

# Youth Substance Use in Tajikistan 2016

2017

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### *Core Team*

*UNODC Research and Trend Analysis Branch, Vienna*

Chloé Carpentier (Chief, Drug Research Section)

Larissa Maier (Consultant, Drug Research Section)

Angela Me (Chief, Research and Trend Analysis Branch)

Kamran Niaz (Epidemiologist, Drug Research Section)

### *UNODC Programme Office in Tajikistan*

Dilbar Isoeva (National Project Officer)

Farkhod Saydullaev (Consultant)

### *Data Collection and Fieldwork*

Drug Control Agency under the President of the Republic of Tajikistan (Leading Agency)

Ministry of Public Health and Social Protection of the Republic of Tajikistan

State Committee on Youth and Sport under the Government of the Republic of Tajikistan

Agency of Statistics under the President of the Republic of Tajikistan

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## Abbreviations and acronyms

CI	Confidence Interval
DRS	Districts of Republican Subordination
EMCDDA	European Monitoring Centre for Drugs and Drug Addiction
EMIS	Education Management Information System
ESPAD	European School Survey Project on Alcohol and Other Drugs
GDP	Gross Domestic Product
HBSC	Health Behaviour in School-aged Children
MDMA	3,4-Methylenedioxymethamphetamine
MoES	Ministry of Education and Science
MoH	Ministry of Health
N	Number
RPANC	Regional Programme for Afghanistan and Neighbouring Countries
UN	United Nations
UNODC	United Nations Office on Drugs and Crime
WHO	World Health Organization
YSSU	Youth Survey on Substance Use

## **Executive Summary**

In 2016, a comprehensive national study on psychoactive substance use among Tajik school students was conducted, aiming to provide reliable baseline information on the prevalence and patterns of youth substance use among the population aged 13 to 18 years old attending school. In total, 5,169 school students from Khatlon, Districts of Republican Subordination (DRS), Sughd and Gorno-Badakhshan Autonomous Region took the Youth Survey on Substance Use (YSSU) and answered questions about their own, as well as their friends', experience with the use of both licit and illicit substances. Students' underreporting of both licit and illicit use of psychoactive substances is likely because of stigma and fear of punishment.

Overall, lifetime prevalence of tobacco use ranged from **4.3% to 10.1%** among male and **0.9% to 5.5%** among female students in Tajikistan. These rates are comparable to the rate of 2.4% of students in Tajikistan who report current tobacco smoking in the Global Youth Tobacco Survey, which reflects the lowest rate of tobacco use of all countries who took that survey. Students in urban areas were twice as likely to report lifetime tobacco use when compared to those living in rural areas which can be explained by the higher availability and marketing of cigarettes in the cities. The same is true for the use of alcohol. The lifetime prevalence of alcohol use ranged from **3.3% to 5.8%** among male and **1.1% to 4.1%** among female students.

It is likely that the self-reported or direct reporting of drug use in the survey was not as accurate as for tobacco and alcohol. Only seven people (0.2%), out of the total interviewed students, indicated lifetime use of any drug and 2.2% of male and 1.8% of female students, respectively, reported that they knew at least one friend who had used any drug. However, an indirect question at the end of the survey revealed that 5.0% of the students used cannabis and did not report it in the earlier section on drug use screening. Overall, the lifetime prevalence of any drug use among students in Tajikistan is, thus estimated to range from **0.2% to 5.0%**, with highest values among male students.

When compared to unpublished data from a 2006 school survey in Tajikistan that used the same methodology and was also guided by UNODC, a strong decrease in both the awareness of different illicit drugs, and in the perceived ease of availability was observed in the current survey. Ten years ago, almost every student admitted it would be easy to obtain at least one of psychoactive substance if they wanted to. In the current study, only 12.5% of students said it would be easy to get at least one psychoactive substance (including controlled substances and

prescription drugs for non-medical use). It remains unclear, whether the popularity and availability of psychoactive substances has indeed strongly decreased over the past years or whether stigmatizing attitudes regarding the use of psychoactive substances have increased. If the latter is the case, accuracy of self-reported survey data may be compromised, and indirect methods are more appropriate to estimate the prevalence of substance use among young people.

The key findings of the school survey among youth are the following:

- **Male** students were more than three times as likely to report any lifetime use of psychoactive substances when compared to their female counterparts.
- Students in **urban** areas were almost twice as likely to report the lifetime use of psychoactive substances use when compared to those in rural areas.
- **Older** students aged 17 or 18 years were most likely to report their experiences with the use of psychoactive substances -not surprising given their longer exposure.
- The most important predictor of lifetime substance use was **substance use in the peer group**. Students who reported having at least one friend who had ever used a psychoactive substance were six times as likely to report the use of psychoactive substances mainly tobacco and alcohol in their life.
- Most Tajik students were reportedly unfamiliar with most drugs and had therefore difficulties to estimate the risk related to their use.
- The perceived risk of harm related to daily cigarette and daily alcohol use was rated higher than the risks related to regular or occasional use of controlled substances.
- **More than half** of the students said that they **would not report cannabis use honestly in the survey** if they had used it before.

In conclusion, estimating the use of tobacco, alcohol, and controlled drugs among youth in Tajikistan is difficult given the social and cultural context. Students in urban areas are more likely to report the use of tobacco and alcohol because the substances are likely to be more available but also because their use is more visible and more socially accepted when compared to small communities in rural areas. Therefore, effective prevention of substance use among youth will need to be tailored to the target group and consider geographical, social, gender and age differences. Most importantly, scientific evidence-based education programs both in schools and among families could help prevent the initiation of and progression to harmful substance use among young people.

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## 1. Introduction

In 2017, the population of Tajikistan was 8.9 million inhabitants of whom most live in rural areas (72%)<sup>1</sup>. Moreover, it is one of the transit countries for trafficking of opiates from Afghanistan along the so-called northern route with the highest number of opiate seizures in Central Asia (UNODC, 2008). In 2015, Tajik law enforcement seized more than 1,000 kg of opioids (UNODC, 2017). In addition, cannabis cultivation and consumption take place in the country, though the extent of its use compared to that of opioids or other illicit substances is not well known. The annual prevalence of opioid use is estimated as 0.5 % of the adult population and a similar proportion of the population is estimated to inject drugs, with 12.9% of those injecting were estimated to be living with HIV. The current health expenditure, as a percentage of the Gross Domestic Product (GD) in Tajikistan is relatively low at 7.0% in 2015<sup>2</sup> and informal out-of-pocket payments has become the main source of health expenditure for the population that has caused a steady increase in existing social inequalities (Donadel, Karimova, Nabiev, & Wyss, 2016; Khodjamurodov et al., 2010). The privatization of numerous state pharmacies in recent years has made it difficult to develop a national pharmaceutical system and quality control of the pharmaceutical products remains low. This has resulted in an overall inequitable access to health care (Khodjamurodov et al., 2010). On the other hand, heroin is perceived to be readily available in cities such as Khorog and Kulob and often cheaper than alcohol (Latypov, Otiashvili, & Zule, 2014). While the production of opium in Afghanistan has been increasing (UNODC, 2017), the number of seizures in Tajikistan has steadily been decreasing.

Data on the use of psychoactive substances in the general population in Tajikistan are greatly lacking. Like other Central Asian countries, data from treatment and police registers are the only sources to estimate the number of persons with drug use disorder in the country (Zabransky, Mravcik, Talu, & Jasaitis, 2014). A focus group study in Kulob and Khorog revealed that needle sharing among PWID is not common although drugs are jointly prepared for injection (Otiashvili, Latypov, Ibragimov, & Zule, 2016). In 2014, the government planned to implement harm reduction services through 51 sites and 6 opioid substitution treatment facilities with the capacity to treat more than 500 PWID (MoH Tajikistan, 2015). By the end of 2017, this was planned to increase to 12 opioid substitution treatment facilities, as well as approximately 50 Needle-Syringe-Programmes (Michels et al., 2017).

