

Drug abuse prevalence and stress-related experiences among secondary school learners in Vihiga County, Kenya

Wasiaya Mathews Odhiambo¹
Otieno Kenneth Olando²
Okaya Edward Khasakhala³

¹mtodhiambo@gmail.com

²kotieno@mmust.ac.ke

³eokaya@mmust.ac.ke

^{1,2,3} Masinde Muliro University of Science and Technology, Kenya

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ABSTRACT

Drug abuse among adolescents presents interrelated educational and psychological risks, yet prevention efforts require evidence that reflects the specific substances, access pathways, and stress-related experiences found in local school settings. This study evaluated the prevalence of drug abuse and examined stress-related experiences reported in relation to drug abuse among secondary school learners in Vihiga County, Kenya. Social Learning Theory and the Person–Environment Fit Model guided the investigation. A pragmatist paradigm and convergent mixed-methods design were adopted. The target population comprised 29,240 Form Three learners, 112 principals, 112 teacher counsellors, and one County Quality Assurance and Standards Officer. Stratified and simple random sampling were used to select 395 learners, purposive sampling selected 12 principals and 12 teacher counsellors, and saturated sampling included the County officer. Usable data were obtained from 387 learners and all 25 institutional respondents. Questionnaires, semi-structured interviews, and a document analysis guide were used. Quantitative data were analysed through frequencies, percentages, and means, while qualitative data were analysed thematically and integrated at interpretation. Alcohol was the most frequently reported substance (46.5%), followed by marijuana (39.3%) and miraa (38.8%). Most substances were reported more frequently by male than female learners, while day schools recorded the largest absolute number of users. Friends and peers were the leading reported source of drugs, and peer pressure was the leading reason for use. Stress and depression constituted the second most frequently reported reason. Further, 64.1% of respondents indicated that learners who used drugs appeared stressed, 68.2% associated continued use with stress or memory problems, and 36.7% reported three or more psychological distress symptoms. These findings demonstrate descriptive co-occurrence rather than a statistically established causal relationship. The study recommends that drug-use prevention in Vihiga County should integrate substance-access control with early psychological screening, confidential counselling, peer-led prevention, parental engagement, school–community monitoring, drug awareness sessions and use of security staff.

Keywords: Adolescents, Drug Abuse, Psychological Distress, Secondary Schools, Stress, Vihiga County

I. INTRODUCTION

Adolescence is characterised by physical, cognitive, emotional, and social transformations. At this stage, the learner is more likely to want independence, make more peer attachments and try behaviours that might be adult-rewarding or socially rewarding. These developmental changes do not predict drug abuse; however, when drugs become available, peer groups begin to endorse and encourage drug use, and coping resources are insufficient, these developmental changes can place an individual at risk. For this article, drug abuse means the use of prescription and non-prescription drugs in non-medical and/or harmful ways that produce an effect on the mood, cognition, behaviour, or physical functioning of the individual, and that the action puts the learner at risk for educational, psychological, and/or social harm.

Drug abuse among school-going adolescents is an educational and public-health issue because its impacts are not just limited to drug use. Psychoactive substances can impact concentration, judgment, control of emotions, memory, and social relationships. The World Health Organization [WHO] (2020) explained that adolescent substance use may result in the manifestation of health and developmental risks that can persist into adulthood. These risks may be seen in a school environment, such as by absenteeism, poor concentration, conflict, withdrawal, lack of motivation, unsafe behaviour, and/or inability to maintain academic or co-curricular responsibilities.

Prevalence of drug abuse refers to the percentage of the target population who say they use specific drugs in a given time frame or in their lifetime. Estimates of prevalence are essential because they pinpoint substances that should be targeted for priority, show disparities in prevalence among different groups, and can help inform the distribution of

prevention resources. But estimates can widely vary by survey measures and criteria used for experimentation or past, lifetime, current, and repeated use. Question wording, confidentiality of administration, learners' willingness to disclose behaviour related to the prohibition in the school, sample composition, and local availability are other factors that may impact them (Shuro & Waggie, 2024).

