuss these topics for each of the three methods.

2.2.1 Mail surveys

De Leeuw (1992) describes the mail survey as follows: “A respondent receives a structured questionnaire and an introductory letter by mail, and answers the questions in his/her time without any assistance, except for any written introductions in the questionnaire or in the accompanying letter and finally sends the questionnaire back”.

Using the mail-survey mode has several advantages as well as disadvantages. Of course these should be considered in the (political, cultural, economic, historic, and physical) context in which it is applied, but also in the light of the subject matter that is addressed. One consideration for instance is the level of civil obedience of a country.

Even if the average response rate on mail-surveys seems to vary between countries (Bless et al, 1997), the general conclusion is that mail surveys tend to produce lower response rates compared to phone and face-to-face surveys almost everywhere. A meta-analysis of mode-effects conducted by de Leeuw (1992) resulted in an average response rate of 68 percent for the postal survey, a percentage relatively high compared to average mail response rates found in other studies.

In addition to relatively low response rates, another disadvantage of the mail survey is the limited control a researcher has over the choice of the specific individual within a household who in fact completes the survey. In the case of a drug survey, it is for instance imaginable that young people still living with their parents, are not allowed to fill in the questionnaire, which results in a under-representation of young people in the response group.

The next disadvantage of the mail survey is absence of an interviewer may lead to a greater number of mistakes in the completed questionnaire. All questions must therefore be presented in a very clear order, and as simple as possible so they can be completed without any additional help of an interviewer. If the questionnaire is difficult to complete without any help, the resulting data quality may be relatively low (missing data, routing errors).

In comparison to the face to face survey, the length of a mail survey should be considered. People tend to loose interest when too much time is demanded to fill in a questionnaire. There appears to be a small effect of the length of the questionnaire and the response rate of mail surveys (de Leeuw, 1992. p. 8).

Apart from the disadvantages, the mail survey of course has also several advantages:

Firstly, in terms of cost and logistics. Compared to the face to face and the telephone survey the postal survey is the least demanding in terms of organisational and personnel requirements.

An important advantage of the mail survey method is that it allows respondents to work at their own pace, without time pressure. In addition fully anonymous mail surveys might provide the highest degree of confidentiality towards the researcher, so the answers are less likely to be socially desirable answers.

An advantage mentioned by Schweigert (1994) is that mail surveys can reach a large number and a wide variety of potential respondents. Because they can be distributed widely, reaching remote or isolated areas there is less chance of a geographical sampling bias. In addition, an interviewer may miss a certain respondent for example by interviewing only during a particular part of the day. In the case of a mail survey every informant, independent of working hours and location, will eventually receive the questionnaire and is free to work on it at a time of choice.

Not mentioned so far, but especially important for surveys on socially risky / sensitive topics such as drug use, is the non-existence of an interviewer bias in mail surveys. It is not unlikely that people give different answers to a younger interviewer than to an older person, or male / female interviewers.

In addition, questions can have more answering categories in the mail survey than in telephone and face to face interview techniques.

2.2.2 Telephone surveys

In the telephone survey the interviewer administers the questions (from a structured or partly structured questionnaire to a respondent within a limited period of time) via telephone. This is mostly done centralised (de Leeuw, 1992). A computer-assisted procedure (CATI) has been developed in the eighties and is used everywhere in Europe these days.

The use of telephone interviews is less appropriate in countries or areas with a low telephone density. This disadvantage has almost become negligible in Europe, since telephone coverage is high and widespread amongst the population in most countries today. (For instance, in the Netherlands in 1992 the telephone coverage was already 92

percent, a rate that can be expected to have increased since then). The issue of undercoverage will be discussed for each of the three participating countries in the subsequent chapter three.

However, telephone coverage is not the only source of sampling bias .We do not know if unlisted numbers are evenly distributed among the population. Acceptance of being interviewed by telephone may also be unevenly distributed (this disadvantage is not particular to telephone surveys). The substitution of regular phones for mobile telephones of some population groups is a new development to be taken into account today if one wants to prevent sampling bias.

A disadvantage of a very different nature, is the great distance that exists between interviewer and respondent, which may influence answering patterns (Aquilino, 1994). Schweigert (1994) mentions the possibility that socially desirable responses to questions are likely in telephone surveys. On the other hand, she claims, interviewer effects are smaller in telephone interviews than in face to face interviews.

Telephone interviews pose some limitations on the questionnaire design. For instance, questions can only have a limited number of response categories because of the total absence of visual cues during the interview. As in the case of the postal survey the questionnaire can not be too long. Successful telephone interviews can be conducted with an average length of no longer than twenty to thirty minutes (de Leeuw, 1992).

Under a telephone interview condition time pressure can also be expected, since moments of silence cannot be bridged by non-verbal communication.

An important advantage of phone interviews is that they are cheaper than postal and face to face interviews. However, the expenses are more dependent on the length of the questionnaire as in the case of the mail survey. Telephone surveys can be conducted over a short time span, and from a central setting, which allows for a stricter control over interviewers and thereby for a reduction of errors made by the interviewer. Compared to the postal survey, the use of interviewers allows follow up questions or additional information, which is another advantage.

2.2.3 Face-to-face surveys

"In a face to face survey an interviewer administers a structured or partly structured questionnaire to a respondent within a limited period of time and in the presence of the respondent. Administration is done by pen and paper or by computer, handled either by the respondent (CASI) or by the interviewer (CAPI)" (de Leeuw, 1992).

The use of a laptop computer may result in under-representation of older people in the sample, since many elderly have not yet grown accustomed to computers. Response bias may also result from the fact that some groups are easier to approach at home, such as housewives, unemployed and retired people.

In addition, there is always a slight risk that the interviewer does not visit the assigned address but fills in the questionnaire him/herself. Very little control can be performed.

A much more important argument in disfavour of face to face surveys is that they are expensive and require a highly developed infrastructure, especially when interviewing is

done by computer. It is extremely costly to utilise the face to face survey to its full potential when national surveys or large surveys in geographically dispersed areas are done. This has led to renewed interest in alternatives for face to face interviews and a renewed research effort to optimise mail and telephone surveys. (E.D. de Leeuw, 1992). It is true that face to face interviews are very demanding from an organisation. Interviewers have to be trained, (as with the telephone method) in the standard interview technique. In addition, in case of the face to face survey they also have to be trained on how to implement sample and respondent selection rules and solve various problems that may arise when they are in the field. The number of persons needed to conduct this type of survey is higher as with the telephone and especially the postal surveys with equal sample sizes. Revisits are costly.

An important advantage of using face to face interviews is that they are traditionally known to have the highest response rates, which gives them a considerable advantage over the postal and the telephone survey. However, non-response in face to face surveys also appears to increase over the years, a trend which is actually not unique for this type of survey.

Another advantage of personal interviews at the home address of the respondent is that they can avoid the bias potentially hidden in a directory by approaching individuals who actually live at a particular address, and not the people who are merely listed as living there (Schweigert, 1994). Interviewers can more easily check the identity of the person.

The situation of direct visual contact between the interviewer and the respondent has many advantages. Firstly, personal contact gives an interviewer more opportunities to convince a respondent of the legitimacy of the study. Secondly, because many aspects of the data collection can be controlled, the resulting data quality is high, certainly if CAPI is used. Contrary to the mail survey, respondents are less dependent on the explanatory context of the questionnaire, but are stimulated to ask for clarification and additional explanation from the interviewer. Therefor for long and tedious interviews the presence of the interviewer is important. The proximity of the interviewer creates less of a feeling of anonymity and privacy, hence, the respondent may be more likely to present him/her self in a positive light. In surveys on sensitive issues, this may lead to distortion.

2.2.4 Conclusion

Each interview mode has both advantages and disadvantages. Choice of mode will be directed by local, cultural, financial, and political conditions. For homogeneity of methodology, needed for comparative research, complicated decision making procedures about choice of mode will be needed.

Literature sources

Aquilino, W.S. (1994), Interview mode effects in surveys of drug and alcohol use
In: **Public opinion quarterly** 1994/58/210-240

European Monitoring Centre for Drugs and Drug Addiction**. Improving the comparability of general population surveys on drug use in the European Union** (CT.96.EP.08). Lisbon: EMCDDA, December 1997.

Frederick T.L. Leong and James T. Austin (ed.) (1996), **The Psychology Research Handbook, A Guide for Graduate Students and Research Assistants**. Sage publications, London New Delhi

Herman, J.B. (1977), Mixed-mode data-collection: telephone and personal interviewing In: **Journal of applied psychology** 1977/62/4/399-404

Leeuw de, E.D. (1992), **Data Quality in Mail, Telephone and Face to Face surveys**, Academisch proefschrift VU, TT publikaties Amsterdam

Wendy A. Schweigert (1994), **Research Methods & Statistics for psychology**, Brooke/Cole Publishing Company, Pacific Grove, California.

Chapter 3 A mode-effect study in three countries: sampling, fieldwork and response efficiency

3.1 Introduction

Three different surveys were conducted in each of the participating countries: a face to face survey, a postal survey and a telephone survey. In order to study the mode-effects within each country we attempted to limit other possible source of bias that could create differences in the prevalence outcomes of the surveys. For instance, the questionnaire context of the face to face survey was partly recreated for the postal and the telephone surveys if this was considered necessary. The same introductions were used and questions were phrased similarly. In the next paragraphs we will outline why important methodological factors causing possible differences between countries could not be homogenised.

Type of sampling frame (telephone book, local or national civil registries, etc) and the sampling technique are important aspect that should be looked at if other than mode-effects need to be avoided. Depending on the sampling frame, different sections of the population may be excluded from the sample, and this may influence prevalence outcomes in one way or the other. The sampling technique is another source of bias; depending on the sampling technique some people may have a greater chance to be approached than others. Because of difficulties with sample frame and sampling technique, we decided not to do a telephone survey in the UK, reasons that explained in more detail in section 3.2.

Ideally, in an international mode-comparison each country should use an identical, at least greatly similar sampling frames and technique. This was impossible here because for the ongoing face to face studies different methods were already applied. Changing these methods would be so difficult and costly, that is was out of the question. We did try however to create as much coherency as possible between the surveys within each country. New samples were drawn for the telephone and postal surveys, replicating the sampling frame and technique of the face to face survey whenever possible. In all cases it was avoided that informants were approached more than once for a survey.

Also very important in getting comparable data are fieldwork procedures that at least resemble each other. So every potential respondent must be approached in a similar way and receive the same information about the survey.

In this chapter we will describe both aspects--sampling technique and fieldwork procedures--for all three surveys in each country.

Subsequently we will shed some light on the efficiency of each mode, as judged by final response rates (table 3.1 - 3.5) and, where possible, the number of times people were approached before they responded and the reasons for non-response.

3.2 Why the UK comparison between face to face survey, telephone survey and mail survey was not executed.

In the fieldwork-preparation phase of this research, an unforeseen problem occurred, which forced us to change the design of the study. The problem is related to the sample of the British telephone survey. The sample frame had to be the same as the face-to-face (the BCS: British Crime Survey) sample frame. We located the firm that designed and created the original BCS sample (CACI). This firm was asked to imitate the sampling procedure of the BCS for the telephone survey as closely as possible. However, we had to promise the home office not to contact people for the second time within a brief period of time. Although the probability of this happening is very small, we were able to guarantee this through the selection technique of eligible addresses. After the sample of addresses was drawn, and the work of finding telephone numbers with the addresses was finished, it was discovered that the sample frame could not deliver a representative sample for the total household population. Only 20 percent of the households in inner city areas were included in the sample. A large majority of inner-city residents was not registered as having a telephone (or did not have a telephone at all). Only 40 percent of the addresses in the other areas could be coupled to a telephone number. Since nothing is known about the background characteristics of the section of the population that could not be sampled, we would not be able to specify the bias for the prevalence estimates by the telephone survey mode. In addition, it would be wrong to compare the possibly biased outcomes to the data of the face-to-face survey in which a similar bias does not occur.

An alternative solution would be to apply a random digit dialling (RDD) method. In this way, also the non-registered telephone-owners would be contacted, eliminating the largest part of the bias. The respondents would be asked for the first three digits of their area code, in order to be able to define their place of residence. A similar distribution of the response population according to residential area as in the case of the face-to-face survey could then be reconstructed by means of a post-stratification procedure.

This method would be superior to using the sampling frame of the face-to-face survey. However, we chose not to use it either. Research experts in the UK express scepticism about the claims of market organisations that they can produce reliable RDD samples. Supposedly, the samples that are generated by these companies do not deserve the claim to be random, for instance because they do not give proof that every household has an equal chance of selection. In addition, their source of numbers is highly questionable.

A third alternative is to compare the results of the telephone survey sample with only a sub-sample of the BCS. i.e. the households with telephone numbers. By choosing for this option it would not be possible to generalise the outcomes to the entire population. It is likely that mode-effects will be differential across population subgroups and it would be impossible to reveal these differences. Since this research focuses on mode-effects in general population studies on drug-use, this option would not deliver a satisfactory outcome in terms of our research goal.

The limitations with the telephone survey sample made us decide not to conduct the telephone survey in the UK altogether. This, in spite of the costs which were already involved in drawing the first telephone sample. Because of expected high non-response rates, as was mentioned by the British Home Office, a mail survey had already been excluded in the first place. The British Partner was completely clear in her judgement that a mail survey in the UK would be a useless endeavour. We decided to not force the British Partner, against her wish, into trying a mail survey nevertheless. Since this left the face-to-face survey the only interview mode (the British Crime Survey), a mode-

comparison could no longer be made. Only when a trustworthy RDD method is developed, would an effort to compare different research modes, including a telephone survey, become meaningful. Therefore, in close co-operation and agreement with the British partner, the UK was taken out of the original research design.

3.3 The Netherlands

3.3.1 The survey sampling methods for the face-to-face survey

The Dutch Bureau of Statistics provided a large part of the sample for the Dutch surveys. The four largest cities (Amsterdam, Rotterdam, the Hague and Utrecht) were responsible for the creation of their own sample for the face to face survey, which was done by their municipal persons registration service.

The sampling frame for the first stage of the face to face sample is the complete list of Dutch municipalities. The sampling frame for the second stage consists of the local population registries of Dutch municipalities. The target population of the face to face sample is the general population of 12 years and older.

The municipalities are divided into 5 strata, based on a measure of density of addresses, ranging from rural to very high-density areas. The municipalities within a density stratum are further stratified by region. Apart from this sample, drawn by Statistics Netherlands, each of the four large cities (Amsterdam, Rotterdam, The Hague and Utrecht) is represented by its own random sample from the municipal persons-registry. The response data of the four city-samples can be analysed individually, but they can also be joined together with the remaining eight cities in the highest density stratum. In each stratum, a net sample size of 2300 is questioned. Youth between 12 and 18 of age and the four biggest cities (Amsterdam, Rotterdam, The Hague and Utrecht) are oversampled. The total net sample size of the sample is around 22,000 for the entire population age 12 and older. After a selection of the age group 15-60 the gross sample size is 31,068 delivering a net sample of 16,200.

3.3.2 The survey sampling methods for the postal and the telephone survey

For the telephone and the mail surveys a two-stage sample is also applied. As in the face to face survey, the first stage is the selection of municipalities and the second stage is the selection of persons. To improve comparability of the results the same sample of municipalities is used for the telephone and the mail survey. For the purpose of this research a selection is made of people between 15 and 60 years of age. The sampling technique excluded the possibility that people would be addressed for more than one survey. The sample is stratified by region to assure that people from all over the country are equally represented. A maximum spread of municipalities over the country is achieved through a target-response of only one person in the smaller municipalities. In the larger self-selecting municipalities—their chance to be drawn in the first sample-stage is one, because of their large population size—more persons have been approached and interviewed. In order to reach a response of one person in each municipality, an average of four households was selected from each municipal population registry and included in the mail survey sample. An average of three households was selected and included in the telephone survey sample. All together 2720 elements were initially drawn for the telephone sample. About 20 percent was excluded from this group because they had

participated in another questionnaire only recently. From the addresses of which more than one person were drawn, only one of the household members was randomly selected to remain in the sample. The residents of institutes, old peoples homes, care centres and so forth were excluded from the sample. 2266 elements remained. The resulting sampling is linked to telephone numbers by the Dutch telecom organisation. 1733 elements could be linked to a telephone number (77%) which is close to a national average of 75%. Secret telephone numbers are not included. These are overrepresented in the largest cities and amongst among people of non-Dutch nationality. A 17.6 percent of all 2266 elements lives in highest address density areas, whereas this same group makes up 31.7 % of the people without a (non-secret) telephone number. The people of foreign background (9.9 % of 2266) make up 24.8 % of all non-telephone owners.

All respondents between 15 and 60 are self-weighting. No oversampling technique is used. The samples for the telephone and the postal survey were drawn in June 1998. The gross and net samples of the postal and telephone survey are respectively 3356 and 1250 (postal) and 1733 and 833 (telephone)

3.3.3 Fieldwork procedures face to face survey

The informants of the Dutch face to face interview were approached by letter and asked to participate in a face-to-face interview in a survey about life styles and the use of medical and other drugs. In this letter the importance of the study and the selecting procedures were explained to them. The informants were also told that they could expect a visit from an interviewer of the fieldwork organisation. A separate letter was written for youngster's between12 and 15 with a parallel one asking permission for the interview to their parents. See appendix 3 for copies of all the letters.

Then respondents were approached systematically by trained NIPO interviewers to avoid selective non-response. Answers were fed directly into a portable computer by the interviewers (CAPI: computer assisted personal interviewing). In Utrecht the fieldwork started in December 1995 and ended in March 1996, in Amsterdam it started in April 1997 and lasted until July 1998. The rest of the fieldwork took place from October 1997 to May 1998. This means that for part of the total sample (about 10%) interview dates were almost two years before the last interviews took place. This is a small source of imprecision that relates to reported data of Utrecht (100% of the response), on the reported data of the high-density stratum, in which Utrecht is included. The impact on the national level is very small.

3.3.4 Fieldwork procedures telephone survey

The informants of the Dutch telephone interview were approached by letter and asked to participate in a telephone survey about life styles and the use of medical and other drugs. In this letter the importance of the study and the selecting procedures were explained to them.

The following fieldwork procedures have been used for the Dutch telephone survey: The interviewer verified the phone number, immediately after connection was made. In case the phone was not answered at all, the same number was attempted for at the most fifteen times on several times of the day and several days of the week. Answering machines were not used but the number was retried instead. The interviewer verified that connection was made with a private household and not a business. The first person

between 15 and 60 to have his/her birthday was selected for an interview. If there was no eligible person in the household the number was no longer used. If an eligible person happened to be out at the time of the phone call, up until five recalls were made until this person was found at home. If an eligible person was there and did not refuse co-operation, the interview was conducted. In case of refusal the next number was dialled. The work of the interviewers was screened during the entire fieldwork period. The average duration of the interviews was almost five minutes.

3.3.5 Fieldwork procedures postal survey

The informants of the Dutch mail interview were approached by letter- with interview schedule included- and asked to participate in a mail survey about life styles and the use of medical and other drugs. In this letter the importance of the study and the selecting procedures were explained to them.

For the Dutch mail survey, the following procedures were used: In order to obtain a high response for the mail survey special incentives were given in the introduction to the survey: An answering envelope was included which could be returned free of charge. In addition, half of the selected informants were told that their co-operation would be rewarded with a gift voucher of *f*15,- or a donation of a similar value to a good cause. Two reminder letters were sent out to respondents that had not reacted to the first letter. People who refused to participate were asked to send back a form with the reason for refusal.

3.3.6 Response rates and reasons for non-response

The response rates of the Dutch face to face -, postal and telephone survey were respectively 59.7, 38.6, and 52.1 percent (see tables 3.1-3.3). Thus, the highest response rate is obtained for the face to face survey. The postal survey has the lowest response rate. The attempt to find out the reasons for non-response was not successful: The majority of the non-respondents (95%) did not return the 'reason for non-response card', so therefore their motives are unknown. The most logical explanation would be a lack of interest, either for the topic or for surveys in general.

The majority of the non-respondents of the face to face- and the telephone survey (57.8% and 44.3% respectively) refused co-operation in the survey. For the face to face survey, another 26.7 percent of the non-respondents were not at home after several attempts. Since outgoing behaviour is positively related to drug use, drug use estimates are probably somewhat too low when calculated on the basis of the response group answers. A similar bias exists for both other surveys, but it is difficult to quantify this bias without an additional non-response study.

We did a non-response survey in the non-response of the national face survey, and found that the largest group of non-response (refusal) had a lower prevalence of lifetime cannabis use than the response. Not at home non response had a slightly higher cannabis LTP .See for detailed results of our non response survey Abraham et al, 1999[2].

[2] Abraham, Manja D., Peter D.A. Cohen, Roelf-Jan van Til, & Mariëlle A.L. de Winter (1999), Licit and illicit drug use in the Netherlands, 1997. Amsterdam: CEDRO.

The second highest non-response category for the telephone survey was the interrupted interviews. These are interviews that were stopped before all questions could be asked, because the respondent was not able or no longer wanted to complete it.

3.4 Greece

3.4.1 The survey sampling method for the face-to-face survey

The sample for the Greek mental health survey is a multistage stratified sample of the population between 12 and 64 years of age, drawn at the UMHRI. Like in the Dutch sample, the country is divided into separate substrata, each representing a density criterion. The first stratum is the Greater Athens Area (approximately 3,500,000 inhabitants). The second stratum is Salonica (approximately 700,000 inhabitants). The third stratum is made up of other urban municipalities with 10,000 or more inhabitants, and the fourth stratum is composed of the semi-urban/rural municipalities up to 10,000 inhabitants. Only a limited number of the Greek isles are included in the sample. A selection of these municipalities is made, based on the 1991 census data.

Since Greece lacks a central population registry, a sample frame first needs to be created. Within the selection of areas, a number of residential 'blocks' is selected randomly, from the maps of the Statistical Service of Greece. Addresses located within these blocks are screened completely, on the number of inhabitants, the age of the inhabitants, and their gender. The households for which no information becomes available are taken out of the sample frame. From this frame, the respondents are selected, using a random numbers table. We could not obtain information about the gross sample that was created from the sampling frame.

Oversampling was used in the age category 12-24. A substitution of potential respondents was made from the beginning of the survey only in the cases of change of address, death or hospitalisation, permanent absence from the household, mental retardation, or for individuals of foreign ethnicity. Substitutions due to refusal or repeated absence of the respondents were started only towards the end of the data collection period. We have no information on the effects of this change in sampling procedure. In case of absence a minimum of five visits to each household was required before a substitution was done. All substitutions were done in such a way as to assure finding a member of the same age group who was living in the same residential block of buildings. No other variables for substitution were applied. In cases where no other individual satisfied the criteria for substitution the interview was not conducted.

3.4.2 The survey sampling methods for the postal and the telephone survey

For the telephone survey sample we asked our Greek partner to use the same sampling frame. This was agreed upon and instructions to obtain telephone numbers were given to the UMHRI employees that were making the sampling frame in the field. The importance of obtaining the telephone number was stressed in the screening procedure. However, field workers experienced great difficulties in getting people in selected blocks to reveal their telephone numbers. The result was that the sampling frame, used for the face to face survey and the mail survey, was not applicable for the telephone survey.

Therefore a random digit dialling method had to be used instead. This was done within areas that run parallel to the area stratification of the face to face survey.

We were told by the Greek partners that there are 5.587.201 telephone lines among the 10.250.000 inhabitants of Greece. Based on an average of 4 persons per household, this implies that there are almost two telephone lines in each Greek household. However,

businesses are also included in the total number of telephone lines. Since business very often have several telephone lines, the average number of telephones per household is much smaller than two.

We were told by our Greek partners that possible telephone undercoverage would not result in the underrepresentation of large groups in the population. The only exception would be a small minority of people without a telephone, living in remote country areas. More precise estimates about telephone coverage amongst Greek households are currently calculated by the Greek telecommunication organisation.

For the postal survey the same frame as for the face-to-face survey was used. After excluding the households that were approached for the face-to-face survey, the households of the mail sample were selected randomly. The mail addresses (N=2,013) were allocated to the 4 geographical strata as follows: Athens stratum = 654 households, Salonika stratum = 154, municipalities over 10,000 stratum = 420, rest stratum = 785 We intended to produce 850 mail responses, but this goal has not been reached; according to an UMRHI a total of 505 responses was reached in the mail, but according to the data set that we used for the analysis we counted 530 responses. We can not account for this difference.

The sampling procedure as described above has a serious drawback for national prevalence studies. A bias may occur in producing the sampling frame. Since no personal information is known about the population excluded from the sample frame, it is not possible to verify this bias, neither to correct for it. Apart from an untraceable sampling bias a non-response bias can not be detected either due to non-registration of non-response information.

Although it could not be checked for the total gross sample, we were told that the sample of the mail survey was representative. Possible biases could be the very limited number of households without proper postal addresses in isolated villages (only one or two), and the fact that there was no way of actually knowing which member of the household completed the questionnaire. According to the instructions, the person in the household who had the most recent birthday should complete the mail questionnaire.

The experience of the face to face survey--we were told by UMRHI staff--where interviewers often met with reluctance from the parents to allow their children to participate in the interview explains the fact that adolescents are underrepresented. For a detailed discussion of response see chapter 5.

3.4.3 Fieldwork procedures face to face survey

The Greek face to face survey was conducted by researchers of the University Mental Health Research Institute (UMHRI) in May and June 1998. The interviewers used a pen and paper method to conduct the surveys. The addresses of selected informants were visited at most five times. A letter from the Department of Psychiatry University of Athens explaining the purpose of the survey was addressed to the selected households before the visit of the interviewer took place. The anonymity and confidentiality of responses was stressed in this letter as well as by the interviewers before the start of the interview. See appendix 2 for the text of the letter.

