Substance Use under a Restrictive and Prohibitive Policy Regime in Secondary Schools in Uganda: The Convergence of Motives, Contexts and Student Characteristics

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ABSTRACT

Drug use among young people is increasing in Africa. To prevent drug use, it is essential to understand the motivations, environments, and characteristics of users. Although there are established risk factors for drug use, little is known about the reasons why adolescents and young people take drugs. This study investigated the reasons given by a sample of secondary school pupils for using drugs and other substances, specifically, how adolescents circumvent the restrictive and prohibitive policy regime and rationalize and account for drug use. This study used a cross-sectional mixed-methods design. For quantitative data, descriptive and regression analyses were run, and for qualitative data, thematic analysis was used. About 13 per cent (n=41) met criteria for moderate to severe drug use. Coping (Mean = 4.13, SD 0.89), social (Mean = 3.71, SD 0.97), and enhancement (Mean = 3.09, SD 0.92) motives were highly endorsed as motives for drug use. The extent to which motives predicted drug use ranged from β = 0.55 (95% CI: 0.39, 0.72) for coping to β = 0.18 (95% CI: 0.08, 0.28) for expansion motives. Students employed ingenious and frequently risky ways to circumvent the rigorous and prohibitive regulatory regimes governing drug use in schools. Academic stress, limited recreational activities, poor stress management, peer influence, poor adult supervision and dysfunctional family backgrounds, all interrelate in complex ways with motives, contexts, and student characteristics to create a conducive environment for the rationalisation, medicalisation, and veneration of drug use. Further research on contexts, motives and characteristics of adolescents that shape drug use is needed.

Keywords: Drug and substances, motive, restrictive and prohibitive regime, rationalisation, contexts, secondary schools, Uganda

INTRODUCTION

In Africa, drug and substance abuse among young people, especially adolescents and young adults is becoming progressively prominent [Arterberry, Goldstick, Walton, et al., 2021; Mupara, Tapera, Selemogwe-Matsetse, et al., 2022]. Motivating factors to use drugs are diverse and include peer pressure, curiosity, social conformity, pleasure-seeking, enhancement, stress and pain relief,

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and habits, among others [Amare, & Getinet, 2020; Ssewanyana, Mwangala, Marsh, et al., 2020]. In Uganda, particularly among secondary school students, drug and substance use has been widely reported [Abbo, Okello, Muhwezi, et al., 2016; Engebretsen, Nalugya, Skylstad, et al., 2020; Hassan, 2015; Kaggwa, Abaatyo, Alol, et al., 2022; Rukundo, Ayebare, Kibanja, et al., 2020].

The latest research, however, shows a relationship with progressively rationalised, medicalised, and venerated motives for using drugs [Mitchell, Sweitzer, Tunno, et al., 2016]. Based on this trend, a few studies have attempted to link the political movement of legalizing drugs such as cannabis to the rise in medical motives [Ladegard, Thurstone, & Rylander, 2020; Athey, Boyd, & Cohen, 2017; Lancaster, Seear, & Ritter, 2017; Lankenau et al., 2018]. Many students report cannabis use to decrease symptoms associated with mental health problems such as anxiety, stress, depression [Butler, Patte, Ferro, et al., 2019], and sleep deprivation [Taghvaee, & Mazandarani, 2022]. Previous studies show that the excuse to use drugs to relieve symptoms of psychological distress is common in environments with restrictive policies, rules and regulations [Hakkarainen et al., 2015; Pedersen, 2015].

Often, adolescents and young adults rationalise their recreational and medical use of drugs depending on contexts [Athey et al., 2017; Hakkarainen et al., 2019] and frequently have diverse motives for drug use other than one [Patterson, Haardörfer, Windle, et al., 2020]. While other adolescents use drugs for enhancement in one context [Kgatitswe & Amone-P'Olak, 2017], others may use drugs to cope with psychological distress or relieve pain in the same context [Butler, Patte, Ferro, et al., 2019; Phillip & Amone-P'Olak, 2019; Mokokwe, Ntsinyane, & Amone-P'Olak, 2022], thus blurring the line between medical and recreational use [Arterberry, Goldstick, Walton, et al., 2021]. Consequently, the adverse and often toxic effects of drug use play a minimal role in young people's understanding of the effects of drugs and substances on their physical and mental health [Fratila, & Berdychevsky, 2021].