Alcohol, tobacco, cannabis, and emerging products have remained prevalent types of substance use among adolescents around the world (Onigbogi et al., 2023). Purchasing and usage rates of the substances most evident in one context can vary in another, as the legal controls, cultural acceptance, price, marketing, and local networks of supply are not the same in all places. This contextual variation renders the evidence from other countries/universities/urban centres cannot automatically represent learners in Vihiga County. There is a need for localised evidence to identify what is being used, who is most at risk, and how learners are accessing these substances, as well as what beliefs fuel experimentation.

Adolescents and young adults in Kenya have been reported to engage in drug and substance abuse regardless of school status. According to the National Authority for the Campaign Against Alcohol and Drug Abuse [NACADA]. (2022), alcohol is one of the significant drugs of concern to youths. The consumption of tobacco, cannabis, miraa, prescription medicines, and inhalants has been reported in other studies. The secondary school matter needs special attention as the students are still learning coping mechanisms skills and are still reliant on families and secondary schools for supervision, guidance, and avenues towards professional skills.

Vihiga County plays a substantial role in the investigation. Previous research in the County documented public secondary school learners' involvement with drugs and related it to their discipline and educational challenges. Chebukaka (2014) reported that a problem of drug abuse was a problem that could not be isolated in that locality. The authors further documented concerns from school administrators regarding alcohol, cigarettes, miraa, marijuana, and other substances among learners. Many day schools are local to home, markets, trading centres, bars, and community networks, which can influence access to the school, and adult and peer role models for substance use.

Stress is a psychological, emotional, and physical strain that is felt by people when they feel that they are faced with more stressors than they have coping abilities for the situation. Re-engaging students in secondary education is likely to result in academic pressure, family issues, financial issues, peer issues, identity issues, and issues of uncertainty. Stress-related experiences in this study include apparent tension, change in mood, withdrawal from others, disturbed eating or sleeping patterns, hopelessness, loss of interest, poor concentration, restlessness, and thoughts of and/or action towards self-injury. Experiences are important because they can create a debilitating factor and can happen simultaneously with substance use (Sharma & Passi, 2022).

The link between drug abuse and stress can be bidirectional. Some learners may be using alcohol or other substances as they believe these substances relieve tension, give momentary confidence, or have the potential to get away from distress. If it is used after that, it can lead to: difficulty making decisions, trouble sleeping, withdrawal symptoms, conflict, and even more emotional instability. Stressed learners, on the other hand, might be more vulnerable to being influenced by peers and reacting in unhealthy ways. The present article is primarily descriptive and cross-sectional and does not presume any one direction of causality, but rather reviews reported co-occurrence between drug taking and stress-related experiences (Sharma & Passi, 2022).

Understanding prevalence in relation to stress-related experiences is important because they are linked practically in the process of prevention and support for learners. A school can effectively offer general drug awareness, but at the same time, fail to detect a substance-using child who is coping with emotional stress. Similarly, prevention programmes could emphasise stress and not target peer drug sources, drug availability, or the assumption that drugs could alleviate stress. By combining these dimensions, a more effective foundation can be established for ageappropriate prevention, early identification, confidential counselling, referral and school – community action.

This article therefore provides evidence regarding the prevalence of specific substances, gender and age trends, school environment trends, reported sources of substance use, reported motives for substance use, and stress-related experiences amongst learners. The main independent variable is drug abuse and the outcome domain is the reported stress-related experiences and psychological distress. The analysis retains the limits of the data and distinguishes descriptive co-occurrence from inferential proof.

1.1 Statement of the Problem

Adolescent drug abuse is a major adverse event to adolescent health, school adjustment, and educational continuity. Despite the provision of guidance and counselling, discipline, awareness programmes and co-operation with parents in schools, learners are still reporting access to alcohol, marijuana, miraa, cigarettes and other things. In Vihiga County, previous investigations have mainly emphasised causes of drug abuse, indiscipline, violence, or academic performance. These studies showed the existence of the problem but failed to integrate the existing substance prevalence, as well as the stressful events occurring amongst secondary school learners.