In the interviewer introduction, the purpose of the research was also explained. The name and the address of the selected person for the interview were printed on a card that was detached from the questionnaire before the interviewer entered the household. No name or other identification was registered on the completed forms of questionnaires. During the phase of creating the sampling frame, as well as during the fieldwork period, people could call local administrative and police departments for questions regarding the survey. Phone calls and visits to the respondents' home were made on a sample of 20 percent of the respondents to check the interviewer and the time and the quality of the interview.

The questionnaire is imbedded in a different context than the Dutch or Swedish survey. The first section of the questionnaire deals with satisfaction with life, illness, hospitalisation, psychological problems and medical treatment. Less sensitive questions are asked first so that a good interpersonal contact could be established between the interviewer and the respondent before asking the drug-related questions. It was expected that likewise, the underreporting of the more sensitive drug questions could be reduced. According to the Greek Partner, questions about mental health and mental illness in the family were less sensitive than the drug use questions.

The questionnaire concludes with the questions about the background of respondents and items related to attitudes towards drugs. For a complete questionnaire list see appendix 2.

3.4.4 Fieldwork procedures telephone and mail survey

Greek native speakers conducted the interviews for the Greek telephone survey from a telephone desk in Amsterdam. The Dutch fieldwork organisation that conducted the Dutch surveys also conducted the Greek RDD telephone survey. Prior to the fieldwork, the Greek interviewers were taped. These tapes were sent to staff of the UMRHI and the interviews were screened on their pronunciation and accents. The questionnaire and the introduction to the questionnaires were supplied by UMHRI. The Greek telephone survey was conducted at the end of September and beginning of October of 1998. The average duration of the interviews was almost eight minutes.

The Greek postal survey was co-ordinated by the University Mental Health Research Institute. The first mailing of the questionnaires took place on May fifth 1998. It was followed by three reminders, each sent approximately two weeks after the previous one. The last reminder was sent on the first week of July. No incentives were given to the respondents. Neither were special cards included on which respondents could fill in their reason for non-response.

In the telephone and the mail surveys a selection of drug use questions from the main face to face survey is made (smoking, drinking, use of cannabis, cocaine, amphetamines and ecstasy). The drug questions are preceded by a number of questions about mental health and some background characteristics. Also inserted in the survey questionnaire are some ESPAD-items concerning respondents' attitudes regarding drugs and the use thereof. These items are also part of the face to face and mail surveys.

3.4.5 Response rates and reasons for non-response

Very little information was delivered to us regarding the response rate and the reasons for non-response.

The response rate for the postal survey was approximately 25 percent (UMHRI). The reasons for non-response are not known.

The response rate of the face to face survey is 68.3% when substitutions are included (5,501 people were approached, delivering a response of 3,759). The response rate is 80.3% when substitutions are not included (UMHRI). However, the response rate is only calculated for the population aged 12-64. A more exact response rate for our target group of 15-59 (response 3,036) could not be calculated because we have no age data for all repondents in the gross sample.

The majority of the non-response of the face to face survey consists of refusals (UMHRI). More detailed information of the reasons for non-response is not available for the face to face survey.

The response rate for the Greek telephone survey is 23.4% (see table 3.4). The reasons for non-response in the Greek telephone survey varied: The majority of non-respondents were people who refused to co-operate (80.1%). The second largest group of non-respondents was the 'no-answer' category. Total number of telephone numbers dialled was 4,243. Successful interviews were done with 854 respondents.

3.5 Sweden

3.5.1 The survey sampling methods

Samples for each of the three Swedish surveys were drawn at the end of December 1997.

The sample for the face to face survey is a stratified random sample drawn from the central population registry. Since this registry is updated every two weeks, the number of frame errors is supposed to be minimal. Residents of hospitals, prisons, old people's homes and so forth are included in the sample frame, but removed during the fieldwork period. The target population is the general population between 15 and 75 years of age. Sweden is divided into 287 area's of which 131 are selected as sampling areas. In some instances (very sparsely populated areas), sampling is limited to a sub-area. There is no oversampling. TEMO, a market research organisation in Stockholm was responsible for all surveys.

The sample of the telephone survey is drawn from TEMO's base of households derived from the telephone directory with an addition of "synthetical" numbers. Adding one (1) to the last figure of the number drawn creates these numbers. By this operation the inclusion in the sample frame of secret numbers is made possible. Selection of respondents within the household reached by telephone is done by asking for the person with the last birthday in the year.

The Swedish telephone coverage is approximately 98% (TEMO). Mobile phones are not included in the sample frame. This could create a bias for young male respondents, since there seems to be a small substitution of regular phones for mobile phones among this group. Certain telephone numbers are never identified (for instance summer cottages

during the winter). According to the Swedish fieldwork organisation, analyses show that approximately 20 percent of these non-reachable telephone numbers are to be considered as "non-response", whereas the remaining 80 percent do not belong to the sample population.

For the mail survey, a non-stratified sample of the Swedish population is used. The frame is the central population register. This means that two out of three Swedish surveys used identical sampling frames.

3.5.2 Fieldwork procedures face to face survey

The Swedish face to face survey was conducted between February and April 1998 in three subsequent waves of approximately 500 interviews. The fieldwork was performed by 125 interviewers living throughout the country.

In case an informant is not living at the registered address it is attempted to track him down. If the informant lives in the same residential area he will be interviewed, otherwise he will be removed from the sample. Since the average distance between the interviewer and the informant is about 30 kilometres, an appointment for the interview is usually made over the phone. A standard letter is sent prior to this booking call. Informants were stimulated to co-operate with a small bonus fee of 35 Crones (4.2 US Dollar, 4 ECU). Respondents are interviewed at their homes. Interviewers use pen and paper to fill in the questionnaires. See appendix 1 for introduction letter and the complete questionnaire.

As a quality control, the first questionnaires of each interviewer are immediately checked. Any errors or discrepancies are brought to the attention of the interviewer. The control verifies that the interview was carried out with the correct person and assesses the general conduct of the interviewer during the interview.

Since the year of birth is included in each respondent's identification number it can be checked if the right person is interviewed. Interviewers receive a bonus in the case they have successfully interviewed informants at 70 percent of all assigned addresses. Ten percent of the returned questionnaires are checked over the phone on whether the interview took place and how long it lasted.

3.5.3 Fieldwork procedures telephone and mail survey

The telephone surveys were conducted in the first week of April 1998.

If 15 attempts to contact a certain telephone number did not lead to a contact or if the number is not eligible for the survey (it is of a company, fax, modem or no subscriber) the number is classified as non-response. To ensure a high quality of the interviews and to avoid negative effects of boredom, the length of the interviews is limited to at most 20 minutes. The total number of questions asked for the telephone interview was 26. Prior to the survey the interviewers are orally informed of and introduced to the questionnaire and the subject of the interview. The telephone interviews are mainly carried out during the day and during the evening.

The Swedish postal survey was conducted between April and the first week of May 1998.

Up to three reminders were sent out for the postal survey. The first reminder was sent out one week after the initial survey, followed by the second one, a week after this. The second reminder included a new questionnaire form and prepaid envelope. One week later a third and last new survey was posted, again including a pre-paid envelope and this time also a note saying that returned surveys would be rewarded. 155 people responded to this last reminder.

3.5.4 Response rates and reasons for non-response

The gross sample (response and non-response) of the Swedish face to face survey is 2,435, delivering a net response of 1,483 (60.9 percent, see table 3.5). 6.3 percent of the gross sample (2,600 informants) consists of frame errors. The gross sample of the mail survey is 1,483 delivering a response of 1,018 (69%). Only 1.1 percent of the gross sample of the mail survey belongs to the frame-error category. The gross sample size of the telephone survey is 1,653. The response rate is 61% (1005 interviews) and 44 percent are frame errors (see table 3.5).

The above figures refer to the population 15 years and older. For the analysis of the data a selection was made of respondents between 15-60 years old, the reason being to create homogeneity between the participating countries. Because gross sample data on the individual record level could not be provided, response rates could not be calculated for the respondents aged 15 through 60.

The goal to focus on a population between 15-60 was, for reasons of miscommunication, not understood by all partners. In the Swedish case the response target of 850 was understood to be for the entire population of 15 years and older. As a consequence of this age-selection the target response of 850 was not reached in the telephone and the postal survey. The analysis is based on 784 responses for the postal survey and 792 for the telephone survey. The net sample of the face to face survey of respondents aged 15-60 is 1,254 (of all respondents of 15 years and older the response is 1,483. (See table 3.5). In a later phase, after it became clear that an international comparison would not be made because of still too many data (quality) differences and differences in the research methods, the ground for the age selection 15-60 eroded. However, in this phase we decided not to go back to the entire interviewed population. The main reason was that the weights for correcting unrepresentativeness were already based on the age cohort 15-60.

3.6 Mode-efficiency: the number of contacts needed before the target response was reached.

The Dutch fieldwork organisation has registered the number of times informants needed to be approached before they gave response in the telephone and the postal survey. The intended (and interviewed) response population of the telephone survey was 850. Almost half of these respondents were already contacted the first time (47.6%). Another 206 respondents (24.2%) were questioned after the second contact. The third, fourth, fifth and sixth contact delivered responses of respectively 97 (11.4%), 52 (6.1%), 45 (5.3%), and 24 (2.8%). The last two responses came in after the twelfth contact.

For the Greek telephone survey fewer--only six--contacts were necessary to obtain a response of 854. The first contact already delivered a response of 74.2 % (634). Another 156 people (18.3%) were questioned after the second contact.

Supposedly, Greek people are easier to approach over the phone as the Dutch people. However, even if this was the case, many more numbers were needed in Greece to generate a similar response. The reason for this is the higher number of refusals. Fifty three percent of all informants refused to co-operate in the Greek telephone survey, whereas this percentage in the Dutch telephone survey was only 20 percent.

If we compare these outcomes to the number of contacts that were made in the Swedish telephone survey, the following conclusions can be drawn for the response population before age-selection: The total response of the Swedish telephone survey was 1005. To make a comparison with the Greek and Dutch telephone surveys, where no more than 850 successful interviews were conducted (854 and 833 respectively), we will look at the moment that a similar sized response in the Swedish telephone survey was reached. A response of 857 people was reached after seven contacts. Just over forty percent of them were contacted the first time. Another 21 percent the second time, a percentage closely resembling the Dutch figure. However, the final response rate of the Swedish telephone survey (61% for the population 15-75) was higher than the response rate of the Dutch telephone survey (52%) because of lower refusal rates.

For the Dutch postal survey two reminders were sent out to non-respondents. Before the first reminder 862 (25.4%) informants returned their questionnaire. The first and second reminders delivered additional responses of respectively 336 (9.9%) and 155 (4.6%). Our target of a net sample of 850 was already reached before the first reminder was mailed.

For the Greek postal survey , information on the return rates after each reminder is only available only for 57.8 % of the population (325 respondents) .We have no information of why this is so. For these respondents the second and the fourth reminder seemed most rewarding: 36.1% (203 people) replied after the second reminder, and 12.6% (71 people) replied after the fourth--which is the last--reminder. For the Swedish postal survey the only information available is that the third (and last) reminder delivered a response of 155 of a total response of 1,018 (15.2%). Both the Swedish and the Greek experience demonstrate that it is worthwhile to repeat sending out several reminders, even without a response-incentive, since they raise the response considerably.

Table 3.1: response and non-response distribution, Dutch face tot face survey, population aged 15 to 60.

gross sample	n	%
Successful interviews	16,200	52.1
Non-response	10,949	35.2
Frame errors	2,173	7.0
Non-used addresses	1,746	5.6
Total	31,068	100.0
frame errors		
Moved	1,448	66.6
Unknown at address	322	14.8
Vacancy/renovation	143	6.6
Address not found	145	6.7
Deceased	19	0.9
Wrong person	96	4.4
Total	2,173	100.0
non-response categories		
Refusal	6,333	57.8
Not-at-home	2,919	26.7
Illness	263	2.4
Language problems	522	4.8
Appointment	74	0.7
Other reasons (unknown)	838	7.7
Total	10,949	100.0
valid gross sample		
Response	16,200	59.7
Non-response	10,949	40.3
Total	27,149	100.0

Table 3.2: response and non-response distribution, Dutch telephone survey, population age 16 to 60.

gross sample	n	%
Successful interviews	833	48.1
Non-response	766	44.2
Frame errors	126	7.3
Non-used telephone numbers	8	0.5
Total	1,733	100.0

frame errors		
Wrong telephone number	109	86.5
Wrong person: not in sample	17	13.5
Total	126	100.0

non-response categories		
Refusal	339	44.3
No answer	124	16.2
Answering machine	43	5.6
Occupied	19	2.5
Interrupted interview	241	31.5
Total	766	100.0

valid gross sample		
Response	833	52.1
Non-response	766	47.9
Total	1,599	100.0

Table 3.3: response and non-response distribution, Dutch mail survey, population aged 15 to 60

gross sample	n	%
Successful interviews	1,250	36.9
Non-response	1,984	58.6
Frame errors	152	4.5
Total	3,386	100.0
frame errors		
Return to sender	61	40.1
Wrong person: not in sample	91	59.9
Total	152	100.0
non-response categories		
Too busy	18	0.9
Principle refusal	48	2.4
Too personal	12	0.6
Problems wreading / writing	3	0.2
Different reason	16	0.8
Reason unknown	1,887	95.1
Total	1,984	100.0
valid gross sample		
Response	1,250	38.7
Non-response	1,976	61.3
Total	3,226	100.0

Table 3.4: response and non-response distribution, Greek telephone survey, population age 16 to 59.

gross sample	n	%
Successful interviews	854	20.1
Non-response	2800	66.0
Frame errors	401	9.5
Non-used telephone numbers	188	4.4
Total	4,243	100.0

frame errors		
Wrong telephone number	401	100.0
Total	401	100.0

non-response categories		
Refusal	2244	80.1
No answer	433	15.5
Answering machine	5	0.2
Occupied	47	1.7
Interrupted interview	71	2.5
Total	2800	100.0

valid gross sample		
Response	854	23.4
Non-response	2800	76.6
Total	3,654	100.0

Table 3.5: response and non-response distributions Swedish surveys, population 15 and older.

	face to face survey		postal survey		telephone survey	
	N	%	N	%	N	%
gross sample	2,600		1,500		2,962	
frame-errors (exduded)	165	6.3	17	1.1	1,309	44.2
net sample	2,435	100.0	1,483	100.0	1,653	100.0
non-response	952	39.1	465	31.4	648	39.2
respons	1,483	60.9	1,018	68.6	1,005	60.8
non-response categories						
absentees / no answer	193	20.3	434	93.3		
refusal	682	71.6	25	5.4	538	83.0
other non-response	77	8.1	6	1.3	110	17.0
Total	952	100.0	465	100.0	648	100.0

Source: TEMO

4 Towards the analysis: data preparation , data quality, data weighting

4.1 Introduction

Anyone familiar with the task of creating a coherent data set composed of several different, smaller data sets, knows that this is a tedious task. This is especially the case when the data sets are composed by different persons, and for different occasions. In the example of this project the latter could not be avoided, if only for the reason that the face to face surveys in each country were designed for different purposes than this mode-effect study. For practical reasons, the Greek telephone survey was conducted by a Dutch fieldwork organization, whereas the other two Greek surveys where conducted at the University of Athens. The Dutch face to face survey is very complicated by itself, being composed of several different elements that are based on surveys conducted in three subsequent years.

The Swedish partners took responsibility for conducting each of their three surveys and their data were delivered in one data set. Coherency in variable- and value-labels facilitated the preparation in comparison to both other countries.

Naturally, the questionnaires were discussed in detail and the main drug questions, background variables and, if relevant, context questions for the telephone and the postal survey, agreed upon. In spite of the agreements and the efforts to create as much coherency as possible between the different questionnaires some mistakes were made nevertheless during the fieldwork period. These mistakes have caused gaps in the data sets, with the consequence that we were hindered in conducting some sections of the analysis. In this chapter we will describe the omissions and how the analysis had to be adjusted as a result thereof.

Apart from the response data on the dependent variables we needed extensive information on the distribution of non-response if possible. Moreover, fieldwork data (like reason for non-response, number of contact attempts) are necessary components of a mode effect study, as well as general population data of a country. Because of insufficient communication and supervision during the fieldwork period, or simply because of technical or sampling constraints, we did not receive all of this information.

This overview of the difficulties encountered will provide the basis of a list of specifications, to refer to when similar methodological studies will be conducted in the future. This list will be described in chapter 7 and will point to both technical as well as organizational aspects. The latter are, to our opinion, especially in this cradle-phase of conducting European comparative drug use studies of equal importance as the first.

4.2 The Swedish data

4.2.1 The response data set

The Swedish data was delivered in different episodes. The first data set we received was in Swedish so value labels could not be read. A translated version came later, but did not include the alcohol questions and the variable 'last month prevalence of cannabis'. The latter were sent to us after request. When matching the alcohol data to the main data set

we discovered that the respondents of the telephone survey did not have a unique identity code. Codes exist twice or even three times for respondents in the telephone survey. Also, the codes were not unique between the three surveys: respondent 'x' in the telephone survey may have had a similar response code as respondent 'y' in the postal survey. When addressing this issue with the fieldwork organization, we were secured that all respondents, in each file delivered to us were ordered in a similar way and therefore matching would be safe. Since serious doubts can be raised about the quality of this technique, we tried first to create a new unique identity code by combining the respondent code with the variables 'type of survey' and 'date of birth'. Still double codes occurred. Finally, it was decided to give each respondent a new, unique identity code in each file by numbering one through 'n' respondents. Subsequently, the matching between the alcohol data and the first data set was performed.

The initial goal of this study was to compare the drug use estimates delivered by samples of respondents aged 15-60, produced by three survey modes within one country (intra-national) and for each respective mode between countries (international).

In the Swedish case we had to select the samples of respondents aged 15-60 from larger samples of respondents aged 15 and older. In Sweden the field work organization had not understood in time that the mail and telephone surveys should be focussed on a population between 15 and 60, instead of 15 and older,(the age limits for their original face to face to face survey).

Because of our age-selection the target response of 850 for the postal and the telephone surveys was not reached. It was reached of course for the wider age boundaries, 15 and older.

The Swedish data was initially was incomplete; sample data, population data and several variables were missing and were very difficult to retrieve from the fieldwork organization. Only after additional funding was made available from the Swedish partner missing information was delivered to us. The problems with data delivery could be related to the fact that the fieldwork institute normally performs market analyses on consumer products were questions about the gross sample, among other things, do not often occur.

Most of the missing respondent information could be delivered in the end. The reason for remaining missing data is that some questions were simply not asked or misplaced in the questionnaire. The following response group data could not be retrieved:
- 'Age of onset of Cannabis use' in the telephone survey: This question was misplaced in the questionnaire and therefore only asked to people who used the last month;
- The variable 'Age of onset' of all other illicit drugs had not been asked;
- The variable 'married or cohabiting' is not asked in the telephone survey;
- The background variables 'income household', 'income respondent' and 'employed/unemployed ' is missing for the telephone survey.
- The variable 'number of reminders', 'number of approaches (calls, visits or reminders)' which was asked in order to evaluate the effectiveness of each mode was available for the telephone survey only.

The age of onset of illicit drug use variables in Sweden can not be part of the analysis of the mode effect data. Also the "frequency of use during last month" questions were, this time according to agreements, not asked.

Apart from problems with the response data, we also had serious complications in retrieving gross sampling data for the face to face survey.

4.2.2 Gross sample information.

In order to analyse a possible non-response bias it is necessary to have data of non-respondents such as date of birth, gender, marital status and residence. In the case of Sweden data of the total gross sample was only available for the postal survey. Gross sampling data for the telephone and the face to face data sets turned out to be unavailable. For the telephone survey, non-response data could not be delivered because of the sampling technique of Random Digit Dialing.
In the case of the face to face sample it is not exactly certain why the non-respondent information could not be delivered. Supposedly, the entire gross sample is never registered, and gross sample information is limited to the name and address of the respondent and is only delivered to the interviewers on paper. According to our contact person at the fieldwork company "for unknown reasons they are not allowed to register gross sample information". This is a barrier in general population studies since prevalence figures generally become less meaningful if non-response biases can not be traced.

4.3 The Greek data

4.3.1 The Greek response data set

The Greek telephone survey was conducted by the Dutch fieldwork organization, whereas the postal and the face to face survey were conducted at the University of Athens. The data were delivered in three separate data files, which needed to be joined into one data set. We discovered mistakes, inconsistencies and omissions within each file, especially in the postal survey, as well as differences between the three data sets. Joining the three files into one coherent set, was therefore a time consuming task. Here we will review the main problems with the Greek data files:

- Different question order

In the Greek telephone survey, the personal background questions age and gender were asked first, whereas in the postal and the face to face surveys these questions were placed more towards the end. In both cases however, the questionnaires ended with questions around the perceptions on drug use and drug users.

Answering categories

In the Greek face to face and postal survey the codes 1 and 2 as an answering category were alternately used, for the answers 'yes' and 'no'. In the telephone survey this problem did not occur. In all these cases the questionnaire had to be used as reference in order to recode correctly.

- Different routing patterns

In the three surveys different routings were applied. The telephone survey used a slightly different routing pattern than both other surveys. For instance the question about the respondent's occupation, in the postal and the telephone survey was only asked to respondents who were not employed, whereas in the face to face surveys the question was asked to all respondents. In the latter case, an additional answering category 'employed' was added, a category missing in the mail and telephone surveys.

The telephone survey had a different routing pattern for the alcohol variables. For the postal and the face to face survey all alcohol questions were asked to all respondents. In case of the telephone survey the alcohol lifetime prevalence question was used as a filter question. In case of no life time alcohol, all other alcohol question were skipped. This creates problems for an analysis of number of 'erroneously not given answers'.

- Dubious routing

The question 'lifetime use of tobacco' was used as a filter question in all three surveys. People who in the lifetime question answered 'once or two times', or 'regularly in the past' were not asked if they smoked during the past month (TBKLMP). This is a dubious routing which leads to an underreporting of last month use. It is possible that people who used only once or twice did this over the past month.

- Different question phrasing

The question 'tobacco last year use' was, according to the agreements not asked in either of the three surveys. The question on lifetime use of tobacco in the telephone survey is phrased: "Have you smoked any cigarettes?" In case of a negative answer the subsequent frequency (how often smoked) question was not asked. In the postal and the face to face survey, the question was phrased as follows: "Have you ever smoked cigarettes and if so how often?" Especially for respondents who have only smoked once or twice this different phrasing is likely to cause different answers. It can be expected that the in the first case, lower prevalence estimates can be expected than in the latter. Similarly the question on tobacco last month use, but this time for all three surveys is asked in combination with frequency of use.

For the question lifetime use of alcohol and all illicit drug use questions, a similar difference exists between the telephone survey on the one hand and the postal and face-to-face survey on the other hand. For the telephone survey, the 'use' question was separated form the 'frequency' question (as agreed upon), whereas for the latter both questions were combined in one.

- Data inconsistencies

- The data that were delivered from Greece were checked randomly and had several data imperfections. Some data had '0' as an answering category, which wasn't not a valid value label. After inquiry we were told all zeros could be considered as missing values.

- The number of people in the Greek face to face data file who answered 'employed' (1561) on the question about their occupation (see appendix 2, question 54: "you are") did not correspond to the number of people who answered 'yes' to the previous question 'Do you work now?' (1601).

- There were 48 respondents in the data set of the face to face survey who answered not to have any children, but who did give an answer to the question "how many children do you have?" We have decided not to use either of the two aforementioned background variables as part of the mode effect analysis.

- Generally, the quality of the drug use variables is dubious, and this is particularly the case for the postal survey. There is a high number of missing values on the life time prevalence questions, in relation to the number of ever users (for all illicit drugs) and in relation to the number of never users (for the licit drugs). This implies that prevalence figures for these illicit drugs could be much higher in case the missing values were in reality positive. But in case a missing answer is given when the answer is negative, prevalence could be lower.

A possible solution would be to exclude all records with missing values on any life time prevalence question from the analyses. This is not done because of the already limited number of cases in the Greek postal file (N=530). Concluding, we recommend carefulness with the interpretation of the Greek data because of the aforementioned reason.

- Missing data

All of the variables that were requested from the Greek partners were delivered, but many cases were missing in the data file. In those cases the interpretation of the data is unreliable.

For all drugs, the frequency and the age of first use is asked only to 'ever users'. The data analysis is therefore only hindered for the variable 'tobacco life time' use. In addition, no information is available on the reasons for non-response, and apart from the telephone survey, on the number of approaches before a respondent was contacted.

4.3.2 Gross sampling data

The problem of missing response information also exists for the Greek section of our study. Gross sample data that can be used to trace non-respondents is not available for either three of the surveys .The possible occurrence of a non-response bias can therefore not be studied. The construction of the sampling frame itself creates a source of bias, since addresses in the sampled residential blocks where no one was found at home for several times or where people refuse to give information are of course excluded from the sampling frame. The lack of a central population register as a sampling frame from which a reliable and up-to-date gross sample can be drawn is a large handicap in the case of Greece.

As in the case of Sweden, the Greek face to face survey did not select the target age group of 15-60 years old. Their face-to-face survey is aimed at the cohort 12 years to 64. So, both older and younger respondents were included in the response file. Non-response information also refers to this larger population, and since no individual records are kept, selections can not be made afterward. Also the weights of the face to face survey were calculated over the entire response group 12 years to 64. Weights for the postal and the telephone survey were not included. We calculated new weights, using the same method for all three survey-samples. The technique will be explained in paragraph 4.6

4.4 The Dutch data

The Dutch section of this study is most complete in terms of data availability; gross sample data are available for each of the three surveys as well as reasons for non-response and several fieldwork variables. The Dutch face to face survey, which consists of several different samples, is drawn a year prior to the other surveys which may be an underlying reason for different prevalence outcomes between the surveys. We expect this difference to be negligible. Because the fieldwork of the Dutch face to face survey is conducted over a relatively long time span--almost a year--which implies that the average difference between the interview date of the face to face survey and of both other surveys is less than a year.