Notwithstanding the adverse consequences of drug use such as dropping out of school, crimes, and eventual poverty [Kaggwa, Abaatyo, Alol, et al., 2022; Mupara, Tapera, Selemogwe-Matsetse, et al., 2022; Rukundo, Ayebare, Kibanja, et al., 2020], many family situations in most countries in Africa drive adolescents to use drugs and substances [Abbo et

al., 2016; Ludick, & Amone-P'Olak, 2016; Mongale & Amone-P'Olak, 2019; Toteng, & Amone-P'Olak, 2019]. History of mental health in the family, familial drug and substance use, separations and divorce, lack of parental supervision, and other psychosocial difficulties associated with family dysfunction, have been implicated in drug use among adolescents and young adults [Engebretsen, Nalugya, Skylstad, et al., 2020; Kaggwa, Abaatyo, Alol, et al., 2022; Rukundo, Ayebare, Kibanja, et al., 2020; Ramotuana & Amone-P'Olak, 2021]. Yet drug use may lead to lasting neurobiological changes, particularly the milieu of developmental alterations in neurotransmission among young people [Thorpe, Hamidullah, Jenkins, et al., 2020].

The cannabis legalization crusade has not only had a tremendous influence on regulatory and policy frameworks in Europe and North America [Chiu, Leung, Hall, et al., 2021; Cunningham, 2021] but also in many countries in Africa such as South Africa [Kitchen, Kabba, & Fang, 2022], Malawi, Kenya, among others [Anywar et al., 2022]. Although cannabis has not been decriminalised in Uganda, its use is widespread [Kwagala, Ndugga, Nankinga, et al., 2022] and its cultivation for export for medical purposes was sanctioned in 2020 with provisions to limit its use among the general population [Africa news, 2020]. Coupled with a weak regulatory framework and inadequate education around the law, the legalisation of cannabis cultivation for export may be regarded as the legalisation of the drug to many and may lead to the normalisation of the drug among the general population. Besides, many farming communities grow cannabis to treat their animal, thus leading to the widespread availability and use of the drug even in rural communities.

The theoretical underpinning of the study

To describe drug and substance use among adolescents in secondary schools, the *Normalisation Theory* developed by Parker and colleagues [1998] and the *Domain Model* advanced by Huba and Bentler [1982] are used in this study.

Normalisation theory: Developed by Parker and colleagues [1999], the *Normalisation Theory* highlights the process by which drug use become less stigmatised and accepted as a normative rather than condemned behaviour. The *Normalisation Theory* was accepted by certain sections of society, particularly in the West [Pennay & Measham, 2016; Sznitman & Taubman, 2016] and reinforced by studies on both youth and adult drug

users [Jarvinen & Demant, 2011; Jarvinen & Ravn, 2014; Liebregts et al., 2015]. Consequently, the normalisation hypothesis is certainly not for every drug [Parker, Aldridge, Measham, et al., 1999]. More so, even the view that cannabis users are not ostracised by certain sections of society, hence its use is acceptable, has been contested [Ekendahl, Månsson & Karlsson, 2020]. As the legal space for cannabis use continues to evolve, many African governments such as South Africa, the Democratic Republic of Congo (DRC), Uganda, Lesotho, Malawi, eSwatini, Zimbabwe, Rwanda, Kenya, and Egypt, have developed legal frameworks that have granted restricted cannabis farming [Anywar et al., 2022]. Although its cultivation for export for medical purposes was sanctioned in 2020, cannabis use is still criminalised in Uganda and the wider society still negatively views its use with high levels of regulation and restriction at all levels of society including secondary schools, institutions of higher learning, and generally in society [Africa news, 2020; Kwagala, Ndugga, Nankinga, et al., 2022].

The *Domain Model*: this model was developed by Huba and Bentler [1982] and hypothesises that four domains explain drug and substance use among young people (Figure 1). These domains comprise biological, socio-cultural, interpersonal, and intrapersonal factors as pillars on which drug and substance use is anchored. Biological factor includes genetic susceptibility such as parental substance use, emotional distress, and temperaments, all of which have biological origins and are risk factors for drug and substance use in adolescents [Sher, Bartholow, Wood, 2000; Ludick & Amone-P'Olak, 2016]. The sociocultural domain includes factors such as restrictive regulatory environment, social sanctions, social media influences and access to drugs and substances [Heath, 2001]. The interpersonal domain includes factors like social support, emotional support, attachment, etc. These factors may expose or prevent young people from drug and substance use [Dokkin, Civita, Paraherakis, et al., 2002; Kesebonye & Amone-P'Olak, 2021]. For instance, adolescents and young adults from situations with a high density of stress with less social support may be exposed to drugs and substances as a coping mechanism for the life stressors [Elliot & Lowman, 2015; Hetolang & Amone-P'Olak, 2018; Moitlakgola & Amone-P'Olak, 2015, Kgatitswe & Amone-P'Olak, 2017]. For example, in a study with university students in Botswana, coping and social motives were significantly associated with cannabis use [Kgatitswe and Amone-P'Olak, 2017]. In another study in Kenya,

Musyoka and colleagues [2020] found a high prevalence of alcohol and drug use among university students. Furthermore, Musyoka and colleagues [2020] found that the prevalence of drug and substance use was four times higher among students living in private hostels than among their peers living on campus. Finally, the intrapersonal domain includes variables like beliefs in deriving pleasure from drug and substance use, personal values (e.g., achievement motivation, independence, etc.), and personality characteristics such as novelty seeking [Cloninger, 1986; Cloninger, 1987], poor self-efficacy [Bandura, 1986; Tsekane & Amone-P'Olak, 2019], and poor self-control, [Morutwa & Plattner, 2014], all of which have been linked to drug and substance use among adolescents and young adults.

