



# Prevalence of Drugs and Substance Abuse Among Adolescents

A Pilot Study in Seven Districts of Rwanda  
Summary



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# Table of Contents

<b>Key Messages</b>	<b>1</b>
<b>1. Introduction</b>	<b>2</b>
<b>2. Background and Objectives of the Study</b>	<b>3</b>
<b>3. Methods</b>	<b>4</b>
<b>4. Quantitative study results</b>	<b>6</b>
4.1. Sample description .....	6
4.2. The prevalence and main type of drugs and substance abuse among young people in seven districts. ....	7
4.3. The determinants of drugs and substance abuse among young people in 7 districts.....	10
4.4. The relationship between substance use and sexual and reproductive health in 7 districts .....	12
<b>5. Qualitative Study Results</b>	<b>12</b>
<b>6. Discussions</b>	<b>13</b>
6.1. Strengths of the study .....	13
6.2. Weaknesses of the study.....	14
6.3. The study results.....	15
6.4. The relationship between substance use and sexual and reproductive health in seven districts .....	16
<b>7. Conclusion</b>	<b>17</b>





# Key Messages

1. Alcohol and cannabis are the most used substances among adolescents residing in 7 districts in Rwanda. Data suggests that alcohol and drug use are associated with unprotected sex. Reducing the use of alcohol and cannabis among youth could therefore arguably improve youth sexual and reproductive health outcomes.
2. 5,3% of respondents used cannabis in the last 30 days preceding the interview but it differs between districts, with higher rate in Nyarugenge (18.9%) and in Gisagara (8.1%).
3. 31,6% of respondents took alcohol during the 30 days preceding the interview; with 13.7 % of males and 2.7% of females who had at least one binge drinking alcohol consumption episode with a higher proportion in Nyarugenge, then in Nyamasheke, Gisagara and Rusizi districts.
4. Current use of alcohol and other substances was significantly associated:
  - a. With risk factors: urban district (Nyarugenge), age >18, male gender, history of unintended pregnancy, family history of alcohol or drug problems, family conflict, serious physical violence in the family circle, and history of anxiety and depressive disorders;
  - b. With protective factors: attending schools, youth centres, sports clubs, involvement and presence of parents.
5. The onset of substance use is occurring at younger age (13-16 years).
6. Preventive interventions conducted in should start early, MoH and MINEDUC must work in collaboration to integrate learning outcomes related to alcohol and drugs in the curriculum of primary and secondary schools, universities and Institutes.
7. Strategic interventions and designs should be evidence-based and related to the identified determinants.





# 1. Introduction

This booklet presents a summary of the results of the study “Prevalence of drugs and substance abuse among adolescents, a pilot study in seven districts in Rwanda”.

The study was done by CIBA (Consultancy and Business Action), with technical and financial support of Enabel (Belgian development agency) through its Barame Project and Rwanda Biomedical Center through its Mental Health Division and Maternal Child and Community Health Division.

The data collection took place in November 2020.





## 2. Background and Objectives of the Study

Rwanda has a young population: the median age is 22.7 years and 61% of the population is under 25.

Adolescence is a turbulent period when the young population faces significant challenges and where different behavioural experiences (positive and negative) are explored. Some, such as consuming harmful substances or engaging in risky sexual activity, will repeat themselves and become behavioural beyond adolescence.

Therefore, it is essential to develop appropriate prevention and awareness strategies before the installation of these risky behaviours.

To maximize the efficiency of the strategies it is important to analyse the existing situation through a cross-sectional mixed method study design among adolescents and young adults (13–24 years of age) in the seven districts where Baramé project is active (Gakenke, Gisagara, Karongi, Nyamasheke, Nyarugenge, Rulindo and Rusizi) to:

1. Assess the prevalence of drugs and substance abuse among young people;
2. Assess the main type of drugs and substances used by young people;
3. Look for potential determinants associated with drugs and substance abuse among young people;
4. Assess the relationship between substance abuse and sexual behaviour.





### 3. Methods

For the cross-sectional quantitative study, 3301 adolescents and young adults aged between 13 and 24 years old from the seven districts were randomly selected.

There were interviewed with a standard set of three questions used to determine the “usability” of a substance abuse prevalence rate on 3 standard time intervals (lifetime, 12 months and past 30 days) and generate the lifetime, annual and monthly (or “current”).