The reconstruction of the Dutch face to face data file is most difficult to do of all files, since it consists of five different files: Utrecht, Amsterdam, Rotterdam, The Hague (the four big cities) and one sample representing five different address density areas. The first two samples (Utrecht and Amsterdam) use different variable codes than the latter because the fieldwork organisation switched variable codes. Between them they are also different. Creating coherency within the face to face data set by itself appeared to be a larger task than creating coherency between the face to face, the postal and the telephone survey. Fortunately, the main drug variables are present in all data sets. Some background variables, such as 'household composition' or 'occupation' are difficult because they have been asked differently in the city of Utrecht. We have decided to use only the background variables that are available and equal in each subsample.

One serious error was made in the Dutch surveys with consequences for the analysis. In the Dutch telephone and the postal survey a routing mistake was made which had not been detected during the fieldwork. The question "did you drink alcohol during the last month" (coded alclmp), and 'last month's frequency' (alclmpn), were only asked to people who answered 'yes' on the previous question: "during the past six months, where there any days on which you drank six glasses of alcohol a day or more?" Thus, all respondents who never drank this amount over the previous half year were not asked the 'last month use' question. Because of this mistake there is an underreporting of last month use in the telephone and postal survey.

In the analysis of the mode-effects in the Dutch surveys, the last month use of alcohol variable is therefore not included.

4.5 Missing values

It is very important to distinguish between a missing answer, and 'do not know'. In a few cases these categories were not included as separate value labels. Another problem is that a missing value may mean that respondent does not know the answer, does not want to give the answer, or just overlooked the question (mail survey). The initial plan to do an item non-response comparison between the modes was deleted because of this.

In a face to face or telephone survey, the interviewer should be instructed to strictly distinguish ' do not know' and 'do not want to answer'. These categories should appear in the data file under separate value labels.

For a postal survey and a CASI survey this is very difficult, because a missing item may mean different things, and there is no way of finding out.

4.6 Data weighting

In order to make reliable estimates of drug use in the general population it is necessary to adjust the response population, on a range of variables, to the data of the same variables in the general population. This procedure makes the response representative for the general population. Problem was of course that for instance for Greece, the quality of the reference data to make weight calculations, is not very high. Looking back at the time and effort devoted to the weight-calculations, and considering the fact that the weights were not needed in the final mode-effect analysis, one can only be left with the unsatisfactory feeling that this aspect has received too much emphasis in the preparation of the data sets. On the other hand, the sensitivity of prevalence data made it necessary to do this weighting procedure. For the presentation of the prevalence rates, as measured by each of the three survey modes in each country, weighted percentages are used (see Appendix 4). But, because of the many methodological comparability problems encountered, we still have to be very careful with cross-country comparison of these prevalence data.

The Greek survey data included the weights for the face to face survey, and not for the other surveys. These weights were calculated for the entire population aged 12 and older, so they had to be recalculated. The Swedish data set included weights for the face to face and the postal survey, but not for the telephone survey. Initially these weights were calculated for the population 15 and older and had to be recalculated as well.

4.6.1 Sweden

A post stratification weighting procedure is applied for all three surveys, using a matrix based on the variables age, gender, and urbanisation. The response groups distributions are corrected to correspond with the distributions of the target population, as registered in official statistics.

More technical information and the statistics used for the weighting exercise were not made available to us.

4.6.2 The Netherlands and Greece

In the previous chapter we have mentioned that there is an oversampling in the Dutch face to face survey of young people between 12 and 18, and of the four largest cities. In the Greek face to face survey there is also an oversampling of people aged 16-24.

Significant differences therefore exist between the sample and the response populations on the one hand, and the national population on the other. In chapter 5 attention is paid to the issue of representativeness.

In this research we have chosen to apply a post-stratification technique to make the response groups representative for the research population. In this way, a correction is also made for selective non-response and frame errors.

The post-stratification method resembles the one used in the latest report on drug prevalence in the Netherlands (Abraham et al. 1999), but is less elaborate because of different research purposes. A weight is assigned to subgroups of the population. The subgroups are categorized by age (15-18, 19-29, 30-39, 40-49, 50-60 in the Dutch surveys and 16-24, 25-34, 35-44, 45-59 in the Greek surveys), by gender and by density stratum (the latter, only in the Dutch case). Usually, in the drug use prevalence studies conducted by CEDRO the indicator marital status in also included. Since this information was unknown for the respondents in the postal and the telephone survey, for reasons of comparability we decided to also exclude this variable from the weight calculations of the Dutch face to face survey. In the Greek survey we had no other choice but to limit ourselves to the two variables age and gender, since no other information on the entire population was available. The Greek national population figures are official estimates taken from the 1997 mid-year estimates of the National Statistical Service of Greece. The estimates are based on the last census <year>, and updated through the registration of births and deaths and fieldwork of the quarterly Labor Force Survey, which yields information on population movements in Greece.

Weights are assigned by ratio of population figures, as follows:

$$w_s = \frac{N_s}{N} / \frac{n_s}{n}$$

s = subgroup determined by age, gender and density stratum

With N the total population aged 15-60 years in 1997, N_S the stratum population, n the net response and n_S the stratum response. All assigned weights amount to n.

Data are now representative with respect to age, gender and density area (in the Dutch surveys). This means that after this weighting step the oversampled groups of 12 to 18 and the large cities are no longer overrepresented for the Netherlands and the oversampled group of 16 to 24 is no longer overrepresented for Greece.

5 The analysis

5.1 Introduction

In this chapter we will report the results of the statistical analysis that Statistics Netherlands (SN) has done on data supplied by CEDRO.

Aim of the analysis is to know if interview mode effects can be shown for a series of data on variables in drug use surveys, collected in Greece, Sweden and the Netherlands.

Although the data are not of top quality we will conclude, based on the data that are available, that mode-effects are small, and do not point into a specific direction. We can not conclude that mode-effects will influence the comparability of results within a country. Cross-country comparisons could not be made due to large methodological differences between countries, in spite of use of the same interview modes.

As we have seen in chapter 2, mode effects are not the only possible source of bias in general population research. In the first section of this chapter we will explain another source of response-effects that may exist: those that are caused by selective non-response. Non-response may have specific outcomes related to the data collection method. For all surveys we have compared the (age, gender and urbanity-) distribution of the response population with that of the general population.

In the Dutch surveys and in the Swedish postal survey, the availability of gross sample population data allowed us to also compare the distribution of the response population with the gross sample population. Distributions are compared response versus sample (or vs. general population) with chi^2 , $p<0.05$ test.

The most important part of the analysis is the comparison between modes of reported prevalence rates. Therefore the question whether modes affect prevalence reports will be answered in the second section of this chapter. More detailed analysis reveal whether there are any interaction effects of modes and respondent characteristics, such as age, gender, urbanity or educational level. Apart from the main prevalence indicators (ever use, last year use and last month use), also the variable age of onset and last month frequency (where this was possible) seemed meaningful.

5.2 Response-effects due to selective non-response

5.2.1 The Netherlands

The Dutch gross sampling data allows us to compare the non-response population with the response population for each of the three surveys. Therefore we have compared the response populations with the total gross sample, looking at three variables age, gender and density. In addition we have compared the response populations with the general Dutch population aged 15-60 in the years the sample was drawn (table 5.1.1, 5.1.2, 5.1.3). In case of the Dutch face to face survey, oversampling of the group of 12-18 years, as well as the highest address density stratum is applied. For this reason, neither the gross sample, nor the response populations are representative of the Dutch population when looking at the variables age and density.

The age-, density- and gender distribution of the response population is significantly different from the Dutch population, as well as from the gross sample.

Respondents in the youngest age category (15-18) had a slightly higher response than could be expected on the basis of their gross sample share (15.5% in the gross sample vs. 18.1% of the response population). People between 19-29 years of age where underrepresented (25.5% vs. 23.7%), as well as the highest age category 50 -60 (15.2% vs. 13.8). Woman had a higher response rate than men. The highest density stratum had a low response, whereas the response in all four other density strata was higher that expected on the basis of their gross sample shares (table 5.1.1).

The Dutch postal survey did not use oversampling. The sample is representative of the Dutch population on the three main variables age, gender and address density. The response population is significantly different from the gross sample population for the variables gender and density (table 5.1.2). As in the case of the face to face survey women are overrepresented and men are underrepresented in the response population. Contrary to the face to face survey the highest density stratum is well represented in the response of the postal survey, whereas the other four strata have a relatively low response.

The telephone survey sample is not representative for the Dutch population except for the gender distribution. Significant differences exist for the age and the urban density distributions.

Significant difference between the response and the gross sample populations exist for the variables age and gender (see table 5.1.3). As in both other surveys the men are underrepresented and woman are overrepresented. Respondents in the youngest age category (15-18) had a slightly higher response than could be expected on the basis of their gross sample share (7.4% in the gross sample vs. 8.2% of the response population). People between 19-29 years of age where underrepresented (23.8% vs. 18.5%) and people between 30 and 50 are overrepresented .

Table 5.1.1: Population according to sample and response group, by age group and gender, Dutch face to face survey

	municipal registries 1-1-1997			*sample*		*response*		
age	N	%	*age*	n	%	n	%	p<0.05
15-18	741,695	7.4	15-18	4,819	15.5	2,930	18.1	
19-29	2,500,804	24.8	19-29	7,921	25.5	3,836	23.7	
30-39	2,576,707	25.6	30-39	7,388	23.8	3,896	24.0	
40-49	2,330,324	23.1	40-49	6,217	20.0	3,308	20.4	
50-60	1,921,555	19.1	50-60	4,723	15.2	2,230	13.8	
Total	10,071,085	100.0	Total	31,068	100.0	16,200	100.0	
gender			*gender*					p<0.05
Male	5,123,749	50.9	Male	15,854	51.0	7,973	49.2	
Female	4,947,336	49.1	Female	15,214	49.0	8,227	50.8	
Total	10,071,085	100.0	Total	31,068	100	16,200	100.0	
density cluster			*density*					p<0.05
very high	1,813,661	18.0	very high	19,921	64.1	9,518	58.8	
high	2,393,559	23.8	high	2,986	9.6	1,683	10.4	
moderate	2,075,524	20.6	moderate	2,702	8.7	1,665	10.3	
low	2,131,048	21.2	low	2,725	8.8	1,643	10.1	
very low	1,657,293	16.5	very low	2,734	8.8	1,691	10.4	
Total	10,071,085	100.0	Total	31,068	100.0	16,200	100.0	

Distributions are compared response versus sample with $\chi 2$, $p<0.05$ test

Source registry totals: CBS, 1997

Table 5.1.2: Population according to sample and response group, by age group and gender, Dutch postal survey

	municipal registries 1-1-1997			*sample*		*response*		
age	N	%	*age*	n	%	n	%	
15-18	741,695	7.4	15-18	257	7.7	101	8.1	
19-29	2,500,804	24.8	19-29	782	23.3	274	21.9	
30-39	2,576,707	25.6	30-39	871	26.0	340	27.2	
40-49	2,330,324	23.1	40-49	785	23.4	300	24.0	
50-60	1,921,555	19.1	50-60	661	19.7	235	18.8	
Total	10,071,085	100.0	Total	3,356	100.0	1,250	100.0	
gender			*gender*					$p<0.05$
Male	5,123,749	50.9	Male	1,710	51.0	582	46.6	
Female	4,947,336	49.1	Female	1,646	49.0	668	53.4	
Total	10,071,085	100.0	Total	3,356	100.0	1,250	100.0	
density cluster			*density*					$p<0.05$
very high	1,813,661	18.0	very high	591	17.6	340	27.2	
high	2,393,559	23.8	high	794	23.7	277	22.2	
moderate	2,075,524	20.6	moderate	699	20.8	234	18.7	
low	2,131,048	21.2	low	695	20.7	230	18.4	
very low	1,657,293	16.5	very low	577	17.2	169	13.5	
Total	10,071,085	100.0	Total	3,356	100.0	1,250	100.0	

Distributions are compared response versus sample with $\chi 2$, $p<0.05$ test

Source registry totals: CBS, 1997

Table 5.1.3: Population according to sample and response group, by age group and gender, Dutch telephone survey

	municipal registries 1-1-1997			*sample*		*response*		
age	N	%	*age*	n	%	n	%	p<0.05
15-18	741,695	7.4	15-18	129	7.4	68	8.2	
19-29	2,500,804	24.8	19-29	412	23.8	154	18.5	
30-39	2,576,707	25.6	30-39	425	24.5	231	27.7	
40-49	2,330,324	23.1	40-49	391	22.6	200	24.0	
50-60	1,921,555	19.1	50-60	376	21.7	180	21.6	
Total	10,071,085	100.0	Total	1,733	100.0	833	100.0	
gender			*gender*					p<0.05
Male	5,123,749	50.9	Male	908	52.4	402	48.3	
Female	4,947,336	49.1	Female	825	47.6	431	51.7	
Total	10,071,085	100.0	Total	1,733	100.0	833	100.0	
density			*density*					
very high	1,813,661	18.0	very high	230	13.3	108	13.0	
high	2,393,559	23.8	high	397	22.9	191	22.9	
moderate	2,075,524	20.6	moderate	352	20.3	167	20.0	
low	2,131,048	21.2	low	401	23.1	189	22.7	
very low	1,657,293	16.5	very low	353	20.4	178	21.4	
Total	10,071,085	100.0	Total	1,733	100.0	833	100.0	

Distributions are compared response versus sample with $\chi 2$, $p<0.05$ test
Source registry totals: CBS, 1997

5.2.2 Greece

The experience of the interviewers of the face to face survey is that many parents do not allow their children to complete a questionnaire. Based on this experience, we may expect a response bias in the face-to-face, and both other surveys. However, we can not examine this bias due to a lack of gross sampling data. For the postal and the telephone survey, youth is underrepresented in the response population.

The figures on the national Greek population are official estimates taken from the 1997 mid-year population estimates of the National Statistical Service of Greece.

These estimations allow us to compare the response group of the three surveys with the general population (see table 5.1.4, 5.1.5, 5.1.6.).

If we consider the distribution by age and gender of the face to face survey, we find significant differences between the response- and the general population. For the age variable this could be expected on the basis of an oversample of respondents aged 15-24. All other age categories are underrepresented in the response population. The gender distributions of the general population and the response group indicate that men are relatively underrepresented.

For the telephone survey, a similar conclusion can be drawn: both the age and gender distribution of the response groups is significantly different from the distribution in the general population. Without an oversampling of people until 25, the expectation that young people are underrepresented seems justified. Also the oldest age category is underrepresented in both response groups. The gender distribution of the response group is least representative for the entire population in case of the telephone survey. Supposedly, men were more difficult to find at home at the times of the interview.

The response population of the Greek mail survey differs significantly from the general Greek population on the age variable.

Table 5.1.4: Population according to sample and response group, by age group and gender, Greece face to face survey

	Population estimates 1-7-1997			*sample*		*response*		
age	N	%	*age*	n	%	n	%	p<0.05
16-24	1,309,451	22.0	16-24	-	-	1,240	40.8	
25-34	1,499,050	25.2	25-34	-	-	642	21.1	
35-44	1,362,632	22.9	35-44	-	-	552	18.2	
45-59	1,781,958	29.9	45-59	-	-	602	19.8	
Total	5,953,091	100.0	Total	-	-	3,036	100.0	
gender			*gender*					p<0.05
Male	2,981,436	50.1	Male	-	-	1,440	47.4	
Female	2,971,655	49.9	Female	-	-	1,596	52.6	
Total	5,953,091	100.0	Total	-	-	3,036	100	

Distributions are compared response versus population with χ^2, $p<0.05$ test
Source: 1997 mid-year population estimates, National Statistical Service of Greece

Table 5.1.5: Population according to sample and response group, by age group and gender, Greece postal survey

	Population estimates 1-1-1997			*sample*		*response*		
age	N	%	*age*	n	%	n	%	p<0.05
16-24	1,309,451	22.0	16-24	-	-	94	17.7	
25-34	1,499,050	25.2	25-34	-	-	179	33.8	
35-44	1,362,632	22.9	35-44	-	-	134	25.3	
45-59	1,781,958	29.9	45-59	-	-	123	23.2	
Total	5,953,091	100.0	Total	-	-	530	100.0	
gender			*gender*					
Male	2,981,436	50.1	Male	-	-	244	46.0	
Female	2,971,655	49.9	Female	-	-	286	54.0	
Total	5,953,091	100.0	Total	-	-	530	100.0	

Distributions are compared response versus population with $\chi 2$, p<0.05 test
Source: 1997 mid-year population estimates, National Statistical Service of Greece

Table 5.1.6: Population according to sample and response group, by age group and gender, Greece telephone survey

	Population estimates 1-1-1997			*sample*		*response*		
age	N	%	*age*	n	%	n	%	p<0.05
16-24	1,309,451	22.0	16-24	-	-	163	19.1	
25-34	1,499,050	25.2	25-34	-	-	250	29.3	
35-44	1,362,632	22.9	35-44	-	-	206	24.1	
45-59	1,781,958	29.9	45-59	-	-	235	27.5	
Total	5,953,091	100.0	Total	-	-	854	100.0	
gender			*gender*					p<0.05
Male	2,981,436	50.1	Male	-	-	327	38.3	
Female	2,971,655	49.9	Female	-	-	527	61.7	
Total	5,953,091	100.0	Total	-	-	854	100.0	

Distributions are compared response versus population with $\chi 2$, p<0.05 test
Source: 1997 mid-year statistics, National Statistical Service of Greece

5.2.3 Sweden

For the Swedish surveys the data set of the gross sample population is available for the postal survey only. The response groups of the face to face and the telephone survey have been compared with the general population on the variables age and gender (see tables 5.1.7, 5.1.8, 5.1.9). The response group of the postal survey was compared to both the sample population and the general Swedish population on the same variables.

No significant differences were found in the comparisons in each of the three cases.

Table 5.1.7: Population according to sample and response group, by age group and gender, Swedish face to face survey

	municipal registries 1-1-1997			*sample*		*response*	
age	N	%	*age*	n	%	n	%
16-24	952,669	18.5	16-24	-	-	244	19.5
25-34	1,256,329	24.4	25-34	-	-	298	23.8
35-44	1,172,520	22.8	35-44	-	-	289	23.0
45-59	1,763,042	34.3	45-59	-	-	423	33.7
Total	5,144,560	100.0	Total	-	-	1,254	100.0
gender			*gender*				
Male	2,620,149	50.9	Male	-	-	610	48.6
Female	2,524.411	49.1	Female	-	-	644	51.4
Total	5,144,560	100.0	Total	-	-	1,254	100.0

Distributions are compared response versus population with $\chi 2$, $p<0.05$ test

Source: Population Statistics Sweden

Table 5.1.8: Population according to sample and response group, by age group and gender, Swedish postal survey

	municipal registries 1-1-1997			*sample*		*response*	
age	N	%	*age*	n	%	n	%
16-24	952,669	18.5	16-24	222	18.7	150	19.2
25-34	1,256,329	24.4	25-34	290	24.4	182	23.3
35-44	1,172,520	22.8	35-44	269	22.7	181	23.2
45-59	1,763,042	34.3	45-59	406	34.2	267	34.2
Total	5,144,560	100.0	Total	1,187	100.0	780	100.0
gender			*gender*				
Male	2,620,149	50.9	Male	586	49.4	372	47.7
Female	2,524,411	49.1	Female	601	50.6	408	52.3
Total	5,144,560	100.0	Total	1,187	100.0	780	100.0

Distributions are compared response versus sample with $\chi 2$, $p<0.05$ test,

Source: Population Statistics Sweden

Table 5.1.9: Population according to sample and response group, by age group and gender, Swedish telephone

	municipal registries 1-1-1997			*sample*		*response*	
age	N	%	*age*	n	%	n	%
16-24	952.669	18,5	16-24	-	-	130	16,4
25-34	1.256.329	24,4	25-34	-	-	204	25,8
35-44	1.172.520	22,8	35-44	-	-	201	25,4
45-59	1.763.042	34,3	45-59	-	-	257	32,4
Total	5.144.560	100,0	Total			792	100,0
gender			*gender*				
Male	2.620.149	50,9	Male	-	-	391	49,4
Female	2.524.411	49,1	Female	-	-	401	50,6
Total	5.144.560	100,0	Total			792	100,0

Distributions are compared response versus population with $\chi 2$, $p<0.05$ test

Source: Population Statistics Sweden

5.3 Analyses of mode-effects

Answers to questions are modulated by the interviewer medium. Different interview medium/methodology will influence survey results. Effects of interview medium in the widest sense (can refer to any technique of interview, technique of registering the answer, interviewer characteristics etc) are called mode-effects. We will concentrate on three modes: interviewing is done by an interviewer in person (face to face mode), by an interviewer on the telephone (telephone mode), and by no interviewer but by the respondent him/herself who answers the questions in a mail delivered questionnaire (mail mode).

In each of the participating countries traditionally the face to face mode is applied to drug use prevalence surveys. However, in Sweden the face to face survey is applied by an interviewer with a paper and pencil instrument in a context of extensive alcohol use questions. In Greece the face to face mode is paper and pencil as well, with a questionnaire strongly dominated by mental health questions. In the Netherlands the face to face is not paper and pencil but computer assisted personal interviewing (CAPI) and the survey is a dedicated drug use instrument with some questions on life style inserted.

In this experimental project each of the three countries has added two modes to the traditional ones: one telephone and one mail survey mode. Questions in the extra modes were taken from the face to face questionnaire, and some typical context questions were added to the list of experimental mode questions.

Questions are asked about alcohol, tobacco, cocaine, amphetamine and ecstasy. Questions are about lifetime prevalence, last year prevalence and last 30 days prevalence.

On the basis of these questions new variables were made by SN with the following values, per drug: never use, ever use but not last year, last year use but not last 30 days, and last 30 day use. These variables are slightly more robust than single prevalence questions, because most of these values are based on more than one score. These variables turned out to be the only usable ones for the mode effect study. Some demographic and geographic variables were used in multivariate analysis and their effects on variance could be compared to the effect of mode.

5.4 Methodology and results of the analysis

In order to do the analysis of mode effects the samples of the three surveys needed to be made comparable. In the Netherlands and Greece the face to face surveys used oversampling for some age categories .In the Netherlands oversampling occurred as well for the highest density areas, because the four largest cities were represented with their own independent samples. These forms of oversampling had to be taken out before meaningful comparison could be done. Statistics Netherlands used a particular method to compensate for these forms of oversampling.

From the Greek face to face sample a subsample was randomly drawn from the lower age categories in order to make the age distribution comparable to the Greek telephone and mail surveys. To check if there would be differences in the comparisons between the modes these random sub samples were drawn several times, and for each sample the outcomes of the Kruskal Wallis analysis were compared (the so called Monte Carlo simulation). No differences were found. The same simulation and controls were done for the Dutch face to face sample, where a subsample was drawn using unequal drawing probabilities to compensate for the over sampling of youth, and of large cities. Also here the Monte Carlo simulations did not reveal differences between them.

An alternative would have been to use weighted data for the mode comparisons, but it was decided not to do so. Computation of levels of significance is made very difficult or impossible if weighted data are used.

5.4.1 The Kruskal Wallis test

First we applied the Kruskal Wallis test on all drug use prevalence variables. This non-parametric technique tests the null hypothesis that more than two independent samples come from the same population or from identical populations with the same median. Equal scores on variables in the different samples are assigned a rank order, after which we check if the medians of these scores differ significantly. This way our three samples are compared in one test. We try to find out if there are significant differences between the three samples per country. (Significant differences are $p < 0.05$) In this test we consider all measurement errors (mode-effects included) as one black box. The only thing we can establish by use of the Kruskal Wallis test is if all measurement errors together create differences between the samples on our target variables.

In table 5.2 we summarise the results of the Kruskal Wallis test on the newly constructed drug use prevalence variables. In Greece we find significant differences between the samples for all variables for all drugs, except for amphetamine use. In Sweden we find these differences only for alcohol and cocaine use. In the Netherlands we find differences for cocaine and ecstasy use.

Table 5.2: Kruskal Wallis test on scores of drug use prevalence questions in three samples per country, unweighted data (significant differences with $p<0.05$ are bold).

	The Netherlands	Greece	Sweden
	P-value	P-value	P-value
alcohol	0.785	**0.000**	**0.000**
amphetamines	0.272	0.149	0.073
cannabis	0.564	**0.000**	0.331
cocaine	**0.005**	**0.007**	**0.002**
ecstasy	**0.018**	**0.001**	0.225
tobacco	0.088	**0.000**	n.a.

The results of the scores of alcohol and cocaine use in the Dutch surveys are presented in table 5.2.1 (presented at the end of this chapter). Differences in scores for all other drugs do not even approach significance. For cocaine we measure the highest prevalence of use in the face tot face survey, and the lowest prevalence of use in the telephone survey. For ecstasy use lowest scores are obtained in the telephone survey as well but the highest are found in the mail survey.

In table 5.2.2 we show the estimates of drug use for those drugs that scored significantly different between the Greek modes. We consistently see that the mail survey shows the highest scores and the telephone survey the lowest. Problem with the Greek data is their quality. This is particularly so for the mail survey. For example, the question about ever use of alcohol is 30 times not answered against 11 times answered with “never’’. With cannabis "ever" we have 36 missing values (versus 81 ever), cocaine "ever" 38 missing (versus 12 ever), ecstasy "ever" 37 missing (versus 7 ever). Follow-up questions for these drugs are questionable as well. The reason is that sometimes a missing answer on 'ever' is followed up by a positive answer on the last month or last year question. The only solution is to exclude such records from the analysis. This leads to a very low number of cases. Of the 530 mail questionnaires in Greece we often can not use more than 490 or even less for the analysis.

So, our observation that the mail survey often delivers the highest drug use estimates might be completely reversed if the missing answers on the 'ever' questions have to be interpreted as 'no' answers. In that case there might be little difference in Greece between the modes. There is no way to know this.

An additional problem of the Greek data set is the unequal distribution between modes of the background variables 'education', 'region' and 'age'.