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<sup>1</sup> [United Nations DESA/Population Division, World Population Prospects 2017](#)

<sup>2</sup> WHO Global Health Expenditure Database: <http://apps.who.int/nha/database/ViewData/Indicators/en>

Overall, little is known about the use of psychoactive substances among youth. The 48 key informant interviews as part of a pilot study on socio-economic impacts of drug use in Dushanbe revealed that only one in ten people sympathised with people who use drugs and that almost two out of five informants knew about children who started using drugs as a consequence of drug use by other family members. (UNODC, 2015).

The European School Survey Project on Alcohol and Other Drugs (ESPAD) provides promising methodology to assess the use of different psychoactive substances among youth especially in the European settings. The target group of the survey are 15-16 years old school students and validated questions aim to ensure comparability of the findings across the participating countries. The main rationale for carrying out school surveys is that the onset of the use of psychoactive substances is likely to occur during early adolescence and monitoring drug use initiation and use around those ages is therefore important for planning and delivery of prevention programmes (UNODC, 2003). Moreover, individual factors, such as attitudes towards the use of psychoactive substances, perceived risk of harm and perceived availability of the drugs, among other factors, can help to predict substance use among adolescents (Bjarnason, Steriu, & Kokkevi, 2010; Piontek, Kraus, Bjarnason, Demetrovics, & Ramstedt, 2013). Many people consider that asking questions about psychoactive substances could potentially increase the curiosity and the desire to use drugs. However, research has shown that this is not the case and a recent study found no increase in self-reported drug use one year after survey administration when compared to a control (Briney et al., 2017). In 2017, the school survey using the ESPAD methodology was implemented among Kyrgyz students. The survey revealed that one in three students at the age of 15-16 years had used alcohol (29.7%) and/or tobacco (28.6%) at least once in their lifetime (Dinara & Aida, 2017). The use of other drugs was less common: 3.3% of male and 1.2% of female students reported lifetime use of cannabis (Dinara & Aida, 2017).

In Tajikistan, two school-based surveys were conducted in 2006, one was supported by UNODC and collected information on drug use from 5,003 school students aged 15 or 16 years in three regions (UNODC, 2006) and the other one was the WHO Global School Based Student Health Survey in which 7,395 school students aged 13 to 15 years participated. (WHO Global School-Based Student Health Survey, 2006). Of the participants in the two surveys 0.5% (UNODC 2006) and 1.1% (WHO, 2006) indicated that they had used drugs such as cannabis or heroin at least once in their lifetime. In the last ten years, no follow-up study had addressed issues on drug use or trends in substance use behaviour among youth in Tajikistan. However,

one case study found that school students felt mostly safe at school and that psychoactive substance use at schools is very uncommon; only few male students in urban areas reported substance use (UNICEF, 2011). In their recommendations the authors of that study called for more research among young people on the prevalence of alcohol and drug use occurring both in and out of schools.

In 2016, Tajikistan welcomed the Regional Office's suggestion of joining the WHO Health Behaviour in School-aged Children (HBSC) research network. Nonetheless, recent information on the extent of drug use in Tajikistan and the neighbouring countries is still lacking.

## **2. Results**

### **2.1. Prevalence of youth substance use**

The primary objective of the Tajik school survey on drug use was to provide estimates of the prevalence of drug use among youth in Tajikistan. For this purpose, self-reported data on the use of tobacco, alcohol, and other drugs and the non-medical use of prescriptions were collected from 5,169 students 13-18 years old in 2016. Tobacco, alcohol, and substance use patterns were evaluated for lifetime, within the past 12 months and within the past 30 days. Friends' substance use was an additional indicator used to create a range of prevalence estimate for each substance. Overall, prevalence of lifetime use of tobacco ranged from **4.3% to 10.1%** among male and **0.9% to 5.5%** among female students. The lifetime prevalence of alcohol use ranged from **3.3% to 5.8%** among male and **1.1% to 4.1%** among female students. Finally, the lifetime prevalence of drug use among students in Tajikistan was, thus estimated to range from **0.2 to 5.0%**, with highest values among male students.

#### **2.1.1. Use of tobacco**

Overall, less than 5% of Tajik students aged 13 to 18 years old smoked cigarettes at least once (Figure 1). Less than 1% of students reported cigarette use in the past year and past month. Both lifetime and 12-month use of tobacco was higher among males residing in urban areas compared to males from rural areas. This was not true for past 30 days' use among males. Similarly, at least twice as many females from urban areas reported tobacco use compared to those from rural areas - this was true for any time period of use i.e., lifetime, past year, and past month. (Figure 1). The average age students first tried cigarettes was 13.8 years ( $SD=1.96$ ), ranging from 11 to 17 years. No gender differences for age of onset were found.

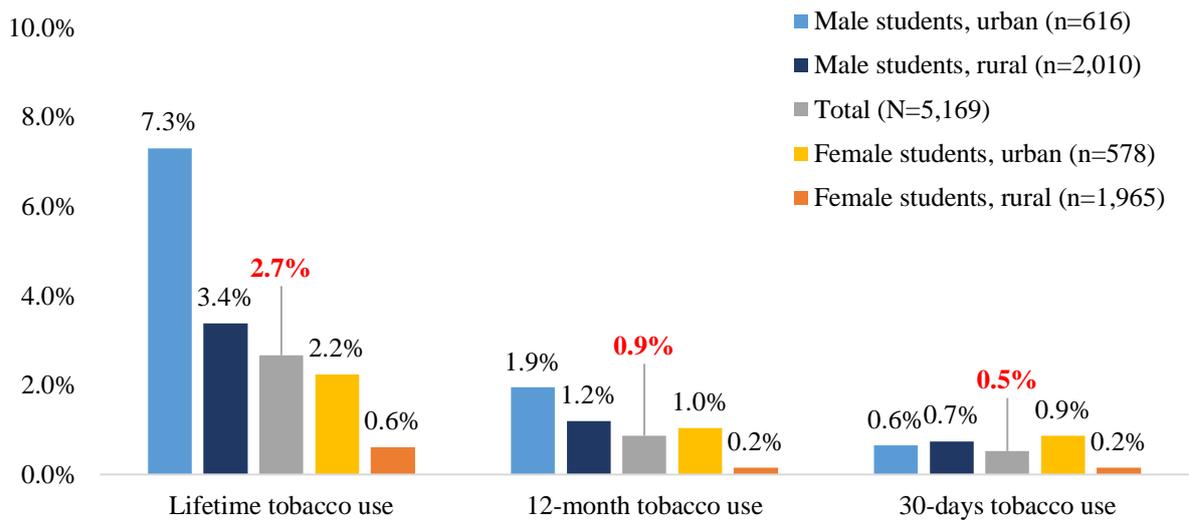


Figure 1. Self-reported tobacco use in the sample by gender and geographical region.

Although somewhat lower, in general these findings are in line with those reported from other school-based youth surveys in Tajikistan. According to the Global Youth Tobacco Survey in 2014, 2.4% (95% CI 1.7–3.5) of Tajik youth 13 to 15 years old indicated current use of tobacco (Arrazola et al. 2017). Tobacco use in Tajikistan assessed in the Global Youth Tobacco Survey was among the lowest within the countries where these studies were undertaken (61 countries).

### 2.1.2. Use of alcohol

Figure 2 shows 2.2% of all youth respondents indicated having ever used alcohol. While the reported lifetime use of alcohol was slightly lower when compared to tobacco, the proportion of youth reporting 12-month and past-30-days use was the same. Male students in urban areas showed the highest prevalence of lifetime alcohol use, followed by female students in urban areas (Figure 2). When focusing on the alcohol use in the last 12 months, twice as many males in urban areas (1.9%) reported alcohol use compared to males from rural areas (0.9%). The difference among females was five times higher (Figure 2). The average age when youth first consumed alcohol was 13.7 years old ( $SD=2.10$ ), ranging from 11 to 18 years old. No gender differences for age of initiation of alcohol were found. Among the youth reporting alcohol use, two thirds first used beer (60%), one quarter (25%) first used wine and 14% said that the alcohol-type they had first tried was a spirit. It should be noted that more respondents answered the question on the type of alcohol they had first consumed than respondents who reported alcohol use. This indicates an underreporting of actual extent of alcohol use, and perhaps future studies could consider different methods for improved reporting and/or discern barriers to

disclosure of self-reported use of substances. Less than 1% of the respondents indicated binge drinking (drinking more than five drinks in a row) at least once in the past 30 days.

