Understanding pathways to stimulant use:

a mixed-methods examination of the individual, social and cultural factors shaping illicit stimulant use across Europe (ATTUNE): overall results

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Among illicit drugs, amphetamine type stimulants (ATS) such as amphetamines (‘speed’), MDMA (‘ecstasy’) and methamphetamine (‘crystal meth’) are the most commonly used substances after cannabis worldwide. At the same time, little is known about the motives of ATS use, what factors are associated with problematic or dependent use and what circumstances contribute to a change of use in terms of increase, reduction or cessation. In order to gain insights into the different pathways of ATS use careers and consequently to generate conclusions regarding possible interventions, the ATTUNE study was conducted in five European countries (Germany, the Netherlands, England, Poland and the Czech Republic).

First, the international literature was systematically reviewed to develop the tools for interviewing different groups of ATS users and a group of non-ATS users. Based on an explorative mixed-method design in two modules, 270 qualitative interviews were initially conducted in pre-defined country-specific sampling regions with people who were ATS dependent, who used ATS frequently or occasionally or who have had an opportunity to use ATS but never tried it (module 1). Subsequently, four groups of ATS users and a group of ATS non-users were recruited in the same regions and interviewed with a standardised questionnaire. After data cleaning 1656 datasets (CZ: 199, UK: 375, NL: 249, PL: 386, GER: 447) were included in the analysis (module 2).

The results show that ATS users have very heterogeneous motives for use, dynamic consumption patterns with alternating phases of increase, reduction and continuation of ATS use and different ways and reasons for cessation. At the beginning, consumption is often motivated by curiosity and pleasure-seeking, further, to improve performance at work/studies or to cope with mental health problems. An increase in ATS use is often associated with individual and social stressors such as loss of employment, separation from a partner, mental illness and increasing orientation towards a drug-using environment. Long-term occasional, controlled use is working for people who prioritise everyday commitments, who use only on selected occasions and who have a social network not only comprising of ATS users. The reduction or eventual cessation of ATS use is associated with experiencing serious health effects of use and increased stress from neglecting work, family and relationships.
or no longer having an interest in nightlife. ATS users who have consumed primarily at parties or during nightlife are often maturing out of consumption. In contrast, many but not all of those with dependent or problematic ATS consumption have utilised counselling and treatment.

The comprehensive quantitative analyses of different types of ATS use patterns, in which ATS non-users, rare, moderate, frequent and ATS dependent users are compared against each other, show that ATS use embedded in the leisure and consumption cultures of young adults remains mostly episodic. Phases of frequent use often decrease over time in line with shifts in life priorities (graduation, career developments, relationship, family). The investigated patterns of frequent and dependent ATS use show that intensive use, combined with various risk factors such as exposure to critical life events, lower educational attainment, integration problems such as unemployment and psychological problems/symptoms, increases the risk of developing dependent use patterns. This includes functional ATS use, in the sense that ATS are increasingly used to cope with personal problems.

Effective interventions should take into account the heterogeneity of ATS users’ consumption patterns and consist of education and information on the effects of individual ATS substances and harm reduction measures on the one hand and special drug counselling and treatment services on the other. The results of the study point out that the specific circumstances and consequences of ATS use have yet received too little attention in outpatient and inpatient addiction care.
Introduction

Background

A number of substances fall into the group of amphetamine-type stimulants (ATS), such as amphetamine (“speed”, “pep”), 3,4-Methylenedioxymethamphetamine (MDMA, “Ecstasy”), and methamphetamine (“crystal meth”). Among the “new psychoactive substances” (NPS) that have emerged over the past few years, there are also substances that mimic the effects of amphetamine. They are based on phenethylamine and cathinones and are marketed primarily on the internet under the name “bath salt”. After these substances had been legally available for several years (“legal highs”), most of them were placed by and by on the controlled drug schedule. The fifth type of substances that are regarded as ATS are prescription drugs containing amphetamine-type medical agents. The most popular ones are “Ritalin” (methylphenidate) and “Vigil” (modafinil) that are often prescribed in order to treat attention deficit hyperactivity disorder (ADHD) or narcolepsy, but are also used non-medical for cognitive enhancement.

The unbroken popularity of ATS is reflected in different data sources about illicit drug use. The world drug report issued by UNODC showed ATS to be the second most widely used illicit substances globally (after cannabis), and the use is still increasing (1). Across Europe as a whole, 0.5% of those aged 15 – 64 reported using amphetamines in the past 12 months, with higher rates for MDMA use (0.8%). However, ATS use rates vary by country, with the highest consumption found in the Netherlands (amphetamine, 1.7%; MDMA, 3.6%). Data also suggest higher consumption rates for adolescents and younger adults compared with the general population, with 1% of those aged 15 – 34 reporting amphetamine consumption and 1.8% MDMA consumption over the previous year (2).

These European epidemiological data can be complemented with information about ATS consumption that is gained by analysing municipal wastewater for ATS metabolites. Referring to these data, EMCDDA reports increased ATS usage levels in several European countries (2). Furthermore, data on worldwide seizures of ATS point in the same direction: the amounts withdrawn from circulation by law enforcement agencies have doubled over the past decade (1).

Long-term use of ATS can lead to a substance use disorder, including (psychological) dependency (3). The global prevalence of substance use disorders related to amphetamines was estimated at nearly five million people in 2016, while in 1990 it was still at around four million people. Prevalence of people affected by amphetamine use disorder in Europe is estimated at nearly 750,000 (4). Latest treatment data, issued by EMCDDA, show that 30,000 people entered specialised treatment in 2017, with amphetamines as their primary drug (2).

In the light of the international data it can be summarized that ATS use is a widespread phenomenon which has the potential of causing health concerns especially for those with frequent consumption and/or dependency.
However, yet there is limited evidence of the natural course and dynamic aspects of individual ATS use, of what influences different trajectories of consumption over time and whether this varies by type of ATS substance or user characteristics, such as gender, age or socioeconomic status.

In order to address this research gap, the Centre for Interdisciplinary Addiction Research of the Hamburg University (ZIS) built a consortium of five European research institutions, following a call for proposals in the framework of the European Research Area Network on Illicit Drugs (ERANID). The consortium set up a research design for a project named: “Understanding pathways to stimulant use: a mixed-methods examination of the individual, social and cultural factors shaping illicit stimulant use across Europe (ATTUNE)”. For details, see section “structure of the project”.

**Aim of the project**

The overall aim of the project is to improve the understanding of which factors shape different pathways of ATS use in Europe. ATTUNE intends to provide a comprehensive understanding of why stimulant users start, stop, increase, and/or reduce their consumption and under which circumstances and conditions they change their consumption patterns.

We employed the “biopsychosocial model” (5) as a theoretical background and adapted it to the research question (see figure 1). Based on this model we assumed that different pathways are influenced by the interaction and influence of a range of factors, including individual differences, social dynamics and environmental/cultural aspects. By examining interactions between individual, social and environmental factors and the overall trajectory of drug use, this study wants to explore individual motivations to use ATS and describe different patterns of consumption over time. In doing so, the study seeks to identify potential protective factors (e.g., personality traits, social integration) associated with the ability to control, decrease or quit ATS use as well as risk factors (e.g., critical life events) associated with the escalation of ATS consumption patterns towards problematic use and/or dependence. Further aims were to explore why some individuals exposed to ATS choose not to use these substances, as well as examining the relationship that illicit stimulant users have with other illicit and licit substances. Another central aspect of the study is to reveal the role of “social integration” as a cause or consequence of specific patterns of ATS use.
The results of the study provide valuable perspectives for the development of target group specific interventions (or shaping of existing ones), such as self-help, prevention and treatment.
Structure of the project

The ATTUNE project was set up and conducted by a consortium of five research institutions from Germany, the UK, Poland, the Netherlands and the Czech Republic, with Germany acting as principle investigator. Even though the project was tendered under the framework of an ERANID call, each partner received funding from its national health authority. Germany was coordinating the overall progress of the project as well as the German part of the study; each partner was responsible to ensure the implementation of the study in its country.

ATTUNE is designed as a sequential, exploratory, mixed-methods study and is structured in three consecutive parts. The first step was to conduct a systematic narrative review of the literature in order to identify individual, social and environmental influences shaping key phases in the ATS use trajectory: initiation, continuation, increase/relapse and decrease/abstinence. The UK team took the lead on this task and was supported by all other partners. One purpose was to gather information on crucial issues regarding ATS use trajectories which were used to inform the content of the survey instruments for the other parts of the study.

The next part, named module 1, consisted of semi-standardised, qualitative interviews with five groups of ATS users as well as one group of non-ATS users. In the third part, module 2, a tablet-based quantitative survey was conducted using a standardised questionnaire. All survey instruments were designed, discussed and decided within the consortium in order to have common instruments which could be applied in each participating country and which resulted in a common qualitative as well as quantitative database. Details about recruitment of interviewees as well as specific content of the survey instruments are described in the methodology section.
Methodology

Operationalisation of sampling groups and eligibility criteria

One aim of the project was to assess different types of ATS users regarding their consumption patterns and the factors that are associated with specific patterns. In order to reach a sufficient variety of ATS use patterns in the sample different user types regarding their history and frequency of use (see figure 2) were pre-defined. Further, we decided to actively include people who were exposed to ATS use but rejected the use. Exposition to ATS use was operationalised as having been present when friends, acquaintances, or family members were using ATS. An online screening was set up for two main reasons. On the one hand, the online screening allowed a certain control about the inclusion of specific user types in order to reach fairly equal group sizes. On the other hand, it allowed to check the inclusion criteria for each person interested.

Individuals who have either used or who had the opportunity to use ATS were regarded as eligible for inclusion in both, the qualitative interviews and the survey questionnaire. To ensure the inclusion of only those who had had the opportunity to experience changes in the trajectory of their ATS use, it was essential that the participant’s first ATS consumption (or exposure) had taken place at least five years before the interview or survey questionnaire. In order to avoid overlap between pathways into opioid use and pathways into ATS use, people previously diagnosed with an opioid addiction (self-reported) were excluded. This exclusion criteria also ensured that sample is not dominated by former or current opioid users who consume stimulants primarily to complement their opioid use (e.g., to get a ‘kick’ while in opioid substitution therapy). Further inclusion criteria were an age of 18 years or older, being a resident in one of the five national sampling regions, and being able to take part in the interview (not psychotic, no severe cognitive impairments or language barriers).

In figure 2 and figure 3 flowcharts of the group allocation during the screening process are presented.
Figure 2: Flowchart of group allocation module 1

Preconditions: Age ≥18 and residence in sampling region and no opioid dependency (lifetime)

ATS lifetime prevalence
- First use ≥5 years ago
- First use <5 years ago
  - Excluded

no ATS lifetime prevalence
- Ever been exposed to ATS
- Never been exposed to ATS
  - Excluded

past 12 months prevalence
- ≥10 consumption days within past 12 month
- <10 consumption days within past 12 month
  - Group 1
  - Group 2

no past 12 months prevalence
- ≥10 consumption days within one year (at any time except past 12 month)
- <10 consumption days within one year (at any time except past 12 month)
  - Group 2
  - Group 4

≥10 consumption days within one year (at any time except past 12 month)
- Formerly ATS dependent
- Never ATS dependent
  - Group 2
  - Group 3

<10 consumption days within one year (at any time except past 12 month)
- Formerly ATS dependent
- Never ATS dependent
  - Group 2
  - Group 3
  - Group 5
Table 1 provides an overview of the operationalisation of the sampling groups in module 1 and table 2 presents the respective information for module 2. The operationalisation of “current use” in module 2 is slightly different than in module 1. Only users who consumed ATS within the past three months before the screening were regarded as “current users” in module 2. Even though this definition excludes users who took ATS between four and 12 month before the screening it assures that current and former users were reliably distinguished. Dependency on ATS was assessed using the severity of dependence scale (6) with the recommended cut-off for ATS of 4 or more points (7).

**Table 1: Overview of operationalisation of sampling groups in module 1**

<table>
<thead>
<tr>
<th>Study groups in Module 1</th>
<th>Name</th>
<th>past 12 months prevalence</th>
<th>≥ 10 consumption days within past 12 months</th>
<th>≥ 10 consumption days within one year (at any time except past 12 months)</th>
<th>currently ATS dependent</th>
<th>formerly ATS dependent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>Currently dependent users</td>
<td>yes</td>
<td>yes</td>
<td>n.a.</td>
<td>yes</td>
<td>n.a.</td>
</tr>
<tr>
<td>Group 2</td>
<td>Formerly dependent users</td>
<td>n.a.</td>
<td>n.a.</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Group 3</td>
<td>Currently frequent, non-dependent users</td>
<td>yes</td>
<td>yes</td>
<td>n.a.</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Group 4</td>
<td>Formerly frequent, non-dependent users</td>
<td>no</td>
<td>n.a.</td>
<td>yes</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Group 5</td>
<td>Non-frequent users (currently or formerly)</td>
<td>no</td>
<td>n.a.</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Group 6</td>
<td>Exposed non-users</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

**Table 2: Overview of the operationalisation of sampling groups in module 2**

<table>
<thead>
<tr>
<th>Study groups in Module 2</th>
<th>Name</th>
<th>past 12 months prevalence</th>
<th>past 3 months prevalence</th>
<th>≥ 10 consumption days within past 12 months</th>
<th>≥ 10 consumption days within one year (at any time except past 12 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A_1</td>
<td>Currently frequent users</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>n.a.</td>
</tr>
<tr>
<td>Group A_2</td>
<td>Currently non-frequent users</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>n.a.</td>
</tr>
<tr>
<td>Group B_1</td>
<td>Formerly frequent users</td>
<td>no</td>
<td>n.a.</td>
<td>n.a.</td>
<td>yes</td>
</tr>
<tr>
<td>Group B_2</td>
<td>Formerly non-frequent users</td>
<td>no</td>
<td>n.a.</td>
<td>n.a.</td>
<td>no</td>
</tr>
<tr>
<td>Group C</td>
<td>Exposed non-users</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>
Figure 3: Flowchart of group allocation module 2

Preconditions: Age >=18 and residence in sampling region and no opioid dependency (lifetime)

ATS lifetime prevalence

- first use ≥ 5 years ago
- first use < 5 years ago

  - excluded

  - Group C
  - excluded

no ATS lifetime prevalence

- ever been exposed to ATS
- never been exposed to ATS

  - first exposition ≥ 5 years ago
  - first exposition < 5 years ago

past 12 months prevalence

- past three months prevalence
- no past three months prevalence

  - excluded

  - Group A_1
  - Group A_2

no past 12 months prevalence

- ever ≥ 10 consumption days within one year (at any time except past 12 months)
- never > 9 consumption days within one year (at any time except past 12 months)

  - Group B_1
  - Group B_2

Group A_1: current frequent users
Group B_1: former frequent users
Group C: non-users
Group A_2: current non-frequent users
Group B_2: former non-frequent users
Aims and its indicators

The progresses of the ATTUNE project followed defined central aims and a number of specific aims. For each aim indicators for the achievement have been specified (table 3). This report will refer again to the indicators at various points.

Table 3: Aims and indicators of the project

<table>
<thead>
<tr>
<th>Aims</th>
<th>Indicators for measuring the achievement of aims</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploration of the consumption patterns and trajectories of ATS users in five European countries.</td>
<td>Comprehensive research report containing information about “consumption careers” of different user types (non-user, moderate, frequent, and dependent user).</td>
</tr>
<tr>
<td></td>
<td>Identification of individual, social, or environmental factors that influence the consumption patterns.</td>
</tr>
<tr>
<td></td>
<td>Publication of research results in international peer reviewed journals.</td>
</tr>
<tr>
<td>Identification of risk and protective factors of changes in consumption habits towards risky or dependent ATS consumption.</td>
<td>Evidence on the motives for first use, continued use as well as the decision not to use ATS from qualitative and quantitative interviews</td>
</tr>
<tr>
<td>Identification of risk and protective factors using logistic regression models is presented in the respective section.</td>
<td></td>
</tr>
<tr>
<td>Specific aims</td>
<td></td>
</tr>
<tr>
<td>Development of a mixed-methods-based research design.</td>
<td>Detailed study protocol is available and published in an international peer-reviewed journal (8).</td>
</tr>
<tr>
<td>Development of a systematic literature review. The results are published in an international peer-reviewed journal (9).</td>
<td></td>
</tr>
<tr>
<td>Development of suitable survey instruments.</td>
<td>The guideline for the qualitative interviews for module 1 as well as the standardised questionnaire for the quantitative survey is available in the annex.</td>
</tr>
<tr>
<td>Achievement sample reach for module 1.</td>
<td>N=279 qualitative interviews were conducted, transcribed and analysed.</td>
</tr>
<tr>
<td>Achievement sample reach for module 2.</td>
<td>N=2058 quantitative interviews were conducted; an SPSS data-set was generated, cleaned and prepared for analysis.</td>
</tr>
<tr>
<td>Development of a framework for project evaluation.</td>
<td>An internet-based real-time monitoring for the evaluation of the qualitative and quantitative study arm was programmed and made available. It allowed all partners to check sample achievement rates at any time, intervene in a controlling manner and served as a basis for decision-making for the entire consortium for project evaluation purpose.</td>
</tr>
</tbody>
</table>
Recruitment and screening

Study participants were recruited in many different ways via purposeful sampling. Leaflets and posters containing information about the study, details to contact the local research team and a link to the screening website were distributed in drug service institutions, at universities and in different night life settings (bars, electronic music clubs). Further, the call to participate was placed in local advertising journals as well as on the internet. Information was disseminated in online drug help as well as drug information/“psychedelics” forums, social media and portals for student and temporary jobs. The recruitment strategy also included the direct approach of potential participants in night life settings, at universities and via “snowball sampling” (asking already interviewed persons to invite potential interested friends/acquaintances).

Interested persons were asked to visit the screening website which was created with the survey tool LimeSurvey. The survey applied a number of questions to check the eligibility criteria. Furthermore, the survey questions on ATS use patterns enabled the allocation of eligible participants to one of the predefined sampling groups. At the end of the screening process a message was shown to each eligible person with the request to contact the local research team via email or phone call. Because of the anonymity of the screening (and the later interview) the research team was not able to contact participants directly.

A coordination database containing some key variables (e.g. group, gender, treatment experiences) which was running in the background allowed the monitoring and steering of the sampling procedure. Groups that already reached the desired size of participants could be closed and normally eligible persons were excluded. The other way round the recruitment team was able to look targeted for participants who fit into a sampling group that was yet insufficiently filled.

Sample sizes

In table 4 and table 5 overviews are given of the desired sample sizes for each group and each sampling region for module 1 and accordingly for module 2. Forty-five persons per study group (n=270 for the total sample) were considered sufficient for the qualitative data collection in module 1 (10).

Sample size calculation for module 2 was based on considerations about possible fruitful analyses when designing the study. The initial point was to ensure country-level analyses within the (sampling) group of current users (A_1 and A_2) as well as former users (B_1 and B_2), see table 5. In order to detect statistically significant small to medium effects for continuous distributed variables (d≥0.40, α=0.05, power=80%), a group size of n=100 is sufficient (11). As group C consists of non-users only, it was planned to focus the analyses on comparison with one of the user groups (A or B), reducing the required size for this group to n=100. Due to funding restraints, the sample size in the Netherlands and the Czech Republic is smaller, which impeded the production of statistically significant country specific intra-group comparisons.
Table 4: Planned sample sizes module 1 by countries and study groups

<table>
<thead>
<tr>
<th>Country</th>
<th>Partner institution</th>
<th>Data collection regions</th>
<th>Sample sizes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Group 1</td>
</tr>
<tr>
<td>Germany</td>
<td>ZIS</td>
<td>Border Region to Czech Republic / metropolitan region of Hamburg</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Currently dependent</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>UNEW</td>
<td>Northern England</td>
<td>10</td>
</tr>
<tr>
<td>Poland</td>
<td>APS</td>
<td>Metropolitan region of Warsaw</td>
<td>10</td>
</tr>
<tr>
<td>Netherlands</td>
<td>RG</td>
<td>Amsterdam/ the region of Eindhoven</td>
<td>10</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>OGCR</td>
<td>Border region to Germany</td>
<td>5</td>
</tr>
<tr>
<td>Total N groups</td>
<td></td>
<td></td>
<td>45</td>
</tr>
</tbody>
</table>
Table 5: Planned sample sizes module 2 by countries and study groups

<table>
<thead>
<tr>
<th>Country</th>
<th>Partner institution</th>
<th>Data collection regions</th>
<th>Sample sizes</th>
<th>Current ATS user</th>
<th>Former ATS user</th>
<th>Non ATS user</th>
<th>Total N countries</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A_1: Frequent</td>
<td>A_2: Non-freq.</td>
<td>B_1: Frequent</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>ZIS</td>
<td>Border Region to Czech Republic / metropolitan region of Hamburg</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>500</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>UNEW</td>
<td>Northern England</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>500</td>
</tr>
<tr>
<td>Poland</td>
<td>APS</td>
<td>Metropolitan region of Warsaw</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>500</td>
</tr>
<tr>
<td>Netherlands</td>
<td>RG</td>
<td>Amsterdam/the region of Eindhoven</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>250</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>OGCR</td>
<td>Border region to Germany</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>250</td>
</tr>
<tr>
<td>Total N groups</td>
<td></td>
<td></td>
<td>400</td>
<td>400</td>
<td>400</td>
<td>400</td>
<td>2000</td>
</tr>
</tbody>
</table>

Survey instruments

Two semi-structured interview guidelines were developed to conduct the qualitative interviews in module 1: one for the ATS-user groups and one for the non-user group. The guideline is based on key emergent themes from the systematic literature review as well as on relevant theoretical considerations (biopsychosocial model of substance use). Participants were asked about their experiences and their consumption patterns regarding ATS and other licit and illicit drugs. To obtain a detailed understanding of which influences have shaped these ATS use patterns, participants were asked about drug use motives, effects/consequences, settings, occasions, lifestyles and how these ATS use trajectories have changed in life. The interview ended with questions about the impact of the ATS use on integration and their future plans with regard to drug use. The interview guidelines are provided in the annex. Whilst the use of the interview guide ensured that all central topics were covered, participants had the opportunity to discuss additional issues or concerns when relevant.

During the qualitative interviews time-charts were used to document the participants’ substance use over time, including age of onset and frequency of use as well as to record positive and negative life events (e.g. family/partnership, education/work, illness, treatment, imprisonment).

The quantitative survey questionnaire which was applied in module 2 included questions based on the key themes emerging from the qualitative interviews, as well as a selection of standardised instruments to assess various substance use, health and psychological factors (see table 6). The questionnaire covered the following:
A: Sociodemographics: These include sex, age, citizenship, migration background, relationship and children, living situation, educational and occupational situation and social integration.

B: Drug use: Detailed assessment of all illicit drugs ever used in life (lifetime prevalence, past 12-month prevalence, past 30-day prevalence, age at first and last use), test for alcohol dependence (Cutting Down, Annoyance by criticism, Guilty feeling, Eye-Openers (CAGE); Alcohol Use Disorders Identification Test- Consumption (AUDIT-C)) and tobacco smoking status.

C: ATS use: Test for ATS dependence (SDS), injecting drug use and treatment experiences; usual setting of ATS use; patterns, motives and consequences of ATS use including (reasons for) changes.

D: Judicial problems: times and reasons for imprisonment.

E: Physical and mental health assessment (Brief Symptom Inventory-18).

F: Personality assessment (Big Five Inventory-10, Brief Sensation Seeking Scale-4, Generalized Self-Efficacy Scale, Connor-Davidson Resilience Scale-10) and critical life events.

Table 6: Overview of standardised measurement instruments

<table>
<thead>
<tr>
<th>Name</th>
<th>Acronym</th>
<th>Content</th>
<th>Reliability: Cronbach’s α</th>
<th>Validity: sensitivity/specificity (cut-off)</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Standard Classification of Education(12)</td>
<td>ISCED</td>
<td>Identification of highest educational level</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Subjective social integration(13)</td>
<td>SSI</td>
<td>Subjective assessment of social integration</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Subjective social position(13)</td>
<td>SSP</td>
<td>Subjective assessment of social position</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CAGE questionnaire(14)</td>
<td>CAGE</td>
<td>Alcohol problems lifetime</td>
<td>0.8-0.98</td>
<td>0.71/0.90 (2)</td>
</tr>
<tr>
<td>Alcohol Use Disorders Identification Test(15)</td>
<td>AUDIT-C</td>
<td>Alcohol problems past year</td>
<td>0.91</td>
<td>0.93/0.66 (4)</td>
</tr>
<tr>
<td>The Severity of Dependence Scale(6)</td>
<td>SDS</td>
<td>ATS dependency lifetime</td>
<td>0.81–0.89</td>
<td>71.3/77.1 (4)</td>
</tr>
<tr>
<td>Brief Symptom Inventory-18(16)</td>
<td>BSI-18</td>
<td>Measurement of somatisation, anxiety, depression</td>
<td>0.87-0.94</td>
<td>91.2/92.6 (63)</td>
</tr>
<tr>
<td>Satisfaction with life scale(17)</td>
<td>SWLS</td>
<td>General life satisfaction</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Big Five Inventory(18)</td>
<td>BFI-10</td>
<td>Assessment of five personality traits</td>
<td>0.58-0.84</td>
<td>-</td>
</tr>
<tr>
<td>Brief Sensation Seeking Scale(19)</td>
<td>BSSS-4</td>
<td>Measurement of sensation seeking</td>
<td>0.66</td>
<td>-</td>
</tr>
<tr>
<td>Generalized Self-Efficacy Scale(20)</td>
<td>GSE</td>
<td>Measurement of self-efficacy</td>
<td>0.92</td>
<td>-</td>
</tr>
<tr>
<td>Connor-Davidson Resilience Scale(21)</td>
<td>CD-RISC-10</td>
<td>Measurement of resilience</td>
<td>0.89</td>
<td>-</td>
</tr>
</tbody>
</table>
For group C (non-users), some questions were omitted (e.g., questions about ATS use) and replaced with alternative questions focused on their motives for non-use and exposure situation.

Both, qualitative and quantitative survey instruments were developed in English and discussed between all partners. The final versions were then translated into the languages of the participating countries. Each participant was interviewed with the same instrument which enabled a common dataset for analysis.

**Data collection**

Face-to-face qualitative interviews were conducted between February and August 2017 by members of the research team of each participating country. Prior to the interview, all participants received an information leaflet containing details about the study, explaining what participation involves: anonymity, confidentiality, the use of data, and data protection rules. The participants were then invited to complete a verbal consent form, if they expressed the wish to participate. The interviews were audio recorded and lasted approximately 45 to 60 minutes. On completion of the interview, each participant received an incentive (money or vouchers, depending on country). All interviews were transcribed in full, transferred to appropriate software for analysis, and afterwards the audio files were deleted.

As mentioned above, the quantitative survey was conducted with the CAPI method (Computer-assisted personal interviewing). The questionnaire content was first drafted in a text editor and once finalised, all questions were programmed using the survey software GessQ® to enable administration via password-protected tablet computers. The survey instrument was translated and piloted in all partner countries and revised as necessary. The latest version of the questionnaire was hosted on a central server operating in the IT environment of Hamburg University and could be downloaded to the tablets directly as necessary. This server was also the recipient for the data uploads from the tablets.

In each country, trained research assistants recruited participants and conducted the interviews face-to-face or via video-telephony (Skype®). Show cards containing relevant prompts and additional information (e.g. lists of ATS, answering scales) supported the conduct of the interviews.
Monitoring, data management and analysis

The screening process and fieldwork progress was monitored using a study-specific coordination database. This database was populated with screening data from each participant as well as key information regarding the interviews or questionnaires, such as study group, duration of interview, gender distribution, sampling region, and contact with drug help services.

The raw qualitative data from Module 1 were managed, stored and analysed by the respective research teams in each participating country. Initial analyses were conducted at country level using a common coding framework. Analysed data, including emerging interview themes, were pooled and provided to ATTUNE PI (Hamburg University).

The raw quantitative data were uploaded continuously to the central data management at the Hamburg University. The raw data were cleaned, edited and transformed into SPSS datasets, one for each country, as well as one comprehensive dataset covering all five countries. In order to get an overview of the data material different sets of descriptive tables were created using different group variables such as sampling groups (described above). However mainly newly developed grouping variables regarding frequency and intensity of ATS use during the respondents’ “ATS career” were analysed. Detailed descriptions of the analysis groups as well as all analyses conducted with these groups are provided in the results section.
Work plan and time schedule

With the ATTUNE study very specific and defined groups of ATS users should be recruited. This approach made recruitment highly challenging. Although for example current users could be reached more easily, former users especially those with rare or experimental use were hard to reach and could not be attracted immediately for participation. This prolonged the recruitment unexpectedly. The delay continued in the further progress of the study, because the next steps in the work plan (data cleaning and preparation) could therefore only begin later. This made it inevitable to request an extension of the project by three months.

The unexpected difficulties in reaching all the defined user groups led to the situation that some groups were slightly under-represented in comparison with the planned group size, while others were over-recruited (see results section). In view of the advanced stage of time, data collection had to be stopped at a certain point.
Results

Results of qualitative Module 1

Characteristics of the sample

First of all the sample of the qualitative module will be described according to the characteristics which are based upon the screening data. In a second step the results of the structured face-to-face interviews will be presented.

In total, 279 individuals participated in the interviews with 41% of them being female. In the Netherlands an equal gender distribution was realised as intended, while in Germany, Poland and Czech Republic more males than females were reached. In the UK more females participated in the interviews (table 7).

Table 7: Interview participants by gender and European country

<table>
<thead>
<tr>
<th>Country</th>
<th>Group 1 (ATS dependent)</th>
<th>Group 2 (ATS dependent; remitted)</th>
<th>Group 3 (frequent ATS use)</th>
<th>Group 4 (former frequent ATS use)</th>
<th>Group 5 (non-frequent ATS use)</th>
<th>Group 6 (no ATS use)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>male</td>
<td>4</td>
<td>9</td>
<td>9</td>
<td>4</td>
<td>6</td>
<td>5</td>
<td>37</td>
</tr>
<tr>
<td>female</td>
<td>5</td>
<td>8</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>23</td>
</tr>
<tr>
<td>United Kingdom</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>6</td>
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<td>30</td>
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<tr>
<td>female</td>
<td>7</td>
<td>6</td>
<td>4</td>
<td>8</td>
<td>5</td>
<td>8</td>
<td>38</td>
</tr>
<tr>
<td>Poland</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>male</td>
<td>7</td>
<td>5</td>
<td>11</td>
<td>3</td>
<td>11</td>
<td>9</td>
<td>46</td>
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<tr>
<td>female</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>Netherlands</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>male</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>4</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>female</td>
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<td>4</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>7</td>
<td>30</td>
</tr>
<tr>
<td>Czech Republic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>male</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>female</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>male</td>
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<td>31</td>
<td>36</td>
<td>20</td>
<td>29</td>
<td>23</td>
<td>164</td>
</tr>
<tr>
<td>female</td>
<td>22</td>
<td>25</td>
<td>12</td>
<td>17</td>
<td>20</td>
<td>19</td>
<td>115</td>
</tr>
</tbody>
</table>
On average the interview participants were between 30.1 (Germany) and 32.8 (Netherlands) years of age. With respect to age there are remarkable differences between the six groups and the countries. Overall, the respondents from group 6 and 3 were the youngest with a mean age of about 29 years while the respondents from group 2 - the former dependent users - were the oldest ones with a mean age of 33.6 years (table 8).

The age of onset of ATS use also differs considerably between the groups and the countries. Overall, the ATS use was initiated at age 17 to 19. However, especially group 1 and group 4 show an earlier onset when compared with the other three user groups. In Germany and the Netherlands members of group 1 were slightly older than 16 at onset. In UK and Poland group 4 initiated their ATS use early when about 16 years old. More than one third of the total sample was positive on the SDS scale, indicating an ATS dependency. Across the countries, the proportion of respondents with ATS dependence varies from 21% in Poland to 48% in Germany. The vast majority of ATS dependent interviewees were from group 1 and 2 which is in line with the definition of the target groups.

With the life-time charts which were used during the interview the different substances and its frequency of consumption were documented. According to the charts most of the ATS users consumed speed only (28%) and second most often they consumed speed and MDMA (17%). In Czech Republic methamphetamine was most prevalent and used by 60% of the Czech sample. In Poland NPS was the ATS second most frequently consumed among the respondents.
Table 8: Age, age at ATS onset and ATS dependence of interview participants by European country

<table>
<thead>
<tr>
<th>Country</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
<th>Group 5</th>
<th>Group 6</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>- age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>- age of ATS onset</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SDS positive %</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Germany</strong></td>
<td>28.2</td>
<td>30.2</td>
<td>27.2</td>
<td>34.7</td>
<td>33.8</td>
<td>28.9</td>
<td>30.1</td>
</tr>
<tr>
<td></td>
<td>16.3</td>
<td>17.6</td>
<td>18.3</td>
<td>21.2</td>
<td>21.8</td>
<td>18.7</td>
<td>48.3</td>
</tr>
<tr>
<td><strong>United Kingdom</strong></td>
<td>37.2</td>
<td>35.4</td>
<td>32.6</td>
<td>30.5</td>
<td>28.1</td>
<td>29.9</td>
<td>32.5</td>
</tr>
<tr>
<td></td>
<td>18.0</td>
<td>16.2</td>
<td>18.2</td>
<td>15.8</td>
<td>17.2</td>
<td>17.0</td>
<td>42.0</td>
</tr>
<tr>
<td><strong>Poland</strong></td>
<td>30.1</td>
<td>32.7</td>
<td>25.3</td>
<td>33.2</td>
<td>33.3</td>
<td>27.0</td>
<td>30.2</td>
</tr>
<tr>
<td></td>
<td>18.1</td>
<td>17.3</td>
<td>17.7</td>
<td>16.4</td>
<td>18.1</td>
<td>17.7</td>
<td>21.3</td>
</tr>
<tr>
<td><strong>Netherlands</strong></td>
<td>34.9</td>
<td>35.2</td>
<td>31.0</td>
<td>35.9</td>
<td>28.9</td>
<td>30.8</td>
<td>32.8</td>
</tr>
<tr>
<td></td>
<td>16.4</td>
<td>17.6</td>
<td>19.3</td>
<td>17.3</td>
<td>19.8</td>
<td>18.1</td>
<td>30.0</td>
</tr>
<tr>
<td><strong>Czech Republic</strong></td>
<td>26.8</td>
<td>38.2</td>
<td>34.6</td>
<td>27.4</td>
<td>29.5</td>
<td>25.4</td>
<td>30.2</td>
</tr>
<tr>
<td></td>
<td>17.5</td>
<td>26.8</td>
<td>23.0</td>
<td>17.8</td>
<td>19.5</td>
<td>20.8</td>
<td>33.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>32.1</td>
<td>33.6</td>
<td>29.3</td>
<td>32.6</td>
<td>31.0</td>
<td>28.8</td>
<td>31.3</td>
</tr>
<tr>
<td></td>
<td>17.3</td>
<td>18.0</td>
<td>18.8</td>
<td>17.4</td>
<td>19.0</td>
<td>18.2</td>
<td>35.5</td>
</tr>
<tr>
<td></td>
<td>85.1</td>
<td>85.7</td>
<td>6.3</td>
<td>16.2</td>
<td>4.1</td>
<td>35.5</td>
<td></td>
</tr>
</tbody>
</table>

Besides ATS most of the respondents consumed other substances as well. Across all countries and groups the majority of the respondents did smoke cannabis at least once in their life (57% to 100%). The use of cocaine and/or hallucinogens was most widespread in the Netherlands (75%; 70%). In Germany, cocaine was ever used by 62% of the respondents and half of them ever used hallucinogens. In Czech Republic hallucinogens were rather widely used (60%). With regard to alcohol the daily use of this substance is most relevant. More than half of the Dutch respondents (57%) and almost half of the Czech respondents (47%) reported a period of daily alcohol use. In all other countries about one third of the respondents ever drank alcohol daily during a period of their life.
Findings from the interviews

In accordance with typical trajectories and based on the biopsychosocial model the analysis of the interviews was structured into the four phases “initiation”, “continuation”, “increase” and “decrease”. For each of the phases the individual, social and environmental circumstances were explored.