We have tried to correct for these differences in the ANOVA analyses (paragraph 5.4.2).

In the Swedish data set we found significant differences between the modes for alcohol use prevalence and cocaine use prevalence (see table 5.2.3). By telephone more respondents report recent alcohol use than in other modes. Fewer people report no use during last year. In the face to face mode clearly the lowest alcohol prevalence is found. With cocaine more respondents report use in the mail survey than in other surveys. Significant as these differences may be, they are small. Nine in ten respondents report alcohol and almost no one reports cocaine use.

5.4.2 The ANOVA-tests

The Kruskal Wallis test we applied in the previous paragraph does not take into account other factors that might be related to drug use prevalence. If these other factors correlate with mode, or in other words, have different distributions per mode, we do not know if the mode effects we found via the Kruskal Wallis are related to mode only or to the other factors (for instance age, gender), or to a combination of them.

If we control for those other factors, we should combine all these factors and mode into one test. We have chosen ANOVA. It is true that this test requires interval measurement of the variables, but often the test is used for ordinal measured variables as well. ANOVA is able to digest large differences in cell size, something that is very important for our goal here.

By applying ANOVA we compare variance of the target variables within factor categories with variance of the target variables between the categories. We do this simultaneously for all factors (age, gender, urbanity, level of education, household composition, mode) This enables us to see what part of total variance can be attributed to all factors together (expressed as R^2), and per specific factor (expressed as beta). A larger beta value of a factor means more explanation of variance by that factor.

Of course, we often do not know which factors correlate with the target variables, and even more often we do not have factor data available in the data set. Another problem is that sometimes we may have factor data, but we do not know if they are measured correctly, without mode effect.

For each of the three countries some background variables are observed, as mentioned above. The factor household composition could not be used for the Dutch and Greek data sets. In Greece and the Netherlands we harvested too many 'missing values' on this variable.

In Table 5.3 we show the results of the ANOVA analyses.

Table 5.3: Significant mode effects with controls for other factors per country. ANOVA-tests, unweighted data, (significant differences with $p<0.05$ are bold).

	The Netherlands	Greece	Sweden
	P-value	P-value	P-value
alcohol	0.832	**0.000**	**0.000**
amphetamines	0.173	0.071	0.06
cannabis	0.558	**0.000**	0.166
cocaine	**0.035**	**0.013**	**0.028**
ecstasy	0.154	**0.008**	0.131
tobacco	**0.034**	**0.010**	_

For the Swedish data there is no change in the outcomes of the ANOVA tests and the Kruskal Wallis tests (table 5.3) Again, only alcohol use and cocaine use show significant mode effects. Multivariate analysis neither changes the results for the Greek data: all drug use except amphetamine differs per mode. In the Netherlands the difference for ecstasy use disappears, but mode in tobacco use appears now as a significant factor.

In table 5.3.1 (presented at the end of this chapter) we show that in the Netherlands the highest cocaine use is reported in face to face, the lowest is reported by telephone. This also was found with the Kruskal Wallis. The beta values indicate that mode, in comparison to the other independent variables contributes least to the already small explained variance (about 2% of all variance). With tobacco use we also find significant differences between mode (highest in telephone, lowest in mail) but also here the mode effect is smaller than the effect of the other factors. Note that level of education has no effect with cocaine use, but the highest effect on variance in tobacco use.

Table 5.3.2 shows comparable outcomes for Greece. Note that for each drug no more than one percent of total variance is explained by all of the factors together!

In table 5.3.3 we show the outcomes for Sweden. In Sweden we can use household composition as a factor. Nowhere this factor shows a significant contribution to the explanation of the variance. Mode explains in alcohol use part of the total explained variance (that still is not more than 2.2% for alcohol and 1.4% for cocaine, even lower).

5.5 Other analysis: Age of initiation, amount and frequency of use, and a combined 'stimulants' variable

Age of initiation

In the Netherlands and Greece we asked age of initiation for a number of drugs. See for results of how much variance all factors explain tables 5.4.1 and 5.4.2 (at the end of this chapter). We found some significant differences between modes for age of initiation in both countries with the results of the ANOVA analysis. All factors together explain slightly more of the total variance between modes in age of initiation (around 3% of tobacco in the Netherlands, almost 4% for alcohol and 25% of variance in cannabis age of initiation.

In Greece total variance explained by all factors in age of initiation is almost 18%.

Amount and frequency of use

We can only use the data for the variables 'frequency of use' and 'amount of use' (for tobacco only) in the Greek data set. The Dutch data are not usable because of a routing error for alcohol. For the other drugs the number of answers on the last month use question was so small that comparison became impossible. This means we only present the Greek data in table 5.4.3. Looking at drugs for which the number of respondents was large enough, we always found a mode-effect on the amount (tobacco) and frequency of use (alcohol and cannabis). Smoking cigarettes showed the highest level in the face to face survey, and the lowest level in the mail survey. Frequency of alcohol use during last week was highest in the mail survey, and lowest in the telephone survey. With frequency of cannabis ever use the direction of the mode-effect was different again (telephone highest and face to face lowest).

Stimulants
Because of the small number of cases on most illicit drug variables (amphetamines, cocaine, ecstasy), we have also decided to create a combined 'stimulants' drug variable. A positive score on one or several of the drugs cocaine, ecstasy, and amphetamines, implies the use of a stimulant.

Priory, a reliability test was conducted to see if there was enough correlation between these three illicit drugs to be able to add them up. This was the case.

The results of this analysis are presented in tables 5.5 and 5.6. In the Netherlands we find a significant difference between modes on the combined variable with the results of the Kruskal-Wallis analysis. Since this was already the case for two of the three variables this is not a new finding.

The result of the ANOVA analysis on stimulants indicated no significant difference between modes, whereas it was significantly different for only the variable cocaine.

In Sweden, the Kruskal-Wallis test on stimulants shows a significant difference between modes, as was already the case with cocaine. Also the ANOVA test shows significant differences between modes which, looking at each individual stimulant, existed for heroine only.

In Greece significant differences between modes on cocaine and ecstasy disappeared in the Kruskal-Wallis analysis of the bundled stimulant variable. The ANOVA test on stimulants resulted in a significant difference between modes, which priory only existed for ecstasy.

5.6 The results in the light of the outcomes of other mode-effect studies

Here, we have concluded that significant differences between modes on our target variables do not point into a uniform direction. Still, a closer inspection of the tables suggests that the telephone surveys many times have the lowest prevalence figures, especially for illicit drugs: for instance with cocaine- and ecstasy prevalence of use in the Dutch surveys, and with cannabis-, cocaine- and ecstasy prevalence of use in the Greek surveys. In addition, the postal surveys often yielded the highest illicit drugs estimates (for cocaine in Sweden, for cannabis, cocaine and ecstacy in Greece on the ANOVA tests)

This finding is in line with the outcomes of a 1992 publication on, amongst others, mode-effects in drug-use prevalence studies by the National Institute on Drug Abuse (chapter 7 and 11). Turner, Lessler and Devore (chapter 7, p. 216) conclude that six self-administered versus interviewer-administered measurements of the prevalence of marijuana and cocaine use yield lowest estimates for the latter. "The results indicate that having interviewers administer the questionnaire reduces the reporting of drug use". This finding, however, does not explain why telephone interviews would yield lower scores on drug use questions than face-to-face interviews.

Gfoerer and Hughes in this same publication (chapter 10, p. 278) list a number of studies that explored the effect of mode of interview on the data collected on sensitive issues such as the topic of our study. One conclusion (Aquilo and LoScuito, 1989) was that

"regardles of collection of mode (telephone vs. face-to-face) estimates of drug use amongst whites were similar, for blacks however, estimates of marijuana and alcohol use based on telephone-collected data were significantly lower than estimates based on data collected during face-to-face interviews".

Generally, the conclusion was drawn that the limited amount of research addressing data on drug use suggests that personal-visit interviewing will lead to higher estimates of persons involved in illicit drug use than will telephone interviewing.

In the Netherlands, de Leeuw conducted a meta-analysis of fourteen studies in which social desirability was tested (de Leeuw, 1992). Nine of these studies published prior to 1980 show a small significant difference indicating less social desirability in face-to-face studies than in telephone surveys. The five studies published after 1980 show no significant difference in social desirability. The differences became more apparent when outcomes of telephone and face-to-face studies on the one hand were compared to outcomes on postal studies on the other hand. Postal surveys delivered the least number of 'desirable' answers.

A great awareness is necessary when comparing outcomes of studies conducted in different countries. Because of differing cultural attitudes towards the phenomenon, the questions of how 'sensitive' the topic really is, and what 'social desirability' actually implies become important. Also cross-cultural differences in familiarity with and acceptance of a certain interview mode exist. This may influence results no matter what the topic of a questionnaire will be.

Another point of attention is the assumption that 'social desirability' automatically produces lower estimates than they should. This may well be different, and should therefore be studied for different population groups.

5.7 Conclusion and discussion

What has been the usefulness and result of all this work?

In some cases we find mode effects. Sometimes higher scores are given through postal interviews, sometimes through one of the other modes. Sometimes these differences are statistically significant, but because of the non-systematic directions of these differences, these results do not lead to clear conclusions about mode effects. In Greece we find systematic mode effects (highest scores in mail), but the quality of the mail data is such, that conclusions are impossible.

Striking is the size of the mode effects. In our ANOVA-tests we often can not explain more than a few percent of the total variance. The contribution of mode in this small explained variance often is the smallest or one of the smallest of all factors tested. This shows that mode can not be an important source of bias in explaining scores on drug use variables. Thus, if our focus is directed on research between the prevalence of drug use and its relation to other variables, we have no reason to be preoccupied with mode.

Looking at the cross tables we made for the Kruskal Wallis tests (tables 5.2.1, 5.2.2, 5.2.3), we see in the last column the result we would have if we would add up all results, independent of mode, into one estimate. We see that our results per mode do not differ

much from this average in spite of the fact that the differences are significant in the statistical sense. This means that also for estimates of drug use prevalence there is no need to be concerned about mode.

This is comforting, because we have very little possibilities to correct for mode effects. We do not know which mode yields the best estimate. The results we presented here do not suggest a systematic preference. Reason is that within a country not one mode systematically shows the same rank (highest, lowest) when looking at drug use.

One of the most important problems is that we have no good method for external validation. Without such a method we continue to guess which mode would result into the most reliable estimate. There is no reason why we would consider the highest estimate to be the best. Fortunately, the small size of the differences between the modes does not force us to create argumentation about 'the best' method. Our most important conclusion is that it does not matter much which mode is applied (they result in small differences). The choice of (mixed) mode should first of all be based on financial and logistical arguments and on the objective to reach an optimal response-rate.

5.8 Some remarks about methods in the future.

In many countries the increasing level of non-response is a growing reason for concern. Often non-response creates systematic bias because it concerns specific subgroups of the population. Probably non-response is a much more important source of error than mode. A way to correct for this error is to apply different modes at the same time. Each mode is suitable to decrease particular kinds of non-response. For instance, by offering telephone surveys, one might increase response among people that are afraid to open the door to a face to face interviewer. By offering email or Internet versions, response is independent of a visit, or telephone call, and one might reach completely different groups again. More modes imply more mode-effects. This risk should be balanced against higher response rates among different groups. There is reason to believe that mode-effects are so small that increasing number of modes via mixed-method approaches can diminish non-response, which will result in better drug use estimates.

Table 5.2.1: Drug use (cocaine and ecstasy) by mode, the Netherlands (unweighted data)

cocaine

	face to face	postal	telephone	total
	%	%	%	%
never	96.7	97.1	98.9	97.4
ever	2.6	2.3	1.1	2.1
last year	0.5	0.3	_	0.3
last month	0.2	0.2	_	0.1
Total N (=100%)	1,282	1,246	833	3,361

ecstacy

never	97.7	97.0	99.0	97.8
ever	1.5	1.9	0.7	1.5
last year	0.5	0.6	0.2	0.5
last month	0.2	0.3	_	0.2
Total N (=100%)	1,282	1,245	832	3,359

Table 5.2.2 : Drug use by mode, Greece (unweighted data)

alcohol

	face to face	postal	telephone	total
	%	%	%	%
never	3.5	2.4	6.3	4.0
ever	6.9	3.1	3.7	5.6
last year	11.3	9.8	16.8	12.5
last month	17.7	17.9	20.2	18.3
last week	60.6	66.7	53.0	59.6
Total N (=100%)	2,159	457	821	3,437

cannabis

never	85.0	85.3	93.3	87.1
ever	10.4	8.3	4.1	8.6
last year	1.8	3.7	1.9	2.1
last month	2.7	2.7	0.7	2.2
Total N (=100%)	2,157	484	852	3,493

cocaine

never	98.6	97.8	99.6	98.7
ever	0.8	0.6	0.1	0.6
last year	0.3	0.8	0.2	0.3
last month	0.3	0.8	_	0.3
Total N (=100%)	2,148	491	854	3,493

ecstasy

never	99.8	98.6	99.8	99.6
ever	0.1	0.8	0.2	0.3
last year	_	0.2	_	0.0
last month	0.1	0.4	_	0.1
Total N (=100%)	2,148	493	854	3,495

tobacco

never	0.1	0.2	0.4	0.2
ever	27.1	22.5	31.9	27.6
last year	21.7	25.5	23.3	22.7
last month	51.0	51.8	44.4	49.5
Total N (=100%)	2,161	506	853	3,520

Table 5.2.3 Drug use (alcohol, cocaine) by mode, Sweden (unweighted data)

alcohol

	face to	postal	telephone	total
	%	%	%	%
never or not last year	9.8	6.9	5.5	7.9
last year	1.5	2.2	0.3	1.3
last month	88.7	90.9	94.3	90.9
Total N (=100%)	1,248	591	785	2,624

cocaine

never	99.4	97.7	99.1	98.8
ever	0.5	2.0	0.6	0.9
last year	0.1	0.3	0.1	0.2
last month	_	_	0.1	0.0
Total N (=100%)	1,249	610	782	2,641

Table 5.3.1: Significant differences (cocaine and tobacco) between modes, ANOVA-test, The Netherlands (unweighted data)

		cocaine		*tobacco*	
Highest use reported in:		face to face		telephone	
Lowest use reported in:		telephone		postal	
		beta	sig	beta	sig
Factors:	gender	0.053	*	0.079	*
	age	0.077	*	0.060	
	urbanity	0.074	*	0.071	*
	education	0.031		0.102	*
	mode	**0.045**	*	**0.045**	*
		R-square=0.019		R-square=0.023	

Table 5.3.3: Significant differences (alcohol and cocaine) between modes, ANOVA-test, Sweden (unweighted data)

		alcohol		*cocaine*	
Highest use reported in:		telephone		postal	
Lowest use reported in:		postal		face to	
		beta	sig	beta	sig
Factors:	gender	0.080	*	0.032	
	age	0.043		0.042	*
	urbanity	0.049	*	0.077	*
	education	0.077	*	0.019	
	household size	0.008		0.032	
	mode	**0.079**	*	0.052	*
		R-square=0.022		R-square=0.014	

Table 5.4.1: Significant differences between modes ANOVA age of first use, the Netherlands (unweighted data)

	level of significance	youngest age reported in:	oldest age reported in:
tobacco	**0.000**	postal	face to face
alcohol	**0.001**	postal	face to face
amphetamines	0.871		
cannabis	**0.000**	postal	telephone
cocaine	0.820		
ecstasy	0.982		

		tobacco		**alcohol**		**cannabis**	
		beta	sig	beta	sig	beta	sig
factors	gender	0.014		0.098	*	0.026	
	age	0.161	*	0.157	*	0.453	*
	urbanity	0.036		0.020		0.049	
	education	0.045		0.037		0.061	
	mode	0.089	*	0.080	*	0.149	*
		R square=0,035		R square=0,039		R square=0,246	

Table 5.4.2: Significant differences between modes ANOVA age of first use, Greece (unweighted data)

	level of significance	youngest age reported in:	oldest age reported in:
tobacco	**0.008**	postal	telephone
alcohol	0.081		
amphetamines	0.458		
cannabis	0.544		
cocaine	0.725		
ecstasy	0.550		

		tobacco	
		beta	sig
factors	gender	0.267	*
	age	0.333	*
	urbanity	0.047	
	education	0.034	
	mode	0.054	*
		R square=0,176	

Table 5.4.3: Amount (tobacco) and frequency (alcohol, cannabis) of use by mode for significant differences ($p<0.05$), Greece (unweighted data)

cigarettes last month

	face to %	postal %	telephone %	total %
no use	2.9	14.4	8.2	6.0
one	4.9	9.5	5.8	5.9
one to five	12.3	12.5	12.7	12.5
half package	14.7	14.1	14.7	14.6
one package	32.7	22.3	32.9	31.0
1 1/2 package	14.0	16.5	12.0	14.0
two packages	12.3	6.4	7.9	10.4
> 2 packages	5.8	1.8	5.0	4.9
don't know	0.3	2.4	0.7	0.9
Total N (=100%)	1,160	327	416	1,903

alcohol last month

no use	22.2	12.5	26.1	21.7
one or two times	19.0	22.3	16.3	18.8
3-9 times	24.4	29.6	28.6	26.2
10-19 times	16.8	16.4	15.7	16.5
20-39 times	14.0	5.8	10.5	12
40-99 times	2.8	0.9	1.5	2.2
100 times or more	0.6	0.6	0.5	0.6
don't know/no answer	0.2	11.9	0.7	2.1
Total N (=100%)	2,221	530	854	3,605

Table 5.4.3 continuation

alcohol last week

	face to	postal	telephone	total
	%	%	%	%
3-9 times	23.0	16.8	18.7	21.1
10-19 times	3.9	1.5	1.4	2.9
20-39 times	0.1	0.9	0.8	1.0
40-99 times	0.4	0.2	0.4	0.4
100 times or more	0.0	0.2	0.0	0.1
don't know/no answer	0.2	10.9	0.5	1.8
Total N (=100%)	2,221	530	854	3,605

cannabis ever

1	43.2	21.0	22.0	36.6
2	21.4	23.5	15.3	21
3	10.9	16.0	11.9	11.9
4	5.6	11.1	3.4	6.3
5	4.7	3.7	6.8	4.8
6	13.7	8.6		11
7		1.2		0.2
8		1.2	1.7	0.4
9	0.6	2.5		0.9
10			10.2	1.3
11			1.7	0.2
13			1.7	0.2
20		1.2	1.7	0.4
30			3.4	0.4
50			3.4	0.4
60			1.7	0.2
200			1.7	0.2
300			1.7	0.2
500			1.7	0.2
600			1.7	0.2
don't know/no answer		9.9	8.5	2.8
Total N (=100%)	322	81	59	462

Table 5.5: Kruskal Wallis test on scores of combined 'stimulants' variable in three samples per country, unweighted data (significant differences with $p < 0.05$ are bold)

	the Netherlands	Greece	Sweden
amphetamines	0.272	0.149	0.073
cocaine	**0.005**	**0.007**	**0.002**
ecstacy	**0.018**	**0.001**	0.225
stimulants	**0.022**	**0.031**	**0.004**

Table 5.6: Significant mode effects with controls for other factors per country, ANOVA tests, unweighted data (significant differences $p < 0.05$ are bold)

	the Netherlands	Greece	Sweden
amphetamines	0.173	0.071	0.06
cocaine	**0.035**	**0.013**	**0.028**
ecstacy	0.154	**0.008**	0.131
stimulants	0.717	**0.002**	**0.006**
highest score*	no significance	postal	postal
lowest score*	no significance	telephone / face-to-face	face-to-face

* Highest and lowest scores are corrected for all the other factors induded in the model

6 International comparisons of methodological studies

6.1 Introduction

In the data analysis phase of this project many problems were encountered of a pure technical nature. Although in the planning stages of the project the items that should be in the questionnaires were specified in detail, no instructions were given on how to process the data after the interview. This lack of instructions resulted in several different ways of recording the data in databases and delivering them to CEDRO for inclusion in a final database.

First, there was the problem of missing data, as a result of which the analysis could not be conducted as planned beforehand. Besides the data recorded using the questionnaires, we also expected data to be recorded about the survey itself, like non-response data and sampling data. Secondly, the way the local databases were designed and delivered created some challenges for the person responsible for joining the files.

The attempts to correct for mistakes and incompletions have caused a time delay in this study and adjustments to the original goals of the analysis. In the future, data mistakes, omissions and dissimilarities in processing the data, should therefore be prevented.

For this reason we have decided to devote a special chapter on a research guide for projects alike in the future. The agenda is structured following the actual structure of a research project. Different phases can be distinguished, and we will describe them in their chronological order. This will finally be crystallised as a checklist, to be referred to for future projects (see appendix 5). The use of this guide is suggested, to create as much as possible coherence between the different elements of an international study. As long as this coherency can not be obtained, mode comparisons should in our opinion be made within the national context only.

In order to prevent incompatibilities in data storage and processing, some measures must be taken in the early stages of the project. Therefore it is important that the persons responsible for the technical work—data entry and data processing—are consulted and if possible attend meetings with the supervising team. In the final section of this chapter we will also discuss these important aspects of organisation and communication in more detail.

6.2 A technical agenda and checklist

The following research phases will be distinguished:

- The selection of the participants
- The sampling frame and procedure
- The questionnaire
- Data collection
- Data registration / delivery

Selection of participants

- In which year do they conduct their population survey? It is no use comparing data that are gathered with a long time span in between, since outcomes may be related to augmenting or decreasing use between different years.

- They have to show a willingness to co-operate and to be dedicated to finalising the project as a joint effort. Can they adjust their research plans to the demands of the project? Can they consent with the goals of the project as the only reason for conducting the survey, in other words, can they work without an agenda of using the data for other than methodological purposes?

- Is it possible to use identical or strongly similar sampling methods to avoid sampling effects?

- Are they willing to use the European model questionnaire-questions as designed in the project 'Improving the comparability of general population surveys on drug use in the European Union', or a questionnaire that is very similar in wording? If not, can they overcome the conceptual and semantic differences in their questionnaires in a different way?

- With the finances available, are they able to obtain a large enough net sample that is required for the calculation of reliable prevalence estimates for most illicit drugs. Otherwise only the questions should be posed for which the N will surely be large enough to draw reliable conclusions.

Sampling frame and procedures

- Try to use as much as possible similar sampling frames and sampling procedures for the surveys that are conducted within each country and between countries. If similar gross samples are used for more than one survey, avoid approaching the same people for a second time.

- If possible, register respondent data of the gross sample population, such as year of birth, gender and marital status, place of residence in a SPSS data file. Only with this information can non-response biases be analysed. It is also possible to check if an interviewed person is indeed part of the gross sample by comparing the age and gender of a person, as registered in the gross sample data (which is derived from an external source such as the population registry), with the response-age and gender.

- Observe the sampling bias. For instance, which section of the population is not covered by the sampling frame? Deliver the most recent local sources available in which this is mentioned, and preferably also quantified. If a sample is drawn from a population registry, relevant questions are for instance:
  - What are the lawful regulations on registry? What conditions need to be satisfied for a person to become registered? And which people will not be included in the sample as a result thereof? What kind of bias can thus be expected?
  - How often is the registry updated?

  In case the sample frame is a telephone book, relevant questions are for instance:
  - What is the telephone coverage and what are the main background

characteristics of the people who do not own a telephone?
- How influential is the substitution of regular by mobile phones and for which population groups is this most relevant?
- What percentage of the population has a secret telephone number and what is done to reach these people as well?

The questionnaire

The topic of the survey questionnaire has been discussed and reported about in detail in the project 'Improving the comparability of general population surveys on drug use in the European Union'. Here, it is not our intention to discuss all different questionnaire components again. However, we would like to touch upon those elements of the questionnaire that were a topic of discussion in this project and those in which mistakes were still made.

- Use similar introductions for all questionnaires, mentioning the name of the organisation conducting the study, the importance of the study, the way the respondent has been selected and guaranteeing anonymity and confidentiality.

- If one of the questionnaires on drug use is embedded in a larger survey questionnaire, recreate this context for the other surveys. An even better solution would be to start the larger survey with a section on drug use, so the context does not have any influence at all.

- Do the questions refer to the proper periods like 'ever', 'last twelve months' and 'last week'?

- Use the same question order and question phrasing for all questionnaires.
  Be cautious for the addition of questions that might cause the respondent to answer differently to the main questions. Be cautious for questions that might have a different meaning in the participating countries. Last of all; be cautious for translation errors.

- Use similar answering categories for each survey questionnaire. Take into account that answering categories need to be used for international comparisons. Is this possible? Discuss beforehand, amongst research partners on which criteria prior categorisation of answers will be based. To optimise the possibility for international comparisons it would even be better not to categorise the answers altogether. The reason thereof is that the answers can be tuned to each other afterward.

- Use similar routing patterns for each survey.

- Create two separate answering categories for the answers 'no answer', 'don't know' and (optionally) 'do not want to answer'. In the case of a 'don't know' answer, the interviewer should record this on his paper or under a special code in the computer. In the case of a postal or CASI interview, item non-response can easily be mistaken for 'don't know', or 'do not want to give an answer' so it is better to include these possibilities.

- Make sure to have metric equivalence in all questionnaires (size of glasses, gram).

Data collection

- Formal checks should be performed by the overall project co-ordinator to keep track of the progress of each participant. Especially at the start of the fieldwork a check is necessary for correction of mistakes.

- Do all teams instruct the interviewers in the same way and are the interviewers rewarded in the same way?

- Conduct pilot interviews before the actual fieldwork is started.

- Collect information about the effect of using incentives. On the response rate, but also on the distribution of the response group.

- In the first period after the start of the fieldwork, completed interviews must be screened randomly by the project partners in each locale to discover answer inconsistencies.