The practical gap is important because prevention strategies can be misdirected when schools do not know which substances are most common, how learners obtain them, and whether drug use coexists with psychological strain. National rates of drug use may mask variations in community access, type of school, gender exposure and new types of use. Likewise, drug abuse addressed only as an academic discipline problem may miss students who abuse a drug in reaction to depression, stress, among peers, or emotional problems. Without local evidence embedded, it is difficult for counsellors, administrators, parents and education officers to tailor appropriate and supportive responses.

The study, therefore, examined drug abuse behaviour of Form Three learners in Vihiga County and cataloged drug-related stress experiences reported. It responded to the empirical problem by providing prevalence and themes and trends for substance use by students in terms of demographics, access, and motivations for use, along with cues to psychological distress, from one convergent mixed-method investigation. In the article, no inferential (correlation/regression) analysis of the relationship between drug abuse and stress has been done, no statistically established relationship between the two exists within the scope of this study.

1.2 Research Objectives

- i. Evaluate the prevalence of drug abuse among learners in secondary schools in Vihiga County, Kenya;
- ii. Examine stress-related experiences reported in relation to drug abuse among the learners.

1.3 Research Questions

- i. What was the prevalence of drug abuse among learners in secondary schools in Vihiga County?
- ii. What stress-related experiences were reported among learners in relation to drug abuse?

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Social Learning Theory

Social Learning Theory, proposed by Bandura and Walters in 1977, states that behaviour can be learned through imitation, reinforcement, observation, and interactions with the social environment (Bandura, 1977). Learners do not learn behaviour just by being told about it. They also imitate role-models' behaviours in other people, such as peers, people in the family, community, and media figures, and how behaviour is treated and rewarded or not rewarded in other people is noticed. Social approval, social competence, boredom reduction, and group acceptance serve as reinforcers, and the theory pertains to adolescent drug use.

Peer networks can offer models and access within the secondary school. The learner can initially observe drug use, hear positive drug use stories, and then be given the chance to sample the substance. Prior relationships with users can normalise behaviours that are disapproved of in school. The theory also helps to explain why simply providing warnings is insufficient for prevention. Peer educators, counsellors, responsible older learners, and supportive adults can be trained in demonstrating refusal skills, seeking help, emotion management, and positive involvement.

The theory is applied in this article to interpret the reported prominence of friends and peers as sources of drugs and peer pressure as a reason for use. It also aids in the understanding of how beliefs about the social benefits of drugs or the ability of drugs to diminish stress can be entrenched despite knowledge of harm. The problem with it is that it does not adequately capture the origins of strain in the mismatch between the needs of learners and the demands of the schools and the families. Therefore, the Person–Environment Fit Model was introduced as a complementary model.

2.1.2 Person–Environment Fit Model

The Person – Environment Fit Model accounts for consequences as a result of fit between personal qualities and the requirements or facilities of the environment. De Cooman and Vleugels (2022) explained that fit concerns the compatibility between what a person needs or can provide and what the environment supplies or requires. Stress can manifest when the demands placed on a learner in the academic, social, or family sphere exceed their capacity to manage, through a lack of support or through the school not being a place of belonging and safety.

A learner may find limited assistance in studying, the combination of high expectations to perform well academically, peer pressure for substance abuse, unresolved family conflicts, inaccessibility of counselling services, or absence of trust in counselling, to mention only a few factors, may not support their learning. The habit of using drugs can then be used as a negative coping mechanism. It can then further exacerbate the imbalance by decreasing focus, reducing adherence to routines, and inducing conflict and/or withdrawal. The model can thus serve as a foundation for comprehending the co-occurrence of drug use and stress-related experiences.

The model also directs attention to prevention environments. Responses should be aimed at strengthening the good practice of making support available according to needs, making use of counselling, peer support, structured activities and rules, family support, and referral mechanisms. The model, however, does not explain by itself how the

drug-use behaviour is learned and reinforced. When combined with Social Learning Theory, it gives a more complete explanation of not only the acquisition of behaviour but also of the psychological strain.