Initiation

Individual circumstances

The biographical background has an impact on the ATS trajectories. Especially in the German and the Dutch sample respondents from group 3 (frequent ATS user), group 5 (non-frequent ATS user) and group 6 (non-user) grew up in normal, stable conditions. They reported that they had strong family bounds and felt loved and cared for during childhood as well as during adolescence. They almost all completed their school education, started or finished their professional training and were integrated in a stable social network. Divorce or separation of the parents in childhood was frequently experienced but from the perspective of the respondents this life event had no impact on a feeling of burden or later ATS consumption. Some interviewees grew up under difficult conditions which were often related to a number of stressful life events including a conflictual parent history, school bullying, and own mental health diseases such as depression. However, those with a professional career and a strong social network showed reduced risks for developing an ATS dependency. Across all countries a considerable number of participants grew up in a stressful or even hostile environment due to parental substance use, experiencing or witnessing domestic violence or due to living with a mentally ill parent. In addition, some of these participants suffered from early mental health problems including depression, self-harm and anxiety. These respondents said that the biographical burden had a strong impact on social functioning. Especially women reported of underage pregnancy (Germany) or of an abusive relationship with a romantic partner (UK). Most of the ATS dependent participants linked their biographical burden to ATS initiation and later dependency.

The first ATS use is predominately motivated by either hedonism or coping with difficult personal situations and/or with own mental health problems. Hedonism implies curiosity, pleasure seeking and the wish to stay awake on party weekends. Coping is associated with decompressing or managing experiences of violence, depression, low self-esteem or social phobia. Furthermore, some participants linked their first ATS use to peer pressure. Few interviewees initiated the use of ATS for functional reasons to enhance work performance in studies or stressful jobs or to increase sexual pleasure. Especially students used methylphenidate (e.g. Ritalin) for a limited period of time to enhance the work performance at University.

The respondents exposed to ATS (group 6) mostly expressed fear of the unpredictable effects of ATS. They did never try ATS as they held strong negative attitudes about using ATS themselves. ATS was associated with the potential to lose control and with health concerns. Even if peers attempted to persuade them into trying ATS they resisted as they wanted to keep a clear mind and partly also because they were already using illicit drugs – mainly cannabis – and they did not want to consume any further (illicit) drug.
Social circumstances

ATS-using peers are important at initiation as they inform about dosage and effect of the substance. At initiation most participants talked about the positive effects of the substances such as feeling alert, energetic and without hunger (speed), being emotional, talkative and happy (MDMA). The effects of methamphetamine were experienced as ambiguous due to an extraordinary wellbeing on one hand and the loss of concentration as well as feelings of paranoia on the other hand. Methamphetamine users tend to increase the consumption frequency rapidly and to become dependent after a short period of time.

Environmental circumstances

At initiation costs for ATS were very low and payment for ATS was no problem. However, many respondents described the availability of the preferred ATS substance as a constant challenge in the beginning. Peers who ensure initial availability of ATS are important.

In group 6, circumstances such as the fear of criminal justice problems due to the consumption (or possession) of illicit drugs did not play a role for the decision to refuse ATS. However, many of the ATS non-users consumed illicit substances such as cannabis, hallucinogens or cocaine.

Continuation

The period of continuation mostly refers to participants who did not increase their ATS use significantly. Consequently, predominately the frequent users (group 3) and the non-frequent users (group 5) continued their ATS use in a more or less stable intensity.

During continued ATS use individual and environmental circumstances were rarely reported.

Social circumstances

The main emphasis of these ATS users was to maintain the positive effect from the substance and to consume for pleasure and for escaping occasionally from normal life routine. They practiced a hedonistic lifestyle characterised by an ATS use on nights out on weekends. Among dependent respondents the use of ATS for functional reason such as to cope with demands of everyday life (manage household, labour) became increasingly common. Other aspects of functional use were to feel more energised and to lose weight.

Increase

Participants of group 1 and group 2 tended to increase their ATS consumption gradually from a frequent use to a problematic use and finally to a dependent use. These participants often maintained a high dosage and frequent consumption for several years. This is different for methamphetamine users who tend to increase their use rapidly towards a daily use.
Individual circumstances

In most respondents from group 3 and 4 the increase in ATS consumption was related to spending more time partying and to associating more frequently with other drug users. Some participants used ATS more frequently in order to increase intimacy and feelings of love with (sexual) partners. Participants of group 1 and 2 who developed a problematic or daily ATS use concentrated more and more on a drug-using network. This behaviour rather often resulted from underlying mental health problems, negative emotions, lack of self-confidence or a boring job.

Participants with an increased or even excessive ATS consumption experienced a number of side effects once the effect of ATS wore off. Common ATS related health implications included sleeping disorders, weight loss, memory loss and concentration problems. Further health problems include intensified feelings of depression, anxiety and paranoia.

Social circumstances

The social circumstances were linked to the ATS consumed and to the lifestyle developed through an increased consumption. Most ecstasy/MDMA users consumed every weekend in high doses or frequency. High frequent speed user commonly reported to drink amounts of alcohol, and some of them developed an alcohol addiction, which from their perspective was their major problem. In order to regulate the after-effects of the lifestyle a number of participants reported to use cannabis or other substances to come down from the ATS effect, to be able to sleep and to be fit for the Mondays duties.

During the period of an increased ATS consumption the focus is drawn to the next ATS use. For this reason a negative impact on responsibilities such as employment, education and childcare began to develop. Participants reported a loss of interest in hobbies, functioning, non-using friends and family relations. Social interaction with non-users was typically avoided and work or studies were more and more neglected.

Environmental circumstances

ATS were easily available and could be purchased easily. Managing the costs of increased ATS use appeared to be ambiguous. Usually ATS substances were assessed as cheap and affordable from personal income. For ATS dependent individuals drug costs were high and affording was regarded as problematic. Dependency was associated with financing the substance through debts, selling personal valuables, loan sharks but also through drug selling or drug dealing for own supply.
Decrease / Desistance

Decrease or desistance do not refer to a limited period of decreased ATS use but to a stage when the ATS consumption clearly shifted into a non-frequent use, a self-regulated use or into abstinence from ATS. Per definition participants from group 4 had already stopped their ATS use at the time of the interview. Many ATS users from the other groups also reported a period of decreased ATS use which finally resulted in desistance from ATS.

Individual circumstances

Amongst dependent and frequent ATS users most often side effects of the substance and related health problems led to the decision to decrease or quit the ATS use. Drug-related health problems include severe physical exhaustion, sleeping disorders, panic attacks, black outs, depression, lack of appetite, paranoia, and dental problems. Another frequently mentioned reason was to be bored by nightlife activities implying to meet always the same peers and to spend time in the same clubs. In particular, participants of group 3 naturally matured out of nightlife. Some participants reported periods of desistance because of new priorities such as marrying, having a new partner or a new job or focusing on the studies. Most of the women abstained from ATS during pregnancy even though some relapsed once their child was born.

During the period of decreasing the ATS use or abstaining from ATS one major challenge was to reorganise priorities in life Hedonistic ATS users in particular redirect their attention to responsibilities such as university, employment or their occupational career. Women with children showed more attention for childcare and responsibilities as a mother. Other participants tried to re-establish daily routine, moving back to former hobbies such as sports or to find new leisure interests. However, reorganising daily life was generally difficult for those with ATS dependency and excessive ATS consumption.

Social circumstances

Frequent ATS user (group 3 and 4) reported to return to normality by refreshing their wider non-using social networks. Socialising with non-using individuals was seen as crucial for either maintaining abstinence or an occasional ATS use. Dependent ATS users often experienced difficulties in changing social networks, and keeping distance to ATS-using environments prompted some of them to move to another city or to avoid walking around in certain areas.

Some participants reported to have been in a stable romantic relationship for many years. Either the partner did not use ATS or quit the ATS use which in both cases had a regulating effect on the consumption pattern of the study participant. If the partner still consumed ATS, the participant broke up the relation in order to prevent increasing the own ATS use again. A few participants reported to have a new partner who was also an ex-user of ATS.
Environmental circumstances

For a few ATS dependent individuals desistance was enforced due to imprisonment. However, environmental factors for decrease or desistance were mainly linked to treatment for drug problems. In all countries predominantly ATS dependent respondents utilised drug counselling services or addiction treatment at least once. For example, in the German sample exclusively participants of group 1 and 2 entered treatment during the decrease period. In the Netherlands only 10 out of 60 Dutch participants – all of group 1 and 2 - had utilised treatment. In other countries frequent ATS users made use of drug services, too, in order to significantly decrease their ATS use and regain control.

The reasons for treatment utilisation were diverse and varied considerably between the participants and across the countries. In most cases the treatment entry was motivated by the wish to stop their ATS use for health reasons, including mental health. Rather often treatment was also used for alcohol problems which were partly related to excessive speed consumption. Especially for methamphetamine dependent individuals drug treatment became essential for recovery.

The type of treatment ranged from drug counselling, detoxification to impatient drug treatment. Some participants felt that the treatment services they had accessed were not sufficiently focused on ATS use. However, rather often treatment entries were also related to mental health disorders and multiple stressors around unemployment, poverty or domestic violence. In particular females reported multiple stressors which made it difficult to desist from ATS without professional support.

Conclusions

Ecstasy and MDMA were perceived as ‘club’ drugs, typically used on weekends, during nightlife or at certain events. The drugs were easily accessible, cheap and tended to be consumed to enhance feelings of pleasure, socializing and intimacy. After a period of time participants lost their interest in clubbing and naturally matured out of this subculture. They consequently declined or even stopped consuming these substances.

Amphetamines, including speed and methamphetamine were consumed for functional purpose of boosting energy, focus, control and self-esteem. Users tended to incorporate the substances into everyday practices rapidly and to be focused on an amphetamine using social network. These drugs were accessible and cheap but could cause considerable financing problems if used in high doses and daily. Some of the users develop additional alcohol dependence.

ATS trajectories were quite similar in the 5 European countries, even though specific ATS substances are more common in a respective country (such as methamphetamine in Czech Republic). The trajectories of the participants in this study were very dynamic as many of them experienced alternating phases of increase, continuation and decrease.
Environmental factors did not have a big impact on the trajectories as ATS were easily available, prices were low and affordable, and criminal justice problems due to the consumption of an illicit drug were rarely experienced.

Individual circumstances were significant in all periods. At initiation participants enjoyed the effects of ATS and they continued their consumption to regain the positive effect experienced at initiation. “Clubbers” took recreational breaks when they realised side effects or intensified health complications arising from an increased dosage and frequency. In contrast, speed and especially methamphetamine users quickly tended to transition into problematic and/or dependent use. Their activities were focused on the ATS use. The result was an impact on their lives in multiple ways regarding their mental health, well-being, family/childcare, employment and education.

Social factors demonstrated considerable influence on the trajectories. ATS experienced peers play a key role at initiation as they provide the drug and information about its effects. Furthermore social networks were important during the stage of an increased ATS use. Among clubbers socialising is associated with an increasing ATS use, while for dependent ATS users social contacts were almost exclusively limited to other ATS users. Romantic partners might contribute possibly contributed to an increased ATS use if they were users or dealers or – on the other hand - they might have provoked a decrease of the ATS consumption if they did not tolerate the drug use of their partner.

Desistance from ATS basically resulted from two contrary pathways; a natural maturing out of nightlife and a longer lasting process to quit problematic or excessive ATS consumption. Maturing out was induced by a combination of factors including ageing, health concerns, prioritising work/education, longing for a conventional lifestyle, founding an own family or a starting a new relationship. For problematic, dependent ATS users desistance became urgent at a certain point in their life due to a series of stressors such as severe drug-related health problems, the loss of control over their use and its negative impact on all areas of their daily life. For these reasons they made use of drug services including counselling, detoxification and rehabilitation. Even though ATS related problems initiated treatment utilisation, dependent users seek also professional support for other symptoms such as an alcohol dependence, health and social concerns (problems with mental health, housing, employment, childcare, poverty).
Implications for policy and practice

From the interview results several implications for policy and practice emerge. ATS users are very heterogeneous with respect to the substances preferred, with consumption frequency and intensity and the lifestyles established along the ATS use. For this reason tailored interventions are needed which take the individual ATS use trajectories into account.

Initiation of ATS use presents a first turning point in the life of the individuals and provides an opportunity for selective prevention in terms of information and education about the different ATS substances, its effects and risks. Although this information is accessible – e.g. via the website drugcom.de in Germany – it is likely that most of the respondents still rely on information given by their peers. For this reason measures of selective prevention need to be a) adjusted to adolescents curious of experiencing the drugs’ effects and b) expanded to a wider community through targeted public campaigns or peer education approaches. The findings from the interviews suggest that there is demand for responsive services for adolescent users, a group where progression from recreational use to dependent use can occur within a short period of time. This is especially true for methamphetamine users.

The contextual information related to the continuation of ATS consumption provide evidence for more targeted harm reduction aiming at keeping control over the frequency and intensity of ATS consumption. Harm reduction for “clubbers” is recommended to be provided onsite in terms of safer nightlife services, including drug testing. For other ATS users community harm reduction and counselling services can contribute to raise awareness for risk reduction through communicating consumption rules.

The nature of an escalating ATS consumption highlights overlapping health, welfare and social problems especially among dependent users. In order to support a defined decrease in ATS use or long-term abstinence, treatment efforts are needed that are tailored to ATS use and address these ranges of demands. ATS dependency was commonly reported to have negative consequences for physical health (sleeping disorders, lack of concentration) as well as for mental health (depression, anxiety). To achieve ATS abstinence, treatment was regarded as crucial but at the same time a number of ATS users felt that the support they received was not focussed sufficiently on ATS and its related health problems. To enhance treatment outcomes, it is therefore suggested to provide coordinated and comprehensive therapeutic interventions that include treatment for mental health and help users to recover from health and social impairments.
Results of quantitative Module 2

Total sample reached

The uncleaned raw data set exported from the GESSQ software contained N=2058 cases (see figure 4). At first test cases, discontinued interviews, and duplicates were deleted. One interview had to be deleted completely, because during the screening this case indicated no ATS use lifetime, but during the interview it turned out that she/he was an ATS user. Since the non-users were certainly not asked any questions in connection with ATS use, this record had far too many missings and was therefore deleted. Further 15 cases were deleted because of too many missings and/or because the interviewer documented severe problems during the interview regarding the respondent’s understanding of the questions.

Figure 4: Flowchart data cleaning
Finally 54 interviews had to be deleted, because a very short interview time of less than 15 minutes (for group C, who received less questions, 10 minutes) indicated an irregular interview or poor data quality (The mean duration of all interviews was 50 minutes). In the end a data set containing N=1656 cases served as the data base for all further analyses.

The distribution of the total sample over the countries is shown in table 9. It becomes visible that the German sample (27%) as well as the Polish sample (23%) account for half of the total sample, 23% comes from UK, the rest is distributed between the Netherlands and the Czech Republic (smaller sample sizes were planned here in advance, see above).

Table 9: Total sample by country

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CZ</td>
<td>199</td>
<td>12.0</td>
</tr>
<tr>
<td>GER</td>
<td>447</td>
<td>27.0</td>
</tr>
<tr>
<td>UK</td>
<td>375</td>
<td>22.6</td>
</tr>
<tr>
<td>NL</td>
<td>249</td>
<td>15.0</td>
</tr>
<tr>
<td>PL</td>
<td>386</td>
<td>23.3</td>
</tr>
<tr>
<td>Total</td>
<td>1656</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Sampling groups

As described above different ATS-user groups (sampling groups) were pre-defined in order to ensure a sufficient variability in the sample. The distribution of the total sample by sampling group and country is shown in table 10. For this table row percentages were calculated in order to show the distribution of the sampling groups in each country independently of the sample size of the respective country. Looking at the total percentages in the last line, it becomes clear, that the group which was reached best was the current frequent-user group A_1 (30%). Group B_1 (former frequent) as well as the non-ATS-user group C each make up about one fifth of the sample. The most difficult group to reach was the former non-frequent-user group B_2 (12%).
Table 10: Total sample by sampling groups and country (row percentage)

<table>
<thead>
<tr>
<th></th>
<th>Group A_1: current frequent user</th>
<th>Group A_2: current non-frequent user</th>
<th>Group B_1: former frequent user</th>
<th>Group B_2: former non-frequent user</th>
<th>Group C: exposed non-user</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td><strong>CZ</strong></td>
<td>74</td>
<td>37.2</td>
<td>32</td>
<td>16.1</td>
<td>21</td>
<td>10.6</td>
</tr>
<tr>
<td><strong>GER</strong></td>
<td>89</td>
<td>19.9</td>
<td>67</td>
<td>15.0</td>
<td>57</td>
<td>12.8</td>
</tr>
<tr>
<td><strong>UK</strong></td>
<td>84</td>
<td>22.4</td>
<td>59</td>
<td>15.7</td>
<td>30.4</td>
<td>10.9</td>
</tr>
<tr>
<td><strong>NL</strong></td>
<td>62</td>
<td>24.9</td>
<td>44</td>
<td>17.7</td>
<td>50</td>
<td>20.1</td>
</tr>
<tr>
<td><strong>PL</strong></td>
<td>74</td>
<td>19.2</td>
<td>74</td>
<td>19.2</td>
<td>32</td>
<td>8.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>29.8</td>
<td>18.0</td>
<td>19.7</td>
<td>11.6</td>
<td>21.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Constructing ATS-user groups for analysis

As described, the screening process was conducted in order to diversify the sample regarding ATS use patterns as well as to check further eligibility criteria. Mostly, interested people did the screening online by themselves. In the main interview all screening questions were repeated, especially the questions about amount and specific time of ATS use were asked much more in detail. After having compared the screening data and interview data it turned out that in some cases the screening data did not match the interview data. The interview data are regarded as more valid, so these data were used to assess currentness and frequency of each participant’s ATS use.

In order to answer the research questions about pathways of amphetamine use, analysis groups which have a different focus than the sampling groups are needed. The construction of the analysis groups was based on the following considerations: We regard past year’s ATS use status at the time of the interview as the current endpoint of each participant’s ATS use career. Further, we wanted to take into account the average ATS consumption during each participant’s ATS use career. The ATS use career is defined as the timespan between first and (currently) last ATS use. Thus the average number of ATS lifetime consumption days was divided by the number of years of the ATS use career. Although years of abstinence may be included in one’s career, we believed this to be the best approximation to the average consumption frequency. The next consideration was to identify particularly problematic users. Problematic or dependent ATS use was assessed using the SDS (see section “Survey instruments”). Participants, who had or still have a dependent ATS use, are a target group of public health measures such as indicative prevention programs, counselling, or treatment. For this reason it was decided to group these cases together in an extra “SDS group” regardless of the consumption pattern during their use career (more than 95% of the SDS group are frequent users). Following on from the idea of focusing on more problematic and/or heavy users, it was finally decided to “correct” user’s group allocation according to their past year’s use in case the use during that year was more frequent than the average use during their career.
The result of these considerations led to the definition of five analysis groups: (1) “never used”, (2) “rarely used”, (3) “moderately used”, (4) “frequently used”, and (5) “SDS positive”. The operationalization of the groups is shown in table 11. One additional remark: “Never” means that respondents never used ATS in their life, but of course they could have used other psychoactive substances like cannabis or alcohol. All further analyses were conducted with the new analysis groups.

Table 11: Operationalisation of analysis groups

<table>
<thead>
<tr>
<th>Name of ATS-user group</th>
<th>Ø consumption days per year of ATS consumption career</th>
</tr>
</thead>
<tbody>
<tr>
<td>never used</td>
<td>0</td>
</tr>
<tr>
<td>rarely</td>
<td>1-5</td>
</tr>
<tr>
<td>moderately</td>
<td>6-20</td>
</tr>
<tr>
<td>frequently</td>
<td>21-365</td>
</tr>
<tr>
<td>SDS positive</td>
<td>SDS ≥ 4</td>
</tr>
</tbody>
</table>

Using the new typology of consumption groups, the distribution of the total sample by country is shown in table 12. The largest analysis group is the SDS group which accounts for nearly 30% of the total sample, followed by the never users (21%). The other three groups are almost equally filled with 16 to 18% of the sample.

Country specific differences become visible in such a way that in the UK rare users were worst reached (9%) while SDS positive respondents account for 40% of the UK sample. In Czech Republic moderate users made up the smallest share of the sample (6%), never user and SDS positive were reached best in this country. The distribution among the analysis groups in the German as well as the Dutch sample is almost equal.

Table 12: Total sample by analysis groups and country (row percentage)

<table>
<thead>
<tr>
<th></th>
<th>never used</th>
<th>rarely</th>
<th>moderately</th>
<th>frequently</th>
<th>SDS positive</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>CZ</td>
<td>55</td>
<td>27.6</td>
<td>38</td>
<td>19.1</td>
<td>12</td>
<td>6.0</td>
</tr>
<tr>
<td>GER</td>
<td>88</td>
<td>19.7</td>
<td>81</td>
<td>18.1</td>
<td>97</td>
<td>21.7</td>
</tr>
<tr>
<td>UK</td>
<td>77</td>
<td>20.5</td>
<td>32</td>
<td>8.5</td>
<td>39</td>
<td>10.4</td>
</tr>
<tr>
<td>NL</td>
<td>48</td>
<td>19.3</td>
<td>51</td>
<td>20.5</td>
<td>58</td>
<td>23.3</td>
</tr>
<tr>
<td>PL</td>
<td>79</td>
<td>20.5</td>
<td>57</td>
<td>14.8</td>
<td>73</td>
<td>18.9</td>
</tr>
<tr>
<td>Total</td>
<td>347</td>
<td>21.0</td>
<td>259</td>
<td>15.6</td>
<td>279</td>
<td>16.8</td>
</tr>
</tbody>
</table>
Sociodemographics

In all analyses following now, column percentages are shown for all tables. In order to make tables easier to read, the count of each analysis group will be indicated only in the respective column header. In case for some reason the group’s count for specific variables is much lower, the corresponding count will be indicated in the respective line. In order to check for statistical significant group differences, Chi\(^2\)-tests for all nominal variables were employed and ANOVAS (oneway) for all scale variables were calculated. The respective level of significance is symbolised with asterisks in the tables.

First, an overview of some sociodemographic as well as social characteristics of the sample is given in table 13. All variables shown in this table reached statistical significance.

Table 13: Sociodemographics and social characteristics

<table>
<thead>
<tr>
<th>Gender, % ***</th>
<th>never used</th>
<th>rarely</th>
<th>mode-rately</th>
<th>frequently</th>
<th>SDS positive</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=347</td>
<td>N=259</td>
<td>N=279</td>
<td>N=298</td>
<td>N=473</td>
<td>N=1656</td>
</tr>
<tr>
<td>female</td>
<td>60.5</td>
<td>45.6</td>
<td>41.9</td>
<td>32.9</td>
<td>35.3</td>
<td>42.9</td>
</tr>
<tr>
<td>male</td>
<td>38.9</td>
<td>54.1</td>
<td>57.3</td>
<td>67.1</td>
<td>64.1</td>
<td>56.6</td>
</tr>
<tr>
<td>other/ preferred not to indicate</td>
<td>0.6</td>
<td>0.4</td>
<td>0.7</td>
<td>0.0</td>
<td>0.6</td>
<td>0.5</td>
</tr>
<tr>
<td>Age, mean (SD) ***</td>
<td>31.4 (10.4)</td>
<td>31.7 (8.8)</td>
<td>28.6 (7.9)</td>
<td>31.5 (9.6)</td>
<td>32.8 (9.3)</td>
<td>31.4 (9.4)</td>
</tr>
<tr>
<td>Currently in relationship, % ***</td>
<td>61.7</td>
<td>58.3</td>
<td>52.0</td>
<td>47.0</td>
<td>39.5</td>
<td>50.5</td>
</tr>
<tr>
<td>Having children, % ***</td>
<td>27.7</td>
<td>27.4</td>
<td>20.1</td>
<td>30.9</td>
<td>42.5</td>
<td>31.2</td>
</tr>
<tr>
<td>Current living situation, % ***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>stable</td>
<td>95.4</td>
<td>93.8</td>
<td>93.2</td>
<td>84.6</td>
<td>67.7</td>
<td>84.9</td>
</tr>
<tr>
<td>precarious</td>
<td>4.6</td>
<td>6.2</td>
<td>6.8</td>
<td>15.4</td>
<td>32.3</td>
<td>15.1</td>
</tr>
<tr>
<td>Highest completed educational status, % ***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>below upper secondary</td>
<td>4.9</td>
<td>10.0</td>
<td>7.9</td>
<td>24.2</td>
<td>35.5</td>
<td>18.4</td>
</tr>
<tr>
<td>upper secondary through short-cycle tertiary</td>
<td>48.7</td>
<td>38.6</td>
<td>47.7</td>
<td>55.4</td>
<td>50.1</td>
<td>48.6</td>
</tr>
<tr>
<td>bachelor through doctoral</td>
<td>46.4</td>
<td>51.4</td>
<td>44.4</td>
<td>20.5</td>
<td>14.4</td>
<td>33.0</td>
</tr>
<tr>
<td>Low income, % ***</td>
<td>25.6</td>
<td>23.6</td>
<td>40.1</td>
<td>36.9</td>
<td>51.2</td>
<td>37.1</td>
</tr>
<tr>
<td>Currently unemployed, % ***</td>
<td>15.9</td>
<td>17.8</td>
<td>20.4</td>
<td>39.6</td>
<td>60.9</td>
<td>34.1</td>
</tr>
<tr>
<td>Social integration index, mean (SD) ***</td>
<td>7.2 (2.0)</td>
<td>7.1 (2.1)</td>
<td>6.9 (2.2)</td>
<td>6.7 (2.4)</td>
<td>5.6 (2.5)</td>
<td>6.6 (2.4)</td>
</tr>
<tr>
<td>Social position index, mean (SD) ***</td>
<td>6.4 (1.7)</td>
<td>6.4 (1.8)</td>
<td>6.3 (1.9)</td>
<td>6.0 (2.1)</td>
<td>5.2 (2.3)</td>
<td>6.0 (2.1)</td>
</tr>
<tr>
<td>(Rather) satisfied with life in general, % ***</td>
<td>76.9</td>
<td>74.9</td>
<td>82.1</td>
<td>63.8</td>
<td>44.8</td>
<td>65.9</td>
</tr>
</tbody>
</table>

Level of significance for Chi\(^2\)-test and ANOVA: * p<0.05 ** p<0.01 *** p<0.001; n.s.= not significant
Female and male gender is almost equally distributed in the total sample. A look at the groups reveals that in the frequent-user as well as the SDS-positive group the share of male respondents accounts to around two thirds, whereas in the non-using group it is the other way round. In the questionnaire a third category of gender ("other") was offered. 0.5% of all respondents indicated that this category applied to them.

The mean age in the sample is 31.4 years, whereas the persons in the moderate-user group are somewhat younger (28.6), and the persons in the SDS group are somewhat older. The age range is from 18 years to 77 years.

Regarding respondents´ social situation respectively living situation it can be reported, that half of the total sample is currently in a relationship. The share in the non-using group is the highest (61.7%) and decreases with increasing consumption frequency (SDS group: 39.4%). On the other hand, the share of parenthood (total sample: 31.2%) is highest in the SDS group (42.5%). But this might also be an age-effect, for this is the oldest group, and in the youngest group (moderately) the fewest people with children (20.1%) were found. The vast majority (84.9%) of the total sample is living in stable living conditions, i.e. having a fixed registered address in an apartment or house. But if respondents indicated a precarious living situation (i.e. temporary accommodation at friends’ place, shelter, treatment facility, on the streets), they preliminary belonged to the SDS group (32.3%).

Respondents were asked to assess their self-perceived social integration on a scale ranging from 1 (feeling excluded from social life) to 10 (feeling completely being part of society). The sample feels comparatively highly integrated in general (6.6). Data furthermore indicate, though, that the higher the respondents’ ATS use during their ATS career the less they felt integrated in society (non-users: 6.4; SDS group: 5.6). Another social index that was used in the questionnaire was meant to let people rate their social position. This index provides for values between 1 (being at the very bottom of society) and 10 (being at the very top of society). The mean social position value of the total sample is 6.0. Regarding the analysis groups, the pattern of the distribution of the integration index can also be found here, albeit not quite so markedly.

In order to ascertain the educational level, the ISCED levels of education was integrated in the questionnaire (see section: Methodology). For analysis, the nine levels were reduced to three categories. Almost half of the sample (48.6) is located in the middle category (upper secondary through short-cycle tertiary), another third has a university degree. Clear differences between analysis groups become visible. More than half of the rare-user group indicated having a university degree. The more intense the ATS use is during the career, the lower the shares become. In the SDS group only 14.4% indicate to have a bachelor degree or higher. Correspondingly, more than one third (35.5%) of the SDS group was found to have a rather low educational status. This applies to only 4.9% of the non-using group. It is well known, that educational performance is associated with income and the employment situation. This is also reflected in the ATTUNE dataset. More than half of the SDS group chose the lowest income category that was provided in the questionnaire. The share of unemployment is highest in the SDS group as well (60.9%). In the non-using group through the moderate-user group unemployment rates from around 16% to 20% were found.
All the characteristics just mentioned might contribute to the feeling of satisfaction with life. Thus, being satisfied with life was affirmed by 75% to 82% in the first three groups, by nearly two-thirds in the frequent-user groups, but by less than half of the SDS group. Finally it should be stressed that the satisfaction with life of ATS users in the total sample is quite good, for around two thirds are rather satisfied with their life.

In the next section, provide detailed information about the use of ATS and other drugs in the sample will be provided.

**ATS use**

One important step to gain knowledge about ATS use trajectories is to receive an overview of the use of different ATS regarding lifetime use (LT), last year’s use (LY), and last month’s use (LM). Further, previous research showed that the age of onset of use is often associated with the development of specific use patterns and/or problematic consequences for the users, see for example: (22-25). In table 14 the respective results from the dataset are provided. All questions about ATS use were of course only posed to the ATS users in the sample, so the column of the non-user group is excluded from the tables showing results in connection with ATS use.

The first part of table 14 provides ATS LT, LY and LM prevalence. Most of the group differences became statistical significant. As a matter of course, all participants have a LT prevalence of any ATS, for this was an inclusion criterion. When it comes to the five different types of ATS, it becomes visible that nearly 90% reported lifetime use of amphetamine as well as MDMA, which consequently are the most popular ATS.