- So far, not much attention is paid to the registration of fieldwork variables. Since our research goal does not include the analysis of interviewer effects, this aspect has never been emphasised in this research. However, the registration of fieldwork variables is useful for different reasons. The registration of the number of times an informant needed to be called (in the case of telephone surveys), to be visited (in the case of the face to face survey), and to be sent a reminder (for the postal survey), is indicative of the effectiveness of a mode. It can give answers to questions such as: "Is it difficult to reach a sample by means of a random digit dialling method? Is it useful to send out reminders in a postal survey?" In addition, the day and time of registration provides insights that are helpful for the use of a method. For instance, at what time of the day can different groups of people best be approached for a face to face survey? What part of the day is best to conduct telephone surveys, and which people are easier to reach at different hours. But also, does the response rate of a survey depend on the period of the year a survey is conducted, and how does this differ between different modes? Even though not all of these questions will be relevant, we advise to register this information in all methodological studies, if only to keep open the possibility for follow up analyses without having to start an entirely new investigation. The occurrence of interviewer effects (for instance, do female interviewers obtain a higher response, or higher prevalence rates if other variables are controlled for?) is one of the possibilities. An interviewer number therefore needs to be registered, in addition to the gender and age of the interviewer and a variable indicating the interview mode. Other important fieldwork variables, which always need to be registered, are the date and the time of the interview.

- Collect information on the reason for non-response, using us much overlap as possible between the answering categories for each of the three surveys. This information has to be included as a separate variable in the gross sample data.

Data registry and delivery

After the interview process the data that were collected should be processed and made available in a format that is compatible with the format produced by the other countries. This means that all teams should take into account the following:

- All data should be delivered in SPSS data format: response variables, gross sample data (including the reason of non-response) and fieldwork variables and refer to the same population age-range. The data format has to include a precise codebook indicating positions, variables and values. Only in case an SPSS file can not be delivered, a DBASE format is recommended. The latter can be transposed to Excel, SPSS or Access.

- Always use unique respondent codes, and use this code for all data registration about a respondent. The respondent codes need to be assigned already when the sample is drawn. This code is meant for administrative reasons and to structure the data file. In order to be able to work with data files it is necessary that a record can be separated from other records. In this way it is possible to link data files (for instance the response data, with the gross sample data and with fieldwork variables). If records can not be identified as separate entities, and because other variables are never unique for a respondent, the computer might mix up the data. The assumption that matching can be performed safely because respondents are always ordered similarly in each file, should not be made. Only one person needs to sort the cases differently (by mistake) and matching will go wrong. To avoid all risks, the use of unique respondent codes is necessary.

- Multiple response questions should be coded the same way using the same coding scheme and using the same variable set up. Throughout the survey questionnaire, similar codes should be applied for the same answering categories. Alternating codes for no good reason (1 meaning 'yes' in one answer and 'no' in another) creates confusion and additional work.

- Each partner should have received a matrix table with columns specifying the variable names (in English), whether or not this variable is asked, and the label that is given to this variable in the data set. Each partner should fill in and return this matrix to the organisation responsible for joining the files. In addition, a question list with corresponding codes in the data set should be delivered.

- Non-response should be recorded in the same way. In face to face and telephone survey it should be possible to distinguish between ‘don’t know’ 'don't want to answer', and ‘not applicable’ and missing values should imply that the question was skipped by accident.

- Weights should be included in the response database of all surveys and they must be calculated over the same age-range as used in the response file. (In case an age

selection is made from a larger response group, new weights have to be calculated on the basis of this smaller population).

- General population data should be delivered in excel-format. General population estimates should be of the same year in which the samples were drawn and for the variables used for the weight calculations. The age-range of the population data must be similar to the age range of the response population. In the case of a two-stage sample the population estimates should also be stratified for each sample- sub-unit. For instance, if the sample is stratified by density area, the distribution of the population according to certain background characteristics (such as gender and age) should also be delivered for each density area. With this information the gross sample and the response populations can be compared to the general population.

- Apart from the quantitative data each partner should deliver a separate written report including: a description of the methodology (sampling frame, sampling technique and possible sampling biases); a description of the fieldwork procedures; a detailed description of the weights calculations, including the formula. Also exemplars of the questionnaires that are used for the interviews, introductions, and reminder letters have to be sent.

- In the case gross sample data (including the variable 'reason for non-response') could not be registered (for instance if households are the sampling units or when a Random Digit Dialling method is used) response rates should be delivered with an explanation of the way they have been calculated.

Because of different procedures, limitations and priorities in different countries it will be difficult to follow the action plan as described above. Each country or institute has its own history of conducting research and publishing research findings. However, for the sake of methodological studies and especially international mode comparisons, it is of utmost importance that similar procedures are followed within each country and between countries, in each stage of the research. Only when a true attempt is made to follow these procedures, will a mode comparison be meaningful. Sometimes this will imply that new and different arrangements need to be made with fieldwork companies. If this is necessary, as was the case in this project, very clear written arrangements need to be made. Generally, most things are possible, but since it may not be in their tradition of conducting research, these companies need to be explained and reminded of their different research tasks. Direct contact with the fieldwork organisation is therefor most efficient.

6.3 Organisation and communication

In this research, it turned out to be difficult to receive all the information that we needed to get. We believe several reasons can be pointed out for this, which will be briefly discussed here.

This research project has been organised around bilateral meetings between the project co-ordinator and the persons who were responsible for conducting the prevalence studies (or the larger studies in which prevalence questions were imbedded) in each participating country. In addition, expert meetings were organised with everyone

involved. During the first meeting the project report was discussed, the questionnaire context and introduction, the fieldwork procedures and the different analyses sections. After this, each partner left to implement all the agreed arrangements in their respective countries. A second meeting was meant for a discussion of preliminary analysis outcomes and a discussion of the final report content. However, due to a later start of the fieldwork and the problems encountered with the preparation of the data, these outcomes were not yet available, and this meeting was not held.

In retrospect we believe that bilateral meetings are much more effective than the collective meeting and should be emphasised more in the future. The bilateral meetings create the opportunity to talk to people involved with the practical aspects of the study, whereas, during the collective meetings only national project co-ordinators are present for which the project is only one responsibility amongst many others. Not to detract from the importance of proper communication and good arrangements between national project co-ordinators, we believe that it is equally important to create more involvement and co-operation between people responsible for the technical aspects of the project, also in an early phase. Communication should be on a regular basis between these practical co-ordinators. In general, the quality of the work depends, not only on the appointments that are made, but more so on how they are put into effect. Regular communication between researchers, who prepare and supervise the fieldwork, can avoid many problems in a later phase. The responsibility should therefore also be shared between these researchers. In that way, the project becomes less vulnerable and dependent on one person.

Another flaw we discovered in the process of conducting this study, and which can be avoided in the future is on the side of the commissioner of the service, i.e. data collection, processing and delivery. Very often the fieldwork is contracted out to an external institute. This external fieldwork organisation should receive a clear specification, including amongst others what should be done exactly, how it should be done, when it should be done, to what costs, and what the final product should look like.

In case there are no detailed specifications—preferably in the shape of a legally binding contract—mistakes are likely to be made. The contract, apart from the above should also include a clause on the consequences for both the commissioner and the contractor if the agreement is not fulfilled. Obviously, this can only be done if the commissioner has clear knowledge of what is needed.

6.4 International comparison: possibilities for further study

Cross-cultural comparisons of quantitative data are usually hindered for plethora reasons. For instance, different definitions of phenomena, or different geographical measurement scales are used. Different methodological procedures are followed due to technical and logistic limitations or simply varying priorities. For measuring mode-effects all other variance--in semantics, questionnaire context and design, in sampling and fieldwork procedures--have to be minimised to avoid other than mode-effect biases. This study has taught us that it is best to take one step at a time. International comparisons should focus on the possibilities to improve the international comparability of drug use prevalence studies first of all. We believe that from our study many lessons can be formulated that are useful in this respect and which can set the agenda for future international methodological studies.

For instance, the fact that many sampling differences still occur between countries not necessarily implies a hindrance for mode-effect studies. It may be possible that the use of different sampling methods does not lead to significant differences between drug prevalence outcomes. The first suggestion is therefore to conduct a study, comparing the outcomes of several drug use surveys, each one using a different sampling method. Thus, modes, fieldwork procedures, and questionnaires should be identical for each of the surveys. The surveys should be held within one individual country to exclude the possibility of cultural biases. When this study is conducted in several European countries we will at least improve our knowledge of a possible sampling impact per country for each sampling method.

For international comparisons up till now, the assumption is made that sampling does not seriously affect outcomes. A test of this assumption is worthwhile. On the longer run it may also be possible to examine the possibility to achieve a uniform sampling frame and uniform sampling procedures.

The next step could be to conduct a study in which the effect of the questionnaire context is isolated. Drug use questions can be imbedded in different contexts (for instance, between questions on crime, or mental health) and other research elements (sampling method, fieldwork procedure) are constant. We do not expect context to carry great weight in explaining differences between countries, but EMCDDA might find it important to dedicate some research to this matter.

In the same way, experiments can be done with the introduction of a survey, or with the fieldwork procedures that are applied. In all of these examples of possible follow-up research, the experiments can be conducted within the framework of the regular national drug use study. Methodological experiments as the ones mentioned above could be included in the design of future national studies.

The studies described above require an investment in time, money and perseverance, which is not always at hand. Worthwhile therefor, is to conduct a meta-analysis of methodological research first, and to focus on the similar or a comparable topic (for instance other sensitive topics, such as sexual or criminal behavior). An overview of this kind of methodological research per country can gain insights in the lack of knowledge and the (ambiguous) aspects that need further research attention.

In the second chapter of this report, we also mentioned contextual aspects that may be relevant to the outcomes of a drug use survey. Herewith was mentioned not the context of he questionnaire, but factors related to the history, culture, policy and so forth.

Because of different political and social attitudes towards drugs and drug use, because of differences in the age structure of countries, and in the availability of drugs, respondents may answer differently in a drug use questionnaire, independent of other factors such as mode of administration. Other influential factors may be the modernity of, and the distribution of high- and low population density areas over the country. Any international comparative mode-effect study therefore, should make these contextual aspects operational. For most aspects this can only take the shape of a descriptive section. A report on the aforementioned contextual aspects can be prepared for each European country that is taking part in the European drug research network.

In order to asses the relevance of the cultural context it is possible to focus the comparison of the outcomes on a mode-effect drug use study on one specific drug which is looked upon differently in European countries. For instance cannabis we assume is more socially accepted in the Netherlands than it is in Sweden and therefore the issue of 'social desirability' of the answers may be less relevant in the Netherlands as in Sweden. Future studies can be conducted around priory constructed hypothesis concerning the affect of the cultural context.

If we wish to focus on an international comparison of outcomes it may be a good idea to narrow the questionnaire down to only the substance use questions of which we are sure that a high enough number of observations can be achieved. Another possibility is to create a new combined drug variable, as we have done in this study. (The 'stimulants' variable combines the variables ecstasy, cocaine and amphetamines.) However, if new combined variables are created, a reliability test should be performed to make sure that there is enough coherence between each individual composing variable to integrate them into the new one.

Any international comparison of drug use data is hindered by the fact that different drug use patterns and attitudes toward drugs exist within individual countries. We may be speaking of different sub-contexts within the national context. These are for instance related to progressive, individual versus more traditional, family-oriented lifestyles. Apart from the background variables such as urbanity, gender, age and education it is also important to capture more of these lifestyle variables, such as outgoing behaviour and family orientation, in the research design.

To simplify the research design it is also possible to first focus the comparison of data on cities, which are comparable in size, modernity, population structure, and maybe also the sampling frame.

Appendix 1

Questionnaire Swedish Postal and Telephone Survey

Index

Introductions (incl. face to face survey introduction)
Reminder letters postal survey
Questionnaire postal and telephone survey:
Alcohol
Cannabis
Cocaine
Amphetamines
Ecstasy
Evaluation question

INTRODUCTION FACE TO FACE (OMNIBUS) SURVEY

Do you usually win the lottery? The chance of doing so is not especially big. But the chance of being chosen to "think" about our society , products and advertising etc. in TEMO's ASK SWEDEN is actually even smaller.

Together with four hundred and twenty nine other people in Sweden, you have been randomly chosen from the population register to answer questions that are part of our survey ASK SWEDEN.
It is of the utmost importance that we only receive YOUR answers and opinions. You cannot be replaced by any other person.

Many advantages of being chosen!
Your answers mean that you actually influence decisions made by politicians and those in power, who evidently take notice of survey results, that are published in different newspapers.

As a consumer you can influence producers and trade regarding their products and services.
Your answers are naturally treated as strictly confidential. You will not be registered in any type of register.

You will meet with one of our interviewers who will contact you shortly to arrange a time and place (at home, at work or other place) for an interview that take approx.. 1 hour.

You will receive a lottery ticket as a thank you for your participation.

INTRODUCTION TELEPHONE SURVEY

Hello, my name is…I am an interviewer at TEMO. At present we are conducting an opinion- and market survey and we would like to know what the Swedish people think about certain topics. I would like to address some questions to the person in your household who had his/her birthday latest and is 16 years or older. (The reason for doing this is to get a randomly selected sample of persons).

IF YOU HAVE THE RIGHT PERSON, ASK: May I ask you a few questions? It will only take a couple of minutes and you are completely anonymous.

IF THE RIGHT PERSON IS NOT AVAILABLE - ASK IF YOU CAN CALL AGAIN, AGREE ON A TIME.

INTRODUCTION LETTER POSTAL SURVEY

1st Introduction letter:

Peoples attitudes towards alcohol and drugs.

TEMO, one of the leading poll-institutes in the country, has been assigned to conduct a scientific study about the use of, and the attitudes towards alcohol and other drugs. The assignment comes from a number of Swedish alcohol- and drug researchers who co-operate with researchers from other European countries and international comparisons are going to be made.

You have been randomly selected to participate in this survey and we ask you to answer a number of questions. We would like to stress that all answers will be treated strictly confidential, like classified information. The results are transformed so that no single individual is discernible. The purpose of this survey is to get a deeper knowledge about peoples habits, than we have at the present state. Participation is voluntary. At the same time we are concerned that you choose to participate. The more answers, the better the research results and a selected person can not be replaced.

We ask you to put off some time to answer the questions, - preferably already today. Please send your filled in questionnaire in the enclosed envelope. Postage is pre-paid.

If you have some questions regarding this survey, please call XXX XXXXXXXX phone XX-XXX XX XX.

Kind regards,
TEMO

FIRST AND SECOND REMINDER LETTER POSTAL SURVEY

Peoples attitudes towards alcohol and drugs

TEMO, one of the leading poll-institutes in the country, has been assigned to conduct a scientific study about the use of, and the attitudes towards alcohol and other drugs. The assignment comes from a number of Swedish alcohol- and drug researchers who co-operate with researchers from other European countries and international comparisons are going to be made.

We still lack an answer from You.

You have been selected randomly to participate in this survey and we ask you to answer a number of questions. We would like to stress that all answers will be treated strictly confidential, like classified information. The results are transformed so that no single individual is discernible. The purpose of this survey is to get a deeper knowledge about peoples habits, than we have at the present state. Participation is voluntary. At the same time we are concerned that you choose to participate. The more answers, the better the research results and a selected person can not be replaced.

We enclose a new questionnaire in case the one we sent before is missing. We ask you to put off some time to answer the questions, - preferably already today. Please send your filled in questionnaire in the enclosed envelope.

Postage is pre-paid.

If you have some questions regarding this survey, please call XXX XXXXXXXX phone XX-XXX XX XX.

Kind regards,
TEMO

Reminder no 2:

Peoples attitudes towards alcohol and drugs

TEMO, one of the leading poll-institutes in the country, has been assigned to conduct a scientific study about the use of, and the attitudes towards alcohol and other drugs. The assignment comes from a number of Swedish alcohol- and drug researchers who co-operate with researchers from other European countries and international comparisons are going to be made.

We still lack an answer from You.

You have been randomly selected to participate in this survey and we ask you to answer a number of questions. We would like to stress that all answers will be treated strictly confidential, like classified information. The results are transformed so that no single individual is discernible. The purpose of this survey is to get a deeper knowledge about peoples habits, than we have at the present state. Participation is voluntary. At the same time we are concerned that you choose to participate. The more answers, the better the research results and a selected person can not be replaced.

We enclose a new questionnaire in case the one we sent before is missing.
Please send your filled in questionnaire in the enclosed envelope.
Postage is pre-paid.

If we receive your answer at the latest the 4th of May you will be rewarded with a lottery ticket for your swift reply. You have the chance to win...

Kind regards, TEMO

1. Of these drinks, what have you been drinking the last 12 months? (Every alternative is a single variable)

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

a. Strong liqour
b. Strong wine
c. Wine
d. Strong beer/medium beer
e. Beer <3.5%
f. Cider/wine-coolers

2. During the last 12 months, have you been drinking any home-made spirits?

- yes [1]
- no [2]

3. How big a proportion or how many percent of the liquor you drank last year was home-made?

- 0 percent [2]
- 1-10 percent [3]
- 11-20 percent [4]
- 21-30 percent [5]
- 31-40 percent [6]
- 41-50 percent [7]
- 51-60 percent [8]
- 61-70 percent [9]
- 71-80 percent [10]
- 81-90 percent [11]
- 91-100 percent [12]

4. During the last 12 months, have you been drinking any smuggled spirits?

- yes [1]
- no [2]

5. How big a proportion or how many percent of the liquor you drank last year was smuggled?

- 0 percent [2]
- 1-10 percent [3]
- 11-20 percent [4]
- 21-30 percent [5]
- 31-40 percent [6]
- 41-50 percent [7]
- 51-60 percent [8]
- 61-70 percent [9]
- 71-80 percent [10]
- 81-90 percent [11]
- 91-100 percent [12]

6. How often do you drink alcohol?

- 4 times a week or more [1]
- 2-3 times a week [2]
- 2-4 times a month [3]
- 1 time/month or more rarely [4]
- other [5]

7. How many drinks, that is glasses of beer, drinks or shots do you usually consume at a typical "drinking occasion"?

- 10 or more [1]
- 7-9 [2]
- 5-6 [3]
- 3-4 [4]
- 1-2 [5]

8. How often do you drink 6 drinks or more at the same occasion?

- daily or almost daily [1]
- every week [2]

- every month..... [3]
- more rarely than one time a month..... [4]
- never ..... [5]

ANY DRUG

9. Have you ever used drugs of any kind?
- yes ..... [1]
- no..... [2]
- no answer..... [3]

For an international comparison which I recently mentioned, I will now ask you some questions about drugs but in a different way

CANNABIS: MARIJUANANA AND HASH USE

10. Have you ever used hash or marijuana?
- yes..... [1]
- no..... [2]
- no answer..... [9]

11. Have you used hash or marijuana in the last 12 months?
- yes..... [1]
- no..... [2]
- no answer..... [3]

12. Have you used hash or marijuana in the last 30 days?
- yes..... [1]
- no ..... [2]
- no answer..... [3]

13. At what age did you first use hash or marijuana?
- younger than 15 ..... [1]
- between 15 and 19 ..... [2]
- between 20 and 29..... [3]
- 30 years and older ..... [4]

AMPHETAMINES

14. Have you ever used amphetamines?
- yes..... [1]
- no..... [2]
- no answer..... [3]

15. Have you used amphetamines in the last 12 months?
- yes..... [1]
- no..... [2]
- no answer..... [3]

16. Have you used amphetamines in the last 30 days?
- yes..... [1]
- no..... [2]
- no answer..... [9]

17. Have you ever used cocaine?
- yes ..... [1]
- no ..... [2]
- no answer ..... [3]

18. Have you used cocaine in the last 12 months?
- yes ..... [1]
- no ..... [2]
- no answer ..... [3]

19. Have you used cocaine in the last 30 days?
- yes ..... [1]
- no ..... [2]
- no answer ..... [3]

20. Do you perceive a drug addict more as a criminal or as a patient?
- more as a criminal ..... [1]
- more as a patient ..... [2]
- neither ..... [3]
- both ..... [4]
- don't know/no answer ..... [5]

I will now read some statements, of which we want you to shape an opinion. Could you please let us know how much you (dis)agree with the following statement…

21. It should be permitted to take hashish or marijuana
- fully agree ..... [1]
- largely agree ..... [2]
- agree nor disagree ..... [3]
- largely disagree ..... [4]
- fully disagree ..... [5]

22. It should be permitted to take to take heroin
- fully agree ..... [1]
- largely agree ..... [2]
- agree nor disagree ..... [3]
- largely disagree ..... [4]
- fully disagree ..... [5]

People differ in whether or not they disapprove of people doing certain things. Do you disapprove of people doing each of the following?

23. Trying ecstacy once or several times?
- do not disapprove ..... [1]
- disapprove ..... [2]
- strongly disapprove ..... [3]
- don't know ..... [4]

24. Trying heroine (smack,horse) once or twice?
- do not disapprove ..... [1]
- disapprove ..... [2]
- strongly disapprove ..... [3]
- don't know ..... [4]

25. Smoking 10 or more cigarettes a day?
- do not disapprove ..... [1]
- disapprove ..... [2]
- strongly disapprove ..... [3]
- don't know ..... [4]

26. Having one or two drinks several times a week?
- do not disapprove ..... [1]

- disapprove ..... [2]
- strongly disapprove ..... [3]
- don't know ..... [4]

27. Smoking marijuana or hashish occasionally?

- do not disapprove ..... [1]
- disapprove ..... [2]
- strongly disapprove ..... [3]
- don't know ..... [4]

How much do you think people risk harming themselves (physically or in other ways if they …

28. Try ecstacy once or twice

- no risk ..... [1]
- slight risk ..... [2]
- moderate risk ..... [3]
- great risk ..... [4]
- don't know ..... [5]

29. Try heroin (smack, horse) once or twice

- no risk ..... [1]
- slight risk ..... [2]
- moderate risk ..... [3]
- great risk ..... [4]
- don't know ..... [5]

30. Smoke 10 or more cigarettes a day

- no risk ..... [1]
- slight risk ..... [2]
- moderate risk ..... [3]
- great risk ..... [4]
- don't know ..... [5]

31. Have a drink a two several times a week?

- no risk ..... [1]
- slight risk ..... [2]
- moderate risk ..... [3]
- great risk ..... [4]
- don't know ..... [5]

32. Smoke marijuana or hashish occasionally?

- no risk ..... [1]
- slight risk ..... [2]
- moderate risk ..... [3]
- great risk ..... [4]
- don't know ..... [5]

BACKGROUND VARIABLES

First some facts about yourself. The information is needed for the statistical calculations.

33. What is gender of respondent?

- male ..... [1]
- female ..... [2]
- no answer ..... [3]

34. What year are you born?

- year ..... [|]

35. What is your age?

- 15 – 29 years ..... [1]
- 30 – 44 years ..... [2]
- 45 – 59 years ..... [3]
- 60+ ..... [4]

36. Are you married or living together with someone?

- yes, married ..... [1]
- yes, living together ..... [2]
- none of these ..... [3]

37. Do you have gainful employment?

- yes, full time (at least 30 hours / week) . [1]
- yes, part time (at least 15 hours / week) [2]
- yes, occasionally ..... [3]
- no ..... [4]

38. What is your present main occupation?

- self-employed person ..... [1]
- employed by a local, regional or national authority, civil servant (white collar worker) ..... [2]
- employed by a local, regional, or national authority, worker (blue collar worker) ..... [3]
- private employment, white collar worker ..... [4]
- private employment, blue collar worker ..... [5]
- housewife / domestic work ..... [6]
- student ..... [7]
- pensioner, disablement pensioner ..... [8]
- others (unemployed, military conscript) ..... [9]

39. Which of the following schools have you completed or are you completing at the moment?

- elementary school / comprehensive school / secondary modern school or other comparable education ..... [1]
- continuation school / Girl's school ..... [2]
residential college for adult education or other comparable eduction
- upper secondary school or other comparable eduction ..... [3]
- college / university or other comparable eduction. ..... [4]

I also have some questions about your household

40. How many people live in you household, that is to say how many people are there that permanently live and eat together?

- 1 person ..... [1]
- 2 persons ..... [2]
- 3 persons ..... [3]
- 4 persons ..... [4]
- 5 persons ..... [5]
- 6 persons or more ..... [6]

41. How many of the household's members are between the ages of 15 – 75?

- 1 person ..... [1]
- 2 persons ..... [2]
- 3 persons ..... [3]
- 4 persons ..... [4]
- 5 persons ..... [5]

- 6 persons or more ..... [6]

42. How old are the other members of your household?
- 0 – 2 years ..... [1]
- 3 – 6 years ..... [2]
- 7 – 10 years ..... [3]
- 11 – 14 years ..... [4]
- 15 – 75 years ..... [5]
- older than 75 years ..... [6]

43. What is your personal income before taxation?
- below 90,000 SEK/year ..... [1]
- 90,000 – 119,999 SEK/year ..... [2]
- 120,000 – 149,999 SEK/year ..... [3]
- 150,000 – 179,999 SEK/year ..... [4]
- 180,000 – 209,999 SEK/year ..... [5]
- 210,000 – 269,999 SEK/year ..... [6]
- 270,000 – 299,999 SEK/year ..... [7]
- 300,000 – 349,999 SEK/year ..... [8]
- 350,000 – 399,999 SEK/year ..... [9]
- 400,000 SEK/year or more ..... [10]
- don't want to answer ..... [11]

44. What is the total household income before taxation?
- below 90,000 SEK/year ..... [1]
- 90,000 – 119,999 SEK/year ..... [2]
- 120,000 – 149,999 SEK/year ..... [3]
- 150,000 – 179,999 SEK/year ..... [4]
- 180,000 – 209,999 SEK/year ..... [5]
- 210,000 – 269,999 SEK/year ..... [6]
- 270,000 – 299,999 SEK/year ..... [7]
- 300,000 – 349,999 SEK/year ..... [8]
- 350,000 – 399,999 SEK/year ..... [9]
- 400,000 SEK/year or more ..... [10]
- don't want to answer ..... [11]

Appendix 2

Questionnaire Greek Postal and Telephone Survey

Index

Telephone introduction
Introduction postal survey
Questionnaire postal and telephone survey:
Introduction
Health
Tobacco
Alcohol
Amphetamines
Cannabis
Ecstasy
Cocaine
General information

TELEPHONE INTRODUCTION

Good....,

This is ..... from NIPO, the market research institute in Amsterdam.