2.1.3 Integration of the Theories

The two theories were integrated rather than applied as separate explanations. The social learning theory accounts for exposure, modelling, access and reinforcement and the Person–Environment fit model explains how any unmet needs or their overload may lead to strain and to lessen adjustment. They conclude that adolescent drug abuse is through social learning, and the degree to which there is a "fit" between an adolescent learner and the school, family, and community environments. This integration aided in the interpretation of the prevalence patterns, peer access, reported purposes for use, and stress-related experience.

2.2 Empirical Review

2.2.1 Prevalence of Drug Abuse among Secondary School Learners

Empirical research indicates that there is significant variation in the amount of substance use across settings among adolescents. In their study on adolescent drug abuse among secondary school students in Katsina State, Nigeria, Lawal et al. (2025) found that class level, family structure, and friend drug use were also reported to be associated with drug abuse among secondary school children. The study showed the significance of peer-behaviour and school context, but this is a Nigerian social and regulatory context, which differs from the Vihiga County context. It was also not aggregated as necessary in this study, with prevalence and stress-related outcomes. According to Shuro and Waggie (2024), alcohol, cigarettes, and marijuana were among the substances that were commonly used by the Limpopo Province high school learners in South Africa. Their conclusions confirm the idea of predominance of socially visible substances in the use by adolescents. Their analysis, however, was based on a South African district with different access and school structuring conditions. The current study builds on this by focusing on alcohol, marijuana, miraa, shisha, cigarettes, inhalants, edible cannabis products, kuber, cocaine, and heroin in a single Kenyan county.

Onigbogi et al. (2023) concluded that awareness of drug abuse was high among secondary school students in Lagos State, albeit with high reported drug use among concussed learners in the state. Coexistence of awareness and use shows that one might not change the behaviour. The study is useful because it demonstrates that informational exposure does not necessarily end substance use, although the substances and the metro area are different from Vihiga County. This distinction provides support for the need for local evidence of commonly accepted products and of concealed products. Ochieng (2022) studied the use of psychoactive substances among secondary school learners in Tanzania, and the important psychoactive substances identified were marijuana, cigarettes, and alcohol. Some of the factors cited were: peer influence, family environment, and availability. Although relevant due to the regional proximity, it is not possible to make direct transfers due to the differences in systems of education, regulatory practice, and community cultures. The current study provides evidence at the County-level in Kenya, and distinguishes patterns by age, gender, and school type.

There is also significant variation in Kenyan studies. Ndeti et al (2010) also reported that prevalence is not uniform, as it was comparatively low in the rural secondary school they surveyed. Variations may stem from supervision, community norms, access to the market, confidentiality, and concerns of current or lifetime user research. The high prevalence estimates were therefore interpreted with caution and not generalised to all Kenyan Secondary schools in the current study. Chebukaka (2014) specifically studied public secondary schools in Vihiga County and found significant engagement in alcohol, cigarettes, miraa, and marijuana. This study formed a local basis for the present study. However, it did not offer the same case-integrated analysis of current substance-specific trends, nor psychological distress indicators, nor issues related to the school context. The current article, therefore, seeks to update the discussion in the locality with a larger sample of Form Three learners and multiple data sources.

Adebisi et al. (2010) conducted an overview of youth tobacco use in sub-Saharan Africa and found a gender disparity with higher use among males in general. Atwoli et al. (2011) also reported a high prevalence of substance use by pupils in Western Kenya, and significantly higher substance use by males. While the latter study was conducted with college students, it points to regional gender trends for interpretation. In the current investigation, it is investigated if there are similar trends among young secondary school students. Three gaps can be identified in the examined studies. Many investigations were carried out in Kenya or within university populations. Second, the prevalence measures were not always linked to local access pathways, the school type, or the emerging product. Third, few Vihiga-based studies examined prevalence together with stress-related experiences. The current study attempts to fill in these gaps by looking at Form Three learners, adopting a convergent mixed-methods approach, and expanding to encompass all the drugs and the psychological markers.