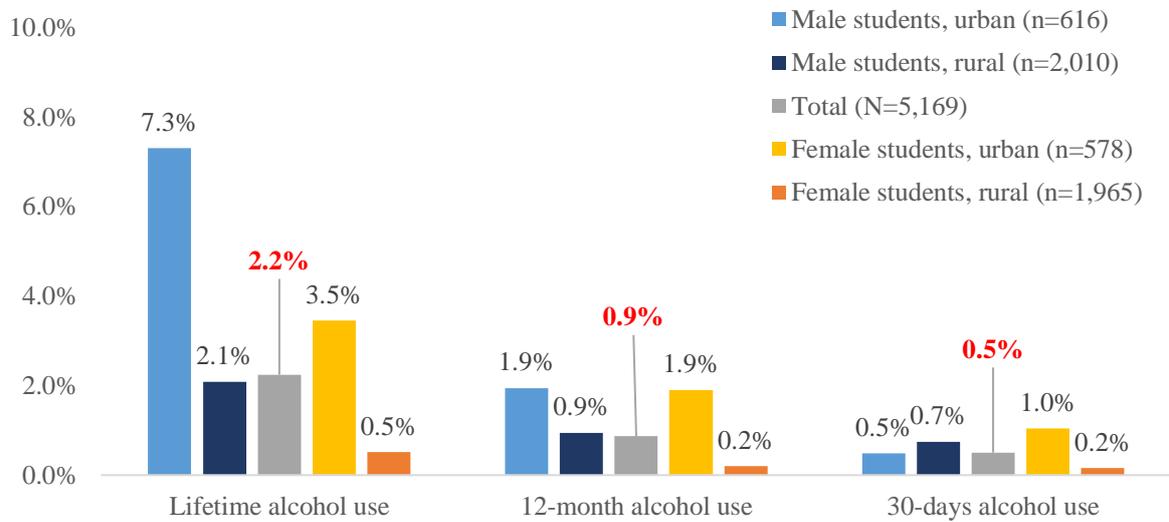


Figure 2. Self-reported alcohol use in the sample by gender and geographical region.

### 2.1.3. Use of drugs other than alcohol and tobacco

In total, seven students who participated in the survey reported lifetime use of drugs, other than alcohol and tobacco (<0.1%) when asked directly. These students self-reported the use on single occasions of cannabis, spice, heroin, and cocaine in their lifetime. No student indicated the use of opium, ecstasy, amphetamine, methamphetamine, or hallucinogens. Given the few respondents who admitted substance use no valid answers for age of first use can be provided. However, more than 7 students replied to the question on the first drug used: two students admitted that it was heroin, two cannabis, one student reported spice and another tranquillizers; whereas 28 students indicated that they did not know which psychoactive substance they first used.. This points to an inconsistency in the self-reported use of substances and it is quite likely that the extent of use of illicit drugs was underreported in this survey. Further discussion of the implications of these results is included in section 2. 2.

### 2.1.4. Non-medical use of prescription drugs

One male student in an urban area as well as two male and two female students from rural areas reported the non-medical use of prescription painkillers to get high at least once or twice in their lifetime. Only

two students reported the use of prescription drugs to get high, both in the last year and in the last month prior to the survey. No student reported the use of morphine or tranquilizers to get high. Such low prevalence of non-medical use of prescription drugs is difficult to interpret, and underreporting is very likely. More information is required to understand if these rates truly reflect the prevalence of non-medical use of prescription drugs or are the result of a highly stigmatized behaviour unlikely to be shared in the classroom setting.

### 2.1.5. Use of any psychoactive substance

The survey results show that overall 4% of student participants indicated the use of any substance (alcohol and/or tobacco) or other drugs to get high at least once in the lifetime (Figure 3), whereas 1.5% of the students reported past year and less than 1% reported use of any psychoactive substance in the past month.

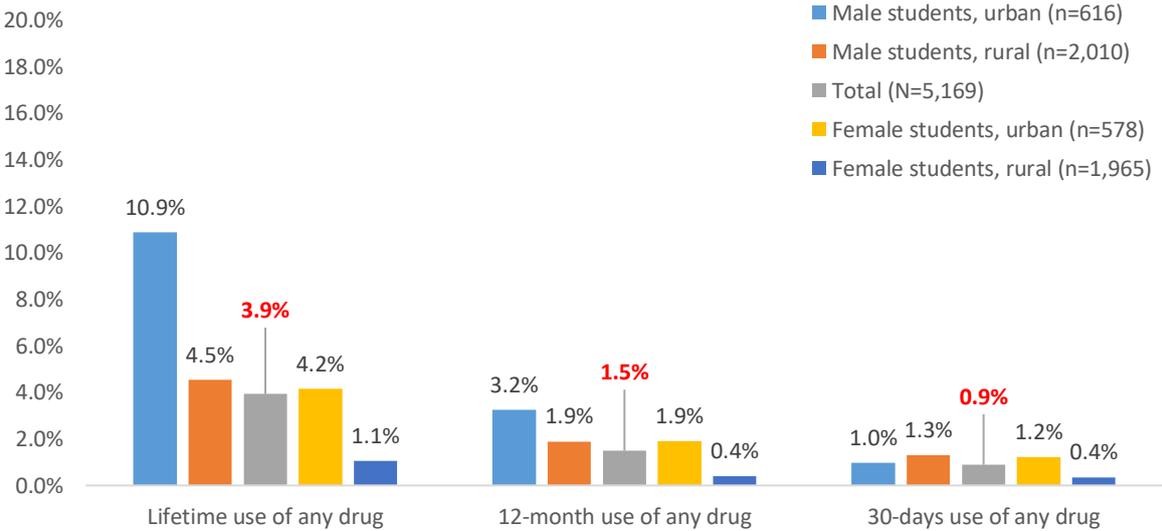


Figure 3. Self-reported use of any psychoactive substance in the sample by gender and geographical region.

### 2.2. Trustworthiness of self-report data on psychoactive substance use

The earlier school survey in Tajikistan (2006) reported that one third of the students (34%) said they would definitely not have admitted cannabis use in the survey if they had used cannabis. The same question was asked in the present study and was analysed as an indicator of trustworthiness of self-reported substance use in general. The hypothesis was that after 10 years in which the country progressed and different UN projects were implemented in the region, the stigma associated with the use of psychoactive substances might be lower. In the current survey

it was found that half of the students (47%) would ‘definitely not’ report their cannabis use honestly (if they used cannabis), and 10% would ‘probably not’ report their cannabis use (Figure 4). Together, these responses represent more than half (57%) of students interviewed. Note, this does not indicate 57% of respondents used cannabis or other drugs, but it does suggest *the fear associated with disclosure of drug use*. Students who did not report any use of tobacco and/or alcohol were more likely to say that they would definitely not report cannabis use (47.4% vs. 34.0%,  $p < .001$ ). It is, therefore, plausible that some students have also not reported their use of tobacco and/or alcohol. In the same set of questions 5% of the students answered that they would have already indicated that they had used cannabis, while in fact, only two reported lifetime use of cannabis, and only seven reported lifetime use of any illicit drug, in response to direct questions presented previously in the questionnaire. Overall, female students were more likely to provide honest responses when compared to males, and students in urban areas were more honest in reporting cannabis use compared to those in rural areas (Figure 4).