Consequently, the current study aims to explore drug use among secondary school students in Uganda. Specifically, we aimed to explore: (i) drug and substance misuse, (ii) their motives, (iii) the extent to which motives predict drug and substance misuse, (iv) ways and methods used by students to circumvent the restrictive and prohibitive regime, and (v) how and why students rationalize and account for the use of drugs and substances in schools.

Study design, area and period

The current study used a cross-sectional design employing a mixed-method technique for gathering data. The study was carried out from March to April 2022.

Study population

Participants were 312 secondary school students in three purposely selected secondary schools in Kampala, Uganda. Kampala has a population of about 32 369 students in secondary schools [Ministry of Education and Sports, 2017]. Furthermore, 48 students were conveniently sampled to participate in focus group discussions (FGD). Altogether, 16 students from each school participated in six (6) FGDs with two FGDs for each school comprising eight students each (8 girls and 8 boys). Participants in the FGDs were not respondents in quantitative data collection. Neither the participants in the quantitative study nor those in the qualitative study were offered any incentive to participate.

Data collection procedures

For the quantitative data collection, the sample size was calculated using G*Power 3.1.9.2 statistical analyses software [Faul et al. 2009]. Based on an effect size of 0.8 and a significance level of $\alpha = 0.05$, and statistical power of $1-\beta = 0.8$, the statistical power analysis indicated a sample size of 300 respondents determined *a priori*. At the start, 340 secondary school students were asked to participate: 18 of the students refused to take part, four (4) were underage and six (6) responded
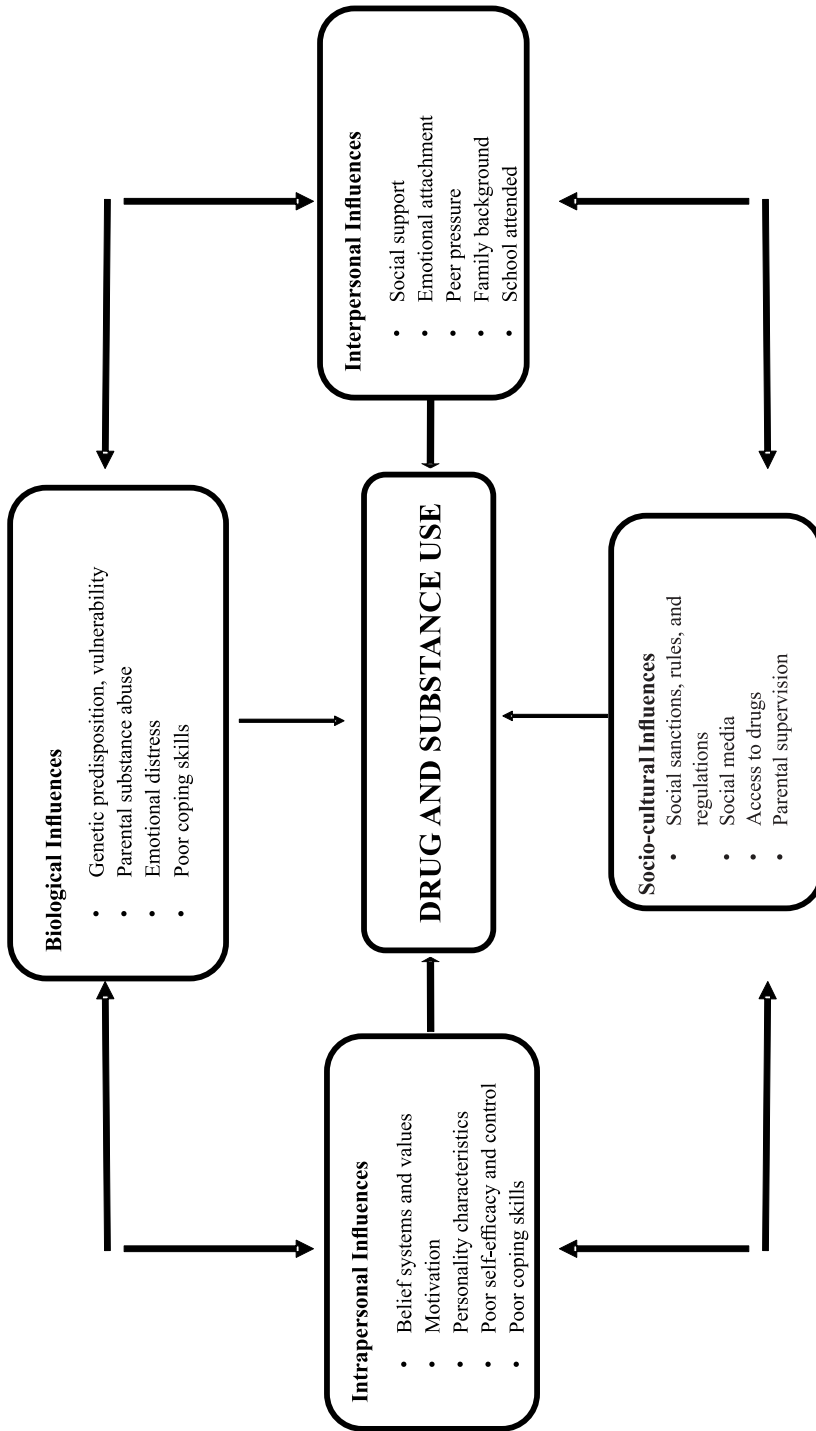
Figure 1: Conceptual framework of factors related to drug and substance use in adolescents.