2.2.2 Drug Abuse and Stress-Related Experiences

Research on drug abuse and stress has frequently identified co-occurring psychological, cognitive, and physiological symptoms. Frade et al. (2013) compared non-users, occasional users, and regular users among secondary students in Brazil. Regular users reported higher levels of psychological, cognitive, and physiological stress symptoms. The study is directly relevant because it involved school-age adolescents, but cultural, educational, and substance-access conditions differ from the Kenyan context.

Elom et al. (2025) examined the effect of drug abuse on the mental health of secondary school students in Abakaliki, Nigeria. They reported a significant relationship between drug abuse and broader mental-health problems, with male students showing greater involvement. The study supports attention to psychological outcomes, although it treated mental health as a broad construct rather than isolating stress-related experiences. The present article narrows the focus to mood changes, withdrawal, sleep or appetite disruption, hopelessness, concentration problems, and related indicators. Sharma and Passi (2022) found a positive correlation between stress and substance use by medical students. They showed that learners can use drugs and alcohol as a reaction to pressure and that pressure and substance usage can coexist. Medical students, however, are older, more independent, and faced with different academic and professional expectations as compared to the secondary school learners. They are constrained in using their results to design interventions in Vihiga County secondary schools by the gap they have encountered.

Ambayo (2018) investigated the perceived stress and substance use disorders in the University of Nairobi students and revealed some relationships in alcohol and tobacco use. This offers Kenyan data, though for a University sample. Mutiso et al. (2022) further reported on the prevalence of substance use and mental-health problems amongst a large group of Kenyan students. These studies highlight the importance of integrated approaches to mental-health and substance use response, but are not a substitute for evidence from adolescent secondary-school populations. Okanga et al (2025) looked at factors predisposing university students to substance abuse in Vihiga and concluded that, interestingly, many students identified as having some kind of stress or anxiety and used drugs as a coping mechanism. The geographical relevance is high, but the actors were university students with more autonomy and in other social settings. The current study deals with the age and institutional gap, as the population of secondary school learners in the same county has been targeted.

These studies also show a gap regarding the methodology. Some correlated or employed more general mental-health indicators, and the data for the present article referred primarily to descriptive indicators and qualitative indications. This exception should be clearly stated. The current study provides detailed evidence of co-occurrence and perceptions by learners, but did not substantiate the direction or strength of statistically tested relationships between drug abuse and stress. Based on this, the empirical literature would consequently expect that drug use and psychological strain might overlap to some degree, but also that the pattern is affected by the factors of age, setting, type of drug, frequency of use, and surrounding systems of support. The study, through linking surveys with learners, interviews with learners, and analysis of school documents, is an account of the context that can give guidance to counselling and prevention and define the future agenda for inferential and longitudinal research.

2.3 Summary of Knowledge Gaps

Literature indicates that adolescent drug use is universal and often accompanies psychological problems. However, estimates vary significantly, and several Kenyan studies focus on academic-related outcomes or discipline instead of stress-related experiences, and a great number of studies target universities. Previous studies in Vihiga County show that drug use exists, but lack adequate intertwining of the latest drug trends, segmentation, avenues of access, drug motives, and psychological suffering into a single study.

The present study engages the contextual gap by giving emphasis to secondary schools in Vihiga County, the population gap by focusing on form three learners and the methodological gap by adopting both quantitative and qualitative evidence. It further provides conceptual clarity in differentiating descriptive co-occurrence from the inferentially tested relationship. This distinction helps to avoid hyperbole, but still allows one to capture the reality of the patterns found.

III. METHODOLOGY

3.1 Research Design

The study was in a pragmatist paradigm and in a convergent mixed methods design. The quantitative aspect followed a cross-sectional survey to collect prevalence and stress-related data from the learners at one point in time. Qualitative research was carried out through semi-structured interviews and document analysis in order to elicit the institutional explanations and contextual evidence. The analyses of quantitative findings and qualitative findings, as well as integration during interpretation, were conducted separately.