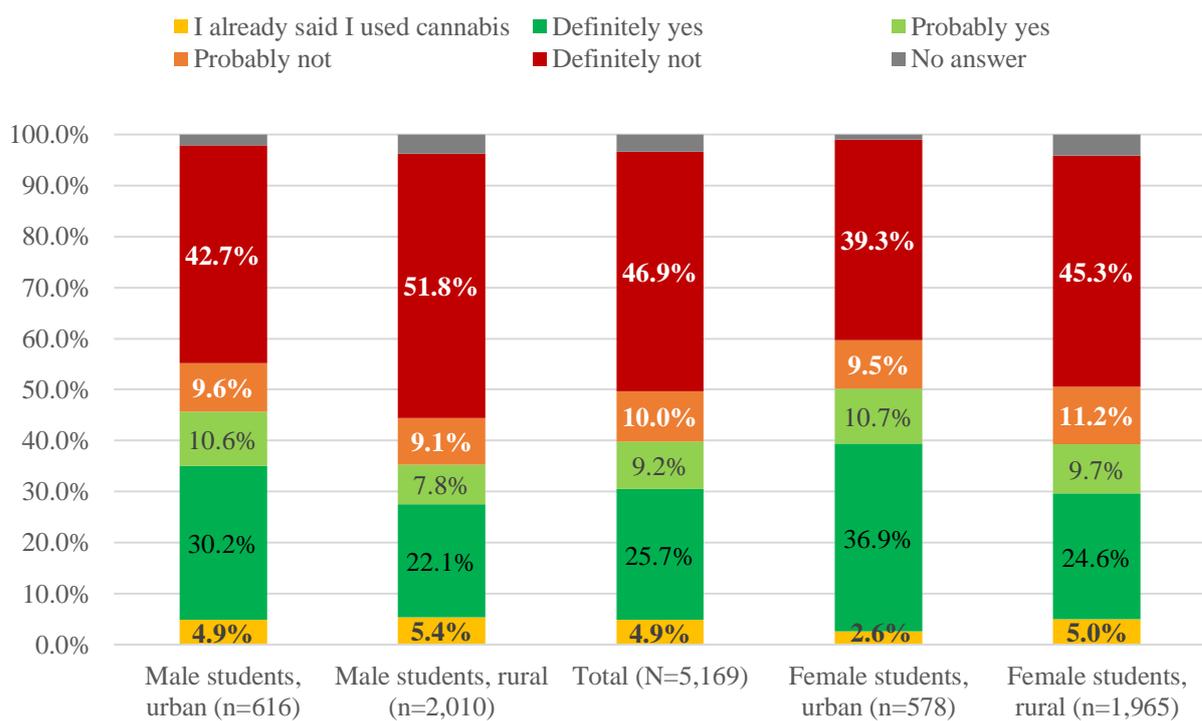


Figure 4. Admitting cannabis use in the survey by gender and geographical region.

### 2.3. Friends' use of psychoactive substances

The report of friends' use of psychoactive substances<sup>3</sup> is usually higher than self-reported substance use. However, those who indicated use of a particular substance are more likely to report that they have friends who use that substance too. In the current survey 9% of the surveyed students reported having at least one friend that used any psychoactive substance (Table 1), compared to 4% of respondents who reported self-use. This trend was observed across each substance type (Table 1). Male students were significantly more likely to report friends who used any psychoactive substance compared to female students (any drug  $X^2 = 61.7$ ,  $p < .001$ ; Table 1), differences which were also significant for combined use of alcohol and tobacco. No significant differences across gender were found for controlled substance (Table 1).

Table 1. Psychoactive substance use among friends vs. self-reported lifetime use by gender.

	At least one friend who uses*			$X^2$	Self-reported lifetime use	
	Total	Male	Female		Male	Female
<b>Any substance</b>	<b>9.2%</b>	11.5%	6.8%	34.3***	6.0%	1.8%
<b>Alcohol and tobacco</b>	<b>8.9%</b>	11.2%	6.6%	33.4***	5.9%	1.7%
Tobacco	7.8%	10.1%	5.5%	38.4***	4.3%	0.9%
Alcohol	5.0%	5.8%	4.1%	1.3**	3.3%	1.1%
<b>Other drugs</b>	<b>2.1%</b>	2.2%	1.8%	1.0	0.2%	0.1%
Heroin	1.5%	1.6%	1.3%	1.3	0.04%	0
Opium	1.4%	1.6%	1.2%	1.3	0	0
Cannabis	1.4%	1.5%	1.3%	0.7	0.1%	0
Ecstasy	1.4%	1.4%	1.3%	0.0	0	0
Spice	1.3%	1.4%	1.2%	0.7	0	0.1%
Crack cocaine	1.3%	1.3%	1.2%	0.1	0.04%	0
Methamphetamine	1.2%	1.3%	1.2%	0.1	0	0
Amphetamine	1.2%	1.3%	1.1%	0.4	0	0
Cocaine powder	1.2%	1.3%	1.1%	0.4	0.04%	0

\*Time period of friends' use not specified.; \*\* indicates a statistical significance  $p < 0.01$ ; \*\*\* indicates statistical significance  $p < 0.001$ .

### 2.4. Awareness of the existence of drugs

When profiling student's awareness of single substances in 2006, males were significantly more aware of opium and ecstasy, while females were more aware of the existence of cannabis, heroin, and hallucinogens (Table 2). The awareness of the existence of t drugs among students changed in 2016 (Table 2). In 2016, no gender differences were found for awareness of any illicit drug in general, but male students were more likely to report that they had heard of people using cannabis and cocaine. While the high awareness of heroin use and low awareness of amphetamine use remained stable across the two data collection periods, all other illicit substances listed seem to have lost popularity. The rate of students reporting having heard of

<sup>3</sup> Please note that inhalants, magic mushrooms, the combination of alcohol and pills and anabolic steroids have not been included here as they only appeared in the friends' section but not specifically in the self-report.

cannabis, cocaine, opium, and hallucinogens has dropped over the ten years (Table 2). Data from 2006 is shown here to support the discussion about a potential underreporting of substance use and awareness of illicit drugs in the current survey.

Table 2. Students' awareness (proportion of students aware) of illicit drugs by gender according to the school surveys in 2016 and compared to 2006.

	Survey 2016 (N=5,169)				Survey 2006 (N=4,962) <sup>1</sup>			
	Total	Male	Female	X <sup>2</sup>	Total	Male	Female	X <sup>2</sup>
<b>Any illicit drug</b>	<b>39.9%</b>	40.3%	39.5%	0.3	<b>46.6%</b>	48.1%	45.3%	3.6*
Heroin	36.8%	36.9%	36.6%	0.03	31.0%	29.8%	32.1%	2.6
Opium	16.0%	16.6%	15.3%	1.6	26.4%	28.3%	24.7%	7.2**
Cannabis	16.1%	18.0%	14.0%	13.0***	43.3%	39.5%	46.7%	22.7***
Ecstasy	3.3%	3.7%	2.9%	2.8	6.0%	6.8%	5.2%	4.1*
Spice <sup>2</sup>	4.5%	5.1%	3.9%	4.1*	-	-	-	-
Crack cocaine	3.2%	3.2%	3.1%	0.03	5.1%	5.3%	5.0%	0.1
Methamphetamine <sup>2</sup>	3.6%	1.3%	1.2%	0.1	-	-	-	-
Amphetamine	3.9%	4.3%	3.5%	0.4	3.6%	3.8%	3.4%	0.4
Cocaine powder	17.6%	18.9%	16.2%	6.3**	31.2%	30.3%	32.0%	1.4
Hallucinogens	2.8%	2.8%	2.8%	0.0	11.0% <sup>a</sup>	9.8% <sup>a</sup>	12.1% <sup>a</sup>	5.4*

\*>0.05 indicates statistical significance p<0.05; \*\* indicates a statistical significance p<0.01; \*\*\* indicates statistical significance p<0.001.

<sup>1</sup> This survey was conducted by UNODC in 2006 and the data were available for analysis.

<sup>2</sup> The substance list for inclusion in the 2016 survey was finalized with the input of the local project steering committee and this substance was added.

<sup>a</sup> In 2006, hallucinogens were asked as single substances LSD and magic mushrooms and the values in the table refer to awareness of the existence of LSD, which was higher when compared to magic mushrooms (6.1%).