According to the World Health Organization, substance abuse refers to the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs.

To look for potential determinants and to assess the potential association with sexual behaviour, an adapted Mini International Neuropsychiatric Interview (MINI) questionnaire was used. Data collectors were trained and visited the selected adolescents.

Bivariate then multivariate logistic regression analysis with odds ratio and its interval of confidence at 95% were used to predict the relationships between the drug and substance abuse and the potential determinants or independent variables.

For validity purpose, among the 3 301 participants, 376 were secondarily randomly selected to provide urine specimens, which were used to cross-validate results from the questionnaires on recent drug use using a biomarker approach.

For the qualitative study design, the study team used a phenomenological approach to gain a deeper understanding of participants' subjective experiences and opinions.

The study questions were explored by conducting individual interviews with key informants (KIs), who were selected based on their roles and responsibilities.

Fifty participants out of fifty-six participants (89%) of this survey included stakeholders drawn from health workers, local leaders, technicians, and other leaders involved in the work against drugs and substance use.



# 4. Quantitative study results

## 4.1. Sample description

The description of the participants is provided in the table below.

*Table 1: Socio-demographic description of respondents*

	Category	N	%
Location	Urban	394	11.9%
	Peri-urban	1,058	32.1%
	Rural	1,849	56.0%
Gender	Male	2,023	61.3%
	Female	1,278	38.7%
Age group	[13-18]	1,557	47.2%
	[19-24]	1,744	52.8%
Education	None	479	14.5%
	Primary	2,099	63.6%
	Secondary /TVET	707	21.4%
	University	16	0.5%
Marital status	Single	3,172	96.1%
	Married	122	3.7%
	Widow/er	1	0.0%
	Divorced	6	0.2%

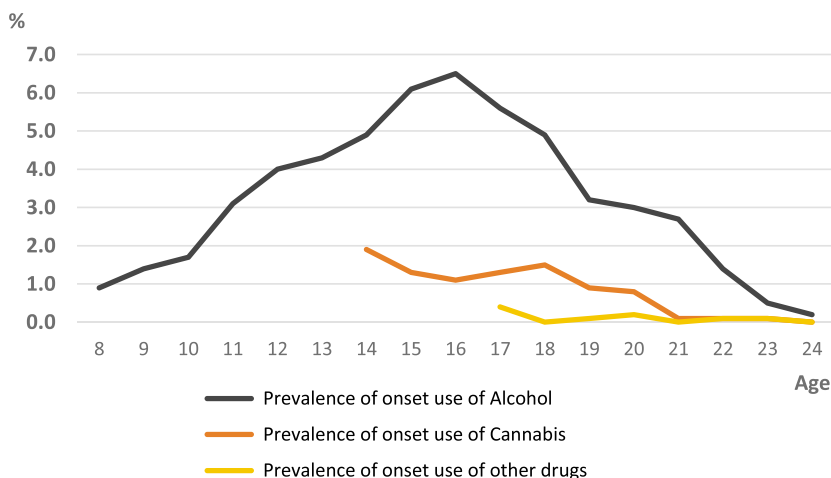




## 4.2. The prevalence and main type of drugs and substance abuse among young people in seven districts.

Alcohol and cannabis are the most used substances among adolescents residing in 7 districts of Baramba intervention in Rwanda. All participants who used alcohol or any other substance once in their lifetime were asked about the age at which they used it for the first time. The mean age at onset of alcohol, cannabis, and heroin use was 13.1, 16.8 and 18.5 years respectively. Above 20 years, the number of first-time users of alcohol and cannabis tends to reduce significantly.

*Figure 1: Prevalence of onset of substance use per age*





#### a. Alcohol abuse and binge drinking

For the alcohol use, the study found that 56.1% of the youths had tried alcohol at least once in their lifetime, 40.5% during the past 12 months and 31.6% during the 30 days preceding the study.