The design was the most suitable because drug abuse is a highly sensitive and multidimensional school issue. To estimate use of specific substances and the frequency of reported stress indicators, numerical data were required, and to explain the observed behaviour, pathways, and school response, interviews were required. Triangulation of self-reports was provided through document review. Convergence among those sources made for stronger interpretations in the absence of causal design.

3.2 Study Area

The study was done in Secondary schools in Vihiga County in the Western Region of Kenya. The county borders Nandi, Kisumu, Siaya, and Kakamega counties and contains predominantly rural and peri-urban communities. Vihiga County was chosen because school administrators and local reports had concerns regarding school learners' consumption of alcohol, cigarettes, miraa, marijuana, and other substances. The setting also enabled the study of day and boarding environments, and the proximity and impact of community accessways surrounding schools.

3.3 Target Population

The target population was comprised of 29,240 Form Three learners in 112 secondary schools, 112 principals, 112 school counsellors, and one County Quality Assurance and Standards Officer. Two reasons led to the selection of the Form Three learners: they had enough experience in their secondary school, but were not yet so much involved in the preparation of the national exams as the Form Four learners. Principals, counsellors, and the County officer were included, as they could observe drug-related behaviour and how it was being responded to in the school through their administrative, pastoral, and oversight duties.

3.4 Sampling Procedures and Sample Size

Yamane's formula was employed to determine the sample with a five percent margin of error, which yielded 395 samples of Form Three learners. Stratified random sampling was employed as the first stage to obtain representation of gender, and simple random sampling was employed to pick individual learners from the strata. A total of 12 principals and 12 teacher counsellors were selected using purposive sampling, as they had information specific to their roles that the researcher did not have. The single County Quality Assurance and Standards Officer was sampled using a saturated technique. All 12 principals, 12 counsellors and the County officer participated, while 387 (of the planned 420) learners returned usable questionnaires, giving a total of 412 usable questionnaires.

3.5 Data Collection Instruments and Procedures

Three instruments were used. The student questionnaire included demographic data, non-medical drug use status, prevalence of use for each drug group, perceived access, sources of drug, motivations for use, stress-related experiences and/or indicators of psychological distress. Principal, teachers, counsellors, and County officers were observed through the use of semi-structured interview schedules to get their evidence on prevalence, stress, and institutional conditions. The pertinent discipline records, attendance register, and counselling reports were analysed using a document analysis guide.

The questionnaire was given under standard instructions and anonymous conditions in classes. Interviews were conducted in depth and lasted from 30 to 45 minutes, and were done in a way that ensured probing, without changing the consistency between the respondents. Institutional permission was obtained to view documents on-site. Pilot testing in neighbouring Kakamega County involved 30 Form Three learners, three principals, and three counsellors. The pilot resulted in improved word clarity and sequencing. Cronbach's alpha coefficient for drug-abuse prevalence was equal to 0.78, and for stress levels was equal to 0.81, far above the required value of 0.70.

3.6 Data Analysis

Quantitative data were coded and summarised by means of frequencies, percentages, and means. These statistics were used to describe characteristics of the respondents, overall rates of non-medical use, prevalence of individual substances, age and gender differences, differences in use by school context, pathways to obtaining drugs and alcohol, reasons for use, and indicators of stress. Qualitative data from interviews and documents were transcribed or organised, coded, and grouped into themes based on objectives. Integration was when qualitative observations were used to explain or qualify quantitative patterns. The study did not complete a correlation or regression test between drug abuse and stress levels. Consequently, this article reports the second objective descriptively and does not state that drug abuse caused stress or that the variables had a statistically significant relationship. This analytical boundary was kept to ensure that conclusions are based on the evidence.

3.7 Ethical Considerations

Ethical approval was obtained from the Masinde Muliro University of Science and Technology Institutional Scientific and Ethics Review Committee, and a research licence was obtained from the National Commission for Science, Technology and Innovation. Consent received from the appropriate education authorities and schools involved. Learners were minors, and drug abuse is a sensitive issue, so participation was voluntary, and learner assent was obtained, as well as appropriate institutional or parental authorisation; respondents could withhold answers from questions that caused discomfort. Questionnaires recorded no names or any admission numbers. Interviews and documents were treated with confidentiality, and results were aggregated and presented. Student discomfort and/or disclosing a need for assistance can be referred to school guidance and counselling services. These minimised the chance of getting caught, punished, and stigmatised and helped enable a more honest response.