Interpersonal Influences
- Social support
- Emotional attachment
- Peer pressure
- Family background
- School attended

Biological Influences
- Genetic predisposition, vulnerability
- Parental substance abuse
- Emotional distress
- Poor coping skills

DRUG AND SUBSTANCE USE

Socio-cultural Influences
- Social sanctions, rules, and regulations
- Social media
- Access to drugs
- Parental supervision

Intrapersonal Influences
- Belief systems and values
- Motivation
- Personality characteristics
- Poor self-efficacy and control
- Poor coping skills

inadequately to the questionnaire or did not return the questionnaires. Subsequently, data from 312 students, represented a response rate of 91.8 per cent.

Data gathering took place in classrooms in the three secondary schools with permission from the school head teachers and the respective class teachers. Students were given information about the purpose of the research, and their rights to accept, refuse or withdraw at will during participation. The students were further informed that information collected from them would be treated anonymously and confidentially. Thereafter, each student signed before they were handed the questionnaire and were further instructed not to place any identifying information on their questionnaire. The questionnaire took about 15 minutes to complete. The study was approved by the ethical vetting board at Gulu University.

Measures

Three categories of measures were used in the current study.

Socio-demographic characteristics of the participants: measures developed to assess socio-demographic characteristics included items on age, gender, place of upbringing, parental educational attainment, type of school, etc.

Drug and substance use: The Drug Abuse Screening Test (DAST-10) by Skinner [1982] was employed to assess the use of various classes of drugs and substances such as cannabis (Marijuana, hashish), solvents (e.g., petrol, paint thinner), tranquillizers (e.g., Valium), barbiturates, cocaine, stimulants (e.g., speed), and hallucinogens (e.g., LSD) or narcotics (e.g., heroin). An extensive review of the DAST-10 psychometric properties was established in previous studies [Benschop, Liebregts, van der Pol, et al., 2015; Yudko etc., 2007]. In this study, the internal consistency as measured by Cronbach Alpha was = 0.89. The DAST-10 questionnaire was adapted to include a question on alcohol and tobacco use.

Motives measure: The Marijuana Motives Measure was adapted to assess the motives for using drugs and substances [Lee, Neighbors, Hendershot, et al., 2009]. This measure comprises 25 items (statements) inquiring about the participants' reasons for using drugs and substances (originally Marijuana). The instruction included "*Here is a list of reasons people give for using drugs and substances (e.g., Marijuana, hashish, solvents (e.g., petrol, paint thinner), tranquillizers (e.g., Valium), barbiturates, cocaine, stimulants (e.g., speed), hallucinogens (e.g., LSD) or narcotics (e.g., heroin), alcohol or tobacco. Thinking of all the times you use drugs and substances, how often would you say that you use drugs and substances for each of the following reasons?* These reasons are grouped into five (5) categories of motives: *social* (e.g., "because it makes social gatherings more fun)*, coping* (e.g., "because it helps me when I feel depressed or nervous"),

enhancement (e.g., "because it gives me a pleasant feeling"), *conformity* (e.g., "because my friends pressure me to use drugs and substances"), and *expansion* (e.g., "because it helps me be more creative and original"). The participants were required to respond to each statement about using drugs and substances on a five-point Likert response format with a response format ranging from 1 for "almost never/never", 2 for "not quite", 3 for "sometimes", 4 for "always", and 5 for "almost always/always" [Benschop, Liebregts, van der Pol, et al., 2015; Chabrol et al., 2005; Lee, Neighbors, Hendershot, et al. 2009; Zvolensky, Vujanovic, Bernstein, et al., 2007]. Higher scores were indicative of a higher endorsement of a particular motive. Cronbach alpha for the five motive subscales were all acceptable and ranged from $=0.86$ for enhancement, $=0.91$ for coping motive, $=0.83$ for social motive, $=0.93$ for conformity motive, and $=0.89$ for expansion motive.