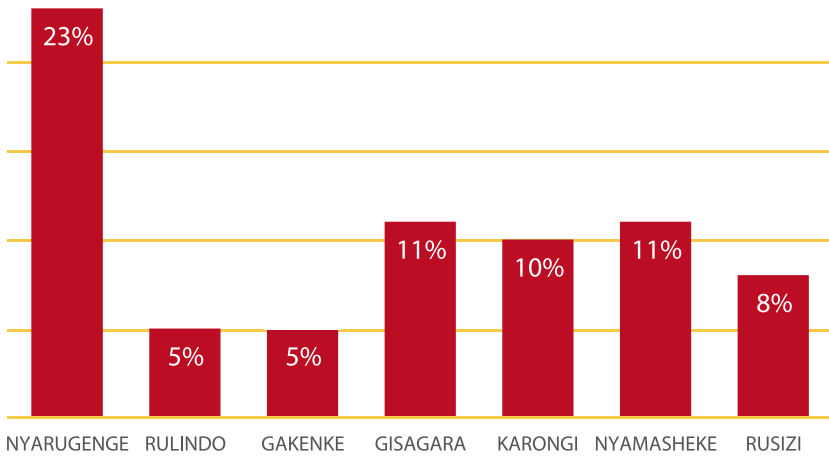
For the binge drinking, youths that indicated consumption of alcohol in the last month, were asked to report the number of drinks that they had had in a session. The binge drinking was ascertained using the following criteria (Cut-off):

- 3 drinks in a row (within a 3-hour period) for youth (boys and girls) aged 17 and below;
- 4 drinks in a row (within a 3-hour period) for girls aged 18 and above;
- 5 drinks in a row (within a 3-hour period) for youth aged 18 and above;

Overall, 13.7 % of males and 2.7% of female had at least one alcohol binge drinking episode over the past 30 days; boys aged 18 and above represent the majority of binge drinkers (9.2%). Alcohol abuse or binge drinking varies across districts as illustrated in the Figure 2, the highest proportion is in Nyarugenge.



Figure 2: Prevalence of harmful binge drinking (above the cut-off) in the last 30 days among adolescents aged 13-24 per district



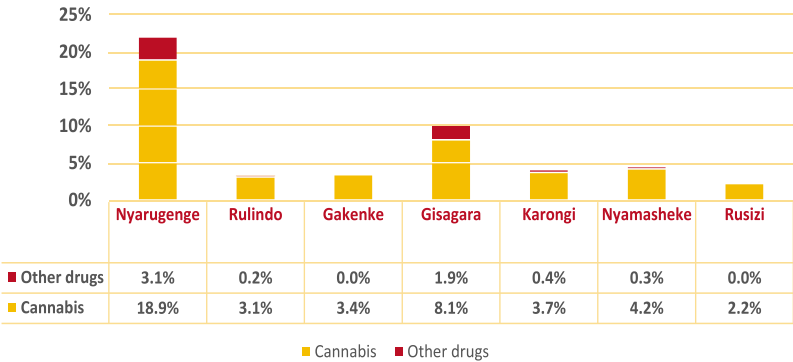
b. Non-alcoholic drug use

Cannabis is the most illegal substance used by adolescents in the seven districts with 9.3% reporting having used cannabis at least once in their lifetime; 6.9% of adolescents consumed cannabis in the past 12 months while 5.3% used cannabis in the last 30 days preceding the interview. Adolescent cannabis-use prevalence rates in Nyarugenge (19.0%) are 3 times higher than the average of other districts (5.3%) as illustrated in the Figure 3.

Severe narcotic drugs are used in some places, but the overall prevalence of reported ever-used heroin and cocaine remains low with 0.5% and 0.1% respectively and is restricted to the capital (Nyarugenge) or districts bordering with neighbouring countries (Karongi and Nyamasheke). No participants reported the use of amphetamines and methamphetamines, and urine analysis tested for the presence of cannabis and heroin, confirmed the reported findings.