IV. FINDINGS & DISCUSSION

4.1 Response Rate and Characteristics of Learners

A learner response rate of 98.0% was achieved from the sampled 387 Form Three learners out of 395 respondents. The 12 principals, 12 teacher counsellors and the County Quality Assurance and Standards Officer were involved. This high return minimised the risk of results being skewed by high levels of non-response and helped to incorporate learners' and institutional voices. Most learners were aged 17–19 years (77.8%), 16.0% were above 19 years, and 6.2% were aged 15–16 years. The male learners formed 67.7 % of the sample and the female learners 32.3%. The majority of the respondents (87.6%) were from day schools, with the rest from boarding, mixed boarding, national, extra-county, county, or sub-county schools. It is important to consider the dominance of day schools in the interpretation of access, as the learners were going back and forth between school and the community setting every day.

When asked whether they had used drugs other than those required for medical reasons, 110 learners (28.4%) answered yes and 277 (71.6%) answered no. This is an indicator that more than a fourth admitted to non-medical use. It does not differentiate occasional experimentation from chronic abuse, but there was enough of a problem to warrant substance-specific and stress-related analysis.

Table 1: Response Return Rate

Respondent Category	Targeted Sample	Responses Received
Form Three Learners	395	387
Principals	12	12
Counselors	12	12
CQASO	1	1
Total	420	412

Table 2: Demographic Characteristics of Secondary School Learners

Demographic Characteristics	Categories	Frequency	Percent
Age in Years	15-16Years	24	6.2
	17-19 Years	301	77.8
	Above 19 Years	62	16.0
	Total	387	100.0
Gender	Male	262	67.7
	Female	125	32.3
	Total	387	100.0
Type of School	Boarding	3	.8
	Mixed boarding	22	5.7
	Day school	339	87.6
	National School	2	.5
	Extra County School	4	1.0
	County School	8	2.1
	Sub County	9	2.3
	Total	387	100.0

Have you used drugs other than those required for medical reasons	Yes	110	28.4
	No	277	71.6
	Total	387	100.0

4.2 Objective One: Prevalence of Drug Abuse

4.2.1 Prevalence of Specific Substances

The independent study variable was drug abuse, which was broken down into alcohol, cigarettes, kuber, shisha, miraa, marijuana, weed, intoxicated food, heroine, cocaine, and inhalants. Table 1 shows that alcohol was the most frequently reported substance at 46.5%, followed by marijuana at 39.3% and miraa at 38.8%. Black marijuana, 19.4%, and cigarettes, 17.6%, were reported. Inhalants, weed-infused foods, and kuber were less prevalent, but still present. The lowest percentages were cocaine and heroin; however, their use among school learners is no laughing matter due to dependence, health, and legal issues.

The ranking suggests that socially more visible these substances took control of the pattern, as well as locally available and cheap. Alcohol may be available both legally and illegally, and miraa may be accepted in some places as a cultural or commercial practice. Marijuana can spread worldwide in peer networks, community networks, and can be disguised in food and beverage items. The finding does not mean that every reported user was a frequent user, but it demonstrates that prevention cannot be restricted to one substance or to conventional smoking and drinking.

Table 3

Prevalence of Drug and Substance Use among Learners (N = 387)

Substance	Used, n (%)	Not used, n (%)
Alcohol	180 (46.5)	207 (53.5)
Bhang/Marijuana	152 (39.3)	235 (60.7)
Miraa (Khat)	150 (38.8)	237 (61.2)
Shisha	75 (19.4)	312 (80.6)
Cigarettes	68 (17.6)	319 (82.4)
Inhalants	35 (9.0)	352 (91.0)
Weed cookies/cakes	33 (8.5)	354 (91.5)
Kuber	27 (7.0)	360 (93.0)
Cocaine/white powder	17 (4.4)	370 (95.6)
Heroin	16 (4.1)	371 (95.9)

There was a high prevalence of alcohol consumption, marijuana use, and consumption of miraa (an indigenous herb), which was significantly higher than that reported in some Kenyan and multi-country school surveys. No data from other studies have been reported, for example, Ndeti et al. (2010), who found moderately low usage in a Kenyan secondary school in rural areas. The disparity can be due to local access, the high percentage of day-school students, the timing of when the data were taken, and whether “use” included experimentation. The study, therefore, contributes localised evidence rather than a national estimate.