By a large margin, this is followed by amphetamine-simulating NPS (42.2%). Lifetime consumption of non-prescribed ATS prescription drugs as well as methamphetamine was indicated by just over a quarter of the total sample. The differences of lifetime prevalence between groups are mostly not very big except for the following three conspicuities: the rare-user group shows constantly lower lifetime prevalence in comparison with the other groups; methamphetamine use as well as the use of non-prescribed ATS medicine is more prevalent in the moderate- and frequent-user group.
Table 14: ATS use: prevalence, types of ATS and age at onset

<table>
<thead>
<tr>
<th>ATS Type</th>
<th>N=259</th>
<th>N=279</th>
<th>N=298</th>
<th>N=473</th>
<th>N=1309</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevalence ATS: lifetime, last year, last month</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any ATS, %</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>***</td>
<td>LY</td>
<td>32.0</td>
<td>70.6</td>
<td>63.1</td>
<td>68.3</td>
</tr>
<tr>
<td>***</td>
<td>LM</td>
<td>4.2</td>
<td>26.2</td>
<td>31.9</td>
<td>30.7</td>
</tr>
<tr>
<td>Amphetamine, %</td>
<td>66.0</td>
<td>90.3</td>
<td>95.0</td>
<td>93.4</td>
<td>87.7</td>
</tr>
<tr>
<td>***</td>
<td>LY</td>
<td>11.2</td>
<td>54.8</td>
<td>51.0</td>
<td>53.1</td>
</tr>
<tr>
<td>***</td>
<td>LM</td>
<td>1.2</td>
<td>15.8</td>
<td>20.5</td>
<td>19.9</td>
</tr>
<tr>
<td>MDMA, %</td>
<td>84.9</td>
<td>92.1</td>
<td>89.9</td>
<td>84.8</td>
<td>87.5</td>
</tr>
<tr>
<td>***</td>
<td>LY</td>
<td>22.4</td>
<td>58.1</td>
<td>44.3</td>
<td>35.7</td>
</tr>
<tr>
<td>***</td>
<td>LM</td>
<td>1.5</td>
<td>12.9</td>
<td>13.4</td>
<td>9.5</td>
</tr>
<tr>
<td>Methamphetamine, %</td>
<td>15.4</td>
<td>15.8</td>
<td>31.2</td>
<td>38.9</td>
<td>27.6</td>
</tr>
<tr>
<td>***</td>
<td>LY</td>
<td>1.9</td>
<td>4.3</td>
<td>13.1</td>
<td>20.3</td>
</tr>
<tr>
<td>***</td>
<td>LM</td>
<td>0.4</td>
<td>1.1</td>
<td>5.4</td>
<td>8.7</td>
</tr>
<tr>
<td>NPS, %</td>
<td>21.6</td>
<td>46.6</td>
<td>46.3</td>
<td>48.2</td>
<td>42.2</td>
</tr>
<tr>
<td>***</td>
<td>LY</td>
<td>2.7</td>
<td>16.1</td>
<td>20.8</td>
<td>20.7</td>
</tr>
<tr>
<td>***</td>
<td>LM</td>
<td>0.8</td>
<td>1.4</td>
<td>4.0</td>
<td>2.5</td>
</tr>
<tr>
<td>ATS medicine, %</td>
<td>17.8</td>
<td>34.1</td>
<td>34.9</td>
<td>22.8</td>
<td>27.0</td>
</tr>
<tr>
<td>***</td>
<td>LY</td>
<td>3.1</td>
<td>10.0</td>
<td>15.8</td>
<td>7.6</td>
</tr>
<tr>
<td>*</td>
<td>LM</td>
<td>0.4</td>
<td>1.1</td>
<td>3.4</td>
<td>1.9</td>
</tr>
</tbody>
</table>

Types of ATS used lifetime (five most frequently indicated) ***

<table>
<thead>
<tr>
<th>Types of ATS used lifetime</th>
<th>N=259</th>
<th>N=279</th>
<th>N=298</th>
<th>N=473</th>
<th>N=1309</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amphetamine, MDMA</td>
<td>25.5</td>
<td>26.9</td>
<td>18.8</td>
<td>21.1</td>
<td>22.7</td>
</tr>
<tr>
<td>Amphetamine, MDMA, NPS</td>
<td>8.9</td>
<td>17.2</td>
<td>17.1</td>
<td>17.5</td>
<td>15.7</td>
</tr>
<tr>
<td>Amphetamine, MDMA, NPS , ATS medicine</td>
<td>1.9</td>
<td>15.8</td>
<td>13.8</td>
<td>7.8</td>
<td>9.7</td>
</tr>
<tr>
<td>Amphetamine, MDMA, ATS medicine</td>
<td>6.6</td>
<td>12.9</td>
<td>11.1</td>
<td>6.3</td>
<td>8.9</td>
</tr>
<tr>
<td>Amphetamine, MDMA, Methamph., NPS</td>
<td>3.1</td>
<td>5.4</td>
<td>8.4</td>
<td>11.8</td>
<td>7.9</td>
</tr>
</tbody>
</table>

Age at first use of ATS

| Any ATS, mean (SD)         | 19.1 (4.8) | 18.5 (4.4) | 17.5 (4.2) | 17.6 (4.5) | 18.1 (4.5) |
| Amphetamine, mean (SD)     | 20.0 (3.8) | 20.0 (5.1) | 18.2 (3.9) | 18.2 (4.6) | 18.9 (4.5) |
| MDMA, mean (SD)            | 20.8 (4.3) | 20.0 (4.5) | 18.9 (4.4) | 18.6 (4.2) | 19.4 (4.4) |
| Methamphetamine, mean (SD) | 21.6 (6.5) | 23.1 (8.4) | 22.2 (8.3) | 22.0 (7.5) | 22.1 (7.7) |
| NPS, mean (SD)             | 22.7 (4.8) | 21.0 (5.5) | 22.8 (7.1) | 24.4 (8.2) | 23.0 (7.2) |
| ATS medicine, mean (SD)    | 19.9 (8.9) | 20.4 (5.7) | 20.7 (6.0) | 22.2 (6.9) | 21.0 (6.7) |

Duration ATS use career (years)

| Duration of ATS use, mean (SD) | 7.9 (6.5) | 8.2 (6.4) | 11.3 (8.0) | 13.2 (8.2) | 10.7 (7.8) |

Duration of current ATS abstinence

| Years after last use of any ATS, mean (SD) | 4.6 (6.2) | 1.9 (4.9) | 2.7 (5.8) | 2.0 (4.7) | 2.6 (5.4) |

Level of significance for Chi²-test and ANOVA: * p<0.05 **p<0.01 ***p<0.001; n.s.= not significant
When it comes to last year’s use, the order of prevalence’s shares is analogous to the one which was found regarding lifetime use. But while the shares of amphetamine and MDMA are half as high in comparison to lifetime prevalence of these substances, last year’s shares of the remaining three ATS amount to only one third compared to lifetime use. The distribution of last year’s amphetamine use between the analysis groups is moving along the lines of the lifetime distribution. Regarding MDMA, the highest last year’s use (58%) was found in the moderate-user group (as in lifetime prevalence) but unlike the lifetime distribution, the shares of the frequent-user as well as the SDS group are 14 respectively 23 percentage points lower. Last year’s methamphetamine use was reported by one fifth of the SDS group. Obviously, prevalence reduces with decreasing frequency of consumption during ATS career (rarely group: 2%). Last year’s use of ATS medicine is second-lowest in the SDS group (8%) and highest in the frequent-user group (16%).

One fourth of the total sample reported current use of any ATS, operationalised as use in the past 30 days before interview. Not surprisingly, the highest shares of current use were found in the frequent-user group (32%) as well as the SDS group (31%), while only 4% of the rare-user group indicated ATS use in the past 30 days. If the last month prevalence shares of the particular ATS are added up (4%), the value determined for any ATS (4%) is resulting. This suggests that the rare-users only used one of the five ATS during past 30 days. In the other groups, this is not the case. The above mentioned popularity of amphetamine as well as MDMA also reflects in the past month prevalence. Further, it becomes visible again, that MDMA is being consumed more often in the moderate- and frequent-user group compared to the SDS group, while methamphetamine plays a bigger role in the SDS group.

In the section “Types of ATS used lifetime” of table 14 the five most frequently indicated individual ATS substances that respondents reported to have consumed at least once in a lifetime are listed. The majority (88%) of the ATS sample tried more than one type of ATS lifetime. Of those who ever used more than one ATS (N=1107), 42% (mainly from the rare-user group) declared not to have used different kinds of ATS on the same day (values not shown in table). 23% of the total sample used amphetamine as well as MDMA with minor differences between analysis groups. Amphetamine and MDMA, supplemented by NPS and/or ATS medicine, always appear in the following lists. The substance methamphetamine only appears on the fifth place on the list. This combination is more prevalent in the frequent-user as well as in the SDS group.

On average, the first consumption of any ATS took place at the age of 18.1 years (The average age at first exposition to ATS in the non-user groups was 18.9 years). Looking at the groups, the expected result becomes clear, namely that a younger age of onset is associated with subsequent more frequent consumption (rarely: 19.1 years; frequently: 17.6 years). Regarding amphetamine and MDMA there are no big group differences, but it is noticeable that the frequent-user as well as the SDS-positive group were older than the other groups when first trying NPS.
At the bottom of table 14 the duration of ATS use careers, so the time span between first and (current) last use of ATS, is indicated. It becomes visible that quite experienced ATS users were included in the sample. This was also intended and should be ensured by the inclusion criterion “first use at least five years before the interview”. The mean duration of ATS use of the total sample is 10.7 years, while rare user’s career lasted shorter (7.9 years) than moderate user’s career (8.2 years), frequent user’s ones (11.3 years) as well as the one from users who once had an ATS dependency according to SDS (13.2 years). Finally, in the last line the mean number of (current) years of ATS abstinence is presented. Rare users show the longest period of current ATS abstinence (4.6 years).

**Use of other drugs**

The study also investigates the patterns of use of other illicit drugs as well as alcohol for the groups of different ATS careers. Table 15 shows that the lifetime use of cannabis reaches about 90%. Nearly two thirds were consuming this drug in the past year, while more than one third (38%) were using cannabis in the last month. Looking at the patterns of use of the ATS-career groups, all groups with ATS-consumption (rarely to frequently with SDS positive) show a comparable pattern of cannabis use. Only the group with no ATS use lifetime shows a different pattern with less use: three thirds used cannabis lifetime, one third during the last year, and 15% currently.

If it comes to cocaine the picture becomes more complex. For the total sample nearly two third report lifetime use, about one third consumed in the past year and every tenth during the past month before the interview. Looking at the patterns in the analysis groups, the two groups with frequent use (frequently and SDS positive) show a similar but more intensive pattern compared to the rest of the sample (all differences are statistical significant). Cocaine consumption is reduced but also relevant in the moderate-user group as half of the group reported cocaine use in the past year. For the group with rarely ATS use, cocaine use is halved compared to the moderate-user group. Only a minority of 12% in the never-user group has a lifetime experience with cocaine.

A lifetime consumption of hallucinogens is reported by more than half of the overall sample. The share of the total sample for last year is lower than one fifth. Looking at the distribution among the ATS-career groups, the patterns are similar with the exception of the never-user group. Remarkably, the frequent-ATS-user group has the highest life time consumption (75%) of hallucinogens. The SDS-positive group shows a much lower past year’s use rate of 18%, compared to the moderate and frequent-ATS-user group.
### Table 15: Other drug use: prevalence and age at onset

<table>
<thead>
<tr>
<th>Drug Type</th>
<th>never used</th>
<th>rarely</th>
<th>mode-rately</th>
<th>frequently</th>
<th>SDS positive</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannabis, % ***</td>
<td>74.9</td>
<td>96.9</td>
<td>96.8</td>
<td>98.7</td>
<td>95.1</td>
<td>92.1</td>
</tr>
<tr>
<td>***</td>
<td>35.7</td>
<td>63.3</td>
<td>76.5</td>
<td>73.5</td>
<td>67.2</td>
<td>63.0</td>
</tr>
<tr>
<td>***</td>
<td>15.3</td>
<td>40.5</td>
<td>48.4</td>
<td>51.3</td>
<td>37.4</td>
<td>37.6</td>
</tr>
<tr>
<td>Cocaine, % ***</td>
<td>12.1</td>
<td>61.0</td>
<td>74.2</td>
<td>85.6</td>
<td>81.6</td>
<td>63.3</td>
</tr>
<tr>
<td>***</td>
<td>3.7</td>
<td>25.9</td>
<td>50.2</td>
<td>53.4</td>
<td>46.3</td>
<td>36.1</td>
</tr>
<tr>
<td>***</td>
<td>0.6</td>
<td>5.4</td>
<td>12.9</td>
<td>17.4</td>
<td>18.4</td>
<td>11.5</td>
</tr>
<tr>
<td>Hallucinogens, % ***</td>
<td>11.2</td>
<td>61.0</td>
<td>62.4</td>
<td>74.8</td>
<td>65.5</td>
<td>54.6</td>
</tr>
<tr>
<td>***</td>
<td>4.0</td>
<td>15.8</td>
<td>30.8</td>
<td>30.9</td>
<td>17.5</td>
<td>19.1</td>
</tr>
<tr>
<td>***</td>
<td>0.9</td>
<td>3.9</td>
<td>6.5</td>
<td>6.7</td>
<td>2.5</td>
<td>3.8</td>
</tr>
<tr>
<td>Non-prescribed tranquiliser, % ***</td>
<td>9.2</td>
<td>20.1</td>
<td>30.5</td>
<td>44.3</td>
<td>46.7</td>
<td>31.5</td>
</tr>
<tr>
<td>***</td>
<td>3.5</td>
<td>5.8</td>
<td>15.8</td>
<td>24.8</td>
<td>24.9</td>
<td>15.9</td>
</tr>
<tr>
<td>***</td>
<td>0.9</td>
<td>0.4</td>
<td>3.9</td>
<td>9.4</td>
<td>11.0</td>
<td>5.7</td>
</tr>
<tr>
<td>Non-prescribed opioids, % ***</td>
<td>2.9</td>
<td>12.4</td>
<td>16.5</td>
<td>36.2</td>
<td>39.1</td>
<td>23.0</td>
</tr>
<tr>
<td>***</td>
<td>1.4</td>
<td>2.7</td>
<td>6.8</td>
<td>18.5</td>
<td>21.4</td>
<td>11.3</td>
</tr>
<tr>
<td>***</td>
<td>0.6</td>
<td>1.2</td>
<td>2.2</td>
<td>9.1</td>
<td>11.2</td>
<td>5.5</td>
</tr>
</tbody>
</table>

#### Prevalence ATS: lifetime, last year, last month

- **Cannabis**: %
  - ***: 74.9, 35.7, 15.3
  - ***: 96.9, 63.3, 40.5
  - ***: 96.8, 76.5, 48.4
  - ***: 98.7, 73.5, 51.3
  - SDS positive: 95.1, 67.2, 37.4

- **Cocaine**: %
  - ***: 12.1, 3.7, 0.6
  - ***: 61.0, 25.9, 5.4
  - ***: 74.2, 50.2, 12.9
  - ***: 85.6, 53.4, 17.4

- **Hallucinogens**: %
  - ***: 11.2, 4.0, 0.9
  - ***: 61.0, 3.9, 0.4
  - ***: 62.4, 6.5, 3.9

- **Non-prescribed tranquiliser**: %
  - ***: 9.2, 3.5, 0.9
  - ***: 20.1, 5.8, 0.4
  - ***: 30.5, 15.8, 3.9

- **Non-prescribed opioids**: %
  - ***: 2.9, 1.4, 0.6
  - ***: 12.4, 2.7, 1.2
  - ***: 16.5, 6.8, 2.2

#### Age at first use of other drugs

- **Cannabis**: mean (SD)
  - ***: 17.6 (4.4), 25.6 (8.2), 21.3 (6.4)
  - ***: 16.6 (3.0), 22.8 (3.9), 20.4 (4.0)
  - ***: 16.2 (3.3), 21.8 (4.5), 20.5 (3.7)
  - ***: 15.3 (3.5), 21.0 (5.2), 19.6 (4.3)
  - ***: 15.7 (4.5), 21.6 (6.2), 19.1 (4.5)

- **Cocaine/Crack**: mean (SD)
  - ***: 23.6 (6.3), 23.6 (6.3)
  - ***: 24.0 (6.2), 23.2 (6.7)

- **Hallucinogens**: mean (SD)
  - ***: 23.6 (6.3), 24.0 (6.2)
  - ***: 23.2 (6.7), 21.3 (5.6)

- **Non-prescribed tranquiliser**: mean (SD)
  - ***: 26.2 (7.5), 23.6 (7.3)
  - ***: 24.6 (7.5), 23.0 (6.5)

- **Non-prescribed opioids**: mean (SD)
  - ***: 26.2 (7.5), 23.6 (7.3)
  - ***: 24.6 (7.5), 23.0 (6.5)

*Level of significance for Chi²-test and ANOVA: *p<0.05 **p<0.01 ***p<0.001; n.s. = not significant*
The overall lifetime consumption of non-prescribed tranquilisers is nearly one third (32%). About half of the respondents used tranquilisers in the past year and 6% in the past month. Looking at the ATS-user groups, tranquilisers are especially relevant in the frequent-user groups. Nearly half of these groups used lifetime, one quarter during the last year. As expected, for the group with moderate ATS use tranquilisers are less relevant with 20% lifetime use.

On a lower level a similar pattern as for tranquilisers is found for non-prescribed opioids. These drugs are lifetime consumed overall by nearly a quarter and by every tenth in the last year. Looking at the ATS-career groups, opioids are more important for the frequent-user and SDS-positive group. About one fifth of these groups were consuming opioids in the past year and about every tenth did so in the past month.

The age at first use of the other drugs is the lowest regarding cannabis (16.2 years), followed with a great distance by hallucinogens (19.8 years). Cocaine, non-prescribed tranquilisers and opioids are first consumed two years later (see table 15). Looking at the ATS-career groups, a slight trend of an earlier age of first use was observed for all drugs in groups with a higher frequency of ATS use during their ATS career. Regarding the non-ATS-user group, the age of first use is heighten. This is especially true for cocaine and non-prescribed opioids. Around 90% of the total sample smoked tobacco lifetime, with a lower share of 76% in the ATS non-using group. The lifetime prevalence for alcohol is 98% with almost no differences between the groups (values not in table).

Problem drug use

Table 16 gives an overview of variables related with problematic alcohol and opioid use. All results are statistically significant. The abuse of alcohol and the suspicion of dependency is assessed by CAGE (lifetime) and AUDIT-C (past year). Lifetime abuse of alcohol (CAGE) was detected for half of the total sample. Between the groups the share rises statistically significant up to 60% for the SDS-positive group and is much lower in the group that never used ATS (37%). Nearly three fourth (72%) of the total sample are AUDIT-C positive referring to the past year (that means female participants reached the cut-off of at least 3 points and male participants of 4 points or more). This rate also applies to all ATS-career groups besides the moderate-user group that shows a higher rate of positive results (see table 16). Opioid dependency was reported for 8% of the overall sample. Cases with opioid dependency were almost completely found in both groups of frequent ATS-users (frequently and SDS-positive). The values that participants reached regarding the SDS are not shown in this table. Due to the fact, that an SDS diagnosis regarding ATS was part of the group construction it does not make sense to report the respective group distribution. A country wise analysis of the ATS SDS diagnosis showed following results: UK: 40%, PL: 33%, CZ: 29%, GER: 22%, and NL: 18%.

Injecting drug use lifetime is overall 14%. The SDS-positive group shows a rate of nearly one third (31%); in the frequent-ATS-user group a share of more than one fifth (23%) was found. For the other groups injecting drug use is barely relevant. But this is different for injecting ATS use lifetime where the overall the rate is 4%. The highest share appears in the frequent frequent-ATS-user group (7%).
One third of the total sample reported drug treatment experiences lifetime. Looking at the distribution between the ATS-user groups, two thirds with treatment experience in the SDS-positive group were found, followed by the frequent using group (42%). In the never-user-ATS group less than one tenth has ever been in treatment.

Table 16: Prevalence of alcohol and opioid misuse, injecting drug use and addiction treatment/counselling

<table>
<thead>
<tr>
<th>Misuse of alcohol and opioids</th>
<th>never used (N=347)</th>
<th>rarely (N=259)</th>
<th>mode-rately (N=279)</th>
<th>frequently (N=298)</th>
<th>SDS positive (N=473)</th>
<th>total (N=1656)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAGE: alcohol abuse lifetime, % ***</td>
<td>37.2</td>
<td>43.0</td>
<td>49.1</td>
<td>48.0</td>
<td>60.1</td>
<td>48.5</td>
</tr>
<tr>
<td>AUDIT_C positive LY (♂ &gt;3, ♀ &lt;2), % ***</td>
<td>69.9</td>
<td>72.8</td>
<td>81.2</td>
<td>70.9</td>
<td>67.8</td>
<td>71.8</td>
</tr>
<tr>
<td>Opioid dependency lifetime, % ***</td>
<td>1.4</td>
<td>1.9</td>
<td>1.8</td>
<td>11.4</td>
<td>16.7</td>
<td>7.7</td>
</tr>
</tbody>
</table>

| Injecting drug use | | | | | |
| Injecting drug use lifetime, % *** | 0.6 | 3.5 | 4.3 | 22.8 | 31.3 | 14.4 |
| Injecting ATS use lifetime, % *** | 0.6 | 2.3 | 2.5 | 7.1 | 6.1 | 3.9 |

| Treatment | | | | | |
| Addiction treatment/counselling lifetime, % *** | 8.8 | 12.4 | 17.3 | 41.9 | 66.3 | 33.2 |

Level of significance for Chi²-test and ANOVA: * p<0.05 **p<0.01 ***p<0.001; n.s.= not significant

In-depth characterisation of ATS consumption careers

In this section various results regarding different aspects which characterise and illustrate each group’s ATS use will be presented. This concerns the self-characterisation of the ATS career, motives for use, time of use, self-imposed consumption rules as well as ATS use of social environment.

Participants were asked how they would retrospectively characterise their ATS consumption and the course of their consumption patterns during their active phase of ATS consumption. As far as the self-labelled type of ATS use is concerned, the participants were asked for the predominant type of pattern, see table 17
Table 17: Type of ATS use

<table>
<thead>
<tr>
<th></th>
<th>rarely N=259</th>
<th>mode-rately N=279</th>
<th>frequently N=298</th>
<th>SDS positive N=473</th>
<th>total N=1309</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recreational/social</td>
<td>39.4</td>
<td>61.3</td>
<td>52.3</td>
<td>21.8</td>
<td>40.6</td>
</tr>
<tr>
<td>(controlled use in social setting)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Situational (use for specific reason)</td>
<td>13.9</td>
<td>18.3</td>
<td>18.8</td>
<td>17.1</td>
<td>17.1</td>
</tr>
<tr>
<td>Experimental (single or short-term use)</td>
<td>46.3</td>
<td>19.0</td>
<td>8.7</td>
<td>4.4</td>
<td>16.8</td>
</tr>
<tr>
<td>Compulsive (very frequent or daily doses/ withdrawal)</td>
<td>0.4</td>
<td>0.0</td>
<td>8.1</td>
<td>37.2</td>
<td>15.4</td>
</tr>
<tr>
<td>Intensive (high doses/binge)</td>
<td>0.0</td>
<td>1.4</td>
<td>12.1</td>
<td>19.5</td>
<td>10.1</td>
</tr>
</tbody>
</table>

Overall the “recreational” type of career is the most relevant characterisation (41%). This label most rarely applied to members of the SDS group. Around 20% each of the total sample indicated that their use would be best described as “situational”. That means that they use ATS only in specific situations (e.g. partying, work, or sports) as well as “experimentally”, which means that they only tried ATS once or a few times and then stopped their consumption. The characterisation of the self-labelled type of ATS use as “compulsive” was reported by a quarter of the sample while every tenth person labelled the use as “intensive”. The quantity of ATS use is the main factor for the allocation to the respective analysis groups of ATS careers. This might partially explain the differences between the groups; all of them reach statistical significance. The groups with rare and moderate use of ATS report predominantly recreational, situational or experimental types of use and hardly chose the compulsive or intensive type. Looking at the group with frequent ATS use, one fifth characterises its use as compulsive or intensive, but on the other hand the most important pattern during career for this group is recreational, controlled use in social setting (52%). The shift to a compulsive (very frequent or daily doses/ withdrawal) and intensive (high doses/binge) use is obvious for the SDS-positive group. Nearly three fifth of the respondents (57%) labelled their type of use in this manner. But also in this group more than one fifth of the respondents were characterising their career of ATS use as recreational.

The participants also were asked to allocate the course of their ATS career to visualised trajectories of ATS consumption, see table 18. Out of six types of ATS consumption courses, they had to choose the one that was the closest to their personal experience. The most important ATS course was the “very changeable” pattern which was chosen by nearly one third of the total sample. The type of development that shows an increase to a peak and then reduction to a certain level was chosen second most frequently (17%). Of similar relevance was a type of development with large quantities of ATS at the beginning and a slow decrease during career as well as the course of interrupted use with significant phases of abstinence all along. The last two types of development are the slowly grown use and the unchanged use of ATS regarding quantity and frequency during career. They were each selected by one tenth of the total sample.
### Table 18: Development in ATS use patterns

<table>
<thead>
<tr>
<th>Development of ATS use (graphs), % ***</th>
<th>rarely N=259</th>
<th>mode-rately N=279</th>
<th>frequently N=298</th>
<th>SDS positive N=473</th>
<th>total N=1309</th>
</tr>
</thead>
<tbody>
<tr>
<td>My ATS use has been very unstable.</td>
<td>29.3</td>
<td>34.1</td>
<td>32.6</td>
<td>34.0</td>
<td>32.8</td>
</tr>
<tr>
<td>My ATS use increased after I started, until I reached a certain peak. After that, my ATS use reduced to a certain level.</td>
<td>11.2</td>
<td>19.0</td>
<td>24.5</td>
<td>14.8</td>
<td>17.2</td>
</tr>
<tr>
<td>After I had tried ATS, I immediately started to use large quantities, but my use has slowly decreased.</td>
<td>21.6</td>
<td>14.7</td>
<td>15.4</td>
<td>12.5</td>
<td>15.4</td>
</tr>
<tr>
<td>I started at about the same level as I now use ATS, but I had repeated and significant phases of abstinence all along.</td>
<td>21.2</td>
<td>19.0</td>
<td>11.4</td>
<td>8.2</td>
<td>13.8</td>
</tr>
<tr>
<td>My ATS use has grown slowly.</td>
<td>1.9</td>
<td>7.5</td>
<td>7.4</td>
<td>20.1</td>
<td>10.9</td>
</tr>
<tr>
<td>I started at about the same level as I now use ATS. Both quantity and frequency of use are (rather) unchanged.</td>
<td>14.7</td>
<td>5.7</td>
<td>8.7</td>
<td>10.4</td>
<td>9.9</td>
</tr>
</tbody>
</table>

*Level of significance for Chi²-test and ANOVA: *p<0.05 **p<0.01 ***p<0.001; n.s. = not significant*
Looking at the differences between the groups these are not as obvious as the ones which were found regarding the self-labelled type of ATS-use, though the group difference are statistically significant. There are minor differences regarding the changeable pattern between the groups. The second pattern was chosen more often by the frequent-user group. The third pattern (slow decrease) was indicated most frequently in the rare-user group. This is also true for the pattern with phases of abstinence, but here the moderate-user group reaches a similar share as the rare-user group. The most obvious group difference was found regarding the pattern of grown use (pattern 5), with a share of 20% for the ATS-positive group, but only small shares in all other groups.

The different motives for ATS over the course of the career were reported retrospectively. For each motive the participants could select one of the statements: “never”, “in the beginning”, “after a while”, “in the latest or current ATS-phase” or “almost every phase”. In table 19 all motives that were indicated to be relevant at some point of the ATS career, independently of the phase of the career, are listed. The motives are sorted in descending order of relevance to the overall sample. For nearly 90%, the most important motive for ATS use during the career was to “feel euphoric and relaxed”. This motive is followed by “go out despite tiredness and stay awake at parties” (68%). “Better connection to peers or partners” was a motive for three fifths, and almost the same proportion mentioned the “normality of use in their social environment” as a motive. Half of the sample each named, “to beat boredom”, “to cope with stress/forget about problems” and “to be more secure in social situations” as motives for ATS use. “To feel less drunk” was a motive for ATS use for 42%. About one third of the ATS users each mentioned the motives of “enhancing sexual pleasure”, to “cope with mental health issues” or to “increase creativity”. Nearly the same proportion of the sample named “the pressure (by peers or partners) to consume”, “the performance at work” and “loss of control” as motives for ATS consumption. Lower shares achieved further motives for ATS use like “to manage family life and housekeeping” or to “lose weight”.

Looking at differentiation of motives between the ATS-career groups the following aspects can be emphasized: First of all, the SDS-group named more motives compared to the other groups in general (see table 19, all results shown in this table are statistically significant). This is why generally higher shares of different motives in this group were found. Secondly, there are mentionable differences between the two frequent-user groups (frequently and SDS-positive) and the groups with the lower frequency (rare or moderate use). For the latter, all motives are not as relevant as for the frequent users. Thirdly, the differences between the groups for single items are highlighted: Especially relevant are motives like “to beat boredom”, “coping with stress”, “being more secure in social situations”, “coping with mental health problems”, “having lost control”, “managing family life”, and “coping with hunger or cold”. All of these more functional and coping related motives were indicated especially frequently by the SDS-positive group compared to all other groups (table 19).
Table 19: Motives for ATS use (multiple response) and number of consumption motives

<table>
<thead>
<tr>
<th>Motives for ATS use (multiple response), %</th>
<th>rarely</th>
<th>mode-rately</th>
<th>fre-quenty</th>
<th>SDS posi-tive</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>rarely N=259</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>to feel euphoric and relaxed ***</td>
<td>84.1</td>
<td>90.3</td>
<td>89.2</td>
<td>86.0</td>
<td>87.3</td>
</tr>
<tr>
<td>to go out despite tiredness/ stay awake at parties ***</td>
<td>45.8</td>
<td>66.3</td>
<td>74.1</td>
<td>77.9</td>
<td>68.3</td>
</tr>
<tr>
<td>to have a better connection with my peers/ partner ***</td>
<td>48.2</td>
<td>57.3</td>
<td>57.6</td>
<td>69.4</td>
<td>60.0</td>
</tr>
<tr>
<td>because it is “normal” in my social environment ***</td>
<td>40.2</td>
<td>54.8</td>
<td>64.3</td>
<td>67.7</td>
<td>58.9</td>
</tr>
<tr>
<td>to beat boredom ***</td>
<td>32.3</td>
<td>34.1</td>
<td>52.2</td>
<td>71.5</td>
<td>51.5</td>
</tr>
<tr>
<td>to cope with stress/ forget about problems ***</td>
<td>20.7</td>
<td>29.4</td>
<td>51.5</td>
<td>77.3</td>
<td>50.2</td>
</tr>
<tr>
<td>to be more secure in social situations ***</td>
<td>28.3</td>
<td>38.7</td>
<td>44.8</td>
<td>67.1</td>
<td>48.4</td>
</tr>
<tr>
<td>to feel less drunk ***</td>
<td>21.1</td>
<td>38.0</td>
<td>48.5</td>
<td>51.2</td>
<td>41.9</td>
</tr>
<tr>
<td>to enhance sexual pleasure ***</td>
<td>22.7</td>
<td>26.9</td>
<td>39.1</td>
<td>48.0</td>
<td>36.5</td>
</tr>
<tr>
<td>to cope with mental health issues ***</td>
<td>13.5</td>
<td>16.8</td>
<td>33.3</td>
<td>56.9</td>
<td>34.5</td>
</tr>
<tr>
<td>to increase my creativity ***</td>
<td>20.3</td>
<td>25.1</td>
<td>33.3</td>
<td>48.4</td>
<td>34.5</td>
</tr>
<tr>
<td>because of pressure (by peers/partner) to consume ATS ***</td>
<td>24.3</td>
<td>27.2</td>
<td>26.6</td>
<td>39.7</td>
<td>31.0</td>
</tr>
<tr>
<td>to increase my performance at work/education ***</td>
<td>11.2</td>
<td>20.4</td>
<td>37.0</td>
<td>43.1</td>
<td>30.7</td>
</tr>
<tr>
<td>because I lost control and could not help to consume ATS ***</td>
<td>2.4</td>
<td>12.2</td>
<td>19.9</td>
<td>61.1</td>
<td>29.8</td>
</tr>
<tr>
<td>to manage family life and housekeeping ***</td>
<td>4.8</td>
<td>8.2</td>
<td>15.2</td>
<td>38.6</td>
<td>20.2</td>
</tr>
<tr>
<td>to cope with hunger or cold ***</td>
<td>2.8</td>
<td>6.1</td>
<td>13.1</td>
<td>30.4</td>
<td>15.9</td>
</tr>
<tr>
<td>because of no danger of police enforce- ment **</td>
<td>8.8</td>
<td>10.0</td>
<td>11.1</td>
<td>17.2</td>
<td>12.6</td>
</tr>
<tr>
<td>to lose weight ***</td>
<td>3.2</td>
<td>6.1</td>
<td>13.1</td>
<td>20.4</td>
<td>12.3</td>
</tr>
<tr>
<td>other *</td>
<td>10.4</td>
<td>6.1</td>
<td>4.7</td>
<td>4.5</td>
<td>6.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Motives for ATS use categorised (multiple response), %</th>
<th>Coping ***</th>
<th>Functionality ***</th>
<th>Hedonism ***</th>
<th>External/environmental ***</th>
</tr>
</thead>
<tbody>
<tr>
<td>rarely N=259</td>
<td>63.5</td>
<td>67.5</td>
<td>91.2</td>
<td>61.0</td>
</tr>
<tr>
<td>mode-rately N=279</td>
<td>80.6</td>
<td>76.0</td>
<td>97.5</td>
<td>79.6</td>
</tr>
<tr>
<td>frequently N=298</td>
<td>89.9</td>
<td>84.8</td>
<td>98.3</td>
<td>79.7</td>
</tr>
<tr>
<td>SDS positive N=473</td>
<td>96.6</td>
<td>93.6</td>
<td>98.1</td>
<td>85.8</td>
</tr>
<tr>
<td>total N=1309</td>
<td>85.3</td>
<td>82.8</td>
<td>96.7</td>
<td>78.3</td>
</tr>
</tbody>
</table>

| Number of motives, mean (SD) *** | 4.5 (2.7) | 6.1 (2.9) | 7.3 (3.2) | 9.6 (3.5) | 7.3 (3.7) |

Level of significance for Chi²-test and ANOVA: * p<0.05 ** p<0.01 *** p<0.001; n.s. = not significant
To get a more general overview on motivation, the single motives are grouped into the categories “hedonism”, “coping”, “functionality” and “external/environmental” motives. The most important complex is hedonism and except for the group using ATS rarely there are no group differences. The coping category with an overall relevance of more than four fifths is especially relevant for the SDS-positive group and less important for the rare-user group. A similar pattern can be reported for functionality and external motives. Again it is to be mentioned, that an important part of the shown differences in motives supposed to be related to the sheer number of motives declared by the different groups. But this also shows that especially the SDS-positive group is more involved in ATS use, is more experienced and is therefore able to reflect more on personal and social functionalities of use.

Regarding the ATS use during their career, the participants were asked, on what days (days off or working days) and at what time (daytime, night-time) they consumed. Again they could answer “never”, “in the beginning”, “after a while”, “in the latest or current ATS-phase” or “almost every phase”. In table 20 any positive answer for every combination is shown, neglecting the specific ATS phase. Overall, the consumption on days off during night-time (95%) as well as during daytime (72%) is most common. Looking at working days during daytime or night-time, between 42% and 49% of the participants reported consumption. The distribution of ATS-use patterns between the ATS-career groups (all group differences are statistically significant) shows minor differences regarding consumption on days off during night-time. Consumption patterns outside this frame, so on working days during daytime and night-time were more often reported in the groups with frequent ATS-use, especially the SDS-positive group.

Table 20: Days and time of ATS use

<table>
<thead>
<tr>
<th></th>
<th>rarely</th>
<th>mode-rately</th>
<th>frequently</th>
<th>SDS positive</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>on days off during daytime, % ***</td>
<td>44.8</td>
<td>62.7</td>
<td>78.2</td>
<td>88.6</td>
<td>72.0</td>
</tr>
<tr>
<td>on days off during night-time, % **</td>
<td>90.3</td>
<td>96.1</td>
<td>96.3</td>
<td>96.2</td>
<td>95.0</td>
</tr>
<tr>
<td>on working days during daytime, % ***</td>
<td>10.4</td>
<td>15.8</td>
<td>48.0</td>
<td>70.6</td>
<td>41.9</td>
</tr>
<tr>
<td>on working days during night-time, % ***</td>
<td>18.5</td>
<td>30.5</td>
<td>52.0</td>
<td>74.2</td>
<td>48.8</td>
</tr>
</tbody>
</table>

Level of significance for Chi²-test and ANOVA: * p<0.05 **p<0.01 ***p<0.001; n.s.= not significant

The participants were further asked if (or if not) they had been applying self-imposed consumption rules during their ATS career (see table 21). Only about one tenth of the ATS sample (12%) reported not to follow consumption rules. The most important rule is the abandonment of use “when my kids/family are around”, that was reported by more than half (52%) of the total sample. Further reported consumption rules - all between 47% and 41% - are to “limit the amount of ATS when consuming”, “no use during work or during courses at university”, “to have phases without ATS use”, use only, if it is “compatible with everyday life”, “use of ATS only after paying for my basic necessities”, or use only with people personally known. Consumption “only on specific occasions
such as festivals, holidays, or selected parties” is a further reported rule for almost two fifth of the sample. A little less than one third of the sample in each group followed the rules to use “only on weekends”, no use when “feeling bad or in a bad mood” and no use “in the daytime”.