On behalf of the University of Athens we are currently conducting a survey among the general population of Greece on health and other relevant issues.

May I speak to the person in your household, between 16 and 60 years whose birthday is next, to ask a few questions?

MAIL INTRODUCTION

Hello,

The University of Athens conducts research on the general population of Greece on health and other relevant issues.

The University will make proposals on health policy addressed to policy makers, based on the results of this research.

The individuals who will participate in the research have been selected randomly, so we do know neither who you are nor who else lives in your house. We ask you to give this questionnaire to the person in your household who had the most recent birthday, and who is between 16 and 60 years of age.

The questionnaire is completely anonymous. Neither your name nor your address is asked.

Furthermore, we would like to assure you that all members of the research team are committed to keeping your answers anonymous and confidential.

INTRODUCTION

01	What is your age?	- Age ..... [|] - Don't know ..... [97] - No answer ..... [99]
02	*INT: Respondent's gender is:*	- Male ..... [1] - Female ..... [2]

HEALTH

The following questions concern your health.

03	How satisfied are you from your life lately? *INT: Read out.*	- Very satisfied ..... [1] - Satisfied ..... [2] - Neither satisfied nor dissatisfied ..... [3] - Dissatisfied ..... [4] - Very dissatisfied ..... [5] - Don't know\no answer ..... [9]
04	How satisfied are you from your relations with others? *INT: Read out.*	- Very satisfied ..... [1] - Satisfied ..... [2] - Neither satisfied nor dissatisfied ..... [3] - Dissatisfied ..... [4] - Very dissatisfied ..... [5] - Don't know\no answer ..... [9]
05	How satisfied are you from your family? *INT: Read out* .	- Very satisfied ..... [1] - Satisfied ..... [2] - Neither satisfied nor dissatisfied ..... [3] - Dissatisfied ..... [4] - Very dissatisfied ..... [5] - Don't know\no answer ..... [9]
06	Would you say that your health, during the last 12 months was … *INT: Read out.*	- Very good ..... [1] - Good ..... [2] - Not so good ..... [3] - Bad ..... [4] - Don't know\no answer ..... [9]
07	Was there a period in your life that you suffered from serious anxiety? …	- Yes ..... [1] - No ..... [2] - Don't know\no answer ..... [9]
08	Was there a period in your life that you suffered from serious depression? …	- Yes ..... [1] - No ..... [2] - Don't know\no answer ..... [9]
09	Did you ever have any other serious psychological problem? …	- yes ..... [1] - No ..... [2] - Don't know\no answer ..... [9]

10	During the last 12 months, did you visit a neurologist, psychiatrist or psychologist, for … your psychological problem?	- Yes ..... [1] - No ..... [97] - Don't know\no answer ..... [99]
11	How many times during the last 12 months, did you visit a neurologist, psychiatrist or … psychologist, for your psychological problem?	- Number ..... [|] - No ..... [2] - Don't know\no answer ..... [9]

TOBACCO

The following questions concern smoking.

12	Have you ever smoked cigarettes? *INT.: Read out.*	- Yes ..... [1] - No ..... [2] - No answer ..... [9]
13	How often have you smoked cigarettes? *INT.: Read out.* Would you say…	- 1 to 2 times ..... [1] - Regularly in the past ..... [2] - Sometimes, but not regularly ..... [3] - Regularly now ..... [4] - Don't know/no answer ..... [9]
14	During last 30 days, how many cigarettes did you smoke on average? *INT.: Read out.* Would you say…	- Not at all ..... [1] - Less than 1 cigarette per day ..... [2] - 1 to 5 cigarettes per day ..... [3] - Almost half a pack a day (10 c) ..... [4] - Almost a pack a day (20 c) ..... [5] - Almost a pack and a half a day (30 c) .. [6] - Two packs a day (40 c) ..... [7] - More than two packs a day (40 c<) ..... [8] - Don't know/no answer ..... [9]
15	How old were you when you first started smoking?	- age ..... [|] - Don't know ..... [97] - No answer ..... [99]
16	Do you think you will be smoking in 5 years time? *INT.: Read out.* Would you say…	- Definitely yes ..... [1] - Probably yes ..... [2] - Probably no ..... [3] - Definitely no ..... [4] - Don't know/no answer ..... [9]

ALCOHOL

The following questions concern alcoholic drinks.

17	Have you ever drunk any? alcoholic drink?	- Yes ..... [1] - No ..... [2] - No answer ..... [9]

18	How many times have you drunk beer or wine or ouzo or brandy or any other alcoholic drink in your lifetime? … *INT.: Read out.* Would you say…	- 1 to 2 times ... [1] - 3 to 9 times ... [2] - 10 to 19 times ... [3] - 20 to 39 times ... [4] - 40 to 99 times ... [5] - 100 times or more ... [6] - Never ... [7] - Don't know/no answer ... [9]
19	How many times have you drunk beer or wine or ouzo or brandy or any other alcoholic drink in the last 12 months? … *INT.: Read out.* Would you say…	- 1 to 2 times ... [1] - 3 to 9 times ... [2] - 10 to 19 times ... [3] - 20 to 39 times ... [4] - 40 to 99 times ... [5] - 100 times or more ... [6] - Never ... [7] - Don't know/no answer ... [9]
20	How many times have you drunk beer or wine or ouzo or brandy or any other alcoholic drink in the last 30 days? … *INT.: Read out.* Would you say…	- 1 to 2 times ... [1] - 3 to 9 times ... [2] - 10 to 19 times ... [3] - 20 to 39 times ... [4] - 40 to 99 times ... [5] - 100 times or more ... [6] - Never ... [7] - Don't know/no answer ... [9]
21	How many times have you drunk beer or wine or ouzo or brandy or any other alcoholic drink in the last 7 days? … *INT.: Read out.* Would you say…	- 1 to 2 times ... [1] - 3 to 9 times ... [2] - 10 to 19 times ... [3] - 20 to 39 times ... [4] - 40 to 99 times ... [5] - 100 times or more ... [6] - Never ... [7] - Don't know/no answer ... [9]
22	How old were you when you drunk for the first time beer or wine or ouzo or brandy or any other alcoholic drinks?	- Age ... [|] - Don't know ... [97] - No answer ... [99]
23	During the last 12 months, how many times have you been drunk? *INT.: Read out.* Would you say… drink in the last 7 days? … *INT.: Read out.* Would you say…	- Never ... [1] - 1 to 2 times ... [2] - 3 to 5 times ... [3] - 6 to 9 times ... [4] - 10 to 15 times ... [5] - 16 to 20 times ... [6] - More than 20 times ... [7] - Don't know/no answer ... [9]

The following questions concern certain medicines and drugs.

AMPHETAMINES

The following questions concern AMPHETAMINES, that doctors sometimes prescribe to individuals to help them loose weight or become more energetic. They are usually taken as tablets, but they are also available in other forms. They are also called "speed" or "pep" or diet pills and some of their brand names

are: Ritalin, Isomeran, Maxiton or Ponderal.

24	Have you ever taken amphetamines without prescription from a neurologist, psychiatrist or other doctor in your lifetime?	- Yes..... [1] - No ..... [2] - Don't know/no answer..... [9]
25	How many times in your lifetime have you taken amphetamines without medical prescription?	- Number..... [|] - Don't know..... [97] - No answer..... [99]
26	Have you taken amphetamines without prescription from a neurologist, psychiatrist or other doctor during the last 12 months?	- Yes..... [1] - No ..... [2] - Don't know/no answer..... [9]
27	How many times during the last 12 months have you taken amphetamines without medical prescription?	- Number..... [|] - Don't know..... [97] - No answer..... [99]
28	Have you taken amphetamines without prescription from a neurologist, psychiatrist or other doctor during the last 30 days?	- Yes..... [1] - No ..... [2] - Don't know/no answer..... [9]
29	How many times during the last 30 days have you taken amphetamines without medical prescription? …	- Number..... [|] - Don't know..... [97] - No answer..... [99]
30	How old were you when you took amphetamines without medical prescription for the first time?	- Age..... [|] - Don't know ..... [97] - No answer..... [99]

CANNABIS

31	Have you ever taken cannabis in your lifetime?	- Yes..... [1] - No ..... [2] - Don't know/no answer..... [9]
32	How many times in your lifetime have you taken cannabis?	- Number..... [|] - Don't know..... [97] - No answer..... [99]
33	Have you taken cannabis during the last 12 months?	- Yes..... [1] - No ..... [2] - Don't know/no answer..... [9]
34	How many times during the last 12 months have you taken cannabis?	- Number..... [|] - Don't know..... [97] - No answer..... [99]
35	Have you taken cannabis during the last 30 days?	- Yes..... [1] - No ..... [2] - Don't know/no answer..... [9]
36	How many times during the last 30 days	- Number..... [|]

	have you taken cannabis?	- Don't know ..... [97] - No answer ..... [99]
37	How old were you when you took cannabis for the first time?	- Age ..... [|] - Don't know ..... [97] - No answer ..... [99]

ECSTASY

38	Have you ever taken ecstasy in your lifetime?	- Yes ..... [1] - No ..... [2] - Don't know / no answer ..... [9]
39	How many times in your lifetime have you taken ecstasy?	- Number ..... [|] - Don't know ..... [97] - No answer ..... [99]
40	Have you taken ecstasy during the last 12 months?	- Yes ..... [1] - No ..... [2] - Don't know / no answer ..... [9]
41	How many times during the last 12 months have you taken ecstasy?	- Number ..... [|] - Don't know ..... [97] - No answer ..... [99]
42	Have you taken ecstasy during the last 30 days?	- Yes ..... [1] - No ..... [2] - Don't know / no answer ..... [9]
43	How many times during the last 30 days have you taken ecstasy?	- Number ..... [|] - Don't know ..... [97] - No answer ..... [99]
44	How old were you when you took ecstasy for the first time?	- Age ..... [|] - Don't know ..... [97] - No answer ..... [99]

COCAINE

45	Have you ever taken cocaine in your lifetime?	- Yes ..... [1] - No ..... [2] - Don't know / no answer ..... [9]
46	How many times in your lifetime have you taken cocaine?	- Number ..... [|] - Don't know ..... [97] - No answer ..... [99]
47	Have you taken cocaine during the last 12 months?	- Yes ..... [1] - No ..... [2] - Don't know / no answer ..... [9]
48	How many times during the last 12 months	- Number ..... [|]

	have you taken cocaine?	- Don't know ..... [97] - No answer ..... [99]
49	Have you taken cocaine during the last 30 days?	- Yes ..... [1] - No ..... [2] - Don't know/no answer ..... [9]
50	How many times during the last 30 days have you taken cocaine?	- Number ..... [|] - Don't know ..... [97] - No answer ..... [99]
51	How old were you when you took cocaine for the first time?	- Age ..... [|] - Don't know ..... [97] - No answer ..... [99]

GENERAL INFORMATION

The following questions are for statistical purpose, to help us analyze the survey results

52	What is your educational level? *INT.: Read out.* Would you say you have…	- Never been to school ..... [2] - Never been to school, but can read and write ... [3] - Completed a few grades of primary school ..... [4] - Completed primary school ..... [5] - Completed the lower secondary level ..... [6] - Completed high school (Gymnasium) ..... [7] - Completed senior high school (Lyceum) ..... [8] - A degree from a higher vocational school ..... [9] - Attended University for a few years ..... [10] - A University degree ..... [11] - Don't know/no answer ..... [12]
53	Do you work now?	- Yes ..... [1] - No ..... [2] - Don't know/no answer ..... [3]
54	Are you *Int: Read out*	- A housewife ..... [1] - A pupil or student ..... [2] - Retired ..... [3] - Disabled ..... [4] - Unemployed ..... [5] - Don't know/now answer ..... [9]
55	Are there other people living with you or do you live alone?	- Other people are living with me ..... [1] - I live alone ..... [2]
56	Do you have parents living with you?	- Yes ..... [1] - No ..... [2] - Don't know/now answer ..... [9]
57	Do you have children living with you?	- Yes ..... [1] - No ..... [2] - Don't know/now answer ..... [9]
58	Do you have in-laws living with you?	- Yes ..... [1] - No ..... [2]

- Don't know/now answer ..... [9]

59 Do you have a spouse or companion living with you?
- Yes ..... [1]
- No ..... [2]
- Don't know/now answer ..... [9]

60 Do you have siblings living with you?
- Yes ..... [1]
- No ..... [2]
- Don't know/now answer ..... [9]

61 Do you have other relatives living with you?
- Yes ..... [1]
- No ..... [2]
- Don't know/now answer ..... [9]

62 How many children live with you?
- 1 child ..... [1]
- 2 children ..... [2]
- 3 children ..... [3]
- 4 children ..... [4]
- 5 or more children ..... [5]
- Don't know/now answer ..... [9]

Individuals differ in whether or not they disapprove of people doing certain things

63 Do you disapprove of people trying ecstasy once or twice?
Int: Read out. Would you say you ...
- Don't disapprove ..... [1]
- Disapprove ..... [2]
- Strongly disapprove ..... [3]
- Don't know/now answer ..... [9]

64 Do you disapprove of people taking marihuana or hash occasionally?
Int: Read out. Would you say you ...
- Don't disapprove ..... [1]
- Disapprove ..... [2]
- Strongly disapprove ..... [3]
- Don't know/now answer ..... [9]

65 How much do you think people risk harming themselves physically or in other ways if they smoke marijuana or hash regularly?
- No risk ..... [1]
- A slight risk ..... [2]
- A moderate risk ..... [3]
- A great risk ..... [4]
- Don't know/now answer ..... [9]

66 How much do you think people risk harming themselves physically or in other ways if they try ecstasy one or twice?
- No risk ..... [1]
- A slight risk ..... [2]
- A moderate risk ..... [3]
- A great risk ..... [4]
- Don't know/now answer ..... [9]

67 How much do you think people risk harming themselves physically or in other ways if they try cocaine once or twice?
- No risk ..... [1]
- A slight risk ..... [2]
- A moderate risk ..... [3]
- A great risk ..... [4]
- Don't know/now answer ..... [9]

That was my final question, thank you very much for your co-operation.

END of questionnaire, interview succeeded.

Then I have no further questions for you, thank you very much for your co-operation.

END of questionnaire, interview NOT succeeded.

Appendix 3.1

Questionnaire Dutch main survey

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ADVANCE LETTER (TO THE YOUNGSTERS BETWEEN 12 AND 15)

Dear Sir/Madam,

Because we find it very important for your child to co-operate in this research, we have also enclosed a letter for him/her. Would you please be so kind to give this letter to your child?

Amsterdam, [date]

The University of Amsterdam and the National Bureau of Statistics are currently conducting a research about the life styles and the use of medical and recreational drugs. Therefore, over 20.000 Dutch residents will be interviewed. Because of your age we are obliged to ask for the permission of your parents or guardians to do this interview. Therefore this letter is addressed to them. However, since the participation of as many youngsters as possible is very important to us, we have included this letter to you personally.

The questionnaires will be carried out by the research organisation NIPO. Within the next few weeks, a fellow worker of the NIPO will visit to ask if you want to participate. If you and your parents agree, he or she will conduct a short interview.

Your answers will be treated with strict confidentiality. No one will be able to look into your answers. All the answers will be put into one large database, without the names and the addresses of the participants.

We truly hope that you will co-operate in the research. If you have any questions , you can call [name] from the NIPO [telephone number].

We thank you in advance for your co-operation.

[Name]
Project co-ordinator
Institute of Human Geography, University of Amsterdam

ADVANCE LETTER (TO THE SAMPLE POPULATION OF 16 AND OLDER)

Dear Sir/Madam,

The University of Amsterdam together with the National Bureau of Statistics are conducting a research about the life styles and the use of medical and recreational drugs. The commissioner is the Ministry of Health, Welfare and Sports. Because health policy and help provisions should be in keeping with what happens in the population, this research is of great importance.

We are carrying out a brief questionnaire with over 20,000 Dutch residents. The names of the people we approach are randomly drawn from the municipal population registries. The interviews will be carried out by the research organisation NIPO. Within the next few weeks, a fellow worker of NIPO will visit to ask if he/she can conduct an interview with you. Naturally, you can ask the interviewer for identification.

The answers will be treated with strict confidentiality. This implies that no-one outside the NIPO will be able to look into the information you provided. All the answers will be put into one large database, without the names and the addresses of the participants. After the research is finished, all names and addresses will be destroyed.

We sincerely hope that you will participate in this research. If you wish to have more information about the research, you can contact [name] of the NIPO [number].

Thank you in advance for your co-operation.

[Name]
Project co-ordinator
Institute of Human Geography, University of Amsterdam

ADVANCE LETTER (TO THE PARENTS/GUARDIANS OF YOUNGSTERS BETWEEN 12 AND 15)

Dear Sir/Madam,

The University of Amsterdam and the National Bureau of Statistics are conducting a research about the life styles and the use of medical and recreational drugs. The commissioner is the Ministry of Health, Welfare and Sports. Because health policy and help provisions should be in keeping with what happens in the population, this research is of great importance.

We are carrying out a brief questionnaire with over 20,000 Dutch residents. The names of the people we approach are randomly drawn from the municipal population registries. Your son/daughter is one of them. For this research it is important to obtain information from youngsters. We would therefore like to have your permission for an interview of 15 to 20 minutes with your child.

The questionnaires will be carried out by the research organisation NIPO. Within the next few weeks, a fellow worker of NIPO will visit to ask if he/she can conduct an interview with your child. Naturally, you

can ask the interviewer for identification.

The names of the people we approach are randomly drawn from the population registries of municipalities. The answers of your child will be treated with strict confidentiality. After the research is finished, all names and addresses will be destroyed.

We hope that you will agree with the participation of your child. If you wish to have more information about the research you can contact [name] of the NIPO [number].

Thank you in advance for your co-operation.

[Name]
Project co-ordinator
Institute of Human Geography, University of Amsterdam

INTRODUCTION

You have received a letter explaining the purpose of this interview: your lifestyle and use of medical and other drugs. We asked about 20.000 people in the Netherlands to participate in this study. The answers to the questions will be processed anonymously.

(When respondent is not alone:) In the interest of this investigation, I would like to ask you if I could speak to you alone, without any other people to influence your answers? Can we sit somewhere apart, i.e. out of hearing distance of other people?

(When this is not possible:) You can key the answers into the computer yourself. If necessary I will help you if there is something you don't understand.

01 *INTERVIEWER*
Is the situation fit to continue orally or better in writing?
- no, in writing ..... [1]
- yes, orally..... [2]

02 According to our information you are years old. Is this correct?
- no ..... [1]
- yes..... [2]

(*If incorrect*:)

03 How old are you then?
- age ..... [|]

LEISURE

First of all, I would like to know something about your activities in your leisure time.

04 How many evenings a week do you
- all evenings at home..... [1]

usually spend at home?

- 5 to 6 evenings at home ..... [2]
- 3 to 4 evenings at home ..... [3]
- 1 to 2 evenings at home ..... [4]
- less than 1 evening at home..... [5]
- no answer..... [9]

05 How many times did you go to pubs, discos, dance halls, etc. *during the past four weeks*?

- not a single time..... [1]
- once..... [2]
- 2 to 3 times..... [3]
- 4 to 9 times..... [4]
- 10 times or more..... [5]
- don't know..... [6]
- no answer..... [9]

06 How many times did you go to restaurants or other dining places, *in the last four weeks?*

- not a single time..... [1]
- once..... [2]
- 2 to 3 times..... [3]
- 4 to 9 times..... [4]
- 10 times or more..... [5]
- don't know..... [6]
- no answer..... [9]

07 How many times did you go to the cinema or art centre *in the last eight weeks?*

- not a single time..... [1]
- once..... [2]
- 2 to 3 times..... [3]
- 4 to 9 times..... [4]
- 10 times or more..... [5]
- don't know..... [6]
- no answer..... [9]

08 How many times did you go to theatre, ballet, opera, etc. *in the last eight weeks?*

- not a single time..... [1]
- once..... [2]
- 2 to 3 times..... [3]
- 4 to 9 times ..... [4]
- 10 times or more..... [5]
- don't know..... [6]
- no answer..... [7]

09 Did you pursue any sports, by yourself or within a club in the last 6 months? For example athetics, cycling, football or tennis.

- no..... [1]
- yes..... [2]
- no answer..... [9]

We would like to know of several types of sports, if you have pursued those, and in which period you were engaged in these sports activities.

10 Have you ever done weight training and if so, when?

- no..... [1]
- yes, longer than one year ago ..... [2]
- yes, in the past year ..... [3]
- no answer..... [9]

11 Have you ever done fitness and if so, when?

- no..... [1]
- yes, longer than one year ago ..... [2]
- yes, in the past year ..... [3]
- no answer..... [9]

12 Have you ever done body building and if so, when?

- no..... [1]
- yes, longer than one year ago ..... [2]
- yes, in the past year ..... [3]

- no answer ..... [9]

13 Have you ever done aerobics, callanetics or steps and if so, when?
- no ..... [1]
- yes, longer than one year ago ..... [2]
- yes, in the past year ..... [3]
- no answer ..... [9]

14 How frequently do you meet relatives friends or acquaintances?

INTERVIEWER: Give card.
- never ..... [1]
- daily ..... [2]
- 2 to 3 times a week ..... [3]
- at least once a week ..... [4]
- at least once a month ..... [5]
- less frequently ..... [6]
- very irregularly ..... [7]
- not applicable ..... [8]
- no answer ..... [9]

TOBACCO

And now for something different. I would like to know something about your habits regarding smoking, drinking, and the use of pharmaceutical and other drugs.

15 Did you ever smoke cigarettes, [shag], cigars or pipes?
INT.: this question also applies to other forms of tobacco such as chewing tobacco and snuff
- no ..... [1] **22**
- yes ..... [2] **16**
- no answer ..... [9] **22**

16 Did you do so 25 times or more?
- no, less ..... [1]
- yes, 25 times or more ..... [2]
- don't know ..... [3]
- no answer ..... [9]

17 At what age did you first smoke tobacco?
- age ..... [|]
- don't know ..... [97]
- no answer ..... [99]

18 Did you smoke cigarettes, [shag], cigars or pipes in the past 12 months?
- no ..... [1] **19**
- yes ..... [2] **20**
- no answer ..... [9] **19**

19 At what age did you quit smoking?
- age ..... [|] **21**
- don't know ..... [97] **21**
- no answer ..... [99] **20**

20 And in the past 30 days?
- no ..... [1]
- yes ..... [2]
- no answer ..... [9]

21 How many cigarettes do you normally smoke per day?
INT.: if the respondent does not smoke cigarettes but cigars or pipes, how many cigars or pipes do you normally smoke per day?
- number ..... [|]
- don't know ..... [97]
- no answer ..... [99]

ALCOHOL

Now a few questions on alcoholic drinks such as beer, wine, gin, liquor etc.

22	Did you ever drink an alcoholic beverage?	- no ... [1]	**32**
		- yes ... [2]	**23**
		- no answer ... [9]	**32**
23	Did you do so 25 times or more?	- no, less ... [1]	
		- yes, 25 times or more ... [2]	
		- don't know ... [3]	
		- no answer ... [9]	
24	At what age did you drink alcohol for the first time?	- age ... [|]	
		- don't know ... [97]	
		- no answer ... [99]	
25	Did you drink alcohol in the last 12 months?	- no ... [1]	**26**
		- yes ... [2]	**27**
		- no answer ... [9]	**26**
26	At what age did you last drink alcohol? (Round up/down to nearest age)	- age ... [|]	**32**
		- don't know ... [97]	**32**
		- no answer ... [99]	**32**
27	Did you drink *6 or more* alcoholic beverages in one day in the last 6 months?	- no ... [1]	**29**
		- yes ... [2]	**28**
		- no answer ... [9]	**29**
28	How often did you drink 6 or more alcoholic beverages in one day?	- daily ... [1]	
		- more than 4 times a week ... [2]	
		- 3 to 4 times a week ... [3]	
		- 1 to 2 times a week ... [4]	
	INT.: Present card.	- 1 to 3 times a month ... [5]	
		- 3 to 5 times past 6 months ... [6]	
		- 1 to 2 times past 6 months ... [7]	
		- don't know ... [8]	
		- no answer ... [9]	
29	Did you drink alcohol in the last 30 days?	- no ... [1]	**31**
		- yes ... [2]	**30**
		- no answer ... [3]	**31**
30	On how many days did you drink alcohol in the last 30 days?	- number ... [|]	
		- don't know ... [97]	
		- no answer ... [99]	
31	On average, how many glasses of alcohol per day did you drink recently? (In case you don't drink every day, please estimate your weekly consumption and divide that by seven.)	- glasses ... [|]	
		- don't know ... [97]	
		- no answer ... [99]	

HYPNOTICS

Now a few questions about hypnotics

32 As you probably know, there are a lot of pharmaceutical drugs available to facilitate sleeping. Have you ever used any of these on prescription by a medical doctor or on your own initiative?
INT.: We don't mean things like a glass of warm milk, a walk, or aspirin); homeopathic drugs do count.

- no ..... [1] **39**
- yes ..... [2] **33**
- no answer ..... [9] **39**

33 Did you do so 25 times or more?

- no, less ..... [1]
- yes, 25 times or more ..... [2]
- don't know ..... [3]
- no answer ..... [9]

34 At what age did you use hypnotics for the first time?

- age ..... [|]
- don't know ..... [97]
- no answer ..... [99]

35 Have you used hypnotics over the past 12 months?

- no ..... [1] **36**
- yes ..... [2] **37**
- no answer ..... [9] **37**

36 At what age did you last use hypnotics?

- age ..... [|] **39**
- don't know ..... [97] **39**
- no answer ..... [99] **39**

37 Have you used hypnotics over the past 30 days?

- no ..... [1] **39**
- yes ..... [2] **38**
- no answer ..... [9] **39**

38 Can you tell me which hypnotic(s) you have used in the last 30 days? Please tell me names or brands. And will you tell me if you took them on prescription by a medical doctor or on your own initiative?