## 2.5. Ease of availability of psychoactive substances

Previous research has shown that the preference for, and the use of, a particular psychoactive substance is highly correlated with its availability (Feldmann et al., 2007 & 2011). Therefore, students in Tajikistan were asked to indicate how difficult it was to access the different substances. For drugs that most students had never heard of (Table 2) it was expected that most of the students would have answered with “don't know” or “impossible”. Overall, only few students indicated that it was fairly easy or very easy to access psychoactive substances in Tajikistan. In summary, 12% thought it was easy for them to get cigarettes or a small bottle of vodka, while only around 1% of the sample thought it was easy for them to get illicit or prescription drugs (1% and < 1%, respectively). The perceived availability of licit and illicit drugs was higher among male and older students (Table 3). However, accessing prescription drugs was most easy for older female students (Table 3). The location of the school (urban vs. rural) had no influence on perceived ease of availability (data not shown). Notably, only one fifth (20%) of the students aged 17 to 18 years old, who had reached the minimum legal age for accessing tobacco and alcohol, noted these substances were easily accessible. Overall, 12.5%

of the students reported that it was fairly easy or very easy to get at least one of the substances listed if they wanted to.

Table 3. Perceived ease of availability of licit and illicit psychoactive substances by gender and age group.

	Male students			Female students		
	13-14 years	15-16 years	17-18 years	13-14 years	15-16 years	17-18 years
<b>Licit substances</b>	9.4%	13.8%	22.3%	8.4%	9.9%	17.1%
<b>Illicit substances</b>	0.9%	1.7%	2.3%	0.7%	0.6%	1.2%
<b>Prescription drugs</b>	0.2%	0.8%	0.7%	0.5%	0.6%	2.3%

<sup>a</sup> It is fairly/very easy to get cigarettes or a small bottle of vodka

<sup>b</sup> It is fairly/very easy to get heroin, opium, cannabis, spice, ecstasy, amphetamines, methamphetamine

<sup>c</sup> It is fairly/very easy to get morphine, tranquilizers or painkillers that usually need a prescription

## 2.6. Problems related to alcohol and other drug use

Students who reported the use of psychoactive substances are more likely expected to report problems related to substance use. Only few students reported problematic episodes as a consequence of students' substance use, these being mainly arguments or fights, accidents or damage to personal objects.<sup>4</sup> However, the quality of these results are problematic as, for example, students who reported problems associated with alcohol use reported having never used alcohol and students who attributed problems due to illicit drug use reported being unaware of, and having never used, any of the substances. Given the small number of students who reported problems attributable to alcohol use and other drug use, a single indicator for "any problem" related to alcohol and drug use or other reasons may be more informative. The underlying assumption was that students who experienced these problems because of substance use might be honest about the problems but not open about their association to drugs or alcohol. Moreover, the survey found nearly 4% of students experienced at least one of the problems listed in the questionnaire due to a reason unrelated to alcohol or other drug use. Out of these students, between one or two percent reported having had at least once an argument and/or a fight, an accident, a loss of and/or damage to a personal object, a problematic relationship with parents, friends and/or teachers, and/or a poor school performance. Given that the question asked about ever occurring events, the numbers that were reported are quite low.

<sup>4</sup> However, it is unclear how many students had experienced the problems that were listed in the questionnaire problems as a ceiling effect (never) was expected due to the inappropriateness of the behaviour

## 2.7. Disapproval and perceived risk of psychoactive substance use

Participants were asked how much they disapprove if people use a particular substance, and how much they think they risk harming themselves when using these substances by frequency of use (once/twice/regularly). The hypothesis was that students who have used the substance are less likely to disapprove and less likely to associate harm with the use of that particular substance. The assessment of the likelihood to which that substance use could cause harmful consequences to the person is an important indicator of actual substance use. The double negative in the question asked has, however, an ethical implication since youth should at no point in the survey be asked to approve the use of any of the psychoactive substances. Another limitation is that “occasional” and “regular” use were not specified and that categories were not consistent across the different substances and across the two questions focusing on risk perception and disapproval (Table 4). In general, Tajik students ranked daily use of tobacco and alcohol as having the highest perceived risk, and greater risk was associated with higher amounts consumed (Table 4). However, 10% of the students believed that the risk of harm is low or not existent when people smoke cigarettes occasionally (Table 4). For each substance, about half of the students had no opinion on whether their use poses a risk to health. Around 40% of students disapproved substance use regardless of substance type, and 60% did not have an opinion (Table 4).

Table 4 Perceived risk of substance use and disapproval of other peoples' substance use in the sample (N=5,169).

	Perceived risk of use			Disapproval of use <sup>1</sup>	
	Moderate/high	Low/none	Don't know <sup>a</sup>	Disapprove	Don't know <sup>a</sup>
20+ cigarettes daily	53.1%	<b>2.0%</b>	44.9%		
4-5 drinks daily	52.5%	<b>1.6%</b>	46.9%		
1-2 drinks daily	51.4%	<b>2.3%</b>	46.3%		
Heroin daily	48.7%	<b>1.6%</b>	49.7%		
Cigarettes occasionally <sup>b</sup>	47.6%	<b>9.7%</b>	42.7%		
Heroin 1-2x	47.3%	<b>2.0%</b>	50.7%	<b>39.1%</b>	59.2%
Cannabis regularly <sup>b</sup>	47.0%	<b>1.6%</b>	51.4%		
Opium daily	44.9%	<b>1.7%</b>	53.4%		
Opium 1-2x	44.1%	<b>1.9%</b>	54.0%		
Tranquilizers 1-2x	42.5%	<b>2.0%</b>	55.0%	<b>37.5%</b>	61.0%
Amphetamine 1-2x	42.3%	<b>2.1%</b>	55.6%	<b>37.1%</b>	61.5%
Ecstasy 1-2x	39.1%	<b>1.9%</b>	59.0%	<b>37.4%</b>	61.1%
Inhalants 1-2x	38.3%	<b>1.8%</b>	59.9%	<b>36.5%</b>	62.2%
10+ cigarettes daily				<b>40.6%</b>	56.4%
5+ drinks weekly				<b>40.9%</b>	56.9%
Cannabis 1-2x				<b>39.3%</b>	59.0%
Cannabis occasionally <sup>b</sup>				<b>38.4%</b>	59.8%
Cocaine (incl. crack)				<b>37.9%</b>	60.5%

<sup>1</sup> Please note that the original answering option “I don’t disapprove” was changed to “I approve” by the Tajik project steering committee to avoid double negative in the initial question, though the double negative was internationally included to avoid a leading question.

<sup>a</sup> Missing values (nonresponse) were counted as don't know. <sup>b</sup> Not further specified

## 2.8. Family and friends – social resources and parenting

Several factors have been shown to be associated with initiation of substance use by adolescents and its progression to substance use disorders. These factors include environmental factors, e.g. family structure, parental support, parental substance use disorders, parental monitoring, peer influences, prevailing attitudes towards substance use and availability of substances, along with individual behavioural, psychological and psychopathological characteristics such as conduct disorders of childhood, antisocial behaviour, aggressiveness, truancy, running away from home, low self-esteem, depressive mood and suicidality.(Bjorn Hibbel et al. 2007). The findings from the Tajik School Survey on these measures are presented in the following sections.

Positive social influences such as family and friends are known to prevent youth from substance use. Higher education is usually related to higher health literacy (Reavely et al. 2012). For this reason, the Tajik youth survey examined whether parental education was associated with the use of psychoactive substances. Overall, one third of students (31%) reported that their fathers had started or completed college or university (Figure 5). The mothers' education was usually lower and only half of students reported that their mothers had attended college or university (Figure 5). The "completed secondary school" category was missing in the questionnaire, and as a result only "some secondary school"-category captured anyone who completed some or all of secondary school education (Figure 5).