Figure 3: Prevalence of substance use among adolescents per district



### 4.3.The determinants of drugs and substance abuse among young people in 7 districts

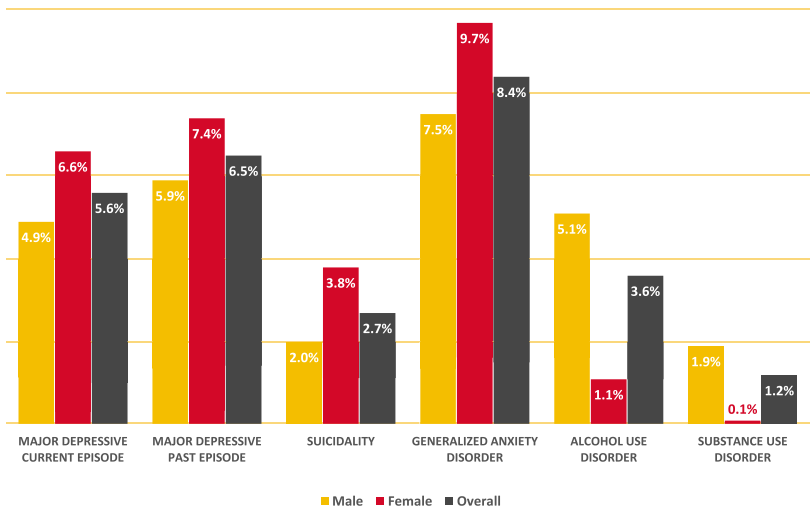
The Multivariate logistic regression analysis showed a **significant risk association** between the drug & substance abuse and

- Being male,
- Having older age,
- Having history in the family of conflict, serious physical violence, losing parents or a close relative, history of alcohol or drug problems, inability to afford food,
- Having history of unintended pregnancy,
- Being suspended from school,
- Living in urban areas,
- Having history of anxiety and depressive disorders.

This study confirms the association of drug abuse and mental health conditions as 3.6% and 1.2% of the youth in the 7 districts met the diagnosis criteria for alcohol use disorder and non-alcoholic psychoactive substance use disorders on the M.I.N.I.



Figure: 4. Prevalence (%) of mental health conditions associated with drug use by gender



The Multivariate logistic regression analysis showed a significant protective association between the drug & substance abuse and

- Attending schools
- Attending youth centres or clubs
- Doing sports activity
- Having involvement and presence of parents.

Those findings are important for strategic decisions and for designing further in-depth studies.



#### 4.4. The relationship between substance use and sexual and reproductive health in 7 districts

The study suggests that alcohol and drug use are associated with unprotected sex: a clear association between alcohol and substance use and sexual and reproductive health variables has been found. Not surprisingly, adolescents currently abusing alcohol and cannabis were more at risk of having unprotected sex in the past 12 months compared to those who did not use these substances (OR = around 3 pvalue < 0.001 for both).

## 5. Qualitative Study Results



The majority of respondents considered alcohol and substance use to be a major problem within the respective districts. They perceived youths using substances to be more vulnerable than the general population.

The predominance of cannabis and local liquors use was confirmed. Gisagara has the highest numbers of detainees who are alleged to have used drugs and substance when compared to other districts.

Some districts reported that adolescents and youths who consume drugs were recently arrested

during roundups and some of them were transferred to Iwawa rehabilitation centre. It was also reported that gender-based violence acts perpetrated by youths are often the fact of youths under drug and substance influence.





# 6. Discussions

## 6.1. Strengths of the study



To our knowledge, there have been few studies that have documented the prevalence of alcohol and substance use among youth in Rwanda. The only existing community-based survey on youth in Rwanda was conducted 10 years ago (November 2011).

The study provides evidence that substance use is still a problem among youth in Rwanda and highlights the need for targeting youth in the 7 districts considered. In addition, this study examined the relationship between substance use, sexual and reproductive health variables and sexual victimization among adolescents.

The present study is also, to our knowledge, the first study on the prevalence of alcohol and substance use among adolescents and youths in Rwanda and East Africa using interview administered questionnaires combined with a biological approach (urine drug tests) to increase the validity.

Numerous risk and protective factors associated with the use of drugs and substance have been found providing evidence-based elements to better design the future strategies.



## 6.2. Weaknesses of the study

This study has some limitations including those inherent to the data collection procedure and to the context of a pilot survey with limited resources. The major limitation of this study is that the sample was limited to youths who were present at home during the daytime on the day the study was undertaken. It cannot be excluded that the latter group might have different characteristics, including alcohol and drug behaviours, compared to our sample group.

Female participation rate was relatively low in the sample compared to males. Every selected village was visited one day (a single point in time) and some eligible female participants were not found in selected households at the day of the study. The proportion of male participants is therefore larger than the proportion of females.

Given the difference in substance use between boys and girls, we performed analyses stratified by gender and we corrected the prevalence by weighting the correct proportion of male-female in sampled villages. The overall response rate (i.e. people who participated when invited to participate) was high, thus not significantly contributing to a bias in the study.