Table 21: Self-imposed consumption rules for ATS (multiple response) and number of consumption rules

<table>
<thead>
<tr>
<th>ATS consumption rules (multiple response), %</th>
<th>rarely N=259</th>
<th>mode-rately N=279</th>
<th>frequently N=298</th>
<th>SDS positive N=473</th>
<th>total N=1309</th>
</tr>
</thead>
<tbody>
<tr>
<td>I don’t use when my kids/family are around***</td>
<td>52.1</td>
<td>59.5</td>
<td>55.7</td>
<td>44.6</td>
<td>51.8</td>
</tr>
<tr>
<td>I limit the amount of ATS which I am consuming***</td>
<td>54.4</td>
<td>59.1</td>
<td>49.7</td>
<td>33.0</td>
<td>46.6</td>
</tr>
<tr>
<td>I do not use ATS during work or during courses at university***</td>
<td>56.0</td>
<td>67.4</td>
<td>45.3</td>
<td>27.9</td>
<td>45.8</td>
</tr>
<tr>
<td>Between phases of ATS use I always observe rules to have phases without ATS use. ***</td>
<td>47.9</td>
<td>52.0</td>
<td>45.0</td>
<td>35.9</td>
<td>43.8</td>
</tr>
<tr>
<td>I only use ATS if the use is compatible with my everyday life. ***</td>
<td>52.5</td>
<td>59.5</td>
<td>45.3</td>
<td>27.9</td>
<td>43.5</td>
</tr>
<tr>
<td>I only use ATS when I can afford it and have money left after paying for my basic necessities. ***</td>
<td>41.7</td>
<td>58.1</td>
<td>45.0</td>
<td>30.9</td>
<td>42.0</td>
</tr>
<tr>
<td>I only use ATS with people whom I know personally. ***</td>
<td>54.8</td>
<td>49.5</td>
<td>36.9</td>
<td>30.7</td>
<td>40.9</td>
</tr>
<tr>
<td>I use ATS only on specific occasions such as festivals, holiday, or selected parties. ***</td>
<td>49.4</td>
<td>55.9</td>
<td>38.3</td>
<td>21.6</td>
<td>38.2</td>
</tr>
<tr>
<td>I use ATS only on weekends.</td>
<td>34.0</td>
<td>33.0</td>
<td>32.9</td>
<td>19.2</td>
<td>28.2</td>
</tr>
<tr>
<td>I never use ATS when I am feeling bad or when I am in a bad mood. ***</td>
<td>34.4</td>
<td>38.4</td>
<td>26.8</td>
<td>16.3</td>
<td>27.0</td>
</tr>
<tr>
<td>I do not use ATS in the daytime ***</td>
<td>34.4</td>
<td>35.8</td>
<td>23.2</td>
<td>18.4</td>
<td>26.4</td>
</tr>
<tr>
<td>Other consumption rules **</td>
<td>8.5</td>
<td>7.5</td>
<td>6.7</td>
<td>5.1</td>
<td>6.6</td>
</tr>
<tr>
<td>I follow no consumption rules/no consumption rule specified***</td>
<td>9.7</td>
<td>4.3</td>
<td>9.7</td>
<td>19.7</td>
<td>12.1</td>
</tr>
<tr>
<td>Number of consumption rules, mean(SD) ***</td>
<td>5.2 (3.6)</td>
<td>5.8 (3.2)</td>
<td>4.5 (3.2)</td>
<td>3.1 (2.9)</td>
<td>3.5 (3.5)</td>
</tr>
</tbody>
</table>

Level of significance for Chi²-test and ANOVA: * p<0.05  **p<0.01  ***p<0.001; n.s.= not significant
A look at the consumption rules for the different groups of ATS-careers shows statistically significant results. The number of reported rules is highest for the rare- as well as moderate-user groups of ATS-careers. The number of mentioned rules is associated with the intensity of the ATS career. But the frequent-user group, too, reports more consumption rules compared to the SDS-positive group, of which most members show frequent consumption during their career as well. This picture is completed by the information that in the SDS-positive group one fifth denied following any consumption rules. This shows on the other hand, that four fifth of the SDS-positive group make use of rules. In every single item, the above mentioned difference between the ATS-course groups occurs: more rules are reported from the groups with a less intensive ATS-career. With regard to single items, the biggest differences appear where the rules are connected to priorities in life such as work, university courses or everyday life. Another difference is the limitation of ATS use to specific settings as festivals, parties or “not in mood”.

Looking at the closer social environment of the ATS-using part of the sample (see table 22), overall just above one fifth indicated to currently have an ATS-using partner. The never used ATS-career group reported a very low rate (5%) of ATS use of her/his partner and the rare users a comparable low number with 19%. All other ATS-career groups – from moderately to SDS-positive – reported statistical significant higher partner’s current ATS use.

Table 22: ATS use of social environment

<table>
<thead>
<tr>
<th></th>
<th>never used</th>
<th>rarely</th>
<th>mode-rately</th>
<th>frequently</th>
<th>SDS positive</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>If in relationship: partner’s ATS use</td>
<td>N=193</td>
<td>N=121</td>
<td>N=124</td>
<td>N=118</td>
<td>N=151</td>
<td>N=707</td>
</tr>
<tr>
<td>Partner is currently using ATS, %***</td>
<td>5.2</td>
<td>19.0</td>
<td>41.1</td>
<td>42.4</td>
<td>38.4</td>
<td>22.9</td>
</tr>
<tr>
<td>If having close friends: friend’s ATS use</td>
<td>N=290</td>
<td>N=226</td>
<td>N=254</td>
<td>N=248</td>
<td>N=358</td>
<td>N=1376</td>
</tr>
<tr>
<td>Friends who use ATS currently, %***</td>
<td>47.9</td>
<td>58.4</td>
<td>78.3</td>
<td>72.2</td>
<td>57.5</td>
<td>62.1</td>
</tr>
<tr>
<td>Number of ATS-using friends, mean (SD) ***</td>
<td>1.2 (2.3)</td>
<td>1.6 (2.4)</td>
<td>3.1 (3.8)</td>
<td>3.3 (5.2)</td>
<td>1.8 (3.4)</td>
<td>2.2 (3.6)</td>
</tr>
</tbody>
</table>

Level of significance for Chi2-test and ANOVA: * p<0.05 **p<0.01 ***p<0.001; n.s. = not significant

On average, respondents have 2.2 ATS-using friends. Between the ATS-career groups the moderate- and frequent-user group reported more ATS-using friends compared to the rarely using and the SDS-positive group. The never-user group indicated the lowest number of ATS-using friends with 1.2.
Exposed ATS-non-users

The group in the sample, which never used ATS but was exposed to ATS use, was asked about details of their exposition. The initial question about the frequency of exposition clarifies that exposition is not a single event but rather regular in social contexts (see table 23). Only one tenth was once exposed to ATS and more than half of the non-users were exposed several times. The most important situations of exposition were at “a club, party or festival” or “hanging out with peers”, each indicated by more than two fifth of the never-ATS-users. 57% of the never-ATS-users experienced attempts by their social network to persuade them to ATS consumption. About one third of the sample reported having been tempted to use ATS after all once or several times.

Table 23: Exposition to ATS use: frequency, situations, attempts to persuade

<table>
<thead>
<tr>
<th>Frequency of expositions, %</th>
<th>never used ATS</th>
</tr>
</thead>
<tbody>
<tr>
<td>once</td>
<td>10.1</td>
</tr>
<tr>
<td>several times</td>
<td>54.5</td>
</tr>
<tr>
<td>often</td>
<td>27.4</td>
</tr>
<tr>
<td>almost all the time</td>
<td>8.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Situations of exposition, %</th>
<th>never used ATS</th>
</tr>
</thead>
<tbody>
<tr>
<td>when I was hanging out with friends</td>
<td>40.6</td>
</tr>
<tr>
<td>when I was at a club/party/festival</td>
<td>45.0</td>
</tr>
<tr>
<td>when I was at work</td>
<td>1.7</td>
</tr>
<tr>
<td>at a dealer’s place where I wanted to purchase other substances than ATS</td>
<td>0.9</td>
</tr>
<tr>
<td>other situations</td>
<td>11.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attempts by the social network to persuade me of ATS consumption?</th>
<th>never used ATS</th>
</tr>
</thead>
<tbody>
<tr>
<td>yes, once</td>
<td>18.7</td>
</tr>
<tr>
<td>yes, several times</td>
<td>38.3</td>
</tr>
<tr>
<td>no</td>
<td>42.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ever been tempted to use ATS after all?</th>
<th>never used ATS</th>
</tr>
</thead>
<tbody>
<tr>
<td>yes, once</td>
<td>17.3</td>
</tr>
<tr>
<td>yes, several times</td>
<td>15.6</td>
</tr>
<tr>
<td>no</td>
<td>67.1</td>
</tr>
</tbody>
</table>

The never-ATS-user group was asked about the reasons for their decision to reject ATS use (see table 24). The reason indicated most frequently was the fear “of hazards to health” (75%). “Heard bad things about the effects of ATS” (72%) was an almost equally relevant reason not to use. 60% to 70% agreed to the following three reasons not to use: “wasn’t interested in these substances”, “didn’t like the behaviour of people on ATS” and “because I didn’t know ATS and its effects”. More general reasons of a categorical rejection of certain types of substances included....
substances – no “chemical”, no “psychoactive” and no “illegal” substances are named by more than half of the sample. The fear of “hazardous extenders” (60%) and of “getting dependent” (53%) are further common reasons. Other relevant reasons are: not “to take more/other drugs than I already do” and the demand of “parents, sister, brother” or “partner” not to use. These reasons are named by more than one fifth.

Table 24: Reasons for not using ATS (multiple response)

<table>
<thead>
<tr>
<th>Reasons for the decision not to use ATS (multiple response), %</th>
<th>never used ATS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=347</td>
</tr>
<tr>
<td>I am afraid of hazard to my health</td>
<td>74.9</td>
</tr>
<tr>
<td>I heard bad things about the effects of ATS</td>
<td>72.0</td>
</tr>
<tr>
<td>I wasn’t interested in these substances</td>
<td>68.8</td>
</tr>
<tr>
<td>I didn’t like the behaviour of people on ATS which I observed earlier</td>
<td>65.9</td>
</tr>
<tr>
<td>I was afraid because I didn’t know ATS and its effects</td>
<td>61.5</td>
</tr>
<tr>
<td>I didn’t know if the available ATS was without hazardous extenders</td>
<td>59.5</td>
</tr>
<tr>
<td>I don’t use “chemical substances” in general</td>
<td>58.9</td>
</tr>
<tr>
<td>I don’t use any psychoactive substances in general</td>
<td>58.3</td>
</tr>
<tr>
<td>I don’t use illegal substances in general</td>
<td>53.6</td>
</tr>
<tr>
<td>I was afraid of getting dependent</td>
<td>53.1</td>
</tr>
<tr>
<td>I don’t want to take more/other drugs than I already do</td>
<td>29.4</td>
</tr>
<tr>
<td>because my parent/sister/brother told me so</td>
<td>26.5</td>
</tr>
<tr>
<td>a friend/my partner told me not to do it</td>
<td>21.6</td>
</tr>
<tr>
<td>not the right people present</td>
<td>21.6</td>
</tr>
<tr>
<td>not the right setting</td>
<td>21.3</td>
</tr>
<tr>
<td>because of my parental responsibility</td>
<td>12.2</td>
</tr>
<tr>
<td>other reasons</td>
<td>3.2</td>
</tr>
</tbody>
</table>

Consequences of ATS use

All ATS users in the sample were asked about their experience regarding any negative consequences of ATS use (see table 25). Only 6% of the total sample reported no negative consequences. The three most important negative consequences which were experienced by more than four fifths are generally “psychosomatic”. Most important were “insomnia, fatigue”, followed by “physical effects such as having no energy / loss of appetite” and “emotional effects such as nervousness, low mood, lacking in concentration”. A further cluster of negative consequences reported by a quarter to half of the ATS sample is related to social and environmental issues. Uppermost there is “the inability to manage daily routines”, “losing social contacts”, followed by “financial problems” and “getting in trouble with police”. The last group of negative consequences is connected to own experience or own use of sexual and/or physical violence. Both, own experience and own use of violence is reported by about one fifth.
Table 25: Negative consequences of ATS use (multiple response) and use of additional drugs to handle negative consequences

<table>
<thead>
<tr>
<th>Negative consequences of ATS use (multiple response), %</th>
<th>rarely N=259</th>
<th>mode-rately N=279</th>
<th>fre-quently N=298</th>
<th>SDS posi-tive N=473</th>
<th>total N=1309</th>
</tr>
</thead>
<tbody>
<tr>
<td>insomnia/ fatigue***</td>
<td>68.7</td>
<td>82.8</td>
<td>87.6</td>
<td>90.7</td>
<td>84.0</td>
</tr>
<tr>
<td>physical effects such as having no energy / loss of appetite***</td>
<td>58.7</td>
<td>78.1</td>
<td>79.2</td>
<td>91.3</td>
<td>79.3</td>
</tr>
<tr>
<td>emotional effects such as nervousness    low mood / lacking in concentration***</td>
<td>57.1</td>
<td>76.7</td>
<td>76.2</td>
<td>90.5</td>
<td>77.7</td>
</tr>
<tr>
<td>unable to manage daily routines***</td>
<td>19.3</td>
<td>31.5</td>
<td>40.3</td>
<td>70.0</td>
<td>45.0</td>
</tr>
<tr>
<td>losing social contacts***</td>
<td>8.9</td>
<td>12.5</td>
<td>30.9</td>
<td>61.5</td>
<td>33.7</td>
</tr>
<tr>
<td>financial problems***</td>
<td>8.5</td>
<td>12.5</td>
<td>27.2</td>
<td>59.2</td>
<td>31.9</td>
</tr>
<tr>
<td>getting in trouble with police</td>
<td>5.4</td>
<td>7.2</td>
<td>24.5</td>
<td>40.4</td>
<td>22.8</td>
</tr>
<tr>
<td>own experience of violence (sexual and/ or physical)***</td>
<td>9.3</td>
<td>11.8</td>
<td>17.8</td>
<td>35.7</td>
<td>21.3</td>
</tr>
<tr>
<td>own use of violence (sexual and/or physical)***</td>
<td>5.8</td>
<td>10.8</td>
<td>14.8</td>
<td>31.5</td>
<td>18.2</td>
</tr>
<tr>
<td>other negative consequences*</td>
<td>4.2</td>
<td>7.2</td>
<td>5.0</td>
<td>9.3</td>
<td>6.9</td>
</tr>
<tr>
<td>no negative consequences indicated***</td>
<td>17.0</td>
<td>6.5</td>
<td>2.7</td>
<td>1.5</td>
<td>5.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Use of other drugs to handle negative consequences of ATS use (multiple response), %</th>
<th>N=211</th>
<th>N=260</th>
<th>N=289</th>
<th>N=461</th>
<th>N=1221</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannabis***</td>
<td>39.3</td>
<td>50.4</td>
<td>63.0</td>
<td>55.5</td>
<td>53.4</td>
</tr>
<tr>
<td>Alcohol***</td>
<td>18.0</td>
<td>21.2</td>
<td>34.9</td>
<td>38.2</td>
<td>30.3</td>
</tr>
<tr>
<td>Non-prescribed tranquiliser***</td>
<td>3.3</td>
<td>8.1</td>
<td>18.7</td>
<td>22.6</td>
<td>15.2</td>
</tr>
<tr>
<td>Non-prescribed opioids***</td>
<td>0.9</td>
<td>1.9</td>
<td>7.3</td>
<td>11.5</td>
<td>6.6</td>
</tr>
<tr>
<td>Cocaine***</td>
<td>2.4</td>
<td>2.7</td>
<td>6.9</td>
<td>9.8</td>
<td>6.3</td>
</tr>
<tr>
<td>none***</td>
<td>53.6</td>
<td>36.9</td>
<td>20.8</td>
<td>20.8</td>
<td>29.9</td>
</tr>
</tbody>
</table>

Level of significance for Chi²-test and ANOVA: * p<0.05 ** p<0.01 *** p<0.001; n.s. = not significant

The review of the distribution of the negative consequences between the groups of ATS careers (all show statistical significant results) reveals that the negative “psychosomatic” consequences are shared by all groups. The proportion of negative consequences is increasing from the rare-user group with two thirds to the SDS-positive group with more than 90%. For the other negative consequences, such as problems with daily routine, losing contacts or getting into a financially problematic situation the range of differences between the ATS careers is considerably larger. This is also the case for trouble with the police and experience or use of violence.

Further, in table 25 is shown, if participants used other substances in order to deal with those negative consequences. 30% reported not having done so with statistical significant group differences. For all groups, but with highly different proportions the most prevalent drug to “cope” with the negative consequences was cannabis, followed by alcohol.
The participants were asked to report the reasons for reduction or cessation of ATS use during the course of their ATS career (see table 26). All following shares in this table are based on the sample, which indicated reasons for reduction, most of the group differences became statistically significant.

Table 26: Reasons for reduction or cessation of ATS use (multiple response), number of reasons and enhanced use of other substances after reduction of ATS

<table>
<thead>
<tr>
<th>Reasons for reduction or cessation of ATS use (multiple response), %</th>
<th>rarely N=210</th>
<th>mode-rately N=212</th>
<th>fre-quently N=244</th>
<th>SDS po-si-tive N=410</th>
<th>total N=1076</th>
</tr>
</thead>
<tbody>
<tr>
<td>I wanted to get rid of the negative mental health consequences of ATS use***</td>
<td>40.0</td>
<td>52.8</td>
<td>47.1</td>
<td>58.8</td>
<td>51.3</td>
</tr>
<tr>
<td>I wanted to get rid of the negative physical health consequences of ATS use*</td>
<td>39.5</td>
<td>50.9</td>
<td>46.7</td>
<td>51.2</td>
<td>47.9</td>
</tr>
<tr>
<td>I felt I was dependent and/or lost control, so I wanted to stop/reduce the consumption***</td>
<td>10.0</td>
<td>10.8</td>
<td>25.8</td>
<td>46.3</td>
<td>27.6</td>
</tr>
<tr>
<td>I disconnected from my social network**</td>
<td>15.2</td>
<td>18.9</td>
<td>20.1</td>
<td>28.5</td>
<td>22.1</td>
</tr>
<tr>
<td>other people (friends, family, partner) expected me to do so***</td>
<td>9.5</td>
<td>13.7</td>
<td>22.1</td>
<td>32.7</td>
<td>22.0</td>
</tr>
<tr>
<td>other reasons***</td>
<td>35.2</td>
<td>25.5</td>
<td>24.2</td>
<td>12.0</td>
<td>21.9</td>
</tr>
<tr>
<td>ATS consumption was not compatible with my job/studies n.s.</td>
<td>11.4</td>
<td>19.3</td>
<td>19.7</td>
<td>19.8</td>
<td>18.0</td>
</tr>
<tr>
<td>I entered treatment***</td>
<td>6.7</td>
<td>7.1</td>
<td>9.0</td>
<td>32.4</td>
<td>17.1</td>
</tr>
<tr>
<td>I found a new romantic partner n.s.</td>
<td>11.0</td>
<td>11.3</td>
<td>13.9</td>
<td>12.2</td>
<td>12.2</td>
</tr>
<tr>
<td>I could not afford it anymore***</td>
<td>3.3</td>
<td>5.2</td>
<td>7.0</td>
<td>17.8</td>
<td>10.0</td>
</tr>
<tr>
<td>I became pregnant / parent n.s.</td>
<td>6.7</td>
<td>8.5</td>
<td>9.0</td>
<td>11.2</td>
<td>9.3</td>
</tr>
<tr>
<td>I had to go to prison***</td>
<td>1.0</td>
<td>2.4</td>
<td>5.3</td>
<td>11.5</td>
<td>6.2</td>
</tr>
<tr>
<td>I was afraid of law enforcement***</td>
<td>1.4</td>
<td>5.2</td>
<td>3.3</td>
<td>9.0</td>
<td>5.5</td>
</tr>
<tr>
<td>**Number of reasons for reduction, mean (SD) ***</td>
<td>1.9 (1.2)</td>
<td>2.3 (1.4)</td>
<td>2.5 (1.5)</td>
<td>3.4 (2.2)</td>
<td>2.7 (1.8)</td>
</tr>
<tr>
<td>Enhanced use of other substances after reduction of ATS (multiple response), %</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol***</td>
<td>12.0</td>
<td>21.8</td>
<td>28.8</td>
<td>36.0</td>
<td>26.8</td>
</tr>
<tr>
<td>Cannabis***</td>
<td>15.8</td>
<td>15.2</td>
<td>26.7</td>
<td>29.6</td>
<td>23.4</td>
</tr>
<tr>
<td>Cocaine***</td>
<td>3.8</td>
<td>7.1</td>
<td>14.8</td>
<td>14.8</td>
<td>11.1</td>
</tr>
<tr>
<td>Non-prescribed opioids***</td>
<td>1.4</td>
<td>0.9</td>
<td>7.8</td>
<td>11.8</td>
<td>6.7</td>
</tr>
<tr>
<td>Non-prescribed tranquiliser***</td>
<td>0.0</td>
<td>2.4</td>
<td>4.9</td>
<td>9.6</td>
<td>5.2</td>
</tr>
<tr>
<td>Hallucinogens n.s.</td>
<td>3.3</td>
<td>3.3</td>
<td>4.5</td>
<td>4.4</td>
<td>4.0</td>
</tr>
<tr>
<td>No enhancement of any non-ATS substance***</td>
<td>74.2</td>
<td>61.6</td>
<td>42.8</td>
<td>39.4</td>
<td>51.4</td>
</tr>
</tbody>
</table>

Level of significance for Chi²-test and ANOVA: * p<0.05 **p<0.01 ***p<0.001; n.s. = not significant
Corresponding to the reported negative consequences of ATS use, the two most relevant reasons for reduction, half of the total sample each, are psychic – “to get rid of the negative mental health consequences” – or somatic – “to get rid of the negative physical health consequences”. Further reasons follow with a big gap. For 27% to feel “dependent” or “having lost control” are reasons for the reduction or cessation of ATS use. Disconnection from the social network, the expectation of friends, family or partner to reduce or the lacking compatibility with job and studies are reasons for nearly one fifth each. “Entered treatment” is a reason named overall by every seventh. Other less common reasons but relevant as they add up are “a new romantic partner”, pregnancy or parenthood, going to prison or the fear of law enforcement. Looking at the differences between the ATS-career groups regarding reasons for reduction or cessation of ATS use, the mental and somatic reasons are named more often by the two groups with frequent use (frequently and SDS-positive) but are also present and relevant for the groups that used less. Differences between groups become manifest, when it comes to more concrete reasons like treatment, expectations of relatives to stop, or going to prison.

Participants were asked, if they had enhanced their use of other substances after having reduced their ATS consumption. More than half of the sample denied an enhancement of any other substance after reduction of ATS. 27% reported an enhanced use of alcohol, 23% enhanced their use of cannabis, and for every tenth this is true for cocaine. An increase of non-prescribed opioids, tranquilisers and hallucinogens was also reported. The reflection about differences between the various ATS-career groups reveals predominantly, that the frequent-ATS-user groups enhanced the use of other drugs after reduction or cessation of ATS more frequently.

**Biographical burden**

In order to investigate the relevance of biographically burdening life events that might influence the course of ATS careers, participants were asked, if they had experienced different negative life events and if so, at what age the event happened to them for the first time. The time of the negative life events was differentiated in “before”, “at the same time” or “after first ATS use or ATS exposition”.

In table 27 a general overview of negative life events that were experienced by the sample is presented. The most frequent reported negative life event is “death of someone close”, indicated by 58.5%. The second most frequent experienced negative event is “physical assault” (40.7%). “Separation from long term partner, divorce” was indicated by 35.9%. Parent’s serious illness” and a “serious accident” happened to nearly one third of the sample. “Unwanted job loss”, “parent’s substance dependency while living together”, “having become homeless”, “been kicked out from parent’s home”, “life-threatening illness” and “imprisonment” are further negative life events that were experienced by approximately 15% to 25%.
Table 27: Biographical burden: Negative life events experienced (multiple response) and index of love and care in childhood

<table>
<thead>
<tr>
<th>Experience of negative life events (multiple response), %</th>
<th>never used</th>
<th>rarely</th>
<th>mode-rately</th>
<th>frequently</th>
<th>SDS positive</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>N=347</td>
<td>N=259</td>
<td>N=279</td>
<td>N=296</td>
<td>N=472</td>
<td>N=1653</td>
<td></td>
</tr>
<tr>
<td>death of someone close**</td>
<td>58.5</td>
<td>54.8</td>
<td>54.8</td>
<td>58.4</td>
<td>62.7</td>
<td>58.5</td>
</tr>
<tr>
<td>physical assault***</td>
<td>33.1</td>
<td>36.7</td>
<td>28.7</td>
<td>43.2</td>
<td>54.0</td>
<td>40.7</td>
</tr>
<tr>
<td>separation from long term partner/divorce***</td>
<td>33.4</td>
<td>30.1</td>
<td>29.7</td>
<td>38.5</td>
<td>43.0</td>
<td>35.9</td>
</tr>
<tr>
<td>parent’s serious illness**</td>
<td>33.4</td>
<td>29.0</td>
<td>26.2</td>
<td>31.8</td>
<td>32.8</td>
<td>31.0</td>
</tr>
<tr>
<td>serious accident**</td>
<td>27.4</td>
<td>22.4</td>
<td>24.7</td>
<td>28.7</td>
<td>35.2</td>
<td>28.6</td>
</tr>
<tr>
<td>unwanted job loss***</td>
<td>19.9</td>
<td>20.8</td>
<td>12.9</td>
<td>24.7</td>
<td>38.8</td>
<td>25.1</td>
</tr>
<tr>
<td>parent’s substance dependency while living together with***</td>
<td>16.7</td>
<td>15.8</td>
<td>15.4</td>
<td>26.7</td>
<td>31.4</td>
<td>22.3</td>
</tr>
<tr>
<td>other very stressful event **</td>
<td>22.8</td>
<td>20.5</td>
<td>24.7</td>
<td>19.3</td>
<td>17.4</td>
<td>20.6</td>
</tr>
<tr>
<td>having become homeless***</td>
<td>5.5</td>
<td>8.9</td>
<td>7.9</td>
<td>25.3</td>
<td>40.0</td>
<td>19.8</td>
</tr>
<tr>
<td>being kicked out from parent’s home***</td>
<td>6.9</td>
<td>9.7</td>
<td>12.2</td>
<td>22.0</td>
<td>33.9</td>
<td>18.6</td>
</tr>
<tr>
<td>life-threatening illness***</td>
<td>15.3</td>
<td>11.6</td>
<td>14.3</td>
<td>19.3</td>
<td>24.4</td>
<td>17.8</td>
</tr>
<tr>
<td>Imprisonment***</td>
<td>2.3</td>
<td>6.6</td>
<td>4.7</td>
<td>18.2</td>
<td>29.9</td>
<td>14.1</td>
</tr>
<tr>
<td>sexual assault after age of 16**</td>
<td>6.9</td>
<td>11.2</td>
<td>10.8</td>
<td>10.8</td>
<td>15.9</td>
<td>11.5</td>
</tr>
<tr>
<td>sexual assault before age of 16***</td>
<td>7.8</td>
<td>10.4</td>
<td>5.7</td>
<td>9.5</td>
<td>16.1</td>
<td>10.5</td>
</tr>
<tr>
<td>serious injury, harm, or death caused to someone else***</td>
<td>5.2</td>
<td>5.0</td>
<td>5.7</td>
<td>9.5</td>
<td>17.8</td>
<td>9.6</td>
</tr>
<tr>
<td>death of a parent in childhood**</td>
<td>6.1</td>
<td>4.2</td>
<td>5.0</td>
<td>9.8</td>
<td>10.2</td>
<td>7.4</td>
</tr>
<tr>
<td>growing up in public institution***</td>
<td>4.3</td>
<td>3.5</td>
<td>2.9</td>
<td>8.4</td>
<td>12.7</td>
<td>7.1</td>
</tr>
<tr>
<td>no stressful life event specified**</td>
<td>11.0</td>
<td>10.8</td>
<td>13.3</td>
<td>7.4</td>
<td>5.1</td>
<td>9.0</td>
</tr>
<tr>
<td>Count of negative life events dimensions affected, mean (SD)**</td>
<td>3.2 (2.4)</td>
<td>3.2 (2.3)</td>
<td>3.0 (2.3)</td>
<td>4.1 (2.7)</td>
<td>5.3 (3.0)</td>
<td>4.0 (2.8)</td>
</tr>
<tr>
<td>Experience of love and care in childhood (1-10), mean (SD) ***</td>
<td>7.6 (2.3)</td>
<td>7.4 (2.3)</td>
<td>7.4 (2.4)</td>
<td>6.8 (2.7)</td>
<td>6.1 (3.0)</td>
<td>7.0 (2.6)</td>
</tr>
</tbody>
</table>

Level of significance for Chi²-test and ANOVA: * p<0.05 **p<0.01 ***p<0.001; n.s.= not significant
Traumatic experiences like a sexual assault before as well as after the age of 16 were experienced by 11% respectively 12%. “Serious injury, harm, or death to someone else” as well as “death of a parent in childhood” was reported by less than one tenth each. 9% reported not to have experienced any severe negative life events. The number of negative life events is 4.0 on average, while the number is rising with increasing ATS use frequency during the career.

When comparing differences between the analysis groups on the level of the single events, it is noticeable that - regarding many of the events - relevant group differences between the career groups were not found. Some of the events were indicated only by few participants, thus these differences did not become statistical significant. Looking at differences between the rare-user group and the SDS-positive group, data show that the SDS-positive group indicated shares that were 15 and 20 percentage points higher regarding the negative events: “physical assault” and “unwanted job loss”. The share of “parent’s substance dependency while living together with” is 15 percentage points higher in the SDS-positive groups than in the other groups. Regarding the experiences of “having become homeless”, having been “kicked out from parent’s home”, “imprisonment” and “growing up in public institutions”, a share four times as high in the SDS group compared to the rare-user group was found.

The experience of “love and care in childhood” could be rated separately from 1 (not at all) to 10 (completely). The mean value for the total sample is 7.0. The mean number of experienced life events between the groups is decreasing with rising ATS use frequency during career (see table 27).

The number of negative life events and their distribution between career groups reveal the huge differentiation in the sample regarding life events. The time of the experience of certain life events (before or after first use of ATS, see table 28) is expected to be a further important aspect regarding possible impact of life events on ATS use. Looking at the total number of life events before first use of ATS, the average value is 1.8. The value is higher for both of the frequent-user groups (frequently and SDS-positive). The differences between the career groups are slightly bigger when it comes to the experience of negative life events in the same year or after first use of ATS. Here, the mean number of the total sample is 2.1 events, but the values between the never- to the moderate-user group compared to SDS-positive are doubled from about 1.5 to 3.1 negative events.

The point in time of negative life events in relation to first ATS use seems to be relevant for the dynamics of ATS careers. Here, especially a look at the impact of negative life events on more frequent use during lifetime is needed. The following negative events, experienced in the same year or after first use of ATS, are statistically significant much more relevant in the frequent-user groups: “unwanted job loss”, “having become homeless”, “life-threatening illness”, “imprisonment”, or “being kicked out from parents’ home”.
Table 28: First experience of negative life events in the same year or after first use of ATS and count of dimensions affected

<table>
<thead>
<tr>
<th></th>
<th>never used N=347</th>
<th>rarely used N=259</th>
<th>mode-rately used N=279</th>
<th>frequently used N=298</th>
<th>SDS positive N=473</th>
<th>total N=1656</th>
</tr>
</thead>
<tbody>
<tr>
<td>death of someone close*</td>
<td>30.3</td>
<td>27.0</td>
<td>30.1</td>
<td>33.1</td>
<td>38.6</td>
<td>32.6</td>
</tr>
<tr>
<td>separation from long term partner/divorce***</td>
<td>27.4</td>
<td>25.9</td>
<td>25.8</td>
<td>34.1</td>
<td>37.9</td>
<td>31.1</td>
</tr>
<tr>
<td>unwanted job loss***</td>
<td>15.0</td>
<td>16.6</td>
<td>10.4</td>
<td>20.6</td>
<td>33.3</td>
<td>20.7</td>
</tr>
<tr>
<td>physical assault***</td>
<td>11.8</td>
<td>14.7</td>
<td>12.2</td>
<td>17.6</td>
<td>24.2</td>
<td>16.9</td>
</tr>
<tr>
<td>having become homeless***</td>
<td>3.5</td>
<td>5.8</td>
<td>4.7</td>
<td>19.6</td>
<td>32.8</td>
<td>15.3</td>
</tr>
<tr>
<td>serious accident**</td>
<td>14.1</td>
<td>9.3</td>
<td>11.1</td>
<td>13.2</td>
<td>19.1</td>
<td>14.1</td>
</tr>
<tr>
<td>parent’s serious illness**</td>
<td>13.5</td>
<td>10.4</td>
<td>9.7</td>
<td>10.1</td>
<td>15.3</td>
<td>12.3</td>
</tr>
<tr>
<td>life-threatening illness***</td>
<td>8.1</td>
<td>4.6</td>
<td>5.4</td>
<td>13.9</td>
<td>18.6</td>
<td>11.1</td>
</tr>
<tr>
<td>Imprisonment***</td>
<td>1.4</td>
<td>4.6</td>
<td>3.6</td>
<td>13.9</td>
<td>24.4</td>
<td>11.1</td>
</tr>
<tr>
<td>being kicked out from parent’s home***</td>
<td>1.7</td>
<td>3.5</td>
<td>4.7</td>
<td>11.1</td>
<td>21.0</td>
<td>9.7</td>
</tr>
<tr>
<td>other very stressful event **</td>
<td>11.5</td>
<td>7.7</td>
<td>9.7</td>
<td>9.5</td>
<td>8.9</td>
<td>9.5</td>
</tr>
<tr>
<td>sexual assault after age of 16**</td>
<td>4.6</td>
<td>6.2</td>
<td>7.5</td>
<td>6.4</td>
<td>11.7</td>
<td>7.7</td>
</tr>
<tr>
<td>serious injury, harm, or death caused to someone else**</td>
<td>2.0</td>
<td>3.1</td>
<td>3.2</td>
<td>6.4</td>
<td>14.4</td>
<td>6.7</td>
</tr>
<tr>
<td>death of a parent in childhood**</td>
<td>0.3</td>
<td>1.2</td>
<td>2.5</td>
<td>2.4</td>
<td>1.3</td>
<td>1.5</td>
</tr>
<tr>
<td>parent’s substance dependency while living together with **</td>
<td>0.9</td>
<td>1.5</td>
<td>0.7</td>
<td>0.3</td>
<td>1.9</td>
<td>1.1</td>
</tr>
<tr>
<td>growing up in public institution**</td>
<td>0.3</td>
<td>0.0</td>
<td>0.0</td>
<td>0.7</td>
<td>0.8</td>
<td>0.4</td>
</tr>
<tr>
<td>sexual assault before age of 16**</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.3</td>
<td>0.8</td>
<td>0.3</td>
</tr>
<tr>
<td>no negative life events</td>
<td>28.8</td>
<td>34.7</td>
<td>33.7</td>
<td>21.6</td>
<td>14.2</td>
<td>25.1</td>
</tr>
</tbody>
</table>

Count of negative life event dimensions affected, mean (SD)

| Count of negative life event dimensions affected before first ATS use*** | 1.6 (2.0) | 1.6 (1.7) | 1.5 (1.8) | 1.9 (1.7) | 2.1 (2.0) | 1.8 (1.9) |
| Count of negative life event dimensions affected in the same year or after first ATS use*** | 1.5 (1.4) | 1.5 (1.7) | 1.4 (1.5) | 2.2 (2.0) | 3.1 (2.3) | 2.1 (2.0) |

Level of significance for Ch²-test and ANOVA: * p<0.05 ** p<0.01 *** p<0.001; n.s. = not significant
Note: In case of the never-user group, time is related to first exposition of ATS use

Further biographical burdens are convictions as well as experiences of imprisonment. The respective results are presented in table 29. 71% of the participants have never been convicted. That means the other way around that about 30% had problems with the legal system related to offenses. 16% of the sample experienced imprisonment lifetime.