INT.: Write down literally! When respondents hesitate or say they don't know, ask them to have a look at the bottle or package (in case itís still there).

name hypnotic	doctors prescr.	own init.	both	d.k.	n.a.
..... [| |]	[1]	[2]	[3]	[4]	[5]
..... [| |]	[1]	[2]	[3]	[4]	[5]
..... [| |]	[1]	[2]	[3]	[4]	[5]
..... [| |]	[1]	[2]	[3]	[4]	[5]

SEDATIVES

39 Other pharmaceutical drugs are sedatives, to calm you down. Have you ever used any of these, on prescription by a medical doctor or on your own initiative?
INT.: We don't mean yoga or other relaxing activities; homeopathic drugs do count.

- no ..... [1] **42**
- yes ..... [2] **40**
- no answer ..... [9] **46**

40 Did you do so 25 times or more?

- no, less ..... [1]
- yes, 25 times or more ..... [2]
- don't know ..... [3]
- no answer ..... [9]

41	At what age did you first use sedatives?	- age ..... [|] - don't know ..... [97] - no answer ..... [99]	
42	Have you used sedatives over the past 12 months?	- no ..... [1] - yes ..... [2] - no answer ..... [3]	**43** **44** **43**
43	At what age did you last use sedatives?	- age ..... [|] - don't know ..... [97] - no answer ..... [99]	**46** **46** **46**
44	And in the last 30 days?	- no ..... [1] - yes ..... [2] - no answer ..... [3]	**46** **45** **46**

45 If so, can you please tell me which sedative(s) you have used in the last 30 days? Please tell me names or brands. And will you tell me if you took them on prescription by a medical doctor or on your own initiative?

INTERVIEWER: Write down literally! When respondents hesitate or say they don't know, ask them to have a look at the bottle or package (in case itís still there).

name sedative	doctors prescr.	own init.	both	d.k.	n.a.
..... [| |]	[1]	[2]	[3]	[4]	[5]
..... [| |]	[1]	[2]	[3]	[4]	[5]
..... [| |]	[1]	[2]	[3]	[4]	[5]
..... [| |]	[1]	[2]	[3]	[4]	[5]

DOPING

There are substances on the market that are used by people who want to improve their sports performance or by people who, through taking these substances, hope to get a strong and muscular body.

46	Have you ever tried any of these substances?	- no ..... [1] - yes ..... [2] - no answer ..... [9]	**59** **47** **59**
47	Which of these substances did you use? (you can give more than one answer) *INT: show card*	- anabolic-androgens steroids (AAS), usually referred to as anabolic steroids ..... [1] - growth hormone (hHG) ..... [2] - EPO (erythropoietin) ..... [3] - thyroid medication ..... [4] - clenbuterol ..... [5] - stimulants (for example amphetamine (speed), cocaine, ephedrine, caffeine in high dosage) ..... [6] - other ..... [7] - don't know ..... [8]	

		- no answer ..... [9]	
48	Did you take these substances in the form of a cure?	- no ..... [1] - yes ..... [2] - no answer ..... [9]	**50** **49** **50**
49	How many cures of these substances did you take?	- number ..... [|] - no answer ..... [9]	
50	Did you take these kinds of substances on individual occasions, meaning not in the of a cure?	- no ..... [1] - yes ..... [2] - no answer ..... [9]	**52** **51** **51**
51	Have you used these substances 25 times or more? *(INT: only use on individual occasions; not when respondent has followed a cure)*	- no, less than 25 times ..... [1] - yes, 25 times or more ..... [2] - don't know how often ..... [3] - no answer ..... [9]	
52	How old were you when you first used a substance to improve your performances in sports or to try and get a stronger and more muscular body?	- age ..... [|] - don't know ..... [77] - no answer ..... [99]	
53	Did you use these kinds of substances in the last 12 months?	- no ..... [1] - yes ..... [2] - no answer ..... [9]	**54** **55** **54**
54	How old were you when you used these kinds of substances for the last time?	- age ..... [|] - don't know ..... [77] - no answer ..... [99]	
	(INT: for last year users and more recent)		
55	Where did you get the substance / substances that you used? *INT: resp. can give more than one answer* *(INT: for last year users and more recent)*	- doctors prescription ..... [1] - trainer / sports club / gym ..... [2] - friends, acquaintances, relatives ..... [3] - other ..... [4] - no answer ..... [9]	
56	Can you tell which substance (substances) you used in the last twelve months? Do you know the name of the substance(s)? *(INT: write down names literally. If respondent does not know the name of the substance or seems to hesitate, ask if he / she can show you and check the name)*	- substance 1 ..... [|] - substance 2 ..... [|] - substance 3 ..... [|] - substance 4 ..... [|]	
	(INT: for last year users and more recent)		
57	For what reason did you take these subs. You can give a maximum of three answers *INT: show card*	- to become stronger ..... [01] - to become faster ..... [02] - to become slimmer ..... [03] - for more endurance ..... [04] - to become more aggressive ..... [05]	

- to improve body shape ..... [06]
- to become bigger ..... [07]
- to cope with injuries ..... [08]
- to cope with fatigue ..... [09]
- to concentrate ..... [10]
- to increase muscle development ..... [11]
- to look better ..... [12]
- other ..... [13]
- don't know / no answer ..... [14]

58 Did you use these kinds of substances in the last 30 days?
- no ..... [1]
- yes ..... [2]
- no answer ..... [9]

CANNABIS

Now a few questions about the use of cannabis

59 Have you ever used cannabis (hash, marijuana or weed)?
- no ..... [1] **70**
- yes ..... [2] **60**
- no answer ..... [9] **70**

60 Have you used it 25 times or more?
- no, less ..... [1]
- yes, 25 times or more ..... [2]
- don't know ..... [3]
- no answer ..... [9]

61 At what age did you first use cannabis? (hash, marijuana, weed)
- age ..... [|]
- don't know ..... [97]
- no answer ..... [99]

62 Have you used cannabis in the last 12 months? (hash, marijuana, weed)
- no ..... [1] **63**
- yes ..... [2] **64**
- no answer ..... [3] **63**

63 At what age did you last use cannabis?
- age ..... [|] **67**
- don't know ..... [97] **67**
- no answer ..... [99] **67**

64 Where did you get the cannabis that you used? (you can give more than one answer)
- relatives, friends, acquaintance ..... [01]
- coffeeshop ..... [02]
- cafe/pub ..... [03]
- other place of entertainment ..... [04]
- bought on the street from a stranger ... [05]
- community centre, youth club, association ..... [06]
- home dealer ..... [07]
- delivery service ..... [08]
- smartshop ..... [09]
- other ..... [77]
- don't know/will not say ..... [99]

65 Can you purchase different drugs from relatives, friends, and acquaintances?
- no ..... [1]
- yes ..... [2]
- no answer ..... [3]

66	Can you purchase different drugs at the coffeeshop?	- no ..... [1] - yes ..... [2] -no answer ..... [3]	
67	Can you purchase different drugs at the café/pub?	- no ..... [1] - yes ..... [2] - no answer ..... [3]	
68	Can you purchase different drugs at the other place of entertainment?	- no ..... [1] - yes ..... [2] - no answer ..... [3]	
69	Can you purchase different drugs from the stranger on the street?	- no ..... [1] - yes ..... [2] - no answer ..... [3]	
70	Can you purchase different drugs at the community centre, youth club, association?	- no ..... [1] - yes ..... [2] - no answer ..... [3]	
71	Can you purchase different drugs from the home dealer?	- no ..... [1[- yes ..... [2] - no answer ..... [3]	
72	Can you purchase different drugs from the delivery service?	- no ..... [1] - yes ..... [2] - no answer ..... [3]	
73	Can you purchase different drugs at the smartshop?	- no ..... [1] - yes ..... [2] - no answer ..... [3]	
74	Can you purchase different drugs at the other place from where you get your cannabis?	- no ..... [1] - yes ..... [2] - no answer ..... [3]	
75	Have you used cannabis in the last 30 days? (hash, marijuana, weed)	- no ..... [1] - yes, ... [2] - no answer ..... [3]	**77** **76** **77**
76	In the last 30 days, on how many days did you use cannabis?	- number ..... [|] - don't know ..... [97] - no answer ..... [99]	
77	Has one of your parents ever used cannabis?	- no ..... [1] - yes ..... [2] - don't know ..... [3] - not applicable (has no parents) ..... [4] - no answer ..... [5]	
78	Has one of your siblings ever used cannabis?	- no ..... [1] - yes ..... [2] - don't know ..... [3] - not applicable (has no siblings) ..... [4] - no answer ..... [5]	

79	Has one of your children ever used cannabis?	- no ..... [1] - yes ..... [2] - don't know ..... [3] - not applicable (has no children) ..... [4] - no answer ..... [5]	

COCAINE

Now a few questions on the use of cocaine

80	Have you ever used cocaine?	- no ..... [1] - yes ..... [2] - no answer ..... [3]	**89** **81** **89**
81	Have you used it 25 times or more?	- no, less ..... [1] - yes, 25 times or more ..... [2] - don't know ..... [3] - no answer ..... [4]	
82	At what age did you first use cocaine?	- age ..... [|] - don't know ..... [97] - no answer ..... [99]	
83	Have you used cocaine in the last 12 months?	- no ..... [1] - yes ..... [2] - no answer ..... [3]	**84** **85** **85**
84	At what age did you last use cocaine?	- age ..... [|] - don't know ..... [97] - no answer ..... [99]	**88** **88** **88**
85	Where did you get the cocaine that you used (you can give more than one answer)	- relatives, friends, acquaintance ..... [01] - coffeeshop ..... [02] - cafe/pub ..... [03] - other place of entertainment ..... [04] - on the street from a stranger ..... [05] - community centre, youth club, association ..... [06] - home dealer ..... [07] - delivery service ..... [08] - smartshop ..... [09] - other ..... [77] - don't know/will not say ..... [99]	
86	Have you used cocaine in the last 30 days?	- no ..... [1] - yes, ... [2] - no answer ..... [3]	**88** **87** **87**
87	In the last 30 days, on how many days did you use cocaine	- number ..... [|] - don't know ..... [97] - no answer ..... [99]	
88	Did you ever take cocaine in the form of crack or freebase?	- yes ..... [1] - no ..... [2] - no answer ..... [9]	

AMPHETAMINES

89	Have you ever used amphetamines? (stimulants, pep, speed , etc.)	- no [1] - yes [2] - no answer [3]	**98** **90** **98**
90	Have you used it 25 times or more?	- no, less [1] - yes, 25 times or more [2] - don't know [3] - no answer [4]	**91** **92** **92** **92**
91	How often did you use amphetamines?	- number [|] - don't know [97] - no answer [99]	
92	At what age did you first use amphetamines?	- age [|] - don't know [97] - no answer [99]	
93	Have you used amphetamines in the last 12 months?	- no [1] - yes [2] - no answer [3]	**94** **95** **94**
94	At what age did you last use amphetamines?	- age [|] - don't know [97] - no answer [99]	**98** **98** **98**
95	Where did you get the amphetamine that you used? (you can give more than one answer)	- relatives, friends, acquaintance [01] - coffeeshop [02] - cafe/pub [03] - other place of entertainment [04] - on the street from a stranger [05] - community centre, youth club, association [06] - home dealer [07] - delivery service [08] - smartshop [09] - other [77] - don't know/will not say [99]	
96	Have you used amphetamines in the last 30 days?	- no [1] - yes [2] - no answer [9]	
97	In the last 30 days, on how many days did you use amphetamines?	- days [|] - don't know [97] - no answer [99]	

ECSTASY

Now a few questions about ecstasy follow.

98	Have you ever used ecstasy (XTC, MDMA, E)?	- no [1] - yes [2] - no answer [3]	**106** **99** **106**

99	Have you used it 25 times or more?	- no, less ..... [1] - yes, 25 times or more ..... [2] - don't know ..... [3] - no answer ..... [4]	
100	At what age did you first use ecstasy?	- age ..... [|] - don't know ..... [97] - no answer ..... [99]	
101	Have you used ecstasy in the last 12 months?	- no ..... [1] - yes ..... [2] - no answer ..... [3]	**102** **103** **103**
102	At what age did you last use ecstasy?	- age ..... [|] - don't know ..... [97]	**106** **106**

103 Where did you get the ecstasy that you used? (you can give more than one answer)

- relatives, friends, acquaintance ..... [01]
- coffeeshop ..... [02]
- cafe/pub ..... [03]
- other place of entertainment ..... [04]
- on the street from a stranger ..... [05]
- community centre, youth club, association ..... [06]
- home dealer ..... [07]
- delivery service ..... [08]
- smartshop ..... [09]
- other ..... [77]
- don't know/will not say ..... [99]

104 Have you used ecstasy in the last 30 days?

- no ..... [1]
- yes ..... [2]
- no answer ..... [9]

105 In the last 30 days, on how many days did you use ecstasy

- days ..... [|]
- don't know ..... [97]
- no answer ..... [99]

HALLUCINOGENS

106 Have you ever used LSD?

- no ..... [1] **127**
- yes ..... [2] **107**
- no answer ..... [3] **127**

107 Have you ever used mescaline?

- no ..... [1]
- yes ..... [2]
- no answer ..... [3]

108 Have you ever used psilocybin?

- no ..... [1]
- yes ..... [2]
- no answer ..... [3]

109 Have you ever used 2CB?

- no ..... [1]
- yes ..... [2]
- no answer ..... [3]

110 Have you ever used ayahuasca?

- no ..... [1]
- yes ..... [2]
- no answer ..... [3]

111 Have you ever used any other substance that causes hallucinations?

- no ..... [1]
- yes ..... [2]
- no answer ..... [3]

112 Have you used [any hall.] 25 times or more? (in total)

- no, less ..... [1]
- yes, 25 times or more ..... [2]
- don't know ..... [3]
- no answer ..... [4]

113 At what age did you first use hallucinogens? (in total)

- age ..... [|]
- don't know ..... [97]
- no answer ..... [99]

114	Have you used hallucinogens in the last 12 months? (in total)	- no [1] - yes [2] - no answer [3]	**115** **116** **115**
115	At what age did you last use hallucinogens? (in total)	- age [|] - don't know [97] - no answer [99]	
116	Where did you get these substances? [list of hallucinogens] (you can give more than one answer)	- relatives, friends, acquaintance [01] - coffeeshop [02] - cafe/pub [03] - other place of entertainment [04] - on the street from a stranger [05] - community centre, youth club, association [06] - home dealer [07] - delivery service [08] - smartshop [09] - other [77] - don't know/will not say [99]	
117	Have you used hallucinogens in the last 30 days?	- no [1] - yes [2] - no answer [9]	**119** **118** **119**
118	In the last 30 days, on how many days did you use hallucinogens	- days [|] - don't know [97] - no answer [99]	

Some mushrooms too, contain substances that can make you hallucinate or induce a trip.

119	Have you ever used this kind of mushrooms	- no [1] - yes [2] - no answer [3]	**127** **120** **127**
120	Have you used it 25 times or more?	- no, less [1] - yes, 25 times or more [2] - don't know [3] - no answer [4]	
121	At what age did you first use mushrooms?	- age [|] - don't know [97] - no answer [99]	
122	Have you used mushrooms in the last 12 months?	- no [1] - yes [2]	**123** **124**
123	At what age did you last use mushrooms?	- age [|] - don't know [97] - no answer [99]	**127** **127** **127**

124	Where did you get the mushrooms? (you can give more than one answer)	- relatives, friends, acquaintance ..... [01] - coffeeshop ..... [02] - cafe/pub ..... [03] - other place of entertainment ..... [04] - on the street from a stranger ..... [05] - community centre, youth club, association ..... [06] - home dealer ..... [07] - delivery service ..... [08] - smartshop ..... [09] - other ..... [77] - don't know/will not say ..... [99]	
125	Have you used mushrooms in the last 30 days?	- no ..... [1] - yes ..... [2] - no answer ..... [9]	**127** **126** **126**
126	In the last 30 days, on how many days did you use mushrooms	- days ..... [| |] - don't know ..... [97] - no answer ..... [99]	

INHALANTS

127	Have you ever used inhalants (like glue or tri, to get high)?	- no ..... [1] - yes ..... [2] - no answer ..... [3]	**135** **128** **135**
128	Have you used it 25 times or more?	- no, less ..... [1] - yes, 25 times or more ..... [2] - don't know ..... [3] - no answer ..... [4]	
129	At what age did you first use inhalants?	- age ..... [| |] - don't know ..... [97] - no answer ..... [99]	
130	Have you used inhalants in the last 12 months?	- no ..... [1] - yes ..... [2] - no answer ..... [3]	**131** **132** **132**
131	At what age did you last use inhalants?	- age ..... [| |] - don't know ..... [97] - no answer ..... [99]	**135** **135** **135**
132	Where did you get the inhalants that you used? (you can give more than one answer)	- relatives, friends, acquaintance ..... [01] - coffeeshop ..... [02] - cafe/pub ..... [03] - other place of entertainment ..... [04] - on the street from a stranger ..... [05] - community centre, youth club, association ..... [06] - home dealer ..... [07] - delivery service ..... [08] - smartshop ..... [09] - other ..... [77] - don't know/will not say ..... [99]	

133	Have you used inhalants in the last 30 days?	- no ... [1]	**135**
		- yes ... [2]	**134**
		- no answer ... [9]	**135**
134	In the last 30 days, on how many days did you use inhalants?	- days ... [|]	
		- don't know ... [97]	
		- no answer ... [99]	

OPIATES, HEROIN, CODEINE, PALFIUM, METHADONE, OTHER OPIATES.

135	Have you ever used opiates, like the ones mentioned on this card?	- no ... [1]	**168**
		- yes ... [2]	**136**
		- no answer ... [3]	**168**
136	Can you please indicate which one of these you ever used?	- opium ... [1]	
		- morphine ... [2]	
		- heroin ... [3]	
		- codeine ... [4]	
		- palfium ... [5]	
		- methadone ... [6]	
		- other opiates ... [7]	
		- don't know ... [8]	
		- no answer ... [9]	
137	Have you used opium 25 times or more?	- no, less ... [1]	
		- yes, 25 times or more ... [2]	
		- no answer ... [9]	
138	At what age did you first use opium? (in total)	- age ... [|]	
		- don't know ... [97]	
		- no answer ... [99]	
139	At what age did you last use opium? (in total)	- age ... [|]	
		- don't know ... [97]	
		- no answer ... [99]	
140	Was that the last time on doctors prescription, on own initiative or both? (in total)	- on prescription ... [1]	
		- own initiative ... [2]	
		- both ... [3]	
		- no answer ... [9]	
141	Have you used morphine 25 times or more?	- no, less ... [1]	
		- yes, 25 times or more ... [2]	
		- no answer ... [9]	
142	At what age did you first use morphine? (in total)	- age ... [|]	
		- don't know ... [97]	
		- no answer ... [99]	
143	At what age did you last use morphine? (in total)	- age ... [|]	
		- don't know ... [97]	
		- no answer ... [99]	
144	Was that the last time on doctors prescription, on own initiative or both? (in total)	- on prescription ... [1]	
		- own initiative ... [2]	
		- both ... [3]	

		- no answer ..... [9]	
145	Have you used heroin 25 times or more?	- no, less ..... [1] - yes, 25 times or more ..... [2] - no answer ..... [9]	**146** **147** **147**
146	How many times?	- number ..... [ ] - no answer ..... [99]	
147	At what age did you first use heroin? (in total)	- age ..... [|] - don't know ..... [97] - no answer ..... [99]	
148	At what age did you last use heroin? (in total)	- age ..... [|] - don't know ..... [97] - no answer ..... [99]	
149	Was that the last time on doctors prescription, on own initiative or both? (in total)	- on prescription ..... [1] - own initiative ..... [2] - both ..... [3] - no answer ..... [9]	
150	Have you used codeine 25 times or more?	- no, less ..... [1] - yes, 25 times or more ..... [2] - no answer ..... [9]	
151	At what age did you first use codeine? (in total)	- age ..... [|] - don't know ..... [97] - no answer ..... [99]	
152	At what age did you last use codeine? (in total)	- age ..... [|] - don't know ..... [97] - no answer ..... [99]	
153	Was that the last time on doctors prescription, on own initiative or both? (in total)	- on prescription ..... [1] - own initiative ..... [2] - both ..... [3] - no answer ..... [9]	
154	Have you used palfium 25 times or more?	- no, less ..... [1] - yes, 25 times or more ..... [2] - no answer ..... [9]	
155	At what age did you first use palfium? (in total)	- age ..... [|] - don't know ..... [97] - no answer ..... [99]	
156	At what age did you last use palfium? (in total)	- age ..... [|] - don't know ..... [97] - no answer ..... [99]	
157	Was that the last time on doctors prescription, on own initiative or both? (in total)	- on prescription ..... [1] - own initiative ..... [2] - both ..... [3] - no answer ..... [9]	
158	Have you used methadone 25 times or more?	- no, less ..... [1] - yes, 25 times or more ..... [2]	

- no answer ..... [9]

159 At what age did you first use methadone? (in total)
- age ..... [|]
- don't know ..... [97]
- no answer ..... [99]

160 At what age did you last use methadone? (in total)
- age ..... [|]
- don't know ..... [97]
- no answer ..... [99]

161 Was that the last time on doctors prescription, on own initiative or both? (in total)
- on prescription ..... [1]
- own initiative ..... [2]
- both ..... [3]
- no answer ..... [9]

162 Have you used any other opiates 25 times or more?
- no, less ..... [1]
- yes, 25 times or more ..... [2]
- no answer ..... [9]

163 At what age did you first use any other opiates? (in total)
- age ..... [|]
- don't know ..... [97]
- no answer ..... [99]

164 At what age did you last use any other opiates? (in total)
- age ..... [|]
- don't know ..... [97]
- no answer ..... [99]

165 Was that the last time on doctors prescription, on own initiative or both? (in total)
- on prescription ..... [1]
- own initiative ..... [2]
- both ..... [3]
- no answer ..... [9]

166 Have you used any other opiates in the last 30 days?
- opium ..... [1]
- morphine ..... [2]
- heroin ..... [3]
- codeine ..... [4]
- palfium ..... [5]
- methadone ..... [6]
- other opiates ..... [7]

167 In the last 30 days, on how many days did you use any other opiates?
- days ..... [|]
- don't know ..... [97]
- no answer ..... [99]

OTHER DRUGS

168 We talked about a lot of different kinds of drugs. Are there any other drugs you used, which are not mentioned above? What are these? (max. 3 drugs)
- no ..... [01]
- yes ..... [02]
- other drug 1 ..... [|]
- other drug 2 ..... [|]
- other drug 3 ..... [|]

169 Have you ever injected a pharmaceutical or other drug?
- no ..... [02]
- hypnotics ..... [03]

(more answers possible)

- sedatives [04]
- heroin [05]
- methadone [06]
- opium [07]
- codeine [08]
- palfium [09]
- morphine [10]
- hallucinogens [11]
- stimulants [12]
- other [13]

ASSISTANCE

And now some questions about assistance.

170 Have you ever had contact with an institution for drug treatment (CAD, Jellinek, GG&GD, etc.)?

- no [1] **173**
- yes [2] **171**
- no answer [9] **173**

171 When did you last have contact with such an institution? In the last 30 days, in the last 12 months or longer ago?

- more than a year ago [1]
- last year [2]
- last month [3]
- no answer [9]

172 For what drug?

- alcohol [02]
- hypnotics or sedatives [03]
- stimulants [04]
- cannabis [05]
- cocaine [06]
- amphetamines [07]
- ecstasy [08]
- hallucinogens [09]
- heroin [10]
- other opiates [11]
- other [12]
- no answer [13]

GENERAL INFORMATION

Now, to complete a few questions for our statistics.

173 Since what year do you live in Amsterdam?

- year [|]
- don't know [98]
- no answer [99]

174 What is your nationality? *(INT:Note! Some persons have dual-nationality More answers are possible)*

- Dutch [1]
- Turkish [2]
- Moroccan [3]
- Surinamese [4]
- German [5]
- British (= Great Britain & Northern Ireland) [6]
- Belgian [7]
- other [8]
- no answer [9]

175 In which country were you born?

- The Netherlands ..... [01]
- Surinam ..... [02]
- Dutch Antilles/Aruba ..... [03]
- Indonesia ..... [04]
- Turkey ..... [05]
- Morocco ..... [06]
- Germany ..... [07]
- United Kingdom (GB+N. Ireland) ..... [08]
- Belgium ..... [09]
- other ..... [10]
- no answer ..... [11]

176 In which country was your mother born?

- The Netherlands ..... [01]
- Surinam ..... [02]
- Dutch Antilles/Aruba ..... [03]
- Indonesia ..... [04]
- Turkey ..... [05]
- Morocco ..... [06]
- Germany ..... [07]
- United Kingdom (GB+N. Ireland) ..... [08]
- Belgium ..... [09]
- other ..... [10]
- no answer ..... [11]

177 In which country was your father born?

- The Netherlands ..... [01]
- Surinam ..... [02]
- Dutch Antilles/Aruba ..... [03]
- Indonesia ..... [04]
- Turkey ..... [05]
- Morocco ..... [06]
- Germany ..... [07]
- United Kingdom (GB+N. Ireland) ..... [08]
- Belgium ..... [09]
- other ..... [10]
- no answer ..... [11]

178 Including yourself, how many persons are part of the household to which you belong?
(INT: kids that live outside the home are not counted)

- one person ..... [1] **182**
- two persons ..... [2] **179**
- three persons ..... [3] **179**
- four persons ..... [4] **179**
- five or more persons ..... [5] **179**
- no answer ..... [9] **179**

179 What is the composition of the household to which you belong?
(INT: depart from household core (kid = also step child, foster child, etc.)
(INT: The core of the household is the steady partners, or in 1 parent homes the parent. In other households the core is the adult(s) in the household.)