Focus Group Discussions (FGDs): FGDs were conducted with students conveniently selected from the three schools. Two FGDs were conducted in each school: one group for girls and another for boys to allow for free discussions without any fear of stigma or gendered socialisation. Altogether, six (6) FGDs were conducted with questions relating to drug and substance use based on four themes: i) reason for drug and substance use (e.g., 'why students use drugs and substances in the school?'), ii) context/environment ('where/when they use drugs and substances'), iii) ways and methods of drug and substance use in the school to circumvent the restrictive and prohibitive environment), and iv) rationalisation (how the students rationalise or give excuses for drug and substance use in secondary schools).

Data analyses

The socio-demographic characteristics of the participants were computed using descriptive statistics (mean, standard deviation and range). Information on the prevalence of drug and substance misuse, endorsement of motives, and the extent to which motives predict drug and substance misuse was quantitatively obtained. Drug and substance use in the total group and the different genders were calculated and tabulated. Sub-population differences (e.g., gender differences in prevalence and motives of drugs and substances were assessed using a t-test. To ensure that both motivation variables in the regression models were comparable, they were standardized to a mean of zero and *SD* of 1 (*Z* scores). Next, univariable regression analyses were used to assess the extent to which the motives predicted drug and substance use and the results were tabulated. To obtain the unique effects of each motive on cannabis use, the shared variance between coping and social motives was adjusted for each other in multivariable regression analyses. All the statistical analyses were carried out using IBM SPSS statistical software, version 27.0 [IBM Corp. Released 2020]. Associations with a *p*-value less than 0.05 were considered statistically significant.

Detailed information on four themes: i)

reason for drug and substance use, ii) context/environment, iii) ways and methods of drug and substance use in the school to circumvent the restrictive and prohibitive environment, and iv) rationalisation of drug and substance use, were all obtained through FGDs. While the information on students' ways and methods employed to circumvent the restrictive and prohibitive regime and how and why students rationalize and account for the use of drugs and substances were qualitatively obtained. The qualitative method of concurrent triangulation was embedded to give an in-depth understanding of the methods employed by students and how and why they rationalize and account for the use of drugs and substances in their schools. Information on the four themes was recorded, transcribed and carefully analysed based on the four themes outlined above. Three senior researchers analysed the interviews and an inter-rater reliability coefficient was computed in IBM SPSS v27 [IBM Corp. Released 2020]. Transcripts were cross-examined for cross-validation of interpretative thematic analysis. Afterwards, a careful multistage analysis was used where the information collected was transformed into meaningful broader content categories, and later discussed and analysed until particular themes emerged based on the qualitative approaches [Strauss 1987; Strauss and Corbin 1990] were used to ease the thematic analysis of the four themes on the interview schedule based on the four themes outlined above. Saturation was reached at points when two or more FGD groups yielded no additional second-level categories. In this study, saturation occurred in six focus groups.

RESULTS

Socio-demographic characteristics

The respondents' characteristics are presented in Table 1. Altogether, 312 students (mean age =18.33 SD ± 1.76; 18 - 20; 54% male) provided data that were used in the analyses. Most of the respondents grew up mainly in urban centres (41%, n=128) and the majority (84%, n=262) were in high school. Similarly, most of the respondents were living in dormitories within the school premises (53%, n=165), 30 per cent (n=94) were living in hostels near their respective schools, and 17 per cent (n=53) were day scholars living with their parents or relatives (Table 1). There were no significant gender or school differences observed.

How students rationalize and account for the use of drugs and substances in schools.

About 13 per cent of the students (n=41) indulged in substantial to severe levels of drug and substance use in the secondary schools where this study was carried out. The inter-rater reliability (IRR) between the three raters was acceptable at .82, Confidence Interval (CI), 0.68, 0.91). Nevertheless, the students interviewed were not surveyed for the quantitative analyses. Consequently, conclusions based on the FGD sample may not be representative of the sample.

Table 1: Demographic characteristics of the respondents

Variables	Total (*N*=312)
Age (M, SD, min, max)	18.33; ±1.76; 18 - 20
Gender	
Male	168 (54%)
Female	144 (46%)
Secondary schools	
A (Boys' only school)	123 (39.4%)
B (Girls' only school)	101 (32.4%)
C (Mixed school)	88 (28.2%)
Educational level	
Advanced level	262 (84%)
Ordinary level	50 (16%)
Type of school attended	
Public	200 (64%)
Private	80 (26%)
Both	32 (10%)
Place of upbringing	
Urban centres	128 (41%)
Rural areas	106 (34%)
Both urban centres and rural areas	78 (25%)
Residence status	
Boarding (resident in school)	165 (53%)
Hostels (residents in private accommodation)	94 (30%)
Homes (living with their parents or relatives)	53 (17%)

M=mean; N=total sample; SD= standard deviation; min=minimum; max=maximum; %= per cent

Prevalence of and motives for drug and substances use

Coping (*Mean* = 4.13, *SD* 0.89), social (*Mean* = 3.71, *SD* 0.97), and enhancement (*Mean* = 3.09, *SD* 0.92) motives were highly endorsed for drug and substance use (Table 2). About 13 per cent (*n*=41) of the respondents were at the level of substantial to severe use of drugs (Table 2).