Both aspects, convictions and imprisonment are differently distributed between the groups of ATS-careers. All group differences – with the exception of sexual assault – are statistically significant. Two main differences were found. Firstly, the difference of the frequent-users (both groups) compared to the never- to moderate-users. The groups with frequent use are more often convicted for offenses and have been imprisoned more often during lifetime, see table 29. The second difference appears in the groups with frequent use. The SDS-positive group is showing even higher shares of convictions for offenses compared to the frequent-user group without SDS. The same is true regarding imprisonment.

Looking at the single offenses, the above described pattern between the ATS-career groups occurs again. For example, about one tenth of the total sample was convicted for “possession of illicit drugs” and this share is twenty times as high for the SDS-positive group compared to the rare user group.

Table 29: Delinquency: Convictions and imprisonment

<table>
<thead>
<tr>
<th>Convictions for offenses, %</th>
<th>never used N=345</th>
<th>rarely N=259</th>
<th>mode-rately N=279</th>
<th>frequently N=298</th>
<th>SDS positive N=473</th>
<th>total N=1654</th>
</tr>
</thead>
<tbody>
<tr>
<td>shoplifting***</td>
<td>1.2</td>
<td>3.5</td>
<td>5.7</td>
<td>13.4</td>
<td>23.7</td>
<td>10.9</td>
</tr>
<tr>
<td>other offense***</td>
<td>3.2</td>
<td>7.3</td>
<td>7.2</td>
<td>12.1</td>
<td>18.0</td>
<td>10.3</td>
</tr>
<tr>
<td>possession of illicit drugs***</td>
<td>0.9</td>
<td>4.2</td>
<td>5.0</td>
<td>14.1</td>
<td>19.9</td>
<td>9.9</td>
</tr>
<tr>
<td>physical violence/affray***</td>
<td>3.8</td>
<td>2.7</td>
<td>5.7</td>
<td>11.4</td>
<td>19.0</td>
<td>9.7</td>
</tr>
<tr>
<td>thefts (of property or from person)***</td>
<td>0.9</td>
<td>3.1</td>
<td>2.5</td>
<td>11.1</td>
<td>17.8</td>
<td>8.2</td>
</tr>
<tr>
<td>robbery***</td>
<td>0.3</td>
<td>0.8</td>
<td>2.2</td>
<td>5.7</td>
<td>12.1</td>
<td>5.0</td>
</tr>
<tr>
<td>selling or distributing drugs***</td>
<td>0.6</td>
<td>2.3</td>
<td>1.4</td>
<td>5.4</td>
<td>9.1</td>
<td>4.3</td>
</tr>
<tr>
<td>fraud, forgery***</td>
<td>0.3</td>
<td>0.8</td>
<td>0.7</td>
<td>4.0</td>
<td>7.2</td>
<td>3.1</td>
</tr>
<tr>
<td>sexual assault / sexual violence**</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.3</td>
<td>0.6</td>
<td>0.2</td>
</tr>
<tr>
<td>never convicted***</td>
<td>91.6</td>
<td>85.3</td>
<td>79.9</td>
<td>62.4</td>
<td>46.7</td>
<td>70.6</td>
</tr>
<tr>
<td>Imprisonment lifetime, %***</td>
<td>2.6</td>
<td>8.1</td>
<td>6.8</td>
<td>19.5</td>
<td>31.7</td>
<td>15.5</td>
</tr>
</tbody>
</table>

Level of significance for Chi²-test and ANOVA: * p<0.05 ** p<0.01 *** p<0.001; n.s. = not significant
Health and mind

Closing the report of descriptive results, results from the field of health issues as well as some psychological measures regarding personality are presented. Regarding physical and mental health, the participants rate their health condition between 1 (poor) and 10 (excellent). Overall, the physical health was self-rated at 7.1 while participants rated their mental health with 6.7 on average. Regarding the self-assessed physical health condition, almost no differences between the groups were found, apart from the SDS-positive group. The latter is showing a statistical significant smaller value. But there are statistical significant differences between the ATS-career groups’ estimation of their mental health condition. Especially the SDS-positive group rated their mental health condition significantly lower than the total sample (see table 30).

The sample’s mental health is clarified more detailed via the investigation of “diagnosed mental health problems lifetime”. No diagnosed mental health problem was reported by 52.8% of the sample (table 30). The most important diagnosed problem was depression (36.0%). The review of differences between the ATS-career groups reveals, that regarding many diagnosed mental health problems, the frequent using groups (frequently used and SDS positive) reported statistical significant higher values. In case of ADHD and eating disorder the largest shares were found in the moderate user group.

Table 30: Health: self-assessed physical and mental health, type of diagnosed mental health problems

<table>
<thead>
<tr>
<th></th>
<th>never used</th>
<th>rarely</th>
<th>mode-rately</th>
<th>frequently</th>
<th>SDS positive</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>N=347</td>
<td>N=259</td>
<td>N=279</td>
<td>N=298</td>
<td>N=473</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-assessed health condition, mean (SD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>physical health condition (1-10)**</td>
<td>7.5 (1.7)</td>
<td>7.3 (1.7)</td>
<td>7.3 (1.7)</td>
<td>7.1 (1.8)</td>
<td>6.5 (2.1)</td>
<td>7.1 (1.9)</td>
</tr>
<tr>
<td>mental health condition (1-10)**</td>
<td>7.2 (2.0)</td>
<td>7.3 (1.8)</td>
<td>7.2 (1.9)</td>
<td>6.8 (2.2)</td>
<td>5.7 (2.3)</td>
<td>6.7 (2.2)</td>
</tr>
<tr>
<td>Diagnosed mental health problems lifetime (multiple response), % (N=781)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>depression ***</td>
<td>32.3</td>
<td>27.5</td>
<td>29.0</td>
<td>34.7</td>
<td>48.3</td>
<td>36.0</td>
</tr>
<tr>
<td>other disorder **</td>
<td>8.9</td>
<td>8.9</td>
<td>5.7</td>
<td>9.8</td>
<td>11.0</td>
<td>9.1</td>
</tr>
<tr>
<td>psychosis ***</td>
<td>2.9</td>
<td>2.7</td>
<td>3.9</td>
<td>6.1</td>
<td>20.1</td>
<td>8.5</td>
</tr>
<tr>
<td>ADHD **</td>
<td>4.3</td>
<td>4.7</td>
<td>9.0</td>
<td>8.4</td>
<td>11.2</td>
<td>7.9</td>
</tr>
<tr>
<td>eating disorder **</td>
<td>6.3</td>
<td>5.8</td>
<td>7.5</td>
<td>6.7</td>
<td>10.6</td>
<td>7.7</td>
</tr>
<tr>
<td>borderline ***</td>
<td>2.6</td>
<td>4.7</td>
<td>5.0</td>
<td>6.7</td>
<td>12.5</td>
<td>6.9</td>
</tr>
<tr>
<td>obsessive-compulsive disorder **</td>
<td>4.0</td>
<td>3.9</td>
<td>2.5</td>
<td>4.0</td>
<td>8.5</td>
<td>5.0</td>
</tr>
<tr>
<td>no diagnosed mental health problem***</td>
<td>59.7</td>
<td>64.0</td>
<td>63.1</td>
<td>54.5</td>
<td>34.3</td>
<td>52.8</td>
</tr>
</tbody>
</table>

Level of significance for Chi²-test and ANOVA: *p<0.05 **p<0.01 ***p<0.001; n.s.= not significant
Another measurement of the mental health condition is the “Brief Symptom Inventory” (BSI), which was applied, too. The BSI measures mental stress regarding somatization, depression, and anxiety. T-values were calculated before creating the subscales (using German norms, for other norms were not available). Based on all symptoms, a Global Severity Index (GSI) is calculated. The overall value for somatization is 53.5, for depression 56.3, and for anxiety 58.1. The GSI score is at 57.1, see table 31. The differentiation between ATS-career groups shows statistically significant higher values in all three dimensions as well as in the GSI-Score (i.e. worse results) for the group with frequent use and especially for the SDS-positive group. Moreover, participants of the latter group indicated more symptoms (PST: 9.4) and an enhanced average level of distress (1.9).

### Table 31: The Brief Symptom Inventory and its subscales

<table>
<thead>
<tr>
<th>Brief Symptom Inventory, mean (SD)</th>
<th>never used (N=347)</th>
<th>rarely (N=259)</th>
<th>mode-rately (N=279)</th>
<th>fre-quenty (N=298)</th>
<th>SDS po-sitive (N=473)</th>
<th>total (N=1656)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Somatization (t-values: 38-80) ***</td>
<td>51.9 (10.8)</td>
<td>51.1 (9.9)</td>
<td>50.7 (9.7)</td>
<td>53.5 (11.0)</td>
<td>57.8 (11.6)</td>
<td>53.5 (11.1)</td>
</tr>
<tr>
<td>Depression (t-values: 38-80) ***</td>
<td>54.4 (9.8)</td>
<td>54.0 (9.5)</td>
<td>54.0 (9.8)</td>
<td>55.5 (11.2)</td>
<td>60.9 (9.8)</td>
<td>56.3 (10.4)</td>
</tr>
<tr>
<td>Anxiety (t-values: 37-80) ***</td>
<td>56.8 (10.7)</td>
<td>54.6 (11.6)</td>
<td>54.8 (11.4)</td>
<td>57.4 (12.0)</td>
<td>63.4 (11.1)</td>
<td>58.1 (11.8)</td>
</tr>
<tr>
<td>Total (Global Severity Index; t-values: 30-80) ***</td>
<td>55.3 (10.2)</td>
<td>54.0 (10.1)</td>
<td>54.1 (10.3)</td>
<td>56.5 (11.3)</td>
<td>62.3 (10.0)</td>
<td>57.1 (10.9)</td>
</tr>
<tr>
<td>Positive Symptom Total (PST, number of symptoms; 0-18) ***</td>
<td>6.6 (4.6)</td>
<td>5.5 (4.1)</td>
<td>5.8 (4.2)</td>
<td>6.7 (4.9)</td>
<td>9.4 (5.0)</td>
<td>7.1 (4.9)</td>
</tr>
<tr>
<td>Positive Symptom Distress Index (average level of distress; 0-4) ***</td>
<td>1.5 (0.7)</td>
<td>1.4 (0.7)</td>
<td>1.4 (0.7)</td>
<td>1.6 (0.8)</td>
<td>1.9 (0.8)</td>
<td>1.6 (0.8)</td>
</tr>
</tbody>
</table>

Level of significance for Chi²-test and ANOVA: * p<0.05 **p<0.01 ***p<0.001; n.s. = not significant

In order to assess the personality traits extraversion, neuroticism, openness to experience, conscientiousness, and agreeableness, known as the “Big Five”, a respective measurement instrument (BFI-10) was applied. Extraversion is referring to the characterisation of activities (solitary/reserved vs. outgoing/energetic). The overall value of the sample is 3.4. There are no significant differences between the individual ATS-career groups. Neuroticism is the tendency to experience negative emotions, such as anger, anxiety, or depression (secure/confident vs. sensitive/nervous). For Neuroticism a value of 3.0 was found and among the groups the SDS-positive scores statistically significant higher for emotional problems. Openness is a general appreciation for art, emotion, adventure, curiosity, and variety of experience (consistent/cautious vs. inventive/curious). The value for openness is 3.6 and there are no significant differences between the groups. Conscientiousness is a tendency to display self-discipline and strive for achievement against measures or outside expectations (easy-going/careless vs. efficient/organized). The overall value for conscientiousness is 3.4. Between the groups only the group of never ATS-user group shows a tendency to a more organised personality. The difference is statistically significant. The agreeableness trait reflects individual differences in a general concern for social harmony (challenging/detached vs. friendly/compassionate). The overall value is 3.4 while no significant group differences were detected (table 32).
Table 32: Personality traits and characteristics

<table>
<thead>
<tr>
<th></th>
<th>never used</th>
<th>rarely</th>
<th>mode-rately</th>
<th>frequently</th>
<th>SDS positive</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=347</td>
<td>N=259</td>
<td>N=279</td>
<td>N=298</td>
<td>N=473</td>
<td>N=1656</td>
</tr>
</tbody>
</table>

**Big Five personality traits (1-5), mean (SD)**

<table>
<thead>
<tr>
<th>Trait</th>
<th>mean (SD)</th>
<th>mean (SD)</th>
<th>mean (SD)</th>
<th>mean (SD)</th>
<th>mean (SD)</th>
<th>mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraversion (solitary/reserved vs. outgoing/energetic) n.s.</td>
<td>3.3 (0.9)</td>
<td>3.4 (0.9)</td>
<td>3.5 (1.0)</td>
<td>3.5 (1.0)</td>
<td>3.4 (1.1)</td>
<td>3.4 (1.0)</td>
</tr>
<tr>
<td>Neuroticism (secure/confident vs. sensitive/nervous) ***</td>
<td>3.1 (1.1)</td>
<td>2.9 (1.0)</td>
<td>2.9 (1.0)</td>
<td>2.8 (1.1)</td>
<td>3.3 (1.0)</td>
<td>3.0 (1.0)</td>
</tr>
<tr>
<td>Openness to experience (consistent/cautious vs. inventive/curious) n.s.</td>
<td>3.6 (1.0)</td>
<td>3.7 (1.0)</td>
<td>3.7 (0.9)</td>
<td>3.7 (1.0)</td>
<td>3.6 (1.0)</td>
<td>3.6 (1.0)</td>
</tr>
<tr>
<td>Conscientiousness (easy-going/careless vs. efficient/organized) ***</td>
<td>3.7 (0.9)</td>
<td>3.4 (0.9)</td>
<td>3.3 (0.9)</td>
<td>3.4 (0.9)</td>
<td>3.4 (1.0)</td>
<td>3.4 (0.9)</td>
</tr>
<tr>
<td>Agreeableness (challenging/detached vs. friendly/compassionate) n.s.</td>
<td>3.4 (0.9)</td>
<td>3.3 (0.8)</td>
<td>3.4 (0.8)</td>
<td>3.3 (0.9)</td>
<td>3.4 (0.9)</td>
<td>3.4 (0.9)</td>
</tr>
</tbody>
</table>

**Personality characteristics, mean (SD)**

<table>
<thead>
<tr>
<th>Scale</th>
<th>mean (SD)</th>
<th>mean (SD)</th>
<th>mean (SD)</th>
<th>mean (SD)</th>
<th>mean (SD)</th>
<th>mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brief Sensation Seeking Scale (1-5) ***</td>
<td>3.1 (0.9)</td>
<td>3.5 (0.9)</td>
<td>3.6 (0.9)</td>
<td>3.6 (0.9)</td>
<td>3.5 (1.1)</td>
<td>3.4 (1.0)</td>
</tr>
<tr>
<td>General Self-Efficacy Scale (1-4) ***</td>
<td>3.0 (0.5)</td>
<td>3.0 (0.5)</td>
<td>3.0 (0.5)</td>
<td>3.1 (0.5)</td>
<td>2.8 (0.6)</td>
<td>3.0 (0.5)</td>
</tr>
<tr>
<td>N=88</td>
<td>N=81</td>
<td>N=97</td>
<td>N=95</td>
<td>N=96</td>
<td>N=447</td>
<td></td>
</tr>
<tr>
<td>Connor-Davidson Resilience Scale (0-40) ***</td>
<td>25.8 (7.2)</td>
<td>27.1 (5.7)</td>
<td>26.0 (6.8)</td>
<td>28.5 (5.3)</td>
<td>23.8 (7.4)</td>
<td>26.2 (6.7)</td>
</tr>
</tbody>
</table>

Note: The Connor-Davidson Resilience Scale was only applied to the German sample.

Further personality characteristics are investigated through the “Brief Sensation Seeking Scale” (overall: 3.4), the “General Self-Efficacy Scale” (overall: 3.0), and the “Connor-Davidson Resilience Scale” (overall: 26.2), see table 32. The group differences regarding these three measures became statistically significant. For the “Brief Sensation Seeking Scale” the results show a different value for the never ATS-user group only. That means that “sensation seeking” in this group is less common. The “General Self-Efficacy” is reduced for the SDS-positive group. For the resilience scale between the career-groups a reduced value is found in the SDS-positive and a higher value for the frequent-user group.
Multivariate analyses

The selection of variables utilized for the descriptive analyses was based on theoretical considerations (bio-psychosocial model), on results from the literature review as well as on key results from the qualitative module. The results presented above show various characteristics regarding the variable distribution across the groups. This provides first indications towards the variables that might be useful in multivariate analyses.

The main objective of the ATTUNE study is to explore the factors that shape different pathways of ATS use. The analysis groups represent the ATS consumption career over the course of the participants’ life up to the present. In order to find out which factors increase or decrease the probability to belong to one of the groups (i.e. having developed a specific consumption pattern), a multinomial logistic regressions was applied, as this statistical method allows to use a multiclass nominal dependent variable (analysis groups). The key advantage of this method is that it enables measuring the influence of each independent variable on the probability of belonging to one of the groups, under control of the influence of all other independent (predictor) variables. “Under control” means: considering the interdependence among the predictor variables by keeping them constant. Thus, the relationship between the respective predictor and the other predictors is being eliminated.

Three different models will be presented. The first logistic regression is calculated with the four ATS-user groups “rarely”, “moderately”, “frequent” and “SDS-positive”, serving as dependent variable. The SDS-positive group is defined as the reference category. The reason for this choice is that this group often proved to be the most divergent (and content wise often problematic) group in the bivariate analyses. If, for example, participants indicating injecting drug use are compared with participants not indicating injecting drug use, the logistic regression model makes it possible to determine the probability to be a member of the rare-user group. These probabilities are called “odds ratios” in a logistic regression model. An odds ratio with the value 1 indicates no relationship between the independent and the dependent variable. An odds ratio higher than 1 indicates the increase of probability of belonging to the respective group (and not the reference group) whereas an odds ratio below 1 indicates a decreased probability of belonging to the investigated group (which then means, that the probability of belonging to the reference group is enhanced).
By simultaneously including a number of possibly relevant variables, a more in-depth characterisation of the analysis groups is received. In other words: we get an impression of the factors that contribute to an ATS user showing a certain consumption pattern during her/his consumption career.

A regression model with 29 independent variables was calculated. The following 29 variables were included in the model: age, gender, nation, currently in relationship, having children, current living situation, educational status, current employment situation, current income, satisfaction with life, social integration index, age at first ATS use, methamphetamine use lifetime, non-prescribed tranquiliser use lifetime, injecting drug use lifetime, alcohol abuse lifetime, drug treatment experiences lifetime, ATS use motive: “coping”, ATS use during daytime on working days, following no consumption rules, no negative consequences of ATS use indicated, no stressful life event indicated, number of life events after onset of ATS use, index of love and care in childhood, imprisonment lifetime, no psychiatric diagnose lifetime, mental health problems according to Brief Symptom Inventory, Brief Sensation Seeking Scale, and General Self-Efficacy Scale.

14 of the variables did not show significant results in the multivariate total model (Likelihood Ratio Test). These are: gender, nation, currently in relationship, having children, current living situation, current employment situation, methamphetamine use lifetime, alcohol abuse lifetime, no consumption rules indicated, no stressful life event indicated, imprisonment lifetime, Brief Sensation Seeking Scale, Brief Symptom Inventory, and index love and care in childhood. As these variables did not show statistical significance, they were excluded, and the model was recalculated. The reduced model contains 15 independent variables. The variables, the operationalisation as well as the reference categories are presented in table 33.
Table 33: Operationalisation and reference category of independent variables in logistic regression models

<table>
<thead>
<tr>
<th>Variable</th>
<th>Operationalisation of valid category</th>
<th>Reference category</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SOCIODEMOGRAPHICS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>years</td>
<td>-</td>
</tr>
<tr>
<td>Educational status</td>
<td>Eight ISCED levels dichotomised into high level (university degree) vs. low to middle level; valid category: high</td>
<td>low to middle</td>
</tr>
<tr>
<td>Currently in relationship</td>
<td>Being in relationship at the time of interview; valid category: yes vs. no</td>
<td>no</td>
</tr>
<tr>
<td>Monthly income</td>
<td>Seven net income categories were dichotomised into low income category vs. above lowest level; valid category: above low</td>
<td>low</td>
</tr>
<tr>
<td>Satisfaction with life</td>
<td>Seven-point Likert scale measuring satisfaction with life in general was dichotomised: ≤ 4 not satisfied vs. ≥ 5 satisfied; valid category: satisfied</td>
<td>not satisfied</td>
</tr>
<tr>
<td>Social integration index</td>
<td>Self-assessed social integration (1-10). Higher scores mean better integration</td>
<td>-</td>
</tr>
<tr>
<td><strong>DRUG USE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age at first ATS use</td>
<td>years</td>
<td>-</td>
</tr>
<tr>
<td>ATS consumption motive “coping”</td>
<td>Five motives for ATS consumption were grouped in the category coping; valid category: no coping motives</td>
<td>yes</td>
</tr>
<tr>
<td>ATS use on workdays during daytime</td>
<td>Participants indicated, if they use ATS on working days during daytime; valid category: no</td>
<td>yes</td>
</tr>
<tr>
<td>ATS consumption rules</td>
<td>Participants indicated, if they follow at least one self-defined rule to control their ATS consumption; valid category: yes</td>
<td>no</td>
</tr>
<tr>
<td>Experienced negative consequences of ATS use</td>
<td>Participants indicated, if they experienced at least one negative consequence of ATS use; valid category: no</td>
<td>yes</td>
</tr>
<tr>
<td>Lifetime consumption of methamphetamine</td>
<td>Participants indicated, if they used methamphetamine at least once in a lifetime; valid category: no</td>
<td>yes</td>
</tr>
<tr>
<td>Lifetime consumption of non-prescribed tranquilisers</td>
<td>Participants indicated, if they used non-prescribed tranquilisers at least once in a lifetime; valid category: no</td>
<td>yes</td>
</tr>
<tr>
<td>Drug treatment lifetime</td>
<td>Participants indicated, if they utilized drug treatment/counselling once in a lifetime; valid category: no</td>
<td>yes</td>
</tr>
<tr>
<td>Alcohol abuse lifetime</td>
<td>Result of the CAGE questionnaire, assessing alcohol abuse lifetime; valid category: no</td>
<td>yes</td>
</tr>
<tr>
<td>Injecting drug use lifetime</td>
<td>Participants indicated, if they injected any drug once in a lifetime; valid category: no</td>
<td>yes</td>
</tr>
</tbody>
</table>

**BURDEN**

- Number of negative life events (LE) after onset of ATS use
  - The age at first experience of each negative LE, that a participant indicated, was compared with the age at onset of participant’s ATS use. LE which happened after ATS onset were summed up.

**HEALTH AND MIND**

- General Self-Efficacy Scale
  - 10 items had to be rated on a 4 point Likert scale to assess self-efficacy. Higher scores mean higher self-efficacy.
- Brief Sensation Seeking Scale (1-5)
  - 4 items had to be rated on a 5 point Likert scale to assess sensation seeking. Higher scores of the total mean value indicate a higher level of sensation seeking.
- Psychiatric diagnosis lifetime
  - Participants indicated, if they received once in a lifetime a diagnosis from a medical doctor regarding one of six psychiatric disorders
- Mental health problem
  - The general severity index received from the Brief Symptom Inventory was transformed into t-values. The scale was dichotomised at ≥60 points (mean + 1 standard deviation). Participants reaching this cutoff are regarded as having a mental health problem; valid category: no

In a multinomial logistic regression one model is calculated for each analysis group apart from the reference group SDS-positive, of course, as this is the group that is compared to all other groups. The odds ratios (OR) of all variables in these three models are presented in table 34, table 35 and table 36 with their level of significance. The clarification of variance was calculated using the method of Nagelkerke’s pseudo $R^2$. 
Table 34: Logistic regression model 1 for the prediction of allocation to ATS use career type: rare, moderate and frequent users in comparison with SDS-positive users

<table>
<thead>
<tr>
<th></th>
<th>rarely</th>
<th></th>
<th>moderately</th>
<th></th>
<th>frequently</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR</td>
<td>Sig.</td>
<td>OR</td>
<td>Sig.</td>
<td>OR</td>
<td>Sig.</td>
</tr>
<tr>
<td><strong>SOCIODEMOGRAPHICS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (years)</td>
<td>1.02</td>
<td>0.066</td>
<td>0.98</td>
<td>0.117</td>
<td>1.01</td>
<td>0.410</td>
</tr>
<tr>
<td>Educational level: high</td>
<td>1.76</td>
<td>0.014</td>
<td>1.57</td>
<td>0.037</td>
<td>0.79</td>
<td>0.289</td>
</tr>
<tr>
<td>Income: medium to high</td>
<td>1.88</td>
<td>0.005</td>
<td>0.91</td>
<td>0.627</td>
<td>1.40</td>
<td>0.048</td>
</tr>
<tr>
<td>Satisfaction with life: satisfied</td>
<td>0.99</td>
<td>0.982</td>
<td>2.24</td>
<td>0.001</td>
<td>1.03</td>
<td>0.863</td>
</tr>
<tr>
<td>Social integration index (1-10)</td>
<td>1.03</td>
<td>0.624</td>
<td>0.94</td>
<td>0.147</td>
<td>1.08</td>
<td>0.050</td>
</tr>
<tr>
<td><strong>DRUG USE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age at first ATS use (years)</td>
<td>0.99</td>
<td>0.672</td>
<td>1.01</td>
<td>0.749</td>
<td>0.95</td>
<td>0.011</td>
</tr>
<tr>
<td>No ATS consumption motive “coping”</td>
<td>9.04</td>
<td>0.000</td>
<td>3.52</td>
<td>0.000</td>
<td>2.44</td>
<td>0.006</td>
</tr>
<tr>
<td>No ATS use on workdays during daytime</td>
<td>10.27</td>
<td>0.000</td>
<td>6.30</td>
<td>0.000</td>
<td>1.98</td>
<td>0.000</td>
</tr>
<tr>
<td>No experience of negative consequences of ATS use</td>
<td>6.79</td>
<td>0.000</td>
<td>2.67</td>
<td>0.055</td>
<td>1.50</td>
<td>0.464</td>
</tr>
<tr>
<td>No lifetime consumption of non-prescribed tranquillisers</td>
<td>1.76</td>
<td>0.014</td>
<td>1.07</td>
<td>0.740</td>
<td>0.72</td>
<td>0.056</td>
</tr>
<tr>
<td>No injecting drug use lifetime</td>
<td>2.50</td>
<td>0.040</td>
<td>1.89</td>
<td>0.084</td>
<td>0.65</td>
<td>0.056</td>
</tr>
<tr>
<td>No drug treatment lifetime</td>
<td>3.11</td>
<td>0.000</td>
<td>2.46</td>
<td>0.000</td>
<td>1.67</td>
<td>0.009</td>
</tr>
<tr>
<td><strong>BURDEN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of negative life events after onset of ATS use</td>
<td>0.90</td>
<td>0.124</td>
<td>0.89</td>
<td>0.039</td>
<td>0.86</td>
<td>0.001</td>
</tr>
<tr>
<td><strong>HEALTH AND MIND</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Self-Efficacy Scale (1-4)</td>
<td>0.74</td>
<td>0.150</td>
<td>0.97</td>
<td>0.887</td>
<td>1.75</td>
<td>0.001</td>
</tr>
<tr>
<td>No psychiatric diagnosis lifetime</td>
<td>1.91</td>
<td>0.003</td>
<td>1.69</td>
<td>0.009</td>
<td>1.69</td>
<td>0.003</td>
</tr>
</tbody>
</table>

Notes:
- OR=Odds ratio; Sig.=p-value; df=degrees of freedom
- Significant results are highlighted in bold.
- Model Fit: $\chi^2=749.42; \text{df}=45, \text{Sig.<}0.001; R^2 (Nagelkerke)=49.1$
- Reference Category of dependent variable: SDS-positive group
First of all, it can be stated that the overall model fit is good and that the total model is statistically highly significant (Chi2=749.42; df=45, Sig: <0.001). This means that the chosen independent variables clearly distinguish between the groups. The percentage of clarified variance in the reduced model is 49.1%. Hence, it is only 2.4 percentage points lower than in the first model (51.5%), even though the number of independent variables was halved. This suggests that the excluded variables did not contribute in a relevant way to clarify the factors that are associated with participants’ group allocation, respectively the distinguishing of the groups.

The independent variables in the logistic regression model can be regarded as “risk” or “protective” factors for being a member of the SDS-group (the reference group), which appeared to be the most problematic group in the bivariate analyses. The respective ORs show the increase or decrease of the probability of belonging to the reference group. In addition, the ORs of the independent variables help to reveal the central characteristics that constitute the groups and thus the different ATS careers.

The most striking associations were found regarding variables in the drug use section (see table 34). The biggest OR (10.27) in the model was calculated for the variable “ATS use on workdays during daytime” in the rare-user group. This value can be interpreted as participants who did not use ATS during daytime on workdays have a ten times higher probability of belonging to the rare-user group than to the SDS group. Members of the moderately using group have a six times higher probability of not being in the SDS group, while the probability for the frequent users is doubled in this respect. Of similar importance for the group allocation appears to be the specific motivation for ATS use. Participants who indicated none of the coping-related consumption motives show a nine times higher probability of belonging to the rare-group than to the SDS group. Again positive (i.e. enhancing the probability) and decreasing ORs for the moderately (3.5) and the frequently (2.0) using groups were found. For psychoactive substances a more frequent use is associated with negative consequences for the user (or her/his environment). This effect exists also in this sample, but the association became statistically significant only for the rare-user group: participants having experienced no negative consequences of ATS use are nine times more likely to belong to the rare-user group than to the SDS-group. The most indicated negative consequence of ATS use in the bivariate analyses was insomnia. Some ATS users try to tackle this problem by consuming tranquilisers as sleeping aids. Non-use of (non-prescribed) tranquilisers did only enhance the probability of belonging to the rarely using ATS group by 1.8. The variable “never been in drug treatment” complements the results regarding problems that may occur together with substance use. The ORs of the three groups are descending again from the rarely (3.1) to the frequent (1.7) using group, so the need for treatment was obviously less likely for rare users. Another indicator of a rather problematic drug use pattern is injecting drug use. People from the sample, who never injected drugs, have a 2.5 higher probability of belonging to the rare users than to the users who developed an ATS dependency once in a lifetime. It is known from many studies (see for example (26-29)), that psychiatric disorders often go along with (problematic) substance use.
This association is visible in the sample, too. Participants having received a psychiatric diagnosis at any point in life are more likely to be found in the ATS dependency-group than in one of the other three groups. Regarding sociodemographic characteristics data show that participants with a high educational status are more likely to show a rare (OR: 1.6), respectively moderate (OR: 1.6) consumption pattern during their ATS career. The educational status is often correlated with the monthly income; a similar pattern is observed here. Only for the moderate users it became statistically significant that being satisfied with life in general doubled the probability of not being in the SDS group. Finally, small but statistically significant ORs were found regarding the number of negative life events (LE) that were experienced after the onset of ATS use. The ORs are smaller than 1, which indicates a negative association: the more negative LE respondents experienced after first use of ATS, the lower the probability for them to belong to the moderate- or frequent-group. To make OR’s < 1 comparable to the ORs >1, the reciprocal value has to be calculated. The OR for the moderately using group is then 1.1 and for the frequent-user group it is 1.2. These ORs are rather small, but it’s important to remember that this is partly connected to the “scale” of number of LE. In the case of the frequent users’ OR of 1.2 this means that the experience of one more LE after ATS onset increases the probability to belong to the SDS group by 20%.