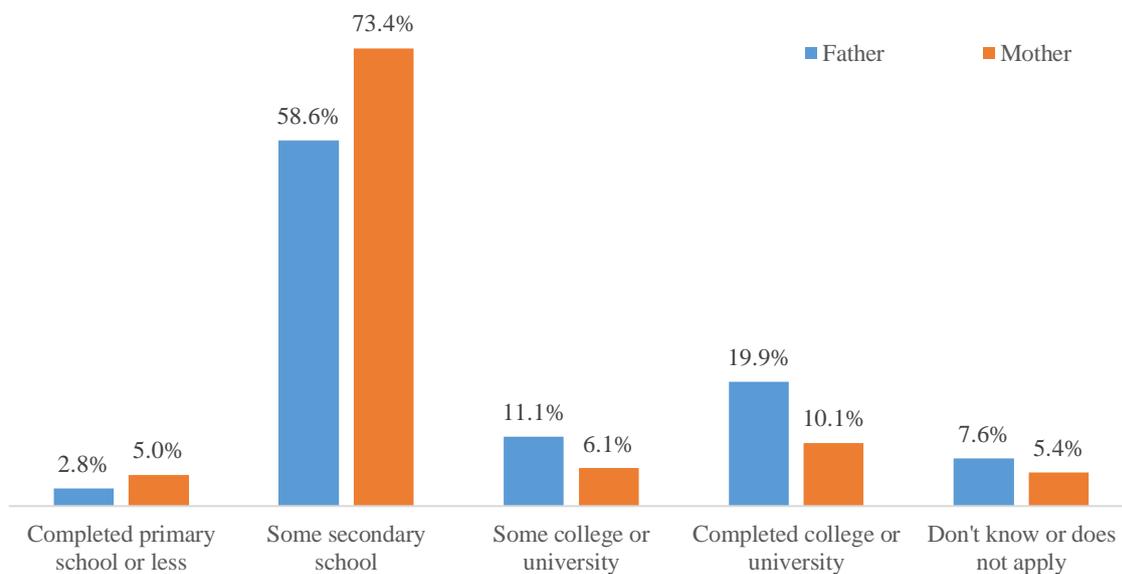


Figure 5. Parental education status according to the students' self-report.

Nearly all the students were very satisfied with the relationship with their father and mother as well as with their friends (98.8%). These findings point to a ceiling effect that is either explained by the actual satisfaction or by the cultural values in Tajikistan that would never allow for negative reporting of family members.

The survey also evaluated levels of parental control to understand if strong parental control was related to lower prevalence of substance use in Tajikistan. Typically, parental control is measured with 6 items, however, in the present study only four items measured how often parents set definite rules a) at home and b) outside home, c) know whom students are with, and d) know where students are in their leisure time, using a Likert scale (1 = almost always, 5 = almost never).<sup>5</sup> The lowest possible score was 4, meaning that parents would almost always be informed about their children's activities, while the highest possible score was 20, meaning that parents would not be informed at all. The mean score value in the sample was 6 ( $SD=2.7$ ), demonstrating Tajik students felt strong parental control. The survey also measured social control to evaluate whether parents could easily give or borrow money to students. Of Tajik students surveyed, 44% reported they would often, or almost always, be able to borrow money from their parents, and 52.5% reported that they could often, or almost always, get money from their parents as a gift. In addition, only 2% of the students indicated that they believe that their family was less well off when compared to other families, while all others claimed to be average or above the average. The students were also quite confident when asked about their own school performances as only 3% reported performing worse than the average student of the same age. One quarter of students reported they had missed at least one day of school within the last 30 days. Students in rural areas missed school significantly more often independently of gender, whereas a gender difference could be observed among those in the city (Figure 6).

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<sup>5</sup> Other questions for instance on getting warmth and support from parents were arbitrarily removed by the Tajikistan project committee, thereby making the responses less comparable.

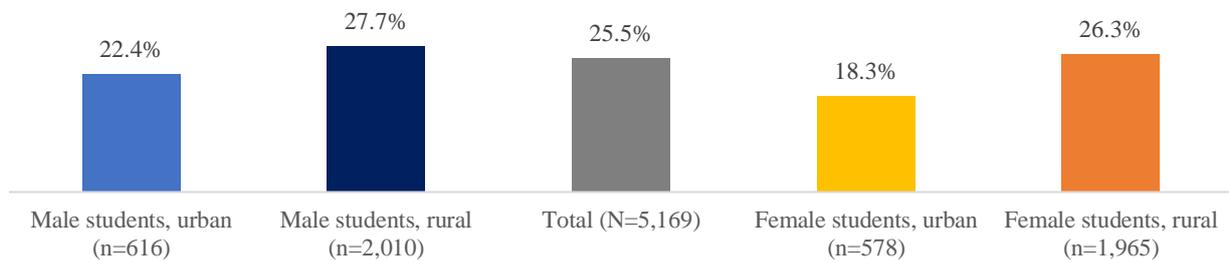


Figure 6. School absences in the last 30 days, defined by being absent from school on at least one day in the last month.

## 2.9. Psycho-social measure: personality – self-esteem, misbehaviour, depression, suicide

As mentioned above, individual behavioural, psychological and psychopathological characteristics such as conduct disorders of childhood, antisocial behaviour, aggressiveness, truancy, running away from home, low self-esteem, depressive mood and suicidality are important factors that are associated with substance use initiation and subsequent development of substance use disorders. Regarding their self-esteem, nearly all the students agreed that they were satisfied with themselves (92.5%). At the same time, half of the students (51%) said they were not good at all. Most students (87%) were convinced that they had several good qualities and agreed that they were able to do things as most others (83%). Conversely, more than half of students (60%) said that they would not have much to be proud of and almost half (47.5%) agreed that they felt useless at times. Further, 82% felt that they were a person of worth at least on an equal plane with others, however one fifth disagreed or provided no answer. Most students (85.5%) wished that they had more respect for themselves and three thirds (74%) perceived that they were a failure. Conversely, the majority (89%) agreed that they would take a positive attitude towards themselves. Overall, these findings are not consistent, and further work should attempt to discern possible reasons for these responses. The students in the present survey were also asked questions on Anomie<sup>6</sup> that were based on the Anomie scale of Exteriority and Constraints.<sup>7</sup> (Bjarnason, 2009) In their responses approximately one third reported that they were able to break most rules if

<sup>6</sup> Anomie is a term that refers to lack of the usual social or ethical standards in an individual or a group.

<sup>7</sup> Exteriority refers to experiencing the social world as an objective, predictable reality, while constraint refers to the extent to which one experiences a personal commitment to the demands and expectations of society.

they didn't apply to them (30%), to that they could do whatever they liked (34.5%), that nobody knew what was expected of him/her in life (33%), and that people could never be certain about anything in life (38%). More than half of the students (58%) agreed on at least one of the statements which indicates that this group of students demonstrated a considerable degree of anomie.

Based on the CES-D 20 item scale by Radloff (Radloff 1977) six items<sup>8</sup> were used to screen depression among school students, through measuring the frequency of occurrence of some specific symptoms over the past 7 days using a Likert scale (1=rarely or never, 4=most of the time). Among the possible symptoms were loss of appetite/concentration, feeling sad/depressed, and unable to do work. The higher the score value (possible range between 6 and 24), the more likely that students would have symptoms of depression. The overall score among Tajik students in the current survey was 10 ( $SD=3.9$ ) which suggests that some students showed signs of depression. In total, 35% of students reported at least one of the symptoms occurring several times, or most of the time, in the past 7 days. On the other hand, nearly all students indicated that they had never run away from home for more than one day (97%), never thought of harming themselves (94%) and that never attempted suicide (98%). Overall, 6% of the students had shown signs of truancy and were likely to have been so unhappy at least once in their life and desperate that they had either run away from home, harmed themselves or had attempted suicide. These findings suggest interventions for a group of students to address these psycho-social deficits.