Table 2: Respondents' motive and drug use scores

	Mean	*SD*
Motive scale		
Coping	4.13	±0.89
Social	3.71	±0.97
Enhancement	3.09	±0.92
Conformity	2.88	±0.93
Expansion	2.85	±0.99
DAST-10 scores and levels of drug use	*N*	*%*
No problem reported (score = 0)	66	21.2
Low level (scores =1-2)	131	42.0
Moderate level (scores = 3-5)	74	23.7
Substantial level (scores = 6-8)	30	9.6
Severe level (scores = 9-10)	11	3.5
Alcohol use scores		
0	119	38.1
1	193	61.9

The influence of motives on drug and substance use

The results of univariable regression analyses to calculate the influence of motives on drug and substance use are presented in Table 3. All the motives significantly predicted drug and substance use particularly coping, social and enhancement

motives after adjusting for sex and age (Table 3). The proportion of explained variance for the model ranged from $R^2 = 0.30$ ($F_{2,310} = 124.18$, $p < .001$) for coping motive to $R^2 = 0.03$ ($F_{2,312} = 26.64$, $p < .001$) for expansion motive.

Table 3: Univariable regression of drug and substance use on motives

Motive scale	β (95% CI)	Adjusted R^2
Coping	0.55 (0.3 9, 0.72)	0.30
Social	0.41 (0.30, 0.50)	0.17
Enhancement	0.39 (0.29, 0.48)	0.15
Conformity	0.2 2 (0. 12 , 0.3 2)	0.05
Expansion	0.18 (0.08, 0.28)	0.03

β= standardised beta; **CI**=Confidence Interval; Results are adjusted for age and sex.

Students rationalised their use of drugs and substances in many ways such as coping with stresses such as heavy academic workload, high expectations from parents, and social relations. Other reasons for rationalising drug and substance use include boosting concentration, overcoming shyness and fears, forgetfulness related to poor performance, enhancing a sense of belonging, feeling better about themselves, and persuasive advertisement, particularly for alcohol. These reasons augment and triangulate the results of the quantitative analyses that found strong associations between the coping, social and enhancement motives with drug and substance use (Tables 3 and 4) further supporting the domain model of explaining drug and substance use [Huba & Bentler, [1982]. For example, many in the FGDs pointed out the high academic workload that does not give them time to rest. One of the girls in an FGD had this to say:

Sometimes in this school, classes are held from 5 am till 10 pm. I only have time for meals and to go to the restroom during this time. When we finish classes at 10 pm, we are expected to complete assignments and class exercises afterwards. This is when some students smoke "weed" (aka Marijuana) to keep awake*. Girl, FGD 1.*

Another boy alluded to pressure from home and made the following remarks:

For me, being the firstborn in the family,

my parents exert a lot of pressure on me to excel and be a good example to pave the way for my sibling. Often, to keep alert and study for longer hours, I take some drugs to prevent me from sleeping. *Boy, FGD 2*.

Another way that students rationalise their use of drugs and substances was embedded in the social realm. In the three secondary schools in which this study was carried out, more emphasis was placed on passing examinations than on the social development of the students. Similarly, this finding of the qualitative analyses augments the results of the quantitative analyses which indicated the context and realities in the schools as drivers of drug and substance use in secondary schools in Uganda. During the FGDs, one of the boys said:

   The only time we have here for getting together is to escape from school to go to nightclubs in town. Subsequently, in the absence of adult supervision, students use drugs and substances and engage in other risky behaviours. *Boy, FGD 3*.

Some of the students also alluded to the marijuana legalisation movement as a reason for them to use the drug. One of the boys put it this way:

   In many countries now, marijuana is legal. I normally see it on Facebook. Our age mates elsewhere use marijuana without problems and it is medicine for many diseases. Smoking Marijuana also makes us happy and we forget our problems. Why do they stop us from using it? *Boy, FGD 3*.

   The lack of social and life skills among many students limits their views on what constitutes entertainment. Most students think drinking alcohol, smoking and other drug use as the only ways of entertainment. Even those who are hesitant to use drugs, end up using them so that they belong. This finding triangulates the results of the quantitative analyses which showed that the social motive was significantly associated with drug and substance use (Table 4). As one girl commented during the FGDs:

   Options for entertainment are limited in my school. Together with other students, we think using drugs or alcohol is the only way of socialising with our friends. *Girl, FGD 4*.