A second logistic regression model was calculated in order to condense the information and to investigate what distinguishes the problematic SDS group from all ATS users who have never developed ATS dependency. So a new binary dependent variable was built: ATS user without SDS diagnosis vs. ATS users with SDS diagnosis. The latter serves as the reference category again. The procedure was the same as the one for the first model: as a first step all 29 independent variables were inserted in the model. After removing non-significant variables, 9 variables remained. The second model is statistically highly significant as well (Chi2=440.95; df=9, Sig: <0.001) and provides a clarification of variance of 40.4%. Again, the loss of explained variance compared to the initial model is very small (2.1%), given that two thirds of the variables were excluded for not being significant. The model is presented in table 35, each individual OR became statistically significant.
Table 35: Logistic regression model 2 for prediction of allocation to ATS use career type: rare to frequent users in comparison with SDS-positive users

<table>
<thead>
<tr>
<th></th>
<th>rarely to frequently</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR</td>
</tr>
<tr>
<td><strong>DRUG USE</strong></td>
<td></td>
</tr>
<tr>
<td>No ATS consumption motive “coping”</td>
<td>4.74</td>
</tr>
<tr>
<td>No ATS use on workdays during daytime</td>
<td>3.46</td>
</tr>
<tr>
<td>Following ATS consumption rules</td>
<td>1.60</td>
</tr>
<tr>
<td>No experience of negative consequences of ATS use</td>
<td>2.68</td>
</tr>
<tr>
<td>No alcohol abuse lifetime (CAGE)</td>
<td>1.38</td>
</tr>
<tr>
<td>No drug treatment lifetime</td>
<td>2.26</td>
</tr>
<tr>
<td><strong>BURDEN</strong></td>
<td></td>
</tr>
<tr>
<td>Number of negative life events after onset of ATS use</td>
<td>0.91</td>
</tr>
<tr>
<td><strong>HEALTH AND MIND</strong></td>
<td></td>
</tr>
<tr>
<td>No psychiatric diagnosis lifetime</td>
<td>1.54</td>
</tr>
<tr>
<td>No mental health problem accord. to Brief Symptom Inventory (GSI)</td>
<td>1.77</td>
</tr>
</tbody>
</table>

Notes:
- OR=Odds ratio; Sig.=p-value; df=degrees of freedom
- Significant results are highlighted in bold.
- Model Fit: $\chi^2=440.95; \text{df}=9, \text{Sig.}<0.001; R^2 (\text{Nagelkerke})=40.4$
- Reference Category of dependent variable: SDS-positive group

The ATS use motives summarised under the label “coping” show the highest OR. This means, participants having indicated using ATS in order to cope with mental or physical problems, show a 4.7 higher probability of having developed an ATS dependency in life compared with those who didn’t use ATS for coping reasons. The use of ATS on workdays during daytime increases the probability of being in the SDS group by the factor of 3.5. The experience of negative consequences related to ATS use (OR: 2.7) as well as having been in need for drug treatment (OR: 2.3) also helps to separate the group of ATS users without an SDS diagnosis from the one with an SDS diagnosis in life. In addition, having struggled with alcohol abuse in life is also related with the SDS group. Two variables became statistically significant in this model which could not be included in the first model. Obviously, they play a significant role when it comes to the characterisation of ATS users with and without (lifetime) dependency. One is “having a mental health problem” according to the Global severity index, which is part of the Brief Symptom Inventory. Participants having no mental health problem have a 1.8 higher probability of belonging to the group of ATS users who never developed an ATS dependency. The other variable is “following (self-imposed) ATS consumption rules”. Participants of the survey, who declared to follow such rules, belong with a 60% higher probability to the non-dependent ATS user group.
Eventually, a third logistic regression model was designed. This model is meant to explore the factors which influence the relationship between the type of the participants’ ATS career and the question whether the participants are currently still consuming or have become abstinent.

**Table 36: Logistic regression model 3 for prediction of allocation to ATS use career type combined with current outcome: abstinent or currently using**

<table>
<thead>
<tr>
<th></th>
<th>rarely/ moderately used - currently abstinent</th>
<th>rarely/ moderately used - currently using</th>
<th>frequently used and/or SDS positive - currently abstinent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR</td>
<td>Sig.</td>
<td>OR</td>
</tr>
<tr>
<td><strong>SOCIODEMOGRAPHICS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (years)</td>
<td>0.000</td>
<td>0.060</td>
<td>0.000</td>
</tr>
<tr>
<td>Currently in relationship</td>
<td>0.001</td>
<td>0.274</td>
<td>0.060</td>
</tr>
<tr>
<td>High educational level</td>
<td>0.014</td>
<td>0.002</td>
<td>0.403</td>
</tr>
<tr>
<td><strong>DRUG USE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age at first ATS use (years)</td>
<td>0.676</td>
<td>0.033</td>
<td>0.028</td>
</tr>
<tr>
<td>No ATS consumption motive “coping”</td>
<td>0.000</td>
<td>0.001</td>
<td>0.898</td>
</tr>
<tr>
<td>No ATS use on workdays during daytime</td>
<td>0.000</td>
<td>0.000</td>
<td>0.134</td>
</tr>
<tr>
<td>Following ATS consumption rules</td>
<td>0.133</td>
<td>0.121</td>
<td>0.014</td>
</tr>
<tr>
<td>No experience of negative consequences of ATS use</td>
<td>0.001</td>
<td>0.002</td>
<td>0.391</td>
</tr>
<tr>
<td>No lifetime consumption of methamphetamine</td>
<td>0.001</td>
<td>0.060</td>
<td>0.000</td>
</tr>
<tr>
<td>No lifetime consumption of non-prescribed tranquillisers</td>
<td>0.001</td>
<td>0.038</td>
<td>0.268</td>
</tr>
<tr>
<td>No injecting drug use lifetime</td>
<td>0.001</td>
<td>0.030</td>
<td>0.005</td>
</tr>
<tr>
<td>No drug treatment lifetime</td>
<td>0.006</td>
<td>0.000</td>
<td>0.280</td>
</tr>
<tr>
<td><strong>HEALTH AND MIND</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Self-Efficacy Scale (1-4)</td>
<td>0.165</td>
<td>0.958</td>
<td>0.004</td>
</tr>
<tr>
<td>Brief Sensation Seeking Scale (1-5)</td>
<td>0.063</td>
<td>0.864</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Notes:
OR=Odds ratio; Sig.=p-value; df=degrees of freedom
Significant results are highlighted in bold.
Model Fit: $\chi^2$=769.24; df=42, Sig: <0.001; $R^2$ (Nagelkerke)=48.0.
Reference Category of dependent variable: frequently used and/or SDS positive - currently using.
In order to do that, another dependent variable was constructed with four different types of users: The first group involved users, who consumed rarely or moderately during their ATS career, but did not indicate consumption in the past 12 months before the interview. These are regarded as (currently) abstinent and are abbreviated R/M-A. In the second group, users were combined who also have had a rare to moderate use during their ATS career, but are currently still using, which means they indicated ATS consumption during the past 12 months; they are marked as R/M-U. The third group comprises users, who showed a frequent use during their ATS career and/or developed an ATS dependency at some point, but overcame the dependency and are currently abstinent. The abbreviation for this group is F/SDS-A. The fourth group contains of F/SDS-users, too, but only those, who are currently still using ATS. This group is labelled as F/SDS-U and serves as the reference group in the logistic regression model (see table 36).

Firstly, it should be noted that the three variables with the largest ORs are again the same as in the other two models: participants who don’t use ATS on daytime during workdays have an almost six times higher probability of belonging to the group comprising currently abstinent rare or moderate users (R/M-A) than to the reference group of currently using ATS users with SDS diagnosis (F/SDS-U). The OR of the R/M-U group is comparably high (5.8) in this regard. People who didn’t report negative consequences of ATS use have a 4.8 times higher probability to be in the R/M-A group, respectively a four times higher probability to be in the R/M-U group, compared to the reference group. Regarding the consumption of ATS for coping reasons, a bigger difference in the ORs of the R/M-A group (4.1) and the R/M-U group (2.6) is visible. Another drug use related variable helps to distinguish between all three groups statistically significant. Participants who never injected any drug are 3.8 times more likely to be found in the R/M-A group, 2.5 times more likely in the R/M-U group and 1.9 more likely in the F/SDS-A group than in the group with frequent and/or SDS-positive users, who are currently not abstinent. When it comes to people with high educational level, they are more likely found in the R/M-A group (OR: 1.7) and in the R/M-U group (OR: 1.8). A higher self-efficacy enhances the probability of not belonging to the F/SDS-U group, statistically significant only for the F/SDS-A group. On the other hand, an OR of 0.7, which was found regarding sensation seeking in the F/SDS-A group, suggests that a higher urge for sensation seeking makes phases of ATS abstinence less likely.
Summary

The various results can best be summarised by characterising and comparing the analysis groups in which ATS consumption careers are reflected. Characterisations of the different types of ATS use careers are presented by highlighting the factors that contributed to shape and come along with these careers, according to the analyses.

Rare users: Survey participants that were allocated in this group used ATS on an average of one to five days per year in their consumption career. Rare users are more likely to be highly educated as well as to have a medium to high monthly income. Rare use in terms of the chosen definition can be regarded as a completely controlled consumption pattern. This is reflected, inter alia, in the strong association with the fact that rare users manage to avoid using ATS in situations where it is important to fulfil everyday responsibilities, like during daytime on working days. Obviously, rare use is strongly associated with other motives than coping related ones. Further, injecting drug use – the most risky route of administration of drugs – is not likely to be found when examining rare ATS users. If ATS use happens rather rarely, negative consequences stay away. The experience of negative consequences of drug use might initiate that users seek professional help at some point. As the rare users in the sample seldom struggle with negative consequences, they hardly have any drug treatment or counselling experiences.

Moderate users: Moderate use was operationalised as six to twenty days of ATS consumption per year of ATS career. The educational level is comparable to the one in the rare user group. Interestingly, the moderate users appear to be the group with the largest satisfaction with life. When it comes to drug use related characteristics, moderate users also try to integrate their ATS use in their life in a reasonable manner by avoiding use in everyday life where there could be conflicts with other obligations. Using ATS for other reasons than to cope with mental health problems is –compared to the SDS group- more likely in the moderately using group as well, but the association is considerably weaker than in the rare user group. Moderate users are, consistent with this, less likely to have a psychiatric diagnosis lifetime than SDS-positive users, but a little more likely compared to rare users.

Frequent users: If a participant used ATS from twenty days per year up to everyday, she/he is regarded as a frequent user. In this group the described association with no ATS use on workdays as well as indicating no coping motives is also visible but much weaker than in the rare and the moderate group. To distinguish this group from the SDS group is quite difficult. Those two groups show differences but these are often not very pronounced. One reason is obviously, that most of the participants in the SDS group are frequent users as well. Reasons of why these frequent users do not develop dependency might also be connected with the protective factors of not using for coping reasons and the ability to avoid use on workdays during daytime. The enhanced self-efficacy that was found in this group might also function as a protective factor, which maybe prevents frequent users from sliding into dependency. Self-efficacy enables a person, to face challenges competently. This is especially true with regard to behaviours affecting health (30).
**SDS-positive users:** Scoring positive on the Severity of Dependence Scale led to the allocation to this group, regardless of frequency of use during ATS career. But as already mentioned, most of the participants in the SDS group show a frequent ATS use during their career. Keeping in mind the bivariate analyses, the results from the group comparison in the first logistic regression model as well as from the second model, where the SDS group was compared with all other groups combined, it is obvious, that this group is the most burdened group in almost all areas that were investigated in this study. Regarding all protective factors that were reported before, is it very less likely that they are linked to the SDS group. In addition, the SDS group also seems to struggle with alcohol issues, or did so at least once during lifetime. Finally, mental health problems according to BSI as well as at least one psychiatric diagnosis are also typical for the SDS group.

For a second level of analysis, in addition to frequency, the information whether a person is currently (past 12 months) abstinent or currently still using ATS, was included. This led to four groups, which will be characterised as well.

**Rare or moderate users, currently abstinent:** R/M-A users are more likely to be in a relationship currently and have a rather high educational level. Their tendency to limit the ATS consumption to the weekends might contribute to the development of a comparably controlled consumption pattern which they showed during their ATS career. A consumption career like this obviously results less likely in negative consequences or treatment needs. The use of methamphetamine and the use of tranquilisers in order to tackle i.e. insomnia are less likely in this group, too.

**Rare or moderate users, currently using:** This group differs from the previous one mainly in the fact that consumption still takes place. The frequency of use is on average the same as in the R/M-A group in the past. Thus, they show similar characteristics regarding ATS use and its consequences. One difference is that persons without treatment experiences are more likely to belong to the R/M-U.

**Frequent and/or SDS-positive users - currently abstinent:** The ATS users in this group developed a rather risky consumption pattern during their career, which resulted in dependency in about half of them. They are currently abstinent, though, so they overcame their risky use and/or dependency unlike the users in the F/SDS-U group. The fact that F/SDS-A users are more likely to follow consumption rules, show higher self-efficacy and lower urge for sensation-seeking than the F/SDS-U group, may have contributed to their current abstinence.

**Frequent and/or SDS-positive users - currently using:** In short, all risk factors and indicators for problem consumption (ATS use for coping reasons, ATS use on workdays, consumption of methamphetamine and tranquilisers, injecting drug use, drug treatment experiences) are increased in this group. On the other hand, protective factors (following consumption rules, enhanced self-efficacy, and reduced sensation seeking) are less pronounced for frequent and/or SDS-positive ATS users who are still consuming ATS.
Overall summary and conclusions: Synthesis of qualitative and quantitative results

Many of the respondents have developed an ATS consumption career that can be considered as unproblematic overall. Among rare or moderate but also among many frequent ATS users, consumption behaviour did not impair everyday life. The situation is quite different regarding ATS users, who have experienced significant physical and mental side effects as a result of the use of ATS and who have severely disregarded everyday obligations. Measures of secondary prevention should therefore be targeted at the different groups of ATS users and be tailored to the risk factors involved.

The initiation of ATS use provides a first opportunity to spread information on the effects, dosage and risks of the various amphetamine-type substances. Although this information is available in principle (e.g. provided by prevention agencies), most ATS beginners tend to rather trust the information they receive by their peers. Nightlife services, run by trained peers, enable procurement of user-friendly and objective information. This could result in greater dissemination and acceptance by the target group. Such on-site offers could also include testing of substances brought along (“drug checking”).

In the transition from occasional use to more frequent use, which, especially in the case of methamphetamine, takes place in a short period of time, harm reduction measures are useful. They should aim to enable users applying rules to control the frequency and intensity of their use. Such rules may address dose reduction, the postponement of the next dose, and situations and contexts, where ATS use should be avoided.

For problematic and/or dependent ATS users, counselling and treatment services are needed to support a significant reduction in use or the achievement of (at least temporary) abstinence. A deficit in the existing treatment provision is that there are very few specific forms of treatment for dependent ATS users. A tailored offer would be useful, since dependence is associated with different negative consequences for physical health (sleep disorders, lack of concentration, exhaustion), with burden related to mental health (paranoia, depression, anxiety) and with social problems (drug-centred social network, unemployment, child care). Treatment must take into account these specific factors and should be as multi-professional as possible.

By synthesizing the qualitative and quantitative results, insights can be gained into which factors determine and shape the different pathways and trajectories of ATS use that were carved out in the results section. The advantage of the qualitative data is its focus on the single phases of ATS use that are initiation, continuation and decrease sometimes up to desistance together with conditions and concomitants. This was done very detailed for individual persons who are regarded as key persons representing certain types of ATS users. Although some topics were specified by the interview guideline, the interview partners always had the opportunity to set their own thematic priorities. The gained individual perceptions were incorporated into the topics of the quantitative survey. The advantage of the quantitative study module is that the type of consumption careers could be determined very accurately on the basis of comprehensive consumption data and that these could be analysed on the basis of a large stratified sample. The intensity and duration of the respective ATS
consumption career could be determined by means of the number of the consumption days in life, in the last year, in the last month as well as information on the age at first consumption and at (current) last consumption. The frequency of occurrence of four different types of consumption careers as well as a lot of information that is related to and could influence the ATS careers could be quantified and generalised using a large sample. The results of both modules will be summarised and discussed along the research questions.

Who is using ATS and what common types of consumption careers are there?

ATS users are a highly heterogeneous group. Besides “clubbers” and young adults who are experimenting with different types of illicit drugs, there are people who are not necessarily associated with ATS consumption like (middle-aged) people in paid full-time employment or (young) mothers with small children. ATS is used by women as well as by men, the qualitative as well as the quantitative sample are almost gender balanced, which was also aimed at. The mean age is around thirty, with an age range from 18 to 77 years. Most of the users are socially well integrated, the majority live in stable conditions. The educational level is comparably high and the majority is in paid employment.

There are ATS use careers that are characterized by rare, moderate and frequent consumption while the latter partly developed an ATS dependency. Regarding all types of consumption careers, there are users who are still using ATS while others have become abstinent. On average, ATS users with comparably long consumption careers were included in the sample; this is true especially in the frequent using groups. Typically, consumption trajectories are very changeable over time. Some respondents describe that after an initial increase, their consumption has stabilised at a certain level, while others control their consumption by taking care to keep adhere to abstinence phases in between. Most users regard their ATS use as recreational, some report experimental use, thus single or short-term use. Compulsive or intensive use is declared scarcest to be the dominant pattern during the consumption career.

Why do users (start to) use ATS, what types are used and the use of what other substances goes along with ATS use?

There are different central motives for ATS consumption which can be subsumed under the categories “hedonism” (to feel euphoric and relaxed and stay awake at parties, to enhance sexual pleasure), “functional” (to increase work/educational performance, to manage family life), “coping” (to cope with physical and mental health problems and forget about problems, to compensate for social insecurity) and various “external” motives like peer pressure or no danger of police enforcement. Often hedonistic and functional motives dominate the earlier phase of an ATS career, while coping-related motives appear rather in later phases. Predominantly, the age at onset is around 18 years, with earlier age in frequent using groups.

Linked to the question of the motives and reasons for consumption is the question of reasons for non-use, which was asked to ATS never-users. Even though these participants were exposed to ATS use several times for example at parties or when they were with friends, and even though the majority experienced repeated
attempts of persuasion, they rejected consumption. The most important reasons for not trying ATS were health concerns, the observed ATS effect on others, or the general rejection of chemical, psychoactive or illegal substances. The concern to take even more drugs than already or to become dependent was also mentioned.

Amphetamine and MDMA, which are also the most common ATS to start with, are the most popular ATS substances, especially among controlled recreational users, followed by amphetamine-type NPS. The use of methamphetamine is more frequent, although not exclusive, in groups with higher and sustained ATS use. Another important group of methamphetamine users are marginalised people, who use this type of ATS in order to cope with their bad living conditions or to cope with hunger and cold. Non-prescribed prescription drugs containing ATS (e.g. methylphenidate) are predominantly used in order to increase work performance or by students who need to prepare for an exam.

The use of other drugs is quite prevalent as well, especially regarding the licit drugs alcohol and tobacco, but also regarding cannabis, cocaine and hallucinogens. This is not only true for the ATS using sample, but also for the non-using group: They do not use ATS, but this does not mean they reject drugs in general. The consumption of alcohol and cannabis play a significant role among non-ATS users. Some report problems associated with these substances, which is a reason for several participants not to use ATS in order to avoid further risks. Especially frequent or dependent ATS users take other substances in order to tackle negative consequences of ATS use, like insomnia or nervousness. The most important substances to do so are cannabis, alcohol and (non-prescribed) tranquilisers.

Insights into why and under which circumstances consumption patterns are being changed will be given in the following.

Why do ATS user continue (and increased at some point) their use and what problematic drug use patterns occur?

In the beginning, the majority of users appreciate the effects of ATS (e.g. enhanced energy and vigilance, disinhibition, enhanced self-esteem, reduced physical needs) and especially for rare or moderate users these effects persist which is why the use is continued. They get the feeling that ATS use is part of partying, or that something is missing if they do not consume in the situations where they normally do. When it comes to frequent use, people experience a weakening of the effects and consequently increase their consumption. The issue of an increase in consumption is specific for the different ATS substances. Many MDMA users tend to realise quite quickly that the increase of use (in terms of frequency and amount) does not have the initial effect. The desired effect of MDMA weakens rapidly after repeated use without phases of abstinence, for the serotonin (or the serotonin transporter), which is released at one go after MDMA use, needs to be rebuilt first. At the same time, the likelihood of adverse side effects increases with increasing frequency of use (31-33). Occasional, controlled MDMA users obviously take that experience into account, when determining the frequency of their consumption. In contrast, some heavy users try to enforce the effect by using MDMA repeatedly and in increasing doses (34). The (psychological) dependence potential of methamphetamine is much higher com-
pared to MDMA (35), e.g. because of the sudden onset as well as the shorter duration of effects, if nasally applied (36). When they are sober, these consumers often feel much worn out and try to fight this with continued consumption. Users who developed an ATS dependency but also frequent users without dependency declared much more often, that they consume because they cannot help to do so. Around one third of the sample is or was affected by an ATS dependency. The results show that the dependent users, but also the frequently using ones, are burdened by the experience of critical and stressful life events to a greater extent, in particular if an accumulation of such events occurs.

Also with regard to other drugs, quite a few develop consumption problems. Lifetime or current problematic alcohol use is common in all groups, opioid dependency lifetime is only visible in the frequent using groups (frequent and SDS-positive); the same applies for injecting drug use and experiences with addiction treatment.

Users with a comparatively controlled ATS career rather do not see a reason to stop their use, because they like the effects and they experience negative consequences rather scarcely. Obviously they were able to integrate the ATS use as a special thing for special occasions into their life and avoid use when it clashes with everyday obligations like work or family commitments. The experience of negative consequences is often connected with changes in consumption patterns, for better or worse, as described in the next section.

**Why do users reduce the use of ATS or stop it completely?**

Participants were asked for reasons for reduction or cessation of ATS use. The most important topic in this regard was related to health (experience of negative mental or physical health consequences), followed by the self-perceived feeling of losing control over the drug use. Further, the social environment plays a role here (changing of social network, new romantic partner, expectancies from social network to reduce), and also environmental reasons like entering treatment, imprisonment or incompatibility with occupational requirements made people reduce or stop their ATS use. Most of the ATS users who reduced their use managed to do so without professional help like addiction treatment or counselling. Some reported that they were just sick of ATS use at some point. This is often connected with a change in lifestyle and priorities in life: After many years of going to parties every weekend people get bored, reduce going out and consequently reduce their ATS consumption or stop it completely. Often this goes along with fundamental changes in life for example graduating from university or starting a family. This phenomenon is labelled as “maturing out” of drug use in addiction research (37, 38).

Like regarding the reasons for reduction, the negative consequences of ATS use are mostly related to physical and mental health issues and mainly concern frequent and SDS-positive users. The following were most often declared: insomnia, having no energy, loss of appetite, and emotional effects such as nervousness, low mood or lacking in concentration. Social or financial problems and trouble with law enforcement are less of-

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1 Opioid dependency lifetime was an exclusion criterion in fact. There was an exception for the sample from UK, though.
ten experienced. The users’ reaction in answer to negative consequences is not always a reduction or cessation of consumption, which appears to be a reasonable decision. If a reduction of use is not reachable or just not desired, another coping strategy is to use other drugs to handle the unpleasant side effects of ATS use. Connected to the predominant health consequences insomnia and low mood, they choose cannabis, alcohol and non-prescribed tranquilisers to deal with these consequences. Obviously, there is no big need for sleeping aid, if ATS is rarely or moderately used. Tranquilisers can be used for other reasons as well, though, for example as self-medication for comorbid psychiatric disorders, which are more prevalent in the ATS dependent group. Around half of the ATS users declared that although they have reduced their ATS use, they have subsequently increased the use of other drugs. Again alcohol and cannabis are their drugs of choice, complemented with cocaine, which might function as a substitution for the missing stimulating effects of ATS.

Risk and protective factors

As a quintessence of the reported qualitative and quantitative results, various risk and protective factors can be deduced for whether an ATS consumption career tends to develop in a controlled and unproblematic manner or whether consumption becomes rather problematic or even leads to dependency. It has to be taken into account that risk and resilience factors are connected to each other, thus the absence of a risk factor is at the same time a resilience factor and the other way round. Further, it is not ruled out that some of the factors might have occurred when a problematic or dependent ATS consumption pattern was already established. An example: If a person is struggling with mental health problems, this might lead to a rather uncontrolled use of ATS, in order to cope with these problems. Another explanation would be that mental health problems occurred as a consequence of frequent or dependent ATS use. Due to limited time and budget constraints, a longitudinal study design was not feasible. In a retrospective, cross-sectional study design, the so called ‘chicken-and-egg’ problem can never be fully resolved for certain variables.
The main risk and protective factors as well as their possible link to a problematic or rather controlled consumption career are summarized in the overview shown in table 37.

**Table 37: Risk and protective factors**

<table>
<thead>
<tr>
<th>Risk factors</th>
<th>Possible link to problematic ATS use</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Low educational level</td>
<td>ATS might be used to escape from rather difficult socioeconomic conditions of life for a moment. Users being confronted with such living conditions might have the feeling to have nothing to lose, i.e. uncontrolled ATS use cannot endanger occupational success or social prestige.</td>
</tr>
<tr>
<td>• Low income</td>
<td></td>
</tr>
<tr>
<td>• Biographical burden (stressful life events)</td>
<td>Users try to cope with the long term impact of stressful life events on their mental health condition by using ATS and perceive this self-medication as (short-term) effective.</td>
</tr>
<tr>
<td>• ATS use motive coping</td>
<td></td>
</tr>
<tr>
<td>• Mental health problems</td>
<td></td>
</tr>
<tr>
<td>• Problematic alcohol use in life</td>
<td>This could be an indication that problems with controlling the use of psychoactive substances already existed before or that substance use was perceived as successful in terms of a (maladaptive) coping strategy.</td>
</tr>
<tr>
<td>• Continuation of ATS use despite negative consequences</td>
<td>Some users ignore negative consequences of ATS use and consequently do not reduce their use. If a dependency is subsequently developed, consumption cannot be reduced easily despite negative consequences.</td>
</tr>
<tr>
<td>• Use of methamphetamine</td>
<td>Methamphetamine use has a high potential of dependency because of its specific drug properties (short duration of effect, sudden onset, strong effect). Injecting drug use is the most risky route of administration in terms of dependency and harms to users’ health.</td>
</tr>
<tr>
<td>• Injecting drug use</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Protective factors</th>
<th>Possible link to controlled ATS use</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Following consumption rules</td>
<td>Following self-imposed consumption rules might help users to organize their ATS use in a way that it does not endanger important obligations in everyday life (job, studies, family life). A crucial rule seems to be the limitation of use on leisure time.</td>
</tr>
<tr>
<td>• No ATS use on workdays during daytime</td>
<td></td>
</tr>
<tr>
<td>• Having not only an ATS consuming social network</td>
<td>If the social network does not comprise only of ATS users it is easier not to use drugs every time when meeting the social network. The decision not to purchase ATS itself, but only to consume when being invited, can help to control the use.</td>
</tr>
<tr>
<td>• Limited availability of ATS</td>
<td></td>
</tr>
<tr>
<td>• Higher self-efficacy</td>
<td>A higher self-efficacy obviously supports the control of ATS use and helps to reach phases of abstinence every once in a while, just as reduced urge for sensation-seeking.</td>
</tr>
<tr>
<td>• Reduced sensation seeking</td>
<td></td>
</tr>
</tbody>
</table>
Gender Mainstreaming

In both modules it was intended to include men and women in equal proportions as far as possible. In addition, a third gender category was offered in the questionnaire to meet the needs of people who cannot or do not want to assign themselves to a binary gender categorization. For the qualitative interviews (module 1) a share of 41% women could be reached, while a share of 43% female participants were recruited for the quantitative interviews in module 2. Against the background of the unequal gender distribution among ATS users in treatment (27% women, see (39)) and the lower prevalence of use among women (1, 40), it was nevertheless possible to include a particularly large proportion of female ATS users in the ATTUNE study. The qualitative data reveal some special features for women. For example, women who were multiple burdened during childhood and adolescence reported often on exposure to physical or sexual violence in the family. Some of these women were already pregnant as minors or left home before the age of 18 years, which resulted often in youth welfare accommodation. During pregnancy the women were usually drug abstinent. As soon as their child was born, some relapsed due to overburdening themselves with the role of mother, as single parents or through a violent partnership. In the qualitative analyses, some women suffered from depression, eating disorders or anxiety. The analysis of life events reported in the qualitative interview shows that women who used ATS were significantly more burdened by negative life events throughout their lives than male ATS users.

The quantitative analysis somewhat different picture was found. Firstly, it is noticeable that gender is not equally distributed across the analysis groups characterised by ATS consumption. Among those who have never used ATS, women predominate, accounting for 61%, whereas in the groups of frequent or dependent ATS users only 33% and 36% respectively are women. This indicates the well-known higher prevalence of ATS use among men (41) as well as the phenomenon that men are overrepresented among frequent or problematic users (2, 40).
ATTUNE data show that a total of 47% of those surveyed had a diagnosed mental disorder, with men (50%) being more affected than women (46%). Both genders (female: 40%, male: 33%) were most frequently diagnosed with depression. Relevant differences were found regarding men who tended to have ADHD more often (10% compared to 6% for women) and women were significantly more likely to develop an eating disorder (13% compared to 4% for men) and more likely to have a borderline disorder (10% compared to 5% for men).

Regarding the self-reported characterisation of ATS use there are only minor gender differences for social and controlled pattern of use (female: 38%, male: 45%) and for compulsive use (female: 12%, male 17%). When it comes to biographical burden, there are no statistically significant differences between men and women in the number of negative life events in the period up to the start of ATS use (both gender: 1.8) but in the phase after onset (female: 1.9, male: 2.2) even though the difference is not very pronounced. There are striking and statistically significant differences in the judicial burden: men are both more likely to have been convicted (37% compared with 19% for women) and more likely to have been imprisoned (22% compared with 7% for women).

The results of the two study modules, which in some cases show interesting differences regarding the gender-specific burdens, backgrounds and living conditions of ATS users require further investigation.
Dissemination

In the course of the project, the results of the study were disseminated in a variety of ways within the professional community. On the one hand, several publications have already been produced in the context of the project and further ones are planned. On the other hand, attention was paid to a timely presentation and discussion of the planning, implementation and results with the European expert public. The following conferences and congresses were used for this purpose:

- In October 2016 the ATTUNE project was presented at the ERANID midterm conference in Rome and the project design was critically discussed with other research groups of the ERANID network.
- In May 2017 the ATTUNE project was represented with a contribution at the 2nd German-Czech Symposium on the Prevention and Treatment of Methamphetamine.
- In May 2017 ATTUNE was presented at the conference of the European Association of Substance Abuse Research (EASAR) in Nunspeet, Netherlands.
- In September 2017, the research design was discussed at the “Deutscher Suchtkongress” (German Addiction Congress) in Lübeck.
- In September 2017, at the annual congress of the “European Society for Social Drug Research (ESSD)” in Lisbon, the methodological challenges of the ATTUNE project were presented and discussed with the congress participants.
- In October 2017 a symposium on ATTUNE was held with the participation of all partners with five individual presentations at the “Lisbon Addictions” conference. The ATTUNE project was introduced in a further presentation at the local ERANID symposium.
• In October 2018 first results from Module 1 of the ATTUNE project were presented at the annual congress of the “European Society for Social Drug Research (ESSD)” in Budapest.

• In May 2019 first results of the quantitative study module were presented and discussed at the EASAR Conference in Velence (Hungary) as well as in September 2019 at the “European Society for Social Drug Research (ESSD)” Conference in Riga.

• In September 2019, the ATTUNE results were presented at the “Deutscher Suchtkongress” (German Congress of Addiction) in Mainz in the context of a poster presentation “Trends in the use of amphetamine-type stimulants: patterns, rules and motives for use” and in a lecture on “Do biographical burdens have an influence on the start of amphetamine use?”

• In October 2019, the largest European addiction congress “Lisbon Addictions” was used to discuss the results from five individual presentations at a special symposium together with all ATTUNE partners. At an additional ERANID symposium, the ATTUNE results were outlined and an outlook was given.

Each national partner provided information on ATTUNE on their own website and used their national and regional forums, some of which received extensive media coverage.

The ATTUNE project achieved very good national and international dissemination through the measures described above. With the further results now available at the end of the project and the planned further analysis of the broad database, it can be assumed that the ATTUNE study will be even more widely disseminated and received.
Exploitation of project results

A number of further questions arise from the extensive research project. For example, the excessive consumption of alcohol in connection with the use of amphetamines/speed was striking. Male respondents in particular reported drinking a large amount of alcohol under the influence of speed, so that in their view they primarily developed an alcohol dependency rather than an ATS dependency. Since an enormous data set was produced and not all data could be analysed yet, further special analyses can be made on these topics based on the available data.

The qualitative data provide indications that there are differences between men and women in their early biographies that have an influence on their involvement into ATS consumption and the further course of consumption. Overall, women appear to be more burdened than men, so that a more detailed analysis of consumption patterns is worthwhile. This applies in particular to the question of how ATS-using mothers can be supported in a more targeted way to avoid relapse after pregnancy.

Furthermore, the project results show that those with methamphetamine use represent a special group of users. In contrast to other ATS substances, methamphetamine use very quickly leads to an increase in the frequency and amount of use. Users reported that they became dependent on this substance very quickly and that they suffer from sometimes severe health problems as a result of years of intensive use. To address this problem and implement (and pilot) appropriate prevention strategies, ZIS submitted a proposal to the European Justice Programme in January 2020 entitled “Implementing Methamphetamine Prevention Strategies into Action”. This project uses the structures and European partnerships already established in ATTUNE. The application has also been extended to include cooperation with Slovakia and Lithuania.
References


39. EMCDDA. Statistical Bulletin 2018 — treatment demand 2018

40. EMCDDA. Differences in patterns of drug use between women and men. 2005.

Annex

Interview guidelines
module 1
Interview Guideline ‘A’ – Attune

Interviewer:

This study is about understanding pathways to stimulants use across Europe. You have agreed to participate in an interview as part of this study because you feel you would identify with one of the following statements, would you agree?

a) Are currently using amphetamines (Group 1, 2, 3 and 5)
b) Stopped using amphetamines (Group 2, 4 and 5)
c) Never used amphetamines but have had the opportunity to in the past (Group 6 – USE Guideline B)

Introduction

Tell me a little about yourself and your life now.

(Prompts – Age, individual situation (job, housing, income, education, health situation, emotional well-being), social life (partnership, family, friends) positive and negative impacts)

Drugs and alcohol

What is your experience of drug and alcohol use? [Interviewer use CHART tool for reporting on substances used in life until today]

(Prompts: personal usage including: age of first use; type of drugs, frequency and quantity, motivations for use/non-use, levels and routes of use; negative impact (dependence, offending, imprisonment)

What effect are you hoping for from use of these substances?