### **3. Predicting students' use of psychoactive substances**

In order to understand the greatest predictors of substance use among Tajik youth, lifetime substance use was compared to key variables using bivariate regression. The most important predictor of students' own substance use was the use of psychoactive substances in the student's peer group. Students who reported having at least one friend who used cannabis were six times more likely to indicate use themselves (Table 5). Male students were more than 3 times (95% CI 2.54-4.97,  $p<.001$ ) likely to report the use of any drug during their lifetime if their friend/s had used (Table 5). When compared to the youngest age category, students aged 15-16 years old and 17-18 years old were more than twice (95% CI 1.59-3.31,  $p<.001$ ) and thrice (95% CI 2.54-4.97,  $p < .001$ ) likely to report any form of substance use if their friend/s had used

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<sup>8</sup> These six items have been used and validated in the ESAPD surveys.

substances (Table 5). In addition, students attending a school in an urban area were almost twice as likely to report lifetime use of substances if their friend/s had used psychoactive substances, Equally, those who rated easy availability and low risks associated with substance use were more likely to report their own substance use. Truancy, anomie, rebellion, and other problems were also predictors of substance use. On the other hand, parental control and relationship with parents and school performance are shown as protective factors in preventing substance use among the school students.

Table 5. Odds ratios (OR) for the overall model of the multivariable associations (fully adjusted results) between participant characteristic and lifetime use of any psychoactive substance among Tajik students.

		OR (95%CI)	p
Gender	Female		
	Male	3.45 (2.37-5.03)	<.001
Age	13-14 years		
	15-16 years	1.69 (1.13-2.54)	<.050
	17-18 years	1.63 (1.04-2.57)	<.050
Region	Rural		
	Urban	1.81 (1.28-2.58)	<.010
Perceived availability	Low – difficult or impossible		
	High – fairly/very easily accessible	2.02 (1.41-2.90)	<.001
Perceived risk	Risk of all drugs high/unknown		
	Risk of at least 1 drug low/ non-existent	1.56 (1.07-2.28)	<.050
Education mother	Primary/secondary/none		
	College/university	1.07 (0.72-1.61)	.731
Education father	Primary/secondary/none		
	College/university	0.97 (0.68-1.37)	.857
Relationship mother	Satisfying		
	Not satisfying	2.27 (0.52-9.89)	.274
Relationship father	Satisfying		
	Not satisfying	2.60 (0.89-7.64)	.082
Relationship friends	Satisfying		
	Not satisfying	1.24 (0.45-3.42)	.673
Friends substance use	No friends who use		
	At least one friend any substance	6.20 (4.35-8.84)	<.001
Parental control	Strong		
	Weak	1.00 (0.66-1.50)	.983
School performance	Average or above		
	Below average	1.54 (0.71-3.31)	.273
Absent in school (30d)	No, never		
	Yes, at least one day	1.31 (0.93-1.83)	.122
Experiencing problems	No, never		
	Yes, not related to substance use	2.13 (1.30-3.49)	<.010
Anomie	No		
	Yes	1.68 (1.16-2.41)	<.010
Depression symptom(s)	No		
	Yes	1.32 (0.94-1.86)	.107
Runaway & self-harm	No, never		
	Yes, at least once	2.23 (1.43-3.49)	<.001

$N = 5,169$ .  $R^2=0.09$  (Cox & Snell), 0.31 (Nagelkerke). Model  $\chi^2(19) = 1236.508$ ,  $p<.001$ .

Additional bivariate logistic regression analyses were performed to compare the students who indicated the use of cannabis in the indirect questions that were asked towards the end of the

questionnaire (Figure 6, yellow). While no gender differences were observed ( $p=.175$ ) in the responses, older students were twice as likely to indicate cannabis use in the indirect question on cannabis use ( $p<.001$ ) when compared to younger students. While the use of tobacco and alcohol were more prevalent among students living in urban areas, students from rural areas were significantly more likely to indicate that they had previously used cannabis ( $p<.050$ )., However, no difference was found with regard to the awareness of cannabis ( $p=.463$ ) or other psychoactive substances in general ( $p=.601$ ). Furthermore, students who reported cannabis use in the survey were more likely to report that it would have been fairly or very easy for them to access at least one of the psychoactive substances ( $p<.010$ ). However, no significant difference was found regarding the ease of availability of cannabis ( $p=.413$ ) - the drug they had allegedly used. In addition, the students who indicated cannabis use in the control question did not differ from the rest with regard to the number of friends who used cannabis ( $p=.784$ ) or any illicit psychoactive substance ( $p=.260$ ), reported problems ( $p=.824$ ), risk perception ( $p=.970$ ), father's ( $p=.248$ ) or mother's ( $p=.679$ ) educational achievement, parental control ( $p=.066$ ), relationship with mother ( $p=.173$ ), relationship with father ( $p=.198$ ), relationship with friends ( $p=.997$ ), school attendance ( $p=.138$ ), anomie<sup>9</sup> ( $p=.349$ ), depression ( $p=.424$ ) or other risk behaviour like running away from home or harming themselves ( $p=.314$ ).

Table 6. Odds ratios (OR) for the overall model of the multivariable associations (fully adjusted results) between participant characteristics and lifetime use of any psychoactive substance among Tajik students.

		OR (95%CI)	p
Age	13-14 years		
	15-16 years	2.35 (1.62-3.41)	<.001
	17-18 years	2.97 (1.97-4.48)	<.001
Region	Urban		
	Rural	3.27 (2.43-4.40)	<.001
Perceived availability	Low – difficult or impossible		
	High – fairly/very easy accessible	4.79 (3.54-6.48)	<.001

$N = 5,169$ .  $R^2=0.04$  (Cox & Snell), 0.13 (Nagelkerke). Model  $\chi^2(4) = 186,555$ ,  $p<.001$ .

## 4. Discussion and estimated prevalence

### 4.1. Discussion

The data analysis of the Tajik Youth Survey on Substance Use and Health aimed to provide information on the nature and the extent of substance use among school students in Tajikistan. Although self-reported substance use was low, important factors for increased risk to engage in substance use were identified. The main substances used were tobacco and alcohol and less

<sup>9</sup> The lack of usual social or ethical standards in an individual or group

than one per cent reported the lifetime use of other drugs. Overall, the lifetime prevalence of **tobacco** use in Tajikistan ranged from **4.3% to 10.1%** among male students, and from **0.9% to 5.5%** among female students. These rates are comparable to the results of the Global Youth Tobacco Survey in 2014, which found that 2.4% of Tajik students had a current use of tobacco. In the current survey students in urban areas were twice as likely to report lifetime cigarette smoking when compared to those living in rural areas and the same was true for alcohol use. The lifetime prevalence of alcohol use ranged from **3.3% to 5.8%** among male and **1.1% to 4.1%** among female students. Only 0.2% self-reported lifetime use of a substance other than tobacco and alcohol, whereas 2.2% of male and 1.8% of female students, respectively, reported that they would know at least one friend who had used a substance other than tobacco and alcohol. These results suggest drug use may be a highly stigmatized behaviour in Tajikistan and different survey methodologies could be explored to improve the under reporting in surveys. In terms of cannabis use, 5.0% of the students indicated they would have reported cannabis use if they used it although most did not report when asked directly. Overall, the lifetime prevalence of any substance use, other than tobacco and alcohol, among students in Tajikistan is, thus estimated to range from **0.2% to 5.0%**.

When compared to unpublished data from the 2006 school survey in Tajikistan that used the same methodology and was also guided by UNODC, a strong decrease in both the awareness of different drugs, and in the perceived ease of availability was observed. Ten years ago, almost every student admitted it would be easy to obtain at least one of the narcotic substances if they wanted to. In the current study, only 12.5% of students said it would be easy to get at least one of the psychoactive substances. It remains unclear, whether the popularity and availability of psychoactive substances has indeed strongly decreased over the past years or whether stigmatizing attitudes regarding the use of psychoactive substances have increased. If the latter is the case, accuracy of self-reported survey data may be compromised, and indirect methods might be helpful when estimating the prevalence of use among youth. Other community-based surveys and/or peer-to-peer survey methodology as well as methodology such as “network scaleup” – that is used to determine the extent of behaviour among the social network of respondents, may be explored, given that they might be more successful in establishing trust beyond ensuring the anonymity of the responses.