Ways and methods students use to circumvent the restriction and prohibition of drug and substance use in schools

   The main drugs used by secondary school students included "solvents" (e.g., petrol, glue, etc.), "Marijuana", "Khat" (aka mairungi), alcohol, and to a smaller extent "cocaine". Students used these drugs in very ingenious ways and contexts to circumvent the restrictions, prohibitive environment, and severe penalties by secondary school administrators. One of the students had this to say:

Students often escape from their dormitories and use drugs and substances late at night to avoid being caught by teachers. During the day, students eat cookies, and biscuits, and drink fruit juices laced with Marijuana, Khat, and for a few rich ones, cocaine. *Boy, FGD 4*.

Table 5. Ways of circumventing the restrictive and prohibitive rules and regulations in schools

S/No	Drugs and substances	Where the drugs and substances are kept	Ingenious ways of using the drugs
1	Solvents (e.g., petrol, glue)	Securely wrapped and kept in tiny little bottles. Sometimes buried in flower gardens around the dormitories, kept in toilets, or inside small pockets located in underwear clothing or placed securely in hollow bedsteads.	Food items (e.g., bread, cookies, biscuits) and fruit juices mixed with solvents. Solvents put in handkerchiefs and sniffed to dupe teachers that they are wiping their faces even during the day.
2	Marijuana	Ground into powder and mixed with alcohol (whiskies, wines, or rum) and kept in tiny little bottles. Sometimes buried in flower gardens around the dormitories, kept in toilets, or inside small pockets located in underwear clothing or placed securely in hollow bedsteads.	Bread soaked in Marijuana mixed with alcohol. Often, food items mixed with alcohol and Marijuana are consumed during the weekends when there are no classes and minimal supervision by teachers
3	Khat (aka mairungi) and Marijuana	Khat is mixed with Marijuana and ground into powder and kept in small paper wrappers, put in sugar containers and sugar is put on top to disguise it.	Mixed with chewing gum and chewed. Similarly, this is often chewed during the weekends and deep into the night when there is minimal supervision by teachers.
4	Cocaine (used by only a minority)	Kept in small paper wrappers and kept like Khat or Marijuana.	Sniffed, often at night when there is minimal supervision by teachers.

DISCUSSION

Recap of main findings

The current study explored the motives for drug and substance use, how students circumvent the restrictive and prohibitive regulatory environment, and how they rationalize and account for the use of drugs and substances in secondary schools. We modified the Marijuana Motives Measure [Chabrol et al., 2005] to capture the general motive for drug and substance use in secondary schools. Coping, conformity and social motives specific to the students' contexts and realities were markedly highlighted as motives for drug and substance use in schools. Students employed ingenious and often dangerous ways and habits to circumvent the restrictive and prohibitive rules and regulations governing drug and substance use in secondary schools and rationalised their drug use based on their specific school contexts, personal characteristics and the prohibitive and restrictive regime in each school.

Agreement with previous findings

The motives for using drugs and substances in this study corroborate findings in previous studies which found that coping, social and social enhancement were often endorsed as motives for drug and substance use [Hides, Lubman, Cosgrave, et al., 2008; Kgatitswe & Amone-P'Olak, 2017]. All five motive scales significantly predicted drug and substance use in the current study, particularly coping, social and enhancement motives. Many of the students indicated an overwhelming academic workload, pressure to perform well from parents, and limited opportunities for entertainment and social activities in their respective schools as reasons for indulging in drug and substance use. The students used ingenious ways of keeping ahead of the restrictive and prohibitive regimes against drug and substance use in their respective schools. Although our focus was mainly on motives, contexts and student characteristics, upbringing in urban centres and residence in private places of accommodation (e.g., hostels and other private accommodations) were associated with increased use of drugs and substances. This is more likely due to a lack of adult supervision, interpersonal influences, poor coping, poor stress management skills, and emotional distress, all in accord with the domain model of explaining drug and substance use [Huba & Bentler, 1982].

As shown in one of the FGDs, one of the participants alluded to the marijuana legalisation and normalisation movement to rationalise their drug and substance use [Pennay & Moore, 2010; Peretti-Watel, 2003; Sandberg, 2012; Parker et al., 1998]. The legalisation movement is also in agreement with the normalisation theory which drug use (e.g., marijuana) become less stigmatised and accepted as a normative rather than condemned behaviour because of its legalisation [Parker et al., 1999]. Similarly, the domain model where behaviour is influenced by socio-cultural influences such as social media is also applicable in this situation [Huba & Bentler, 1982]. Just as in previous studies,

the students perceive drugs and substances as ways of overcoming their academic, social, and familial challenges besides drugs and substances having health benefits and is of entertainment value [Amare, & Getinet, 2020; Ssewanyana, Mwangala, Marsh, et al., 2020].

From the responses during FGDs, the rationalisation of drug and substance use may also be based on the personal circumstances of the users (e.g., family dysfunction, peer pressure, family pressure, etc.) or the social contexts (e.g., academic overload, lack of opportunities for entertainment, school climate, etc.), all linked to the *Domain Model* of drug and substance [Huba & Bentler, 1982]. Previous studies also demonstrate that individuals rationalise drug use based on their contexts and the personal benefits that they derive from using the drug and substance [Zinberg, 1984]. Consequently, the results of the current study show the significance of considering not only the motivation but also the context in which drugs and substances are used.