(Prompts: socialising, coping strategy, behaviour change, health)

Tell me more about the circumstances of your drug and alcohol use since your first use [plot significant moments in the life events CHART]

(Prompts: use of drugs/alcohol by others around them; any drug/alcohol offers; individual situation (work, housing, income, health), relationships (family, friends, romantic partners); critical life events (violence, separation from significant other, death, illness, chronic disease)

What is your use of drug and alcohol like now? Has this changed over time? [CHART tool for substances]

(Prompts: type of substance and frequency of use; circumstances for changes (living, employment, education, income, health), lifestyle (leisure), relationships (friends, family, romantic partner, marriage, birth of children)

Stimulants – Firsts, effects, perceptions

What is your experience of Amphetamine Type Substances? E.g. amphetamine, ecstasy, MDMA, methamphetamine [REFER to ATS card and CHART for substances]

(Prompts: personal usage including: age of first use; type of drugs; frequency levels and routes of use; and surrounding circumstances of use/non-use, motivations for use/non-use)
what was life like leading up to amphetamine type stimulants being first used? [plot significant moments in the life events chart]

(prompt around family, friendships, relationships, education, employment, and social, offending behaviour, health and emotional well-being, housing, significant events)

what effect were you hoping for from these amphetamine type stimulants? why did you want this effect?

(prompt: feelings, positive and negative experiences, change inhibitions, focus, control, euphoria)

what was happening in your life when you continue to use xxx (specify the different ats the person has discussed)? [plot significant moments in the life events chart]

(prompts: use of ats by others around them, any ats offers or availability people in their social network and their use/non-use of ats, individual situation (work, housing, income, health), relationships (family, friends, romantic partners); critical life events (violence, separation from significant other, death, illness, chronic disease)

what do you personally think about ats use?

(prompt around positive and negative views- physical and mental health, lifestyle, personal plans, offending, social relations)

stimulants – source, availability, funding

how would/do you usually get amphetamine type stimulants?

(prompt: buy from/share with friends, dealer-user interactions, ease of interaction/introduction to dealer)

how easy or difficult are they to get? give examples

how do you fund your use? does funding imply any legal problems?

(prompt: employment, welfare, criminal activity, deal, trouble with the police, criminal justice system)

stimulants – lifestyle and relationships

how does your ats use impact on your relationships with others? give examples

how has your lifestyle changed since you started/stopped using ats? [plot significant moments in the life events chart]

(prompt: significant life events (individual, social, lifestyle, health and well-being), increases/decreases in substance use since first usage of ats; protective or harmful factors (dependence, offending)

how has your use of ats changed over time? [plot chart for substances]

(prompt: type of substance and frequency of use, increase in levels, decrease in levels, poly-substance use, changes in routes of administration, context of use)

what was happening at the time of the change in use? [plot significant moments in the life events chart]

(prompt: treatment, other service use, circumstances (living, employment, education, income, health), lifestyle (leisure), relationships (friends, family, romantic partner, marriage, birth of children), significant events

what is important for your life now?
Use for groups 1-5:
dependent; remitted; frequent; non-dependent; formerly frequent non-dependent, non-frequent

(Prompt around family, marriage, children, romantic partners, friends, education, employment, social, offending
behaviour, health and emotional well-being, housing, positive and negative impacts)

**What do you hope for/expect for your life in the next 5-10 years?**
(Prompt: change in substance use (including ATS), change in relationships, health, employment career, lifestyle)

---

*Thank you for taking part in interview*

(Check have consent form)
Interview Guideline ‘B’ – Attune

Interviewer:

This study is about understanding pathways to stimulants use across Europe. You have agreed to participate in an interview as part of this study because you feel you would identify with one of the following statements, would you agree?

a) Are currently using amphetamines (Group 1, 2, 3, 5 – use Guideline A)

b) Stopped using amphetamines (Group 2, 4 and 5 – use Guideline A)

c) Never used amphetamines but have had the opportunity to in the past (Group 6 – USE Guideline B)

Introduction

Tell me a little about yourself and your life now.

(Prompts – Age, individual situation (job, housing, income, education, health situation, emotional well-being), social life (partnership, family, friends) positive and negative impacts)

What is your experience of drug and alcohol use? [Interviewer use CHART tool for reporting on substances used in life until today]

(Prompts: personal usage including: age of first use; type of drugs, frequency and quantity motivations for use/non-use, levels and routes of use; negative impact (dependence, offending, imprisonment)

What effect are you hoping for from use of these substances?

(Prompts: socialising, coping strategy, behaviour change, health)

Drugs and alcohol

Tell me more about the circumstances of your drug and alcohol use since your first use [plot significant moments in the life events CHART]

(Prompts: use of drugs/alcohol by others around them; any drug/alcohol offers; individual situation (work, housing, income, health), relationships (family, friends, romantic partners); critical life events (violence, separation from significant other, death, illness, chronic disease)

What is your use of drug and alcohol like now? Has this changed over time? [CHAR tool for substances]

(Prompts: type of substance and frequency of use; circumstances (living, employment, education, income, health), lifestyle (leisure), relationships (friends, family, romantic partner, marriage, birth of children)

Stimulants – Firsts, protective factors, perceptions

What is your experience with the use Amphetamine Type Substances? E.g. amphetamine, ecstasy, MDMA, methamphetamine in your social network?

(Prompts: use of ATS by others around them, any ATS offers or availability)
What was happening in your life when XXX (specify the different ATS the person has discussed by using the ATS card) was offered to you (ATS substances)? [plot significant moments in the life events CHART]

(Prompt: individual and social circumstances surrounding the non-use health and wellbeing, people in their social network and their use/non-use of ATS, specific life events)

Are others in your networks continuing to use ATS? How does this use impact on your relationship with them? Give examples

(Prompt: changes, life events, availability)

What was it like being around others who were using ATS?

(Prompt: impact on relationships, socialising, networks, and employment)

Has there ever been a situation where you thought about using ATS? [Plot [plot significant moments in the life events CHART] What was happening at this time for you?

(prompt: lifestyle, relationships, networks, employment, significant events)

How would you explain that you never used these ATS

(Prompt: costs, availability, opportunity, age, circumstances, health, fear of legal problems, fear of dependence, protective factors such as partner, employment, lifestyle, negative impact on other people)

What do you think about ATS use? Has that perception changed or stayed the same over time?

(Prompt around positive and negative views- physical and mental health, lifestyle, personal plans, offending, social relations)

Stimulants – Source, availability, funding

Would you know how to buy Amphetamine Type Stimulants?

(Prompt: buy from/share with friends, dealer-user interactions, ease of interaction/introduction to dealer)

How easy or difficult do you think they are to get? Give reasons

Lifestyle

What is important for your life now?

(Prompt around family, marriage, children, romantic partners, friends, education, employment, social, offending behaviour, health and emotional well-being, housing, positive and negative impacts)

What do you hope for/expect for your life in the next 5-10 years?

(Prompt: change in substance use (including ATS), change in relationships, health, employment career, lifestyle)

Thank you for taking part in interview

(Check have consent form)
Standardised questionnaire module 2
Thank you very much for showing interest in participating in our survey. This study is about understanding pathways to stimulants use across Europe. Further we are interested in the development of ATS consumption. We would like to learn about the different ways people use or have used amphetamine type stimulants (ATS), about their motives and how their use developed over the course of life. I will ask several questions about you and your life as well as about your substance use. Please be open and honest when answering the questions. The survey is completely anonymous, we will not ask for your name, address or anything else that might enable someone to identify you as a specific person. If an answer option does not fully apply to you, please choose the most appropriate answer. First of all I will ask you several questions in order to find out if you are eligible to participate in the main interview. If you don’t have any questions yourself, let us start. Otherwise, please feel free to pose your questions now.

Interviewer: Please confirm that you handed over data protection declaration to respondent and that she/he consented to the declaration.

If respondent does not agree with the declaration she/he cannot participate in the interview.
**gender_age**

**How old are you?**

S1 [numq]

1: indicate age

S2 [singleq]

What is your gender?

1: female
2: male
3: other/ preferred not to indicate

**S3**

**Have you ever in your life consumed amphetamine type stimulants (ATS) such as...**

S3 [singleq]

_Interviewer: Hand over show card No. 2 to respondent_

1: yes
2: no

**S4_1**

**How old were you, when you consumed ATS for the first time?**

S4_1 [numq]  Flt = (S3 eq 1)

1: indicate age

**S4_2**

**Have you ever present while people you know (partner, family, friends, acquaintances) consumed ATS?**

S4_2 [singleq]  Flt = (S3 eq 2)

1: yes
2: no

**S4_3**

**How old were you when you were present for the first time while people you know consumed ATS?**

S4_3 [numq]  Flt = (S4_2 eq 1)

1: indicate age

**S5**

**Have you consumed ATS within the past 12 months?**

S5 [singleq]  Flt = (S3 eq 1)

1: yes
2: no
<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>S6 Have you consumed ATS within the past 3 months? If you are in treatment and do not consume ATS currently, please answer this question in respect to the 3 months before entering treatment</td>
<td>1: yes  2: no</td>
</tr>
<tr>
<td>S7 Within the past 12 months, did you consume ATS on 10 days or more?</td>
<td>1: yes  2: no</td>
</tr>
<tr>
<td>S8 Has there been a year in the past (more than 12 months ago), in which you consumed ATS on 10 days or more?</td>
<td>1: yes  2: no</td>
</tr>
<tr>
<td>S9 Have you ever been in contact with drug treatment or drug counseling centers?</td>
<td>1: yes  2: no</td>
</tr>
<tr>
<td>S10 Have you consumed (non-prescribed) opioids more than 10 times in your life?</td>
<td>1: yes  2: no</td>
</tr>
<tr>
<td>S11 Have you ever been dependend from (non-prescribed) opioids (e.g. heroin, fentanyl, codein) or been in treatment because of opioid use (e.g. substitution treatment, residential rehab)?</td>
<td>1: yes  2: no</td>
</tr>
<tr>
<td>S12 What are the first three digits of the postal code of your residence?</td>
<td>Open question</td>
</tr>
</tbody>
</table>

Interviewer: ‘treatment’ means inpatient and outpatient drug treatment as well as low-threshold services but no self-help groups.

If you do not know your post code, do not have a current fixed address or would prefer not to disclose your post code, please enter "XX99" here instead.
**S13**

How did you learn about this website/study?

S13 [multiq]

Multiple answers possible

1: I was asked by a member of the research team, if I am interested in participating
2: flyer/poster
3: friends/family told me about it
4: consultant/staff at drug help facility/ low threshold service told me about it
5: I read about it in a webforum/social network
6: a person I know shared the link to the study website
7: other, please specify (max three)

**S14**

Did you conduct the online screening on the study website www.attune-study.eu?

S14 [singleq]

1: yes
2: no

lime_ID

Please tell me the number that was shown at the end of the screening questions

lime_ID [openq] Flt = ((S14 eq 1) and (nation ne 2))

Interviewer: If respondent forgot her/his screening ID, leave this field blank and go to next question.

exclusion

Thank you very much for showing interest in participating. Unfortunately, you don´t meet the inclusion criteria of this survey and therefore we cannot offer you the possibility to participate.

Interviewer: Interview ends here, please thank the respondent and tell her/him that she/he is welcome to tell friends who might be interested in participating about the study.

Exclusion criterion/s:

@insert( te_exit1 )
@insert( te_exit2 )
@insert( te_exit3 )
@insert( te_exit4 )
@insert( te_exit5 )
@insert( te_exit6 )
@insert( te_exit7 )

exclusion [textq] Flt = (excl ge 1)

assert( (excl lt 1) ) "exit interview" exit 2
studygroups

*Internal information for interviewer: Please confirm group allocation below by indicating the group, then go to next question.*

studygroups (singleq)

1: Group A_1: current frequent user
2: Group A_2: current non-frequent user
3: Group B_1: former frequent user
4: Group B_2: former non-frequent user
5: Group C: exposed non-user

start_interview

Thank you very much so far. You are eligible to take part in the interview. So let’s start with the main interview!

start_interview (textq)
Q3
What is your citizenship/nationality?

Q4.1
What is your country of birth?

Q4.2
What is your father’s country of birth?

Q4.3
What is your mother’s country of birth?
Q5

What is your ethnicity?

Q5 [singleq]  F1t = nation eq 3

1: White British
2: Irish
3: Gypsy or Irish Traveller
4: Other White
Mixed/Multiple ethnic group
5: White and Black Caribbean
6: White and Black African
7: White and Asian
8: Other Mixed
Asian/Asian British
9: Indian
10: Pakistani
11: Bangladeshi
12: Chinese
13: Other Asian
Black/African/Caribbean/Black British
14: African
15: Caribbean
16: Other Black
Other ethnic group
17: Arab
18: Any other ethnic group

Q6

Are you currently in a relationship?

Q6 [singleq]

1: yes, living together
2: yes, but not living together
3: no

Q7

What is your current marital status?

Q7 [singleq]

1: married
2: not married
3: widowed/divorced/separated

Q8

How many children do you have? Please indicate not only biological children, but all children you have parental duties for (e.g. stepchildren, foster children, adopted children)

Q8 [numq]

Interviewer: indicate number. If no children indicate 0.

1: indicate number
### Q8.1
**How many of them are under 18 years old?**

Q8.1 [numq]  \( Flt = (Q8 \text{ ne } 0) \)

Interviewer: indicate number. If no children under 18 indicate 0.

1: indicate number

### Q9
**Who do you live with currently?**

Q9 [singleq]

1: alone
2: alone with child(ren)
3: with partner and (child(ren)
4: with partner/spouse
5: with parents
6: with friends/flatmates
7: other, please specify (max three)

### Q11
**Which of the following best describes your current living situation?**

Q11 [singleq]

1: Fixed registered address (e.g. house/flat)
2: No fixed abode / address (e.g. sofa surfing)
3: Temporary accommodation (shelter / hostel / B&B / supported accommodation)
4: Treatment facility
5: Street / homeless

### Q12
**What is your highest completed educational status?**

Q12 [singleq]

1: none
2: Primary education
3: Lower secondary education
4: Upper secondary education
5: Post-secondary non-tertiary education
6: Short-cycle tertiary education
7: Bachelor's or equivalent level
8: Master's or equivalent level
9: Doctoral or equivalent level

### Q13
**What is your current employment situation?**

Q13 [multiq]

Multiple answers possible

1: Have paid job - full time (30+ hours per week)
2: Have paid job - part-time (8-29 hours per week)
3: Have paid job - part time (under 8 hours per week)
4: Self - employed
5: Unpaid domestic work
6: Full time student
7: Still at school
8: Unemployed and seeking work
9: Retired
10: Not in paid work because of long term illness or disability
11: Not in paid work for other reason
Q15

What is your average monthly combined household income?

Q15 [singleq]

Interviewer: this means total net income before having paid rent or other running costs. Respondents who live in shared accommodation are supposed to indicate only their personal income. Hand over show card No 1 to respondent.

1: (1) up to 1000€
2: (2) up to 1500€
3: (3) up to 2000€
4: (4) up to 2500€
5: (5) up to 3000€
6: (6) up to 3500€
7: (7) more than 3500€

Q16

One may have the feeling to be integrated into normal social life and to be a proper part of society or one may rather feel excluded. What about your case? How far do you feel to be part of it or do you rather feel excluded? Please use the numbers from 1 - 10 for the rating your opinion. 1 means that you feel excluded from social life. 10 means, that you feel part of it. The numbers from 2 to 9 allow you to grade your assessment.

Q16 [numq]

1: indicate number (1-10)

Q17

There are groups in our society, which tend to be rather at the top and other groups, which are at the bottom. How would you rank yourself using the numbers 1 to 10? 1 means that you are at the very bottom, 10 means, that you are positioned at the very top. The numbers from 2 to 9 allow you to grade your assessment.

Q17 [numq]

1: indicate number (1-10)
drug_use

Now we will ask about ATS use and other substance use during your life. Which of the ATS substances listed here have you ever consumed in your life? *Interviewer: Hand over show card No. 2.*

Please indicate number of consumption days and age at first use. *Interviewer: Hand over show card No. 3 and No. 4 to respondent. Point out that No. 2 is related to lifetime use and No. 3 is related to past year use. Repeat the explanation occasionally.*

drug_use_introduction [textq]

Q18 [singleq]

On how many days have you consumed Amphetamine (speed, whizz, phet) in your life?

1: (1) never used
2: (2) one day
3: (3) 2-5 days
4: (4) 6-10 days
5: (5) 11-20 days
6: (6) 21-50 days
7: (7) 51-100 days
8: (8) 101-500 days
9: (9) 501-1000 days
10: (10) >1000 days

Q18_1

How old were you when you first consumed Amphetamine?

Q18_1 [numq] Flt = (Q18 ne 1)

1: indicate age at first use

Q18_2

On how many days have you consumed Amphetamine within the past 12 months?

Q18_2 [singleq] Flt = (Q18 ne 1)

1: (1) no use
2: (2) one day
3: (3) 2-5 days
4: (4) 6-10 days
5: (5) 11-20 days
6: (6) 21-50 days
7: (7) 51-100 days
8: (8) 101-300 days
9: (9) >300 days

Q18_3

How old were you when you last took Amphetamine?

Q18_3 [numq] Flt = (Q18_2 eq 1) and (Q18 ne 1)

1: indicate age at last use

Q18_4

How many months ago did you last take Amphetamine?

Q18_4 [numq] Flt = (Q18_3 eq 0) and (Q18 ne 1)

1: indicate months (0-11)
Q18_5
On how many days have you consumed Amphetamine within the past 30 days?

Q18_5 [numq] Flt = (Q18_4 eq 0) and (Q18_3 eq 0) and (Q18 ne 1)
1: indicate consumption days (1-30)

Q19
On how many days have you consumed MDMA/Ecstasy (e´s, pills, mandy, cowies) in your life?

Q19 [singleq]
1: (1) never used
2: (2) one day
3: (3) 2-5 days
4: (4) 6-10 days
5: (5) 11-20 days
6: (6) 21-50 days
7: (7) 51-100 days
8: (8) 101-500 days
9: (9) 501-1000 days
10: (10) >1000 days

Q19_1
How old were you when you first consumed MDMA/Ecstasy?

Q19_1 [numq] Flt = (Q19 ne 1)
1: indicate age at first use

Q19_2
On how many days have you consumed MDMA/Ecstasy within the past 12 months?

Q19_2 [singleq] Flt = (Q19 ne 1)
1: (1) no use
2: (2) one day
3: (3) 2-5 days
4: (4) 6-10 days
5: (5) 11-20 days
6: (6) 21-50 days
7: (7) 51-100 days
8: (8) 101-300 days
9: (9) >300 days

Q19_3
How old were you when you last took MDMA/Ecstasy?

Q19_3 [numq] Flt = (Q19_2 eq 1) and (Q19 ne 1)
1: indicate age at last use
Q19_4

How many months ago did you last take MDMA/Ecstasy?

Q19_4 [numq] Flt = (Q19_3 eq 0) and (Q19 ne 1)
1: indicate months (0-11)

Q19_5

On how many days have you consumed MDMA/Ecstasy within the past 30 days?

Q19_5 [numq] Flt = (Q19_4 eq 0) and (Q19_3 eq 0) and (Q19 ne 1)
1: indicate consumption days (1-30)

Q20

On how many days have you consumed Methamphetamine (Crystal Meth, Ice) in your life?

Q20 [singleq]
1: (1) never used
2: (2) one day
3: (3) 2-5 days
4: (4) 6-10 days
5: (5) 11-20 days
6: (6) 21-50 days
7: (7) 51-100 days
8: (8) 101-500 days
9: (9) 501-1000 days
10: (10) >1000 days

Q20_1

How old were you when you first consumed Crystal Meth?

Q20_1 [numq] Flt = (Q20 ne 1)
1: indicate age at first use

Q20_2

On how many days have you consumed Crystal Meth within the past 12 months?

Q20_2 [singleq] Flt = (Q20 ne 1)
1: (1) no use
2: (2) one day
3: (3) 2-5 days
4: (4) 6-10 days
5: (5) 11-20 days
6: (6) 21-50 days
7: (7) 51-100 days
8: (8) 101-300 days
9: (9) >300 days
**Q20_3**

How old were you when you last took Crystal Meth?

**Q20_3** [numq] \( \text{Flt} = (Q20_2 \text{ eq } 1) \text{ and } (Q20 \text{ ne } 1) \)

1: indicate age at last use

**Q20_4**

How many months ago did you last take Crystal Meth?

**Q20_4** [numq] \( \text{Flt} = (Q20_3 \text{ eq } 0) \text{ and } (Q20 \text{ ne } 1) \)

1: indicate months (0-11)

**Q20_5**

On how many days have you consumed Crystal Meth within the past 30 days?

**Q20_5** [numq] \( \text{Flt} = (Q20_4 \text{ eq } 0) \text{ and } (Q20_3 \text{ eq } 0) \text{ and } (Q20 \text{ ne } 1) \)

1: indicate consumption days (1-30)

**Q21**

On how many days have you consumed new synthetic stimulants: cathinones, phenethylamines, mephedrone and similar substances (`legal highs`, `bath salts`) in your life?

**Q21** [singleq]

1: (1) never used
2: (2) one day
3: (3) 2-5 days
4: (4) 6-10 days
5: (5) 11-20 days
6: (6) 21-50 days
7: (7) 51-100 days
8: (8) 101-500 days
9: (9) 501-1000 days
10: (10) >1000 days

**Q21_1**

How old were you when you first consumed new synthetic stimulants?

**Q21_1** [numq] \( \text{Flt} = (Q21 \text{ ne } 1) \)

1: indicate age at first use
Q21_2
On how many days have you consumed new synthetic stimulants within the past 12 months?

Q21_2 [singleq]  \( \text{F} = (Q21 \neq 1) \)

1: (1) no use
2: (2) one day
3: (3) 2-5 days
4: (4) 6-10 days
5: (5) 11-20 days
6: (6) 21-50 days
7: (7) 51-100 days
8: (8) 101-300 days
9: (9) >300 days

Q21_3
How old were you when you last took new synthetic stimulants?

Q21_3 [numq]  \( \text{F} = (Q21_2 \text{ eq } 1) \text{ and } (Q21 \neq 1) \)

1: indicate age at last use

Q21_4
How many months ago did you last take new synthetic stimulants?

Q21_4 [numq]  \( \text{F} = (Q21_3 \text{ eq } 0) \text{ and } (Q21 \neq 1) \)

1: indicate months (0-11)

Q21_5
On how many days have you consumed new synthetic stimulants within the past 30 days?

Q21_5 [numq]  \( \text{F} = (Q21_4 \text{ eq } 0) \text{ and } (Q21_3 \text{ eq } 0) \text{ and } (Q21 \neq 1) \)

1: indicate consumption days (1-30)

Q22
On how many days have you consumed non-prescribed amphetamine-type medication such as methylphenidate (Ritalin®), modafinil (Vigil®) in your life?

Q22 [singleq]

1: (1) never used
2: (2) one day
3: (3) 2-5 days
4: (4) 6-10 days
5: (5) 11-20 days
6: (6) 21-50 days
7: (7) 51-100 days
8: (8) 101-500 days
9: (9) 501-1000 days
10: (10) >1000 days
Q22_1
How old were you when you first consumed non-prescribed ATS?

Q22_1 [numq] Flt = (Q22 ne 1)
1: indicate age at first use

Q22_2
On how many days have you consumed non-prescribed ATS within the past 12 months?

Q22_2 [singleq] Flt = (Q22 ne 1)
1: (1) no use
2: (2) one day
3: (3) 2-5 days
4: (4) 6-10 days
5: (5) 11-20 days
6: (6) 21-50 days
7: (7) 51-100 days
8: (8) 101-300 days
9: (9) >300 days

Q22_3
How old were you when you last took non-prescribed ATS?

Q22_3 [numq] Flt = (Q22_2 eq 1) and (Q22 ne 1)
1: indicate age at last use

Q22_4
How many months ago did you last take non-prescribed ATS?

Q22_4 [numq] Flt = (Q22_3 eq 0) and (Q22 ne 1)
1: indicate months (0-11)

Q22_5
On how many days have you consumed non-prescribed ATS within the past 30 days?

Q22_5 [numq] Flt = (Q22_4 eq 0) and (Q22_3 eq 0) and (Q22 ne 1)
1: indicate consumption days (1-30)
Q23

Now we come to other substances than ATS. On how many days have you consumed Cannabis (marijuana, hash, weed, skunk, ganja, pot) in your life?

Q23 [singleq]

1: (1) never used  
2: (2) one day  
3: (3) 2-5 days  
4: (4) 6-10 days  
5: (5) 11-20 days  
6: (6) 21-50 days  
7: (7) 51-100 days  
8: (8) 101-500 days  
9: (9) 501-1000 days  
10: (10) >1000 days

Q23_1

How old were you when you first consumed Cannabis?

Q23_1 [numq] Flt = (Q23 ne 1)

1: indicate age at first use

Q23_2

On how many days have you consumed Cannabis within the past 12 months?

Q23_2 [singleq] Flt = (Q23 ne 1)

1: no use  
2: (2) one day  
3: (3) 2-5 days  
4: (4) 6-10 days  
5: (5) 11-20 days  
6: (6) 21-50 days  
7: (7) 51-100 days  
8: (8) 101-300 days  
9: (9) >300 days

Q23_3

How old were you when you last took Cannabis?

Q23_3 [numq] Flt = (Q23_2 eq 1) and (Q23 ne 1)

1: indicate age at last use

Q23_4

How many months ago did you last take Cannabis?

Q23_4 [numq] Flt = (Q23_3 eq 0) and (Q23 ne 1)

1: indicate months (0-11)
Q23_5

On how many days have you consumed Cannabis within the past 30 days?

Q23_5 [numq] Flt = (Q23_4 eq 0) and (Q23_3 eq 0) and (Q23 ne 1)

1: indicate consumption days (1-30)

Q24

On how many days have you consumed Cocaine (Coke, Charlie, rocks, crack) in your life?

Q24 [singleq]

1: (1) never used
2: (2) one day
3: (3) 2-5 days
4: (4) 6-10 days
5: (5) 11-20 days
6: (6) 21-50 days
7: (7) 51-100 days
8: (8) 101-500 days
9: (9) 501-1000 days
10: (10) >1000 days

Q24_1

How old were you when you first consumed Cocaine?

Q24_1 [numq] Flt = (Q24 ne 1)

1: indicate age at first use

Q24_2

On how many days have you consumed Cocaine within the past 12 months?

Q24_2 [singleq] Flt = (Q24 ne 1)

1: (1) no use
2: (2) one day
3: (3) 2-5 days
4: (4) 6-10 days
5: (5) 11-20 days
6: (6) 21-50 days
7: (7) 51-100 days
8: (8) 101-300 days
9: (9) >300 days

Q24_3

How old were you when you last took Cocaine?

Q24_3 [numq] Flt = (Q24_2 eq 1) and (Q24 ne 1)

1: indicate age at last use
Q24_4

How many months ago did you last take Cocaine?

Q24_4 [numq] Flt = (Q24_3 eq 0) and (Q24 ne 1)

1: indicate months (0-11)

Q24_5

On how many days have you consumed Cocaine within the past 30 days?

Q24_5 [numq] Flt = (Q24_4 eq 0) and (Q24_3 eq 0) and (Q24 ne 1)

1: indicate consumption days (1-30)

Q25

On how many days have you consumed Hallucinogens (LSD, 'Magic Mushrooms') in your life?

Q25 [singleq]

1: (1) never used
2: (2) one day
3: (3) 2-5 days
4: (4) 6-10 days
5: (5) 11-20 days
6: (6) 21-50 days
7: (7) 51-100 days
8: (8) 101-500 days
9: (9) 501-1000 days
10: (10) >1000 days

Q25_1

How old were you when you first consumed Hallucinogens?

Q25_1 [numq] Flt = (Q25 ne 1)

1: indicate age at first use

Q25_2

On how many days have you consumed Hallucinogens within the past 12 months?

Q25_2 [singleq] Flt = (Q25 ne 1)

1: (1) no use
2: (2) one day
3: (3) 2-5 days
4: (4) 6-10 days
5: (5) 11-20 days
6: (6) 21-50 days
7: (7) 51-100 days
8: (8) 101-300 days
9: (9) >300 days
Q25_3
How old were you when you last took Hallucinogens?

Q25_3 [numq]  \( \text{Flt} = (Q25_2 \text{ eq } 1) \text{ and } (Q25 \text{ ne } 1) \)

1: indicate age at last use

---

Q25_4
How many months ago did you last take Hallucinogens?

Q25_4 [numq]  \( \text{Flt} = (Q25_3 \text{ eq } 0) \text{ and } (Q25 \text{ ne } 1) \)

1: indicate months (0-11)

---

Q25_5
On how many days have you consumed Hallucinogens within the past 30 days?

Q25_5 [numq]  \( \text{Flt} = (Q25_4 \text{ eq } 0) \text{ and } (Q25_3 \text{ eq } 0) \text{ and } (Q25 \text{ ne } 1) \)

1: indicate consumption days (1-30)

---

Q27
On how many days have you consumed non-prescribed tranquiliser (benzodiazepines, Valium®) in your life?

Q27 [singleq]

1: (1) never used  
2: (2) one day  
3: (3) 2-5 days  
4: (4) 6-10 days  
5: (5) 11-20 days  
6: (6) 21-50 days  
7: (7) 51-100 days  
8: (8) 101-500 days  
9: (9) 501-1000 days  
10: (10) >1000 days

---

Q27_1
How old were you when you first consumed non-prescribed tranquiliser?

Q27_1 [numq]  \( \text{Flt} = (Q27 \text{ ne } 1) \)

1: indicate age at first use
Q27_2
On how many days have you consumed non-prescribed tranquiliser within the past 12 months?

Q27_2 [singleq] \( \text{Flt} = (Q27 \neq 1) \)

1: (1) no use
2: (2) one day
3: (3) 2-5 days
4: (4) 6-10 days
5: (5) 11-20 days
6: (6) 21-50 days
7: (7) 51-100 days
8: (8) 101-300 days
9: (9) >300 days

Q27_3
How old were you when you last took non-prescribed tranquiliser?

Q27_3 [numq] \( \text{Flt} = (Q27_2 \equiv 1) \) and \( (Q27 \neq 1) \)

1: indicate age at last use

Q27_4
How many months ago did you last take non-prescribed tranquiliser?

Q27_4 [numq] \( \text{Flt} = (Q27_3 \equiv 0) \) and \( (Q27 \neq 1) \)

1: indicate months (0-11)

Q27_5
On how many days have you consumed non-prescribed tranquiliser within the past 30 days?

Q27_5 [numq] \( \text{Flt} = (Q27_4 \equiv 0) \) and \( (Q27_3 \equiv 0) \) and \( (Q27 \neq 1) \)

1: indicate consumption days (1-30)

Q28
On how many days have you consumed non-prescribed opioids (heroin, smack, gear, morphine, methadone) in your life?

Q28 [singleq]

1: (1) never used
2: (2) one day
3: (3) 2-5 days
4: (4) 6-10 days
5: (5) 11-20 days
6: (6) 21-50 days
7: (7) 51-100 days
8: (8) 101-500 days
9: (9) 501-1000 days
10: (10) >1000 days
Q28_1
How old were you when you first consumed non-prescribed opioids?

Q28_1 [numq] Flt = (Q28 ne 1)
1: indicate age at first use

Q28_2
On how many days have you consumed non-prescribed opioids within the past 12 months?

Q28_2 [singleq] Flt = (Q28 ne 1)
1: (1) no use
2: (2) one day
3: (3) 2-5 days
4: (4) 6-10 days
5: (5) 11-20 days
6: (6) 21-50 days
7: (7) 51-100 days
8: (8) 101-300 days
9: (9) >300 days

Q28_3
How old were you when you last took non-prescribed opioids?

Q28_3 [numq] Flt = (Q28_2 eq 1) and (Q28 ne 1)
1: indicate age at last use

Q28_4
How many months ago did you last take non-prescribed opioids?

Q28_4 [numq] Flt = (Q28_3 eq 0) and (Q28 ne 1)
1: indicate months (0-11)

Q28_5
On how many days have you consumed non-prescribed opioids within the past 30 days?

Q28_5 [numq] Flt = (Q28_4 eq 0) and (Q28_3 eq 0) and (Q28 ne 1)
1: indicate consumption days (1-30)

Q29_sub
Did you ever consume further substances (except alcohol and tobacco) in your life?

Q29_sub [singleq]
1: yes
2: no
**Q29_0**

Please indicate substance, number of consumption days and age.

Q29_0 [openq]  \( \text{Flt} = (Q29\_\text{sub} \ eq 1) \)

*Interviewer: Please insert respondent’s self-chosen substance here*

**Q29**

On how many days have you consumed \( @\text{insert}(Q29\_0) \) in your life?

Q29 [singleq]  \( \text{Flt} = (Q29\_\text{sub} \ eq 1) \)

- 2: (2) one day
- 3: (3) 2-5 days
- 4: (4) 6-10 days
- 5: (5) 11-20 days
- 6: (6) 21-50 days
- 7: (7) 51-100 days
- 8: (8) 101-500 days
- 9: (9) 501-1000 days
- 10: (10) >1000 days

**Q29_1**

How old were you when you first consumed \( @\text{insert}(Q29\_0) \)?

Q29_1 [numq]  \( \text{Flt} = (Q29 \ ne 1) \ and \ (Q29\_\text{sub} \ eq 1) \)

1: indicate age at first use

**Q29_2**

On how many days have you consumed \( @\text{insert}(Q29\_0) \) within the past 12 months?

Q29_2 [singleq]  \( \text{Flt} = (Q29 \ ne 1) \ and \ (Q29\_\text{sub} \ eq 1) \)

- 1: (1) no use
- 2: (2) one day
- 3: (3) 2-5 days
- 4: (4) 6-10 days
- 5: (5) 11-20 days
- 6: (6) 21-50 days
- 7: (7) 51-100 days
- 8: (8) 101-300 days
- 9: (9) >300 days

**Q29_3**

How old were you when you last took \( @\text{insert}(Q29\_0) \)?

Q29_3 [numq]  \( \text{Flt} = (Q29\_2 \ eq 1) \ and \ (Q29 \ ne 1) \ and \ (Q29\_\text{sub} \ eq 1) \)

1: indicate age at last use
Q29_4
How many months ago did you last take @insert(Q29_0)?
Q29_4 [numq] Flt = (Q29_3 eq 0) and (Q29 ne 1) and (Q29_sub eq 1)
1: indicate months (0-11)

Q29_5
On how many days have you consumed @insert(Q29_0) within the past 30 days?
Q29_5 [numq] Flt = (Q29_4 eq 0) and (Q29_3 eq 0) and (Q29 ne 1) and (Q29_sub eq 1)
1: indicate consumption days (1-30)

Q30_sub
Did you ever consume further substances (except alcohol and tobacco) in your life?
Q30_sub [singleq] Flt = (Q29_sub eq 1)
1: yes
2: no

Q30_0
Please indicate substance, number of consumption days and age.
Q30_0 [openq] Flt = (Q30_sub eq 1) and (Q29_sub eq 1)
Interviewer: Please insert respondent’s self-chosen substance here

Q30
On how many days have you consumed @insert(Q30_0) in your life?
Q30 [singleq] Flt = (Q30_sub eq 1) and (Q29_sub eq 1)
2: (2) one day
3: (3) 2-5 days
4: (4) 6-10 days
5: (5) 11-20 days
6: (6) 21-50 days
7: (7) 51-100 days
8: (8) 101-500 days
9: (9) 501-1000 days
10: (10) >1000 days
Q30_1

How old were you when you first consumed @insert(Q30_0)?