Urine drug tests were performed on the day the study team visited the households. As such, it was not possible to document substance use over 4 weeks. Yet, the correlation when cross-validating the questionnaire and urine measures were high, indicating the reliability of the methodology used.

The limitations of this study also include the design: our findings are based on data from a cross-sectional survey, and it is therefore not possible to make causal inferences.



### 6.3. The study results



This study found that the age of onset of substance use for most youth falls in the middle of adolescence (13-18 years) and this finding is aligned with similar studies across the world, including Africa. This therefore confirms that preventive strategies must be put in place early on.

The cannabis is the most common drug used as it is also the less expensive and more accessible compared to cocaine which is certainly the least available and most expensive drug on the Rwandan market.

In a study by Kanyoni, Gishoma & Ndahindwa (2015) conducted in 2011 in Rwanda (5 out of 7 districts selected in the current study were part of sampled districts -Gakenke, Rulindo, Karongi, Nyamasheke, Nyarugenge), the prevalence rate of substance use over the month prior to the survey was 34% for alcohol, 8.5% for tobacco smoking, 2.7% for cannabis sand 0.1% for other hard drugs.

Although there are some differences, rates of alcohol users remained fairly constant, whereas rates of cannabis use almost doubled from 2.7% to 4.36 %. It should be noted that the sample in the current study is younger than youth sampled from the study by Kanyoni et al. (2015) that considered the age range of 14-35 years old.

There is also a marginal increasing trend of opiates (0.08 % of youth aged 14-35 years old reported having used heroin in the 2011 versus 0.39% of youth aged 13-24 years old who had used heroin in the 2020).



The data on binge drinking suggest the importance of prevention programmes for alcohol abuse in Rwanda. The use of M.I.N.I. diagnostic criteria concluded a significant substance abuse and dependence problem that may be defined as “clinical condition” to be referred to health care providers. Our results are consistent with worldwide findings reported in the literature (Merikangas et al., 2012).

Considering family environment-related factors, our analysis demonstrates that youth from families with no history of intra-familial conflict and family not reporting violence were less likely to be engaged in drug and substance use. Other protective factors found are attending school, attending youth centres and playing sports.

The findings corroborate those reported by other studies, which have identified demographic, adolescent and youth emotional health, parental factors, peers, and contextual risk factors as key determinants for substance use among young people.

## 6.4. The relationship between substance use and sexual and reproductive health in seven districts

The association between alcohol, substance use, high-risk sex behaviours among adolescents has been documented in previous studies internationally and in Africa.

A household survey in South Africa found that alcohol and substance use decreased awareness of social norms or perceptions of acceptable behaviour among youth and was linked with an increased number of sexual partners, regretted sexual relations, inconsistent condom use.

Disinhibition resulting from alcohol and substance impairs decision-making around sex and undermines skills for condom negotiation and correct use.



# 7. Conclusion



The results of this study in 7 districts have shown that adolescence and young adulthood remain a critical period for substance use: the 30-day prevalence of alcohol, cannabis and other illicit drugs use was respectively 31.6%, 5.3 %, and 0.9%. The mean age at onset for alcohol and cannabis use was 13 and 16 years respectively.

**The most consistent identified risk factors to alcohol and substance use were:**

- Being male,
- Older age,
- Having a history of family conflict,
- Serious physical violence in the family circle,
- History of losing parents or a close relative,
- Family history of alcohol or drug problems,
- Inability to afford food, history of unintended pregnancy,
- Suspension from school,
- Living in urban areas,
- Availability of drugs in the community.



The protective factors were:

- Attending school,
- Youth centres,
- Sports clubs,
- And having involvement of parents.

This study emphasizes that coordinated efforts are needed to integrate sexual and reproductive health programs and alcohol and substance use prevention services to reduce the use of alcohol and cannabis among youth, which will have an impact on the improvement of health outcomes among youth.

Education strategies should be developed and implemented to make young people aware of the consequences of drug abuse on their health, including reproductive health, avail psychological and treatment services for adolescents and young people and improve community and family support for an effective social reintegration of former drug users, while avoiding discrimination and stigmatization as it can prevent people with drug problems recognizing their problem and seek health.

**Effort should also be oriented to maintain youths and adolescents at school and to encourage and favourite the use and the development of youth-friendly centre and sports activities.**





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