The key findings of the YSSU are the following:

- **Male** students were more than three times as likely to report lifetime psychoactive substance use when compared to their female counterparts.

- Students in **urban** areas were almost twice as likely to report lifetime psychoactive substance use when compared to those in rural areas.
- **Older** students aged 17 and 18 years were more likely to report about experiences with the use of psychoactive substances given their longer exposure.
- The most important predictor of having ever used a substance was **substance use in the peer group**. Students who reported having at least one friend who had used a psychoactive substance were six times more likely to report the lifetime use of psychoactive substances, mainly tobacco and alcohol.
- Most Tajik students were unfamiliar with most illicit drugs and therefore had difficulties to estimate the risk related to their use.
- The perceived risk of harm related to daily cigarette and daily alcohol use was rated higher than the risks related to regular or occasional use of other psychoactive substances.
- **More than half** of the students said that they **would not report cannabis use honestly in the survey** if they would have used it before.

## 4.2. Conclusion

The current study shows that use of licit psychoactive substances is most common among male students who attend schools in the city. However, estimating the use of psychoactive substances among youth in Tajikistan is difficult given the social and cultural context.

Students in urban areas are more likely to report the use of tobacco and alcohol, which may be associated with greater ease of availability, visibility of use within the community, and social acceptance compared to those in the rural areas. Therefore, effective prevention of substance use among youth will need to be tailored to the different target groups and would need to consider the geographical, social, gender and age differences of the target youth. Most importantly, scientific evidence-based prevention programmes both in schools and among families could help increase students' knowledge of as well as prevent the initiation of substance use and progression to a pattern of harmful substance use. Moreover, broader aim of such prevention programmes is the healthy and safe development of children and youth to realize their talents and potential and becoming contributing members of their community and society. Therefore effective prevention contributes significantly to the positive engagement of children, youth and adults with their families, schools, workplace and community.

## **5. Methodology**

The overarching goal of the Youth Survey on Substance Use (YSSU) in Tajikistan was to develop an understanding of the nature and the extent of substance use among school students in order to implement appropriate prevention programs for young people in the countries within the region. The survey was implemented between December 5<sup>th</sup> and 24<sup>th</sup>, 2016. Quantitative data of past and current substance use, age of initiation, and frequency of use were the main variables of interest. In addition, attitudes, and risk perception regarding substance use, as well as factors associated with family and social integration, were analysed to answer the defined research questions.

A two-stage stratified sampling procedure was used to select the classes for inclusion into survey. The schools were treated as a secondary sampling unit and the classes as the primary sampling unit. The complete list of schools was derived from the Education Management Information System (EMIS) administered by the Ministry of Education and Science (MoES) of Tajikistan. As per the EMIS yearbook released in 2015, a total of 3,325 public and private schools were providing education services across the country. This number does not include special schools for children with disabilities. In order to select the schools, the sampling frame was stratified by all four regions of the country and the capital city, Dushanbe. The selected schools in the regions were represented proportionally by their settings – rural and urban. Schools and classes in this approach had the same probability of being sampled, regardless of size. All students from the sampled classes (intact classes), present on the day of the visit, were invited to take part in the survey. This approach has been used in most countries of the European School Survey Project on Alcohol and Other Drugs (ESPAD) that has a long and proven track record in conducting this kind of survey in European countries (ESPAD, 2015).

Prior to the start of the fieldwork, the MoES had issued a letter of support addressed to regional and district education authorities with a request to extend assistance to DCA in implementation of the survey. This letter assured participation of schools /classes in the survey. Ethical approval was obtained in accordance with national guidelines. None of the visited schools refused to participate. The survey team instructed school authorities during the initial contact, and as part of the preparatory step, to inform parents about the survey. In case of their disagreement with participation of their child, parents were requested to withdraw their child from participation via a note in student's diary. This approach was discussed and agreed by the survey steering committee.

### 5.1. Sample characteristics

Overall, 5,272 school students from 149 schools in Tajikistan participated in the survey. All randomly selected schools and classes (100%) agreed on the participation. The response rate among the school students invited to take the survey was almost 100% as only 11 empty envelopes were returned in total. However, roughly 15% of students missed the school on the day of the survey. As reported by the local team, the great majority of them were suffering from seasonal illness since the survey dates coincided with a peak season of common cold and influenza. In total, data from 103 students were excluded due to a) reported age of 12 years or younger ( $n=47$ ), b) missing information on age and/or gender ( $n=54$ ) that are relevant for group comparisons and c) random answers ( $n=2$ ). Consequently, this report will be focused on the responses from **5,169** Tajik school students aged 13 to 18 years old.

These school students were recruited in grades 7 to 11 with a range of four to 119 participants per school. This wide range in the number of participants can be explained by the fact that the class size significantly differed by geography (smaller classes in rural areas), and in that some schools combined more than one class for participation – which was actually a deviation from the sampling strategy. Half of the school students were female (50.8%,  $n=2,543$ ). Almost a quarter of students (23.1%,  $n=1,194$ ) were in a school that was in the city. The proportion of students who attended schools located in urban areas was highest in the Districts of Republican Subordination (DRS) because of the high density of schools in its capital city, Dushanbe. Figure 7 presents the distribution of the students across different Tajik regions.

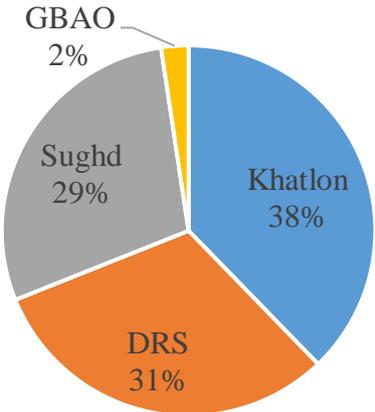


Figure 7. Region in Tajikistan in which the study participants attended school ( $N=5,169$ ).

Note: GBAO – Gorno-Badakhshan Autonomous Region; DRS – Districts of Republican Subordination (Federal territory)

The age and gender distribution of student participants were nearly equal (Figure 8); half of the total sample (49%) were female students. Two fifths of the students (39%) were aged 15 or 16 years, the same age of study participants targeted in the European School Survey on Alcohol and Other Drugs (ESPAD).

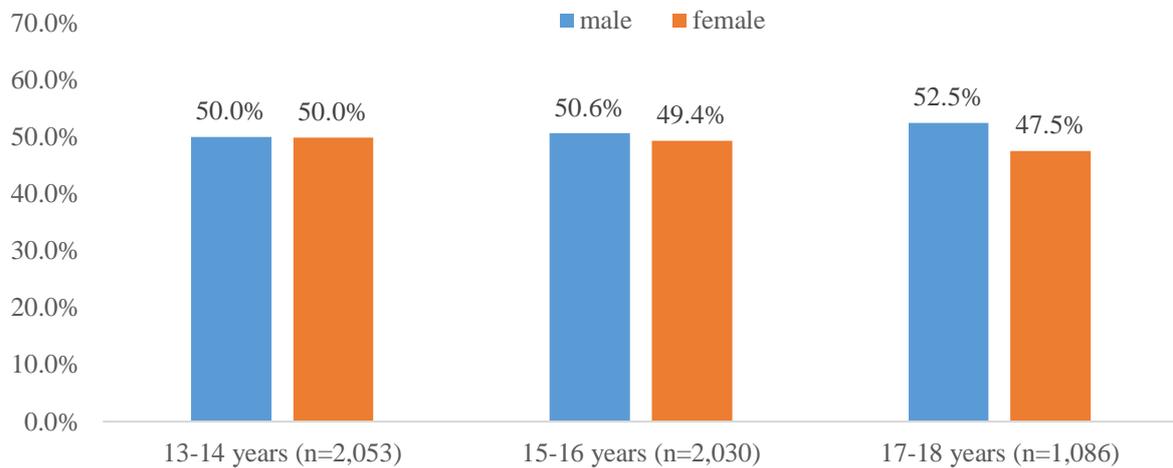


Figure 8. Age categories of the Tajik school student sample by gender (N=5,169).

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