Q30_1 [numq] Flt = (Q30 ne 1) and (Q30_sub eq 1) and (Q29_sub eq 1)

1: indicate age at first use

Q30_2

On how many days have you consumed @insert(Q30_0) within the past 12 months?

Q30_2 [singleq] Flt = (Q30 ne 1) and (Q30_sub eq 1) and (Q29_sub eq 1)

1: (1) no use
2: (2) one day
3: (3) 2-5 days
4: (4) 6-10 days
5: (5) 11-20 days
6: (6) 21-50 days
7: (7) 51-100 days
8: (8) 101-300 days
9: (9) >300 days

Q30_3

How old were you when you last took @insert(Q30_0)?

Q30_3 [numq] Flt = (Q30_2 eq 1) and (Q30 ne 1) and (Q30_sub eq 1) and (Q29_sub eq 1)

1: indicate age at last use

Q30_4

How many months ago did you last take @insert(Q30_0)?

Q30_4 [numq] Flt = (Q30_3 eq 0) and (Q30 ne 1) and (Q30_sub eq 1) and (Q29_sub eq 1)

1: indicate months (0-11)

Q30_5

On how many days have you consumed @insert(Q30_0) within the past 30 days?

Q30_5 [numq] Flt = (Q30_4 eq 0) and (Q30_3 eq 0) and (Q30 ne 1) and (Q30_sub eq 1) and (Q29_sub eq 1)

1: indicate consumption days (1-30)

Q34

Have you ever smoked tobacco (cigarettes, cigars, shisha, e-cigarettes)?

Q34 [singleq]

1: no, I never smoked
2: yes, I currently smoke on a daily basis
3: yes, I currently smoke, but not on a daily basis
4: yes, I previously smoked on a daily basis, but now I don’t smoke at all
5: yes, I previously smoked irregularly, but now I don’t smoke at all
6: yes, I just tried smoking but never smoked regularly or on a daily basis
Q35
Have you ever had a drink containing alcohol in your life?

Q35 [singleq]
1: yes
2: no

\[ b1 \quad \text{Flt} = (Q35 \text{ eq 1}) \]

alc_life
Please refer the following four questions to your entire life: Have you ever felt you needed to cut down on your drinking?

Q36_1 [singleq]
1: yes
2: no

Q36_2 [singleq]
Have people annoyed you by criticizing your drinking?

1: yes
2: no

Q36_3 [singleq]
Have you ever felt guilty about drinking?

1: yes
2: no

Q36_4 [singleq]
Have you ever felt you needed a drink first thing in the morning (Eye-opener) to steady your nerves or to get rid of a hangover?

1: yes
2: no

Q37_1
Now we come to some further questions about alcohol use. Please refer the following three questions to the last 12 months. How often did you have a drink containing alcohol in the last year?

Q37_1 [singleq]
1: never
2: monthly or less
3: 2-4 times a month
4: 2-3 times per week
5: 4 or more times a week

Q37_2
How many drinks containing alcohol did you have on a typical day when you were drinking in the past year?

Q37_2 [singleq] \[ \text{Flt} = (Q37_1 \text{ ne 1}) \]
1: 1 or 2 drinks
2: 3 or 4
3: 5 or 6
4: 7 to 9
5: 10 or more

Q37_3
How often did you have six drinks or more on one occasion in the past year?

Q37_3 [singleq] \[ \text{Flt} = (Q37_1 \text{ ne 1}) \]
1: never
2: less than monthly
3: monthly
4: weekly
5: daily or almost daily
Q38

Here are a number of graphs that show the possible developments in ATS use. Interviewer: Hand over show card No. 5 to respondent. At the far left is the point where you started using ATS and the far right is how you use ATS at the moment. If you don’t use ATS at the moment, the right side is how you used ATS just before you stopped. Please indicate which pattern is most similar to the development of your ATS use.

Q38 [singleq]  

Fit = (studygroups ne 5)

1: (1) My ATS use has grown slowly.
2: (2) After I had tried ATS, I immediately started to use large quantities, but my use has slowly decreased.
3: (3) I started at about the same level as I now use ATS. Both quantity and frequency of use are (rather) unchanged.
4: (4) I started at about the same level as I now use ATS, but I had repeated and significant phases of abstinence all along.
5: (5) My ATS use has been very changeable.
6: (6) My ATS use increased since I started, until I reached a certain peak. After that, my ATS use reduced to a certain level.

Q39

Have you ever injected one of the drugs for which you reported consumption?

Q39 [singleq]

1: never
2: yes, but not within the last 12 months
3: yes, within the last 12 months but not within the last 30 days
4: yes, within the last 30 days

Q39_inject_new

Which of the drugs for which you reported consumption have you ever injected?

Q39_inject_new [multiq]  

Fit = (Q39 ne 1)

1: Amphetamine
2: MDMA/Ecstasy
3: Methamphetamine/Crystal Meth
4: new synthetic stimulants
5: non-prescribed amphetamine-type medication
6: Cocaine
7: Non-prescribed tranquilliser
8: Non-prescribed opioids
9: other drugs

Q40_1_new

In the beginning you said that you accessed treatment services to manage substance use once. Please indicate if you accessed treatment services because of alcohol or because of illicit drugs and indicate the age at first treatment entering.

Q40_1_new [numq]  

Fit = (S9 eq 1)

Interviewer: treatment means inpatient and outpatient drug treatment as well as low-threshold services but no self-help groups

1: Because of my use of alcohol I entered treatment at the age of __________
2: Because of my use of illicit drugs I entered treatment at the age of __________

Q41

Does your partner use ATS currently?

Q41 [singleq]  

Fit = (Q6 ne 3)

1: yes
2: no
3: not anymore
Q42
How many close friends do you have currently?
Q42 [numq]
If no close friends, indicate 0.
1: indicate number of friends

Q44
How many of them consume ATS currently?
Q44 [numq] \( \text{Flt} = (Q42 \neq 0) \)

NoAnswerLabel: 999 "don’t know"
1: indicate number of friends

Q46
How often do you see your family on average?
Q46 [singleq]
1: never
2: less than monthly
3: monthly
4: weekly
5: (almost) daily

Q47
How many of them consume ATS currently?
Q47 [numq] \( \text{Flt} = (Q45 \neq 0) \)

NoAnswerLabel: 999 "don’t know"
1: indicate number of members

Q48
How would you describe the level of love and care you received in your childhood? 1 means 'no love and care' 10 'much love and care'
Q48 [numq]
1: indicate number (1-10)
Q49
You mentioned before that you used @insert(ATS) in your life. Did you use different ATS together on the same day?

Q49 [singleq]
\[Flt = ((Q18 \neq 1) \text{ and } (Q19 \neq 1)) \text{ or } ((Q18 \neq 1) \text{ and } (Q20 \neq 1)) \text{ or } ((Q18 \neq 1) \text{ and } (Q21 \neq 1)) \text{ or } ((Q18 \neq 1) \text{ and } (Q22 \neq 1)) \text{ or } ((Q19 \neq 1) \text{ and } (Q20 \neq 1)) \text{ or } ((Q19 \neq 1) \text{ and } (Q21 \neq 1)) \text{ or } ((Q19 \neq 1) \text{ and } (Q22 \neq 1)) \text{ or } ((Q20 \neq 1) \text{ and } (Q21 \neq 1)) \text{ or } ((Q20 \neq 1) \text{ and } (Q22 \neq 1)) \text{ or } ((Q21 \neq 1) \text{ and } (Q22 \neq 1))\]

1: yes
2: no

Q49_1
What was the typical combination of ATS, when you used more than one type on the same day?

Q49_1 [multiq]
\[Flt = (Q49 eq 1) \text{ and } (((Q18 \neq 1) \text{ and } (Q19 \neq 1) \text{ and } (Q20 \neq 1)) \text{ or } ((Q18 \neq 1) \text{ and } (Q19 \neq 1) \text{ and } (Q21 \neq 1)) \text{ or } ((Q18 \neq 1) \text{ and } (Q19 \neq 1) \text{ and } (Q22 \neq 1)) \text{ or } ((Q18 \neq 1) \text{ and } (Q20 \neq 1) \text{ and } (Q21 \neq 1)) \text{ or } ((Q18 \neq 1) \text{ and } (Q20 \neq 1) \text{ and } (Q22 \neq 1)) \text{ or } ((Q19 \neq 1) \text{ and } (Q20 \neq 1) \text{ and } (Q21 \neq 1)) \text{ or } ((Q19 \neq 1) \text{ and } (Q21 \neq 1) \text{ and } (Q22 \neq 1)) \text{ or } ((Q20 \neq 1) \text{ and } (Q21 \neq 1) \text{ and } (Q22 \neq 1))\]

1: Amphetamine
2: MDMA/Ecstasy
3: Methamphetamine/ Crystal Meth
4: new synthetic stimulants
5: non-prescribed amphetamine-type medication

Q50
What was/were your favourite ATS and in which consumption phase? Please choose one of the following options and indicate in this way for what point of your ATS use your answer is true.

Interviewer hand over show card No. 6 and explain the meaning of it. Respondent is supposed to use the scale separately for each ATS listed. Users with lifetime ATS use less than 6 times are supposed to choose between "never" and "in the beginning"

Q50 [singlegridq]
\[Flt = ((Q18 \neq 1) \text{ and } (Q19 \neq 1)) \text{ or } ((Q18 \neq 1) \text{ and } (Q20 \neq 1)) \text{ or } ((Q18 \neq 1) \text{ and } (Q21 \neq 1)) \text{ or } ((Q18 \neq 1) \text{ and } (Q22 \neq 1)) \text{ or } ((Q19 \neq 1) \text{ and } (Q20 \neq 1)) \text{ or } ((Q19 \neq 1) \text{ and } (Q21 \neq 1)) \text{ or } ((Q19 \neq 1) \text{ and } (Q22 \neq 1)) \text{ or } ((Q20 \neq 1) \text{ and } (Q21 \neq 1)) \text{ or } ((Q20 \neq 1) \text{ and } (Q22 \neq 1)) \text{ or } ((Q21 \neq 1) \text{ and } (Q22 \neq 1))\]

Interviewer: hand over show card No. 6 and explain the meaning of it one more time. Respondent is supposed to use the scale separately for each ATS listed.

<table>
<thead>
<tr>
<th></th>
<th>(1) never</th>
<th>(2) in the beginning</th>
<th>(3) after a while</th>
<th>(4) in the latest or current ATS phase</th>
<th>(5) almost every phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Amphetamine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2: MDMA/Ecstasy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3: Methamphetamine/ Crystal Meth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4: new synthetic stimulants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5: non-prescribed amphetamine-type medication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Restrict = fav_ATS

Q51
Did you typically use any of the following substances together with ATS, on one occasion?

Q51 [multiq]

Interviewer: Multiple answers possible. Tobacco is not relevant.

1: Alcohol
2: Cannabis
3: other, please specify (max three)
4: never took any other substance (apart from tobacco) together with ATS
**SDS**

For the following questions, please think about the 12 months you used ATS most often. For each of the five questions, please indicate the most appropriate response.

**Q52**
In those 12 months did you ever think your use of ATS was out of control?

1: (1) never/almost never
2: (2) sometimes
3: (3) often
4: (4) always/nearly always

**Q53**
In those 12 months did the prospect of missing a shot/snort (or dose) ever make you anxious or worried?

1: never/almost never
2: sometimes
3: often
4: always/nearly always

**Q54**
In those 12 months did you ever worry about your use of amphetamines?

1: never/almost never
2: sometimes
3: often
4: always/nearly always

**Q55**
In those 12 months did you ever wish you could stop?

1: never/almost never
2: sometimes
3: often
4: always/nearly always

**Q56**
In those 12 months how difficult did you find it to stop or go without amphetamines?

1: not difficult
2: quite difficult
3: very difficult
4: impossible

**Q57_new**
How would you describe your ATS use in general?

1: Experimental (single or short-term use)
2: Recreational/social (controlled use in social setting)
3: Situational (use for specific reason)
4: Intensive (high doses/binge)
5: Compulsive (very frequent or daily doses/withdrawal)
### Q59
On what days and at what time did you consume ATS? Please indicate all applicable.

**Q59 [singlegridq]**

<table>
<thead>
<tr>
<th></th>
<th>(1) never</th>
<th>(2) in the beginning</th>
<th>(3) after a while</th>
<th>(4) in the latest or current ATS phase</th>
<th>(5) almost every phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:</td>
<td>on days off during daytime</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:</td>
<td>on days off during night time</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:</td>
<td>on working days during daytime</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4:</td>
<td>on working days during night time</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Interviewer:** Please hand over show card No. 6 to respondent and let the respondent indicate point of ATS use separately for each answer option.

### Q60
With whom did you consume ATS usually? Please indicate all applicable.

**Q60 [singlegridq]**

<table>
<thead>
<tr>
<th></th>
<th>(1) never</th>
<th>(2) in the beginning</th>
<th>(3) after a while</th>
<th>(4) in the latest or current ATS phase</th>
<th>(5) almost every phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:</td>
<td>alone</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:</td>
<td>with (sex) partner/spouse</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:</td>
<td>with friends/peers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4:</td>
<td>with family members</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5:</td>
<td>with colleagues</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6:</td>
<td>other, please specify (max three)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Interviewer:** Let respondent use show card No. 6 and let respondent indicate point of ATS use separately for each answer option.

### Q61
In which setting or context did you consume ATS? Please indicate all applicable.

**Q61 [singlegridq]**

<table>
<thead>
<tr>
<th></th>
<th>(1) never</th>
<th>(2) in the beginning</th>
<th>(3) after a while</th>
<th>(4) in the latest or current ATS phase</th>
<th>(5) almost every phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:</td>
<td>at parties</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:</td>
<td>at work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:</td>
<td>at home</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4:</td>
<td>in the streets (not in context of festival/party)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5:</td>
<td>other, please specify (max three)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Interviewer:** Let respondent use show card No. 6 and let respondent indicate point of ATS use separately for each answer option.
Q62

There are different reasons, why people consume ATS. We list some typical reasons. Please indicate all reasons, why you consumed ATS.

Q62 [singlegridq]

Interviewer: Let respondent use show card No. 6 and let respondent indicate point of ATS use separately for each answer option.

<table>
<thead>
<tr>
<th></th>
<th>(1) never</th>
<th>(2) in the beginning</th>
<th>(3) after a while</th>
<th>(4) in the latest or current ATS phase</th>
<th>(5) almost every phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>to feel less drunk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>to better enjoy music</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>to feel euphoric and relaxed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>to have a better connection with my peers/partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>to beat boredom</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>to cope with hunger or cold</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>to go out even though I was tired / to stay awake at parties</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>to be more secure in social situations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>to enhance sexual pleasure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>to cope with stress/ forget about problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>to cope with mental health issues</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>to increase my creativity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>because I lost control and could not help to consume ATS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>to manage family life and housekeeping</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>because of pressure (by peers or partner) to consume</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>to increase my performance at work/education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>because it is 'normal' in my social environment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>to lose weight</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>because of no danger of police enforcement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>other, please specify (max three)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q63

Did you experience one or more of the following negative consequences of ATS use? Please indicate all applicable.

Q63 [singlegridq]

Interviewer: Let respondent use show card No. 6 and let respondent indicate point of ATS use separately for each answer option.

<table>
<thead>
<tr>
<th></th>
<th>(1) never</th>
<th>(2) in the beginning</th>
<th>(3) after a while</th>
<th>(4) in the latest or current ATS phase</th>
<th>(5) almost every phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>insomnia/ fatigue</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>emotional effects such as nervousness / irritability / loneliness / anger / guiltiness / low mood / lacking in concentration / suicidal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>physical effects such as having no energy / loss of appetite / insomnia</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>own use of violence (sexual and/or physical)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>own Experience of violence (sexual and/ or physical)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>unable to manage daily routines</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>financial problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>losing social contacts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>getting in trouble with police</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>other, please specify (max three)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Q64_new**

Which of the substances you mentioned before, i.e. @insert(non_ATS) did you mostly use, in order to deal with negative consequences of ATS use, e.g. insomnia, nervousness?

---

**Q64_new [multiq]**

Multiple answers possible

1: Alcohol
2: Cannabis
3: Cocaine
4: Hallucinogenes
5: Non-prescribed tranquiliser
6: Non-prescribed opioids
7: @insert(Q29_0)
8: @insert(Q30_0)
9: none

---

**Q66_new**

Some people give themselves specific 'consumption rules' which they usually follow. Here are some of those rules. Please indicate all rules you usually follow.

---

**Q66_new [multiq]**

Multiple answers possible

1: I do not use ATS in the daytime
2: I limit the amount of ATS which I am consuming
3: I do not use ATS during work or during courses at university
4: Between phases of ATS use I always observe rules to have phases without ATS use.
5: I use ATS only on weekends.
6: I use ATS only on specific occasions such as festivals, holiday, or selected parties.
7: I never use ATS when I am feeling bad or when I am in a bad mood.
8: I only use ATS with people whom I know personally.
9: I don’t use when my kids/family are around
10: I only use ATS if the use is compatible with my everyday life.
11: I only use ATS when I can afford it and have money left after paying for my basic necessities.
12: other, please specify (max three)

---

**Q67**

What were the reasons, why you reduced or stopped your ATS use at some point?

---

**Q67 [multiq]**

Multiple answers possible

1: I never reduced/stopped my ATS use
2: I wanted to get rid of the negative physical health consequences of ATS use
3: I wanted to get rid of the negative mental health consequences of ATS use
4: I could not afford it anymore
6: other people (friends, family, partner) expected me to do so
7: I felt I was dependent and/or lost control, so I wanted to stop/reduce the consumption
8: I became pregnant / parent
10: I entered treatment
11: I had to go to prison
12: I disconnected from my social network
13: I found a new romantic partner
15: ATS consumption was not compatible with my job/studies
17: I was afraid of law enforcement
18: other, please specify (max three)
Q68
Did you enhance your consumption of other non-ATS substances like @insert(non_ATS) after you reduced or stopped your ATS consumption?

Q68 [singlegridq] Flt = (Q67 ne 1)

<table>
<thead>
<tr>
<th></th>
<th>yes</th>
<th>no</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:</td>
<td>Alcohol</td>
<td></td>
</tr>
<tr>
<td>2:</td>
<td>Cannabis</td>
<td></td>
</tr>
<tr>
<td>3:</td>
<td>Cocaine</td>
<td></td>
</tr>
<tr>
<td>4:</td>
<td>Hallucinogenes</td>
<td></td>
</tr>
<tr>
<td>5:</td>
<td>Ketamine</td>
<td></td>
</tr>
<tr>
<td>6:</td>
<td>Non-prescribed tranquiliser</td>
<td></td>
</tr>
<tr>
<td>7:</td>
<td>Non-prescribed opioids</td>
<td></td>
</tr>
<tr>
<td>8:</td>
<td>@insert(Q29_0)</td>
<td></td>
</tr>
<tr>
<td>9:</td>
<td>@insert(Q30_0)</td>
<td></td>
</tr>
<tr>
<td>10:</td>
<td>@insert(Q31_0)</td>
<td></td>
</tr>
<tr>
<td>11:</td>
<td>@insert(Q32_0)</td>
<td></td>
</tr>
<tr>
<td>12:</td>
<td>@insert(Q33_0)</td>
<td></td>
</tr>
</tbody>
</table>

Restrict = non_ATS

Q69
Why didn’t you increase your consumption of ATS?

Q69 [multiq] Flt = ((studygroups eq 2) or (studygroups eq 4))

Multiple answers possible

1: I wanted to keep control
2: I wanted to keep ATS consumption as something special not for every day/every party
3: I heard that the effects will get weaker the more you consume
5: I was afraid that a higher consumption would lead to physical problems
6: I was afraid that a higher consumption would lead to mental problems
7: I was afraid that a higher consumption would lead to problems in my job/studies
8: I was afraid that a higher consumption would lead to problems with my partner/friends/family
9: I could not financially afford a higher/more frequent use
11: I felt better/good with less use
12: other, please specify (max three)

Q85
Now I will ask you some questions about about your exposition to ATS. In what situation have you been exposed to ATS for the first time?

Q85 [singleq]

1: when I was hanging out with friends
2: when I was at a club/party/festival
3: when I was at work
4: at a dealer's place where I wanted to purchase other substances than ATS
5: other, please specify (max three)

Q88
How many times in your life have you been exposed to ATS?

Q88 [singleq]

1: once
2: several times
3: often
4: almost all the time
**Q87_often**

When you were exposed to ATS use for the first time, why didn´t you try ATS?

**Q87_often [singlegridq]** \[Flt = (Q88 \text{ ne } 1)\]

Multiple answers possible

<table>
<thead>
<tr>
<th></th>
<th>(1) never</th>
<th>(2) at the first exposition</th>
<th>(3) at later expositions</th>
<th>(4) at almost every exposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:</td>
<td>I don´t use any psychoactive substances in general</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:</td>
<td>I don´t use illegal substances in general</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:</td>
<td>I don´t use 'chemical substances' in general</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4:</td>
<td>I was afraid of getting dependent</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5:</td>
<td>I heard bad things about the effects of ATS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6:</td>
<td>I was afraid because I didn´t know ATS and its effects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7:</td>
<td>I didn´t like the behaviour of people on ATS which I observed earlier</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:</td>
<td>I didn´t know if the available ATS was without hazardous extenders</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:</td>
<td>I wasn´t interested in these substances</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:</td>
<td>a friend/my partner told me not to do it</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:</td>
<td>not the right people present</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:</td>
<td>not the right setting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13:</td>
<td>because my parent/sister/brother told me so</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14:</td>
<td>because of my parental responsibility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15:</td>
<td>I don’t want to take more/other drugs than I already do</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16:</td>
<td>I am afraid of hazard to my health</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17:</td>
<td>other, please specify (max three)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Q87_once**

When you were exposed to ATS use for the first time, why didn´t you try ATS?

**Q87_once [multiq]** \[Flt = (Q88 \text{ eq } 1)\]

Multiple answers possible

1: I don´t use any psychoactive substances in general
2: I don´t use illegal substances in general
3: I don´t use 'chemical substances' in general
4: I was afraid of getting dependent
5: I heard bad things about the effects of ATS
6: I was afraid because I didn´t know ATS and its effects
7: I didn´t like the behaviour of people on ATS which I observed earlier
8: I didn´t know if the available ATS was without hazardous extenders
9: I wasn’t interested in these substances
10: a friend/my partner told me not to do it
11: not the right people present
12: not the right setting
13: because my parent/sister/brother told me so
14: because of my parental responsibility
15: I don’t want to take more/other drugs than I already do
16: I am afraid of hazard to my health
17: other, please specify (max three)

**Q89**

How old were you, when you were last exposed to ATS?

**Q89 [numq]**

1: indicate age
Q90
Did somebody from your social network (peers, partner, family) try to persuade you to try ATS?

Q90 [singleq]
1: yes, once
2: yes, several times
3: no

Q91
Have you ever been tempted to use ATS after all?

Q91 [singleq]
1: yes, once
2: yes, several times
3: no

Q58_new
Currently, how difficult or easy is it for you personally to get ATS within 24 hours, if you wish to?

Q58_new [singleq]
1: impossible
2: difficult
3: neither easy nor difficult
4: rather easy
5: easy

Q82
How many times have you been imprisoned in your life?

Q82 [numq]
Interviewer: If never enter 0

1: times imprisoned

Q83
How long have you ever been imprisoned?

Q83 [numq] Flt = (Q82 ne 0)
Interviewer: If imprisonment lasted less than 1 month indicate 0 months

1: months in total
Q84

Have you ever been convicted of any of these offenses? Please indicate all applicable.

Q84 [multiq]
Multiple answers possible

10: Never convicted

1: Possession of illicit drugs

2: Selling or distributing drugs

3: Fraud, forgery

4: Shoplifting

5: Thefts (of property or from person)

6: Robbery

7: Sexual assault / sexual violence

8: Physical violence

9: Other offense, please specify (max three)

Q70

Do you have any medical problems, which continue to interfere with your life?

Q70 [singleq]

1: yes

2: no

Q70_1

If yes, please specify

Q70_1 [openq]

Flt = (Q70 eq 1)

Q72_1

Please assess your current physical health condition on a scale from 1 to 10 from your point of view. 1 means you think your physical health condition is very bad, 10 means you think your physical health condition is excellent.

Q72_1 [numq]

1: indicate number (1-10)

Q72_2

Please assess your current mental health condition on a scale from 1 to 10 from your point of view. 1 means you think your mental health condition is very bad, 10 means you think your mental health condition is excellent.

Q72_2 [numq]

1: indicate number (1-10)
**Q73**

Did a physician or another specialist tell you that you have any of the diseases listed here? Or have you been in treatment for the disease, e.g. in a hospital or in an emergency department? Please indicate all applicable.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>lifetime</th>
<th>past 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Attention deficit hyperactivity disorder (ADHD)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Depression</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Obsessive–compulsive disorder</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Eating disorder</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Psychosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Borderline</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>other, please specify (max three)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Q74**

Have you been treated medically with any of the following prescription drugs?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>lifetime</th>
<th>past 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Medications to treat ADHD: Methylphenidate (Ritalin, Medikinet)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Sedatives / anxiolytics like Benzodiazepines (Valium, Tavor)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Antidepressants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Antipsychotics or neuroleptics: Haldol, Seroquel, Zyprexa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>other, please specify (max three)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Q75

Here I have a list of problems people sometimes have. As I read each one to you, I want you to tell me how much that problem has distressed or bothered you during the past 7 days including today. These are the answers I want you to use. Interviewer: Please hand over show card No. 8 to respondent.

Q75 [singlegridq]

During the past 7 days, how much were you distressed by...

<table>
<thead>
<tr>
<th></th>
<th>(1) Not at all</th>
<th>(2) A little bit</th>
<th>(3) Moderately</th>
<th>(4) Quite a bit</th>
<th>(5) Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Faintness or dizziness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Feeling no interest in things</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Nervousness or shakiness inside</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Pains in heart or chest</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Feeling lonely</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Feeling tense or keyed up</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Nausea or upset stomach</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Feeling blue</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Suddenly scared for no reason</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Trouble getting your breath</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Feelings of worthlessness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Spells of terror or panic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Numbness or tingling in parts of your body</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Feeling hopeless about the future</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Feeling so restless you couldn't sit still</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Feeling weak in parts of your body</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Thoughts of ending your life</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Feeling fearful</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q76_new

Please tell me how much you agree or disagree with the following statement using this 1 - 7 scale:

Interviewer hand over show card No. 9. 'In general, I am satisfied with my life.'

Q76_new [singleq]

1: (1) Strongly disagree
2: (2) Disagree
3: (3) Slightly disagree
4: (4) Neither agree nor disagree
5: (5) Slightly agree
6: (6) Agree
7: (7) Strongly Agree
Did you experience one of the following stressful events in your life? If yes, please indicate your age at the point where the event first happened to you. Please indicate all applicable.

**Q77_1 [numq]**
Serious accident at work, home, or during recreational activity or serious car accident?

*NoAnswerLabel: 99 “no”*
1: Yes, at age

**Q77_3 [numq]**
Physical assault (for example, being attacked, hit, slapped, kicked, beaten up)

*NoAnswerLabel: 99 “no”*
1: Yes, at age

**Q77_4 [numq]**
Sexual assault before age of 16 (rape, attempted rape, made to perform any type of sexual act through force or threat of harm)

*NoAnswerLabel: 99 “no”*
1: Yes, at age

**Q77_5 [numq]**
Sexual assault after age of 16 (rape, attempted rape, made to perform any type of sexual act through force or threat of harm)

*NoAnswerLabel: 99 “no”*
1: Yes, at age

**Q77_6 [numq]**
Life-threatening illness or injury

*NoAnswerLabel: 99 “no”*
1: Yes, at age

**Q77_7 [numq]**
Death of a parent in childhood

*NoAnswerLabel: 99 “no”*
1: Yes, at age

**Q77_8 [numq]**
Growing up in an orphanage, public institution, foster parents

*NoAnswerLabel: 99 “no”*
1: Yes, at age

**Q77_9 [numq]**
Death of someone close to you

*NoAnswerLabel: 99 “no”*
1: Yes, at age

**Q77_10 [numq]**
Serious injury, harm, or death you caused to someone else

*NoAnswerLabel: 99 “no”*
1: Yes, at age
Q77_11 [numq]
Parent’s substance dependency while living together with parents

NoAnswerLabel: 99 “no”
1: Yes, at age

Q77_12 [numq]
Parent’s serious illness (physical or mental)

NoAnswerLabel: 99 “no”
1: Yes, at age

Q77_13 [numq]
unwanted job loss

NoAnswerLabel: 99 “no”
1: Yes, at age

Q77_14 [numq]
Imprisonment

NoAnswerLabel: 99 “no”
1: Yes, at age

Q77_15 [numq]
Separation from long term partner/divorce

NoAnswerLabel: 99 “no”
1: Yes, at age

Q77_16 [numq]
Became homeless

NoAnswerLabel: 99 “no”
1: Yes, at age

Q77_17 [numq]
Being kicked out from parent’s home

NoAnswerLabel: 99 “no”
1: Yes, at age

Q77_18 [numq]
Any other very stressful event or experience, please specify. Interviewer: Respondent is allowed to report up to 3 self-chosen events here

NoAnswerLabel: 99 “no”
1: Yes, at age specify event:
Q77_19

Any other very stressful event or experience, please specify.

Q77_19 [numq] \(\text{Flt} = ((Q77_18 \neq 99))\)

NoAnswerLabel: 99 "no"

1: Yes, at age specify event:

Q77_20

Any other very stressful event or experience, please specify.

Q77_20 [numq] \(\text{Flt} = ((Q77_18 \neq 99)) \text{ and } ((Q77_19 \neq 99))\)

NoAnswerLabel: 99 "no"

1: Yes, at age specify event:

Q78

How well do the following statements describe your personality? Please use the following scale.

**Interviewer: please hand over show card No. 10 to respondent**.

Q78 [singlegridq]

I see myself as someone who...

<table>
<thead>
<tr>
<th></th>
<th>(1) disagree strongly</th>
<th>(2) disagree a little</th>
<th>(3) neither agree nor disagree</th>
<th>(4) agree a little</th>
<th>(5) agree strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>... is reserved</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>... is generally trusting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>... tends to be lazy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>... is relaxed, handles stress well</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>... has few artistic interests</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>... is outgoing, sociable</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>... tends to find fault with others</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>... does a thorough job</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>... gets nervous easily</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>... has an active imagination</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q79

How much do you agree or disagree to the following statements?

**Interviewer: please let respondent use show card No. 10 again**.

Q79 [singlegridq]

<table>
<thead>
<tr>
<th></th>
<th>(1) disagree strongly</th>
<th>(2) disagree a little</th>
<th>(3) neither agree nor disagree</th>
<th>(4) agree a little</th>
<th>(5) agree strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I would like to explore strange places</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>I like to do frightening things</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I like new and exciting experiences, even if I have to break rules</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>I prefer friends who are exciting and unpredictable</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Q80

How true or not true are the following statements for you?

Q80 [singlegridq]

Interviewer: please hand over show card No. 11 to respondent.

<table>
<thead>
<tr>
<th>1: I can always manage to solve difficult problems if I try hard enough.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Not true at all (2) Hardly true (3) Moderately true (4) Exactly true</td>
</tr>
<tr>
<td>2: If someone opposes me, I can find the means and ways to get what I want.</td>
</tr>
<tr>
<td>3: It is easy for me to stick to my aims and accomplish my goals.</td>
</tr>
<tr>
<td>4: I am confident that I could deal efficiently with unexpected events.</td>
</tr>
<tr>
<td>5: Thanks to my resourcefulness, I know how to handle unforeseen situations.</td>
</tr>
<tr>
<td>6: I can solve most problems if I invest the necessary effort.</td>
</tr>
<tr>
<td>7: I can remain calm when facing difficulties because I can rely on my coping abilities.</td>
</tr>
<tr>
<td>8: When I am confronted with a problem, I can usually find several solutions.</td>
</tr>
<tr>
<td>9: If I am in trouble, I can usually think of a solution.</td>
</tr>
<tr>
<td>10: I can usually handle whatever comes my way.</td>
</tr>
</tbody>
</table>

Q81

Please indicate how much you agree with the following statements as they apply to you over the last month. If a particular situation has not occurred recently, answer according to how you think you would have felt.

Q81 [singlegridq] Flt = nation eq 2

Interviewer: please hand over show card No. 12 to respondent.

| 1: I am able to adapt when changes occur. |
| 2: I can deal with whatever comes my way. |
| 3: I try to see the humorous side of things when I am faced with problems. |
| 4: Having to cope with stress can make me stronger. |
| 5: I tend to bounce back after illness, injury, or other hardships. |
| 6: I believe I can achieve my goals, even if there are obstacles. |
| 7: Under pressure, I stay focused and think clearly. |
| 8: I am not easily discouraged by failure. |
| 9: I think of myself as a strong person when dealing with life's challenges and difficulties. |
| 10: I am able to handle unpleasant or painful feelings like sadness, fear, and anger. |

Q92

That was the last question. Thank you very much for your participation and for sharing your experiences! Interviewer: Please give incentive to respondent and receipt the payment on the receipt list. After that, please fill in the next questions about the setting of the interview.

Q92 [textq]
Setting of recruitment?

Q93 [singleq]

1: respondent conducted online screening and/or contacted research team on its own initiative
2: drug service
3: open drug scene
4: university campus
5: (electronic) music club
6: pub, bar or café
7: on the street
8: other, please specify

Setting of interview?

Q94 [singleq]

1: private
2: drug service
3: public indoor (e.g. café)
4: public outdoor (e.g. park)

Please specify the setting '@insert(Q94)'

Q94_1 [openq]

Third person present?

Q95 [singleq]

1: yes
2: no

Please insert a comment here regarding the recruitment, the interview, the respondent or anything else. If everything was fine please insert `ok`.

Q96 [openq]

That was it. When you are done with all interviews for the day, please remember to connect your tablet with a WiFi network and transfer the data. Thank you very much!

Q97 [textq]