Students employed ingenious and often dangerous ways and habits to circumvent the restrictive and prohibitive regimes in secondary schools. Such dangerous habits such as lacing food with drugs, hiding drugs in school compounds which can further be contaminated with germs or bacteria and so on. Interventions should address motives, knowledge, habits, and ways by which students use drugs and substances. The findings in this study demonstrate that drugs and substances should not just be seen as rule-breaking and a revolt but for

different purposes depending on the context and personal circumstances or even a confluence of numerous factors coming into play at the same time or at different times to influence drug and substance use [Ekendahl, Månsson, & Karlsson, 2020]. This is in line with the Domain Model where biological (e.g., genetic predisposition), interpersonal (e.g., peer pressure and support systems), intrapersonal (e.g., personal values, poor coping) and socio-cultural factors (e.g., access to an avalanche of toxic social media, lack of parental supervision). Similarly, unrestricted exposure to social media among adolescents and the movement toward the legalisation of certain drugs and substances [Nessi, Rothenberg, Hussong, et al., 2017], has made the debate on interventions to prevent or reduce drug and substance use more complex and nuanced than the previous narrative on deviance and rebellion. For example, the use of cannabis for medical purposes (e.g., to treat or reduce pain) and for recreation is currently distorted. Whereas using cannabis for its health benefit may reduce the stigma associated with the drug, its use for recreation purposes is still loathed [Zinberg, 1984]. Thus, adolescents may publically characterise their use of cannabis for its health benefits to gain acceptability.

Implications for research, policy and practice

The findings of the current research have implications for research, policy, practice, and research. On the subject of research, a longitudinal design that aims to delineate drivers and factors that

shape the course of drug and substance use from inception in early childhood to early adulthood should be prioritised. Particularly, risk and protective factors in individuals, families, communities, schools, dynamic contexts, and personal characteristics should be studied [Cleveland, Feinberg, Bontempo, et al., 2008]. Drugs and substances should not just be seen from a developmental perspective of adolescent rule-breaking and revolt. Motivational and contextual factors should be considered when designing interventions. Societal structural and specific contextual and personal circumstances and developments in the legal frameworks and the confluence of numerous other factors coming into play at the same time or at different times should be considered. Particularly, interventions to identify adolescents likely to use drugs and those that enhance the protection of adolescents against drug and substance abuse should be considered. Youths in poor psychosocial situations are particularly vulnerable to drug abuse [Abbo et al., 2016] and should be empowered to use more adaptive coping strategies and social activities (e.g., having fun) without resorting to drug and substance use. Policies on boarding schools and private hostel accommodation for students should be further interrogated to make them safe for students.

The rationalisation of cannabis use for purposes of overcoming social and personal challenges or as an antidote for difficult psychosocial situations and experiences among adolescents should be taken seriously as this is certainly a maladaptive coping strategy [Abbo et al., 2016]. Empowering adolescents to speak out about their challenges and be their agents of change is crucial in an attempt to prevent or reduce drug and substance abuse among this young subpopulation. Previous studies have demonstrated that intrapersonal and cognitive psychological empowerment was associated with lower rates of drug and substance abuse among vulnerable adolescents and young adults [Lardier, Opara, Reid, *et al.*, 2020].

Limitations

Some limitations need to be considered while interpreting the results of this study. First, the setting of this study is an urban area. Drug use in rural secondary schools may be characteristically different due to different contexts and personal circumstances. Second, some drugs and substances may be more common in one context than in others. For example, cocaine may be more common in urban areas than in rural areas due to its high price. Third, drug and substance use remains stigmatised and reviled, particularly in rural areas. Fourth, the samples for both the quantitative and qualitative analyses were relatively small, making it difficult to extrapolate the findings. Finally, many of the participants in the FGDs might have been biased in presenting a socially desirable view while rationalising their drug and substance use. We recommend longitudinal studies that are capable of analysing trends in drug and substance use and that can be able to pick changing trends in drug and substance use over a long period. Nevertheless, the results of this study may point to a more nuanced and

complex problem of drug and substance use among adolescents in secondary schools in Uganda.

CONCLUSION

Although drug and substance use is still stigmatised, it is becoming progressively rationalised, medicalised, and venerated among urban adolescents and young adults. Coping, conformity and social motives specific to the students' circumstances in different contexts were markedly highlighted as motives for the rationalisation of drug and substance use in schools. Interventions to mitigate drug use in schools should address motives, knowledge, excuses for drug use, and ways by which students use drugs and substances. Although drug and substance use is still stigmatised, education to address the rationalisation, medicalisation and veneration of drug use should be prioritised in interventions, particularly among urban secondary school students.

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