- (married) couple ..... [1]
- (married) couple with children ..... [2]
- (married) couple with children, plus others ..... [3]
- (married) couple without children, plus others ..... [4]
- 1 parent with child/children ..... [5]
- 1 parent with child/children, plus others ..... [6]
- core of household is not couple/ fixed partners of 1 parent ..... [7]
- no answer ..... [9]

180 What is your position in this household?

- one of (married) couple ..... [1]

- head of 1 par. household (parent) ..... [2]
  foster child
- live-in child/stepchild/ ..... [3]
- someone else within household ..... [4]
- no answer ..... [9]

181 What does apply to you?
Are you?
(INT:show card)
(INT: What is meant here is the relationship between the respondent and the ëcoreí of the household (i.e. the (married) couple, the parent (in a single parent household) or the other adults (in alternative forms of households)

- father/mother ..... [1]
- father /mother-in-law ..... [2]
- brother / sister ..... [3]
- brother/sister-in-law ..... [4]
- son /daughter-in-law ..... [5]
- grandchild ..... [6]
- other: in-law family ..... [7]
- other: non (in-law) family ..... [8]
- no answer ..... [9]

182 *INT: Respondent's gender is:*

- male ..... [1]
- female ..... [2]

183 What is your age?

- age ..... [|]
- don't know ..... [97]
- no answer ..... [99]

184 Do you consider yourself in the first place:
(only one answer)

- employed with paid job ..... [1]
- homemaker (M/F) ..... [2]
- employed non-paid ..... [3]
- studying at school or elsewhere ..... [4]
- old-age pensioned or early retiree ..... [5]
- none of those ..... [6]
- no answer ..... [9]

185 Do you consider yourself as unemployed or unfit for labour?
(more answers possible)

- yes, unemployed ..... [1] **186**
- yes, unfit for work ..... [2] **186**
- no ..... [3] **188**
- no answer ..... [4] **188**

186 Do you receive social security benefits because of unemployment or unfitness for labour?

- yes ..... [1]
- no ..... [2]

187 What is the duration of your present period of unemployed or unfitness for work?

- less than 6 months ..... [1]
- 6-12 months ..... [2]
- 1-2 years ..... [3]
- longer than 2 years ..... [4]
- no answer ..... [9]

188 Apart from recreation, with what do you spend most of your time?
(only one answer)

- paid work ..... [1]
- home work inside the house ..... [2]
- education/study ..... [3]
- unpaid work ..... [4]
- something else ..... [5]
- no answer ..... [9]

189 Do you have a paid job?
(1 hour or short period also counts)

- yes ..... [1]
- no ..... [2]
- no answer ..... [9]

190 How many hours do you work in an

- hours ..... [|]

	average week, non-paid hours not counted? *(INT: eventually estimate average working week, for instance in the case of shift work)*	- no answer ..... [97] - don't know ..... [99]	
191	Are you an employee?	- yes ..... [1] - no ..... [2] - no answer ..... [9]	
192	Are you employed in the business or practice of:	- your own ..... [1] - your partner ..... [2] - parents or in-laws ..... [3] - none of these ..... [4] - no answer ..... [9]	
193	What is your profession?	- profession ..... [|]	

(INT.: Also ask if respondent is unemployed. Profession is oneís former occupation, what one studied for, or the position one is seeking. Also ask if the respondent does not have a job. The profession then is the occupation previously held, what one studied for, or the position one is seeking.)

194	Are you enrolled in a course/education at a school or other institute of learning? *(INT.: in case of more than one, indicate what was followed longest)*	- no ..... [1] - yes ..... [2] - no answer ..... [9]	**199** **195** **199**
195	What sort of education are you enrolled in? *(INT.: what was followed longest)* *(INT.: Show card)*	- elementary school ..... [01] - low level vocational school (LBO, VBO, LTS, LEAO, huishoudschool) ..... [02] - medium level high school, years 1 - 3 (MAVO) ..... [03] - medium level high school, year 4 ..... [04] - high level high school, years 1 - 3 (HAVO, VWO, Atheneum, Gymnasium) ..... [05] - high level high school, years 4 and higher (HAVO, VWO, Atheneum, Gymnasium) ..... [06] - medium level vocational school (e.g. MEAO, MTS, INAS) ..... [07] - high level vocational school (HTS, HEAO, Soc. Academie, etc.) ..... [08] - university, phase 1 (including propaedeuse) ..... [09] - university, phase 2 (doctoral) ..... [10] - university, other post-doctoral ..... [11] - other ..... [12] - no answer ..... [13]	
196	Are you enrolled full time or part time?	- full time ..... [1] - part time ..... [2] - no answer ..... [9]	
197	Have you played truant in the last 2 months, or missed lessons without valid reasons?	- yes ..... [1] - no ..... [2] - no answer ..... [9]	
198	How many hours did you play truant during the last 2 weeks, or missed lessons	- hours ..... [|] - no answer ..... [97]	

without valid reason? - don't know ..... [99]

INT: Next two questions are only applicable if respondent is child/step child/foster child or grandchild in household.

We would like to know, what the head of your household does. If you live with two parents this is your father, otherwise your mother.

199 Is the head of your household employed?

- yes ..... [1] **200**
- no, homemaker ..... [2] **200**
- no, unemployed ..... [3] **200**
- no, unfit to work or prolonged illness ..... [4] **200**
- no, retired or retired early ..... [5] **200**
- no parents in the household ..... [6] **201**
- other ..... [7] **200**
- no answer ..... [9] **201**

200 What profession does the head of household have ?
(INT.: Ask also if respondent is unemployed. Profession is ones former occupation, what one studied for, or the position one is seeking.)

- profession ..... [|]

201 What is the highest level of education you completed?
(INT: Show card)
(INT: Education must be completed)

- elementary school ..... [01]
- low level vocational school (LBO, VBO, LTS, LEAO,) ..... [02]
- medium level high school, years 1 - 3 (MAVO) ..... [03]
- medium level high school, year 4 ..... [04]
- high level high school, years 1- 3 (HAVO, VWO, Atheneum, Gymnasium) ..... [05]
- high level high school, yrs 4 and higher (HAVO, VWO, Atheneum, Gymnasium) ..... [06]
- medium level vocational school (e.g. MEAO, MTS, INAS) ..... [07]
- high level vocational school (HTS, HEAO, Soc. Academy, etc) ..... [08]
- university, phase 1 (including propaedeuse) ..... [09]
- university, phase 2 (doctoral) ..... [10]
- university, other post-doctoral ..... [11]
- no answer ..... [12]

202 I now give you a card with income classes. Could you indicate, which class applies to your own monthly net income?
(INT.: Hand over card)

- less than Fl. 750 ..... [01]
- Fl. 750 to Fl. 1250 ..... [02]
- Fl. 1250 to Fl. 1500 ..... [03]
- Fl. 1500 to Fl. 2000 ..... [04]
- Fl. 2000 to Fl. 2500 ..... [05]
- Fl. 2500 to Fl. 3000 ..... [06]
- Fl. 3000 to Fl. 4000 ..... [07]
- Fl. 4000 to Fl. 5000 ..... [08]
- over Fl. 5000 ..... [09]
- don't know ..... [77]
- no answer ..... [99]

203 Could you indicate which class applies

- less than Fl. 750 ..... [01]

to the monthly net income of your complete household, all members together?
(INT.: Hand over card)

- Fl. 750 to Fl. 1250 ..... [02]
- Fl. 1250 to Fl. 1500 ..... [03]
- Fl. 1500 to Fl. 2000 ..... [04]
- Fl. 2000 to Fl. 2500 ..... [05]
- Fl. 2500 to Fl. 3000 ..... [06]
- Fl. 3000 to Fl. 4000 ..... [07]
- Fl. 4000 to Fl. 5000 ..... [08]
- over Fl. 5000 ..... [09]
- don't know ..... [77]
- no answer ..... [99]

204 Do you see any topics that were not yet raised? If so, which ones?

- no ..... [1]
- yes ..... [2]

205 Soon, the University of Amsterdam will conduct research on the use of heroin and amphetamines. People that use these substances are to be interviewed about the use of these substances only. Earlier in this questionnaire you indicated that you have used heroin or amphetamines. May we contact you in the future to be interviewed about this?

- yes ..... [1] **206**
- no ..... [2] **207**

206 *INT.; hand over the form about the follow up project*

- respondent fills out form ..... [1]
- respondent does not fill out form ..... [2]

207 It may be that we will contact you to check if you are satisfied with the way this interview was conducted. Could we write down your telephone number for this purpose?
(Enq.: You may add:)
NIPO guarantees total confidentiality.
Your telephone number will only be used by NIPO employees for check-ups on my work.

- does not want to give phone number .. [1]
- has no telephone ..... [2]
- gives phone number ..... [3]

(INT.: Please thank respondent for her/his cooperation and fill in evaluation questions.)

EVALUATION QUESTIONS

208 Respondent showed:

- much cooperation ..... [1]
- normal cooperation ..... [2]
- little cooperation ..... [3]
- no judgement ..... [4]

209 Interviewer was:

- alone with respondent ..... [1]
- others present, not disturbing ..... [2]
- others present, disturbing ..... [3]
- other disturbances ..... [4]

210 Language of interview:

- Dutch ..... [1]
- English ..... [2]
- Turkish ..... [3]
- Moroccan ..... [4]
- other ..... [5]

Appendix 3.2

Questionnaire Dutch Postal and Telephone Survey

Index

Introductions
Tobacco
Alcohol
Cannabis
Cocaine
Amphetamines
Ecstasy
Evaluation question
Reminders

INTRODUCTION LETTER MAIL SURVEY

Dear sir/Madam,

The University of Amsterdam and the National Bureau of Statistics are conducting a survey about living habits and the use of medical and recreational drugs. Because health policy and help provisions should be in keeping with what actually happens amongst the population, this research is of great importance.

We ask approximately 850 people to answer a few questions about these topics. The names of the people that are approached are randomly drawn from municipal population registries. The fieldwork organisation NIPO send out the letters and will process the information.

Your answers will be processed with strict confidentiality. We guarantee that your information will remain private. The answers will be imported into one database, leaving out the names and addresses of the people who participated. The NIPO will destroy your name and address information.

We truly hope that you will comply with our request for co-operation, by filling in the enclosed questionnaire. You can return the questionnaire free of charge, by using the answering envelope included here. (Your co-operation will be rewarded with a gift voucher of *f*15,- or a donation of a similar value to a good cause).

If you would like to receive more information about this research, you can call Paul Meijer at the NIPO (020-5225479). Would you please be so kind to return the completed questionnaire to the NIPO within two weeks on receipt?

Thank you in advance for your co-operation.

Dr. P.D.A Cohen
Project coordinator
Institute of Human Geography,University of Amsterdam

Ps. If for any reason you are not able to participate, could you please fill in and return the anwering card?

Good afternoon/evening, you are speaking with … from the fieldwork organisation NIPO.
NIPO is presently conducting a research on behalf of the University of Amsterdam and the Central Bureau of Statistics. Therefore, I would like to speak to…

(mention the name of the person on top of the screen)

Good afternoon/evening, this is … from NIPO.
As you have been able to read from a letter send to you by the University of Amsterdam and the Central Bureau of Statistics, NIPO is currently interviewing 850 Dutch residents about their life styles and their use of medical and recreational drugs.
Can we ask you some questions about this topic? The interview will take approximately five minutes of your time. We assure you that your answers will be treated with strict confidentiality. We guarantee that your information will remain absolutely private.

01 *INTERVIEWER*
Does the respondent want to respondent cooperate?
- yes, start the interview ..... [1]
-make an appointment ..... [2]
- no, no co-operation..... [3]

02 What is the composition of the household to which you belong?
(INT: depart from household core (kid = also step child, foster child, etc.)
(INT: The core of the household is the steady partners, or in 1 parent homes the parent. In other households the core is the adult(s) in the household.)
- (married) couple..... [1]
- (married) couple with children..... [2]
- (married) couple with children,..... [3] plus others
- (married) couple without children,..... [4] plus others
- 1 parent with child/children..... [5]
- 1 parent with child/children, ... [6] plus others
- core of household is not couple/ ..... [7] fixed partners of 1 parent
- no answer..... [9]

03 What is your position in this household?
- one of (married) couple..... [1]
- head of 1 par. household (parent) ..... [2] foster child
- live-in child/stepchild/..... [3]
- someone else within household ..... [4]
- no answer..... [9]

04 *INT: Respondent's gender is:*
- male..... [1]
- female ..... [2]

05 What is your age?
- age ..... [|]
- don't know..... [97]
- no answer..... [99]

06 Do you consider yourself in the first place: (only one answer)
- employed with paid job..... [1]
- homemaker (M/F)..... [2]
- employed non-paid..... [3]
- studying at school or elsewhere ..... [4]

- old-age pensioned or early retiree..... [5]
- none of those ..... [6]
- no answer..... [9]

07 Do you consider yourself as unemployed or unfit for labour?
(more answers possible)

- yes, unemployed ..... [1]
- yes, unfit for work..... [2]
- no..... [3]
- no answer..... [4]

08 How many hours do you work in an average week, non-paid hours not counted?
(INT: eventually estimate average working week, for instance in the case of shift work)

- hours..... [|]
- no answer..... [97]
- don't know..... [99]

09 What is your highest completed education?

- elementary school..... [01]
- low level vocational school (LBO, ... [02]
  VBO, LTS, LEAO)
- medium level high school, ... [03]
  years 1 - 3 (MAVO)
- medium level high school, year 4..... [04]
- high level high school, years 1 - 3..... [05]
  (HAVO, VWO, Atheneum,
  Gymnasium)
- high level high school, years 4 and ..... [06]
  higher (HAVO, VWO, Atheneum,
  Gymnasium)
- medium level vocational school..... [07]
  (e.g. MEAO, MTS, INAS)
- high level vocational school..... [08]
  (HTS, HEAO, Soc. Academie, etc.)
- university, phase 1 ..... [09]
  (including propaedeuse)
- university, phase 2 (doctoral)..... [10]
- university, other post-doctoral..... [11]
- other..... [12]
- no answer..... [13]

TOBACCO

And now for something different. I would like to know something about your habits regarding smoking, drinking, and the use of pharmaceutical and other drugs.

10 Did you ever smoke cigarettes, [shag], cigars or pipes?
INT.: this question also applies to other forms of tobacco such as chewing tobacco and snuff.
- no ..... [1]
- yes ..... [2]
- no answer ..... [9]

11 At what age did you first smoke tobacco?
- age ..... [|]
- don't know ..... [97]
- no answer ..... [99]

12 Did you smoke cigarettes, [shag], cigars or pipes in the past 12 months?
- no ..... [1]
- yes ..... [2]
- no answer ..... [9]

13 And in the past 30 days?
- no ..... [1]
- yes ..... [2]
- no answer ..... [9]

ALCOHOL

Now a few questions on alcoholic drinks such as beer, wine, gin, liquor etc.

14 Did you ever drink an alcoholic beverage?
- no ..... [1]
- yes ..... [2]
- no answer ..... [9]

15 At what age did you drink alcohol for the first time?
- age ..... [|]
- don't know ..... [97]
- no answer ..... [99]

16 Did you drink alcohol in the last 12 months?
- no ..... [1]
- yes ..... [2]
- no answer ..... [9]

17 Did you drink *6 or more* alcoholic beverages in one day in the last 6 months?
- no ..... [1]
- yes ..... [2]
- no answer ..... [9]

18 How often did you drink 6 or more alcoholic beverages in one day?

.
- daily ..... [1]
- more than 4 times a week ..... [2]
- 3 to 4 times a week ..... [3]
- 1 to 2 times a week ..... [4]
- 1 to 3 times a month ..... [5]
- 3 to 5 times past 6 months ..... [6]
- 1 to 2 times past 6 months ..... [7]
- don't know ..... [8]
- no answer ..... [9]

19 Did you drink alcohol in the last 30 days?
- no ..... [1]
- yes ..... [2]
- no answer ..... [3]

20	On how many days did you drink alcohol in the past 30 days?	- number ..... [|] - don't know ..... [97] - no answer ..... [99]

CANNABIS

Now a few questions about the use of cannabis

21	Have you ever used cannabis (hash, marijuana or weed)? - no answer	- no ..... [1] - yes ..... [2] [9] .....
22	At what age did you first use cannabis? (hash, marijuana, weed)	- age ..... [|] - don't know ..... [97] - no answer ..... [99]
23	Have you used cannabis in the last 12 months? (hash, marijuana, weed)	- no ..... [1] - yes ..... [2] - no answer ..... [3]
24	Have you used cannabis in the last 30 days? (hash, marijuana, weed)	- no ..... [1] - yes, ... [2] - no answer ..... [3]
25	In the last 30 days, on how many days did you use cannabis?	- number ..... [|] - don't know ..... [97] - no answer ..... [99]

COCAINE

Now a few questions on the use of cocaine

26	Have you ever used cocaine?	- no ..... [1] - yes ..... [2] - no answer ..... [3]
27	At what age did you first use cocaine?	- age ..... [|] - don't know ..... [97] - no answer ..... [99]
28	Have you used cocaine in the last 12 months?	- no ..... [1] - yes ..... [2] - no answer ..... [3]
29	Have you used cocaine in the last 30 days?	- no ..... [1] - yes, ... [2] - no answer ..... [3]
30	In the last 30 days, on how many days did you use cocaine	- number ..... [|] - don't know ..... [97] - no answer ..... [99]

AMPHETAMINES

31	Have you ever used amphetamines? (stimulants, pep, speed , etc.)	- no ..... [1] - yes ..... [2] - no answer ..... [3]
32	At what age did you first use amphetamines?	- age ..... [|] - don't know ..... [97] - no answer ..... [99]
33	Have you used amphetamines in the last 12 months?	- no ..... [1] - yes ..... [2] - no answer ..... [3]
34	Have you used amphetamines in the last 30 days?	- no ..... [1] - yes ..... [2] - no answer ..... [9]
35	In the last 30 days, on how many days did you use amphetamines?	- days ..... [|] - don't know ..... [97] - no answer ..... [99]

ECSTASY

Now a few questions about ecstasy follow.

36	Have you ever used ecstasy (XTC, MDMA, E)?	- no ..... [1] - yes ..... [2] - no answer ..... [3]
37	At what age did you first use ecstasy?	- age ..... [|] - don't know ..... [97] - no answer ..... [99]
38	Have you used ecstasy in the last 12 months?	- no ..... [1] - yes ..... [2] - no answer ..... [3]
39	Have you used ecstasy in the last 30 days?	- no ..... [1] - yes ..... [2] - no answer ..... [9]
40	In the last 30 days, on how many days did you use ecstasy	- days ..... [|] - don't know ..... [97] - no answer ..... [99]

(mail survey only)

41	As an appreciation for your co-operation, would you like to receive a gift voucher worth ƒ15,-, or would you rather have this amount donated to a noble cause?	- yes, I would like to receive it ..... [1] - yes, for a noble cause ..... [2] - neither ..... [3]

This was the last question. Thank you very much for your time.

INTERVIEWER (telephone survey only):

41 Was the interview successful?

- yes..... [1]
- no, refusal ..... [2]

FIRST AND SECOND REMINDER LETTER POSTAL SURVEY

UNIVERSITEIT VAN AMSTERDAM

Centraal Bureau voor de Statistiek

Subject: Research Living habits and the use of medical and recreational drugs

Amsterdam, date

Dear Sir, Madam,

Some time ago you received a questionnaire concerning our research on the living habits and the use of medical and recreational drugs by Europeans. At the time we asked ample 850 Dutch residents to answer a few questions about these topics.

Until now a number of people has not returned a completed questionnaire to the NIPO. We can imagine that not all of you have had the time to do this. Maybe, some people simply forgot to do it. If you are one of these people, we would like to ask you the following.

Because it is of great importance for this research that everyone takes part, we would again like to ask all of you to fill in the enclosed questionnaire and to send it back to the NIPO. In case you did return the questionnaire already, we would like to thank you for your co-operation. In that case you can consider this letter as not being send.

If you would like to have more information about the research, you can contact Paul Meijer at the NIPO (020-5225 479). Would you please be so kind to return the completed questionnaire within the next week to the NIPO?

Thank you I advance for your co-operation.

dr. P.D.A. Cohen
project coordinator
Institute of Human Geography, University of Amsterdam

ps: If, for any reason you are not able to take part in this investigation, would you please be so kind to fill in and return the answering card?

Appendix 4 Prevalence figures the Netherlands, Greece and Sweden

Table A1: Drug use prevalence by type of survey (1997-1998), (weighted percentages)
x: variable not available

the Netherlands

	Face to Face survey				Postal survey				Telephone survey			
	lifetime	*last year*	*last month*	*unweighted n reported lifetime*	*lifetime*	*last year*	*last month*	*unweighted n reported lifetime*	*lifetime*	*last year*	*last month*	*unweighted n reported lifetime*
drug	%	%	%		%	%	%		%	%	%	
Tobacco	70.2	43.2	38.9	*11,180*	69.8	38.3	34.2	*881*	75.4	42.1	38.0	*633*
Alcohol	93.2	87.3	39.3	*14,722*	94.2	88.4	46.6	*1,174*	96.9	89.3	40.2	*805*
Cannabis	20.2	6.0	3.3	*4,329*	20.4	6.7	3.1	*248*	21.6	6.1	3.6	*156*
Cocaine	2.7	0.8	0.3	*711*	2.8	0.6	0.2	*36*	1.4	-	-	*9*
Amphetamine	2.4	0.4	0.2	*557*	3.2	0.8	0.3	*40*	2.4	0.4	0.4	*17*
Ecstasy	2.5	1.0	0.4	*615*	3.0	1.0	0.3	*37*	1.3	0.4	-	*8*
Total sample				*16,200*				*1,250*				*833*
Greece												
Tobacco	72.9	x	50.6	*2,156*	74.2	x	49.0	*392*	69.1	x	44.8	*581*
Alcohol	96.7	90.1	78.7	*2,940*	97.6	94.3	84.4	*489*	94.6	91.2	76.0	*802*
Cannabis	15.0	5.2	2.7	*478*	15.9	7.2	2.9	*81*	7.8	2.9	0.9	*59*
Cocaine	1.4	0.6	0.2	*46*	2.2	1.8	0.8	*12*	0.5	0.4	-	*3*
Amphetamine	0.7	0.1	0.0	*22*	2.4	0.6	0.6	*11*	1.1	0.4	0.2	*9*
Ecstasy	0.3	0.1	0.1	*13*	1.6	0.6	0.4	*7*	0.4	-	-	*2*
Total sample				*3,036*				*530*				*854*
Sweden												
Tobacco	x	x	x	*x*	x	x	x	*x*	x	x	x	*x*
Alcohol	x	90.0	88.5	*1132**	x	89.6	86.6	*702**	x	94.5	94.3	*745**
Cannabis	14.9	1.0	0.2	*167*	12.4	2.2	0.6	*98*	13.3	1.7	0.5	*104*
Cocaine	0.6	0.1	x	*7*	1.7	0.3	x	*14*	0.9	0.3	0.1	*7*
Amphetamine	2.0	0.1	0.1	*22*	2.9	0.6	0.4	*22*	2.9	0.9	0.1	*21*
Ecstasy	0.2	-	-	*3*	0.4	-	-	*3*	0.9	0.3	0.1	*6*
Total sample				*1,254*				*784*				*792*

Appendix 5 Checklist

A *Sample data*

1 Describe sample frame and population coverage
2 Describe sampling technique
3 Attribute unique respondent numbers
4 Register gross sample information such as age, gender, residence and marital status, in SPSS or DBASE data format
5 Include 'reason of non-response' variable
6 If gross sample data can not be registered: what is the response rate and how is it calculated?
7 Use similar age-range as is applied in the response data file
8 Compare surveys samples from the same year or with minimal time in between as possible

B *Fieldwork procedures*

1 How many times are people approached before they become a non-response?
2 How are the interviewers selected, trained, and rewarded?
3 Has a pilot survey been conducted?
4 How are respondents approached?
5 What time of the day are interviews conducted?
6 Are interviews screened?

C *Fieldwork variables*

1 Use the same unique respondent number
2 Create variable number of reminders used/visits/calls
3 Use interviewer numbers
4 Register interviewer background characteristics such as age, gender, ethnicity
5 Date of the interview
6 Time of the interview
7 Duration of the interview

D *Population data*

1 Main population characteristics used for the weight calculations (for instance distribution by age, gender and urban density)
2 Use population data of the same year as the year in which the survey sample was drawn
3 If the sample is stratified by region, the information on the population distribution should as well be stratified by region
4 Use a similar age selection as is made for the response population

E *The questionnaire*

1 Use unique respondent codes, similar as in the gross sample data file and referring to the same respondent
2 Use as much as possible similar introductions
3 Use similar question wording and phrasing
4 Use similar question order and routing pattern
5 Recreate context if necessary
6 Use similar and the same number of answering possibilities
7 Check for metrical equivalence
8 Always include separate answering categories 'don't know' and 'not applicable', and 'don't want to answer'
9 The categories 'don't know' and 'not applicable' should not be put on show card, but registered by the interviewers
10 Minimize grouping of answering categories
11 Check for translation errors

F *The respondent data*

1 SPSS-data form, otherwise DBASE, with code book indicating position, variables and values
2 The main target variables agreed upon: (lifetime, last year and last month prevalence of different licit and illicit drugs)
3 Include background characteristics such as age, gender, education, income, household composition
4 Include weights, based on the agreed population age range
5 Check if the right respondents have been interviewed
6 Do not exclude respondents because of data omissions or imperfections

G *Other*

1 Collect the original questionnaire surveys, including introduction letters and reminder and have them translated by a professional translator
2 Compose a matrix with three columns, mentioning:
* the final names of the variables in the joint data set *
whether or not they were asked *
their names in the data set Ask
calculation method of the weights, including the formula