The trend, however, aligns with Shuro and Waggie (2024), who found that alcohol, cigarettes, and marijuana were prevalent among South African high school learners. This also aligns with Ochieng (2022), who found alcohol and cannabis use among secondary school students in Tanzania. The commonality across contexts validates the emphasis on alcohol and cannabis, while the strong mention of miraa further points to a need for Kenyan and regional specificity.

4.2.2 Prevalence across Age and Gender

All age groups had substance use on the list. 70.8% of all 24 learners aged 15-16 years reported using alcohol, and 58.3% reported using miraa. These high percentages must be interpreted with care, as this was the smallest age group, but they do suggest that initiation may take place before late adolescence. Because there were more students in the 17–19 age group, the largest number of users was found in this age group. Elevated percentages for marijuana, alcohol, miraa, kuber, and inhalant use were reported for learners older than 19 years, indicating that possible cumulative exposure and a more independent lifestyle may increase risk.

The age pattern is consistent with the developmental explanation that experimentation can start as early as the age of 19 and diversify, especially as age increases. Steinberg (2008) humanised that neurodevelopment plays a role in adolescent risk-taking, as adolescents have an increased sensitivity to rewards and are becoming better at self-regulating. Thus, the findings suggest that prevention should start at pre-form three to be developed in an age-appropriate manner

for the older learners. In early prevention, refusal skills and accurate risk information need to be highlighted, with screening, counselling, and referral being included in interventions for older learners.

Male learners were more likely to speak about substance use for nearly all substances. Forty-four per cent of males and 31.4 percent of females reported alcohol use. A total of 46.6% of males and 43.5% of females reported cannabis use; 24.0% of females and 28.8% of males reported miraa use. The percentage of users was small, but cocaine was found to be slightly higher for females. These findings are suggestive of the need to increase attention to male exposure to halt and prevent drug use, while not thinking in purely masculine terms about drug use.

Table 4

Selected Substance Use by Gender (N = 387)

Substance	Male (n = 262)	Female (n = 125)
Alcohol	133 (50.8%)	47 (37.6%)
Miraa (Khat)	114 (43.5%)	36 (28.8%)
Bhang/Marijuana	122 (46.6%)	30 (24.0%)
Shisha	56 (21.4%)	19 (15.2%)
Cigarettes	48 (18.3%)	20 (16.0%)
Inhalants	27 (10.3%)	8 (6.4%)
Cocaine/white powder	10 (3.8%)	7 (5.6%)
Heroin	12 (4.6%)	4 (3.2%)

The relatively high male prevalence is consistent with observations by Adebisi et al. (2010) in sub-Saharan Africa, which showed that young males consume more tobacco. Atwoli et al. (2011) also found higher substance use among male students in Western Kenya. These may include the gendered nature of mobility, societal acceptance of risky behaviour on the part of men, and exposure to peers. The high alcohol, miraa, and marijuana intake by female learners, however, presents a reality that interventions need to be inclusive and confidential.

4.2.3 School Context, Accessibility, Sources, and Reasons

Day schools had the highest absolute number of users for the majority of substances, given that they accounted for 87.6% of the sample. The percentages using alcohol amongst the day-school respondents were 46.3%, marijuana 41.9%, and miraa 40.1%. Also, remarking on selected substances, noticeable percentages were recorded in the mixed boarding and sub-county schools. Direct comparisons across the different school categories are restricted by small numbers in a few categories and should not be seen as evidence of a drug use effect caused by a given school type. The findings rather focus attention on the intertwining of school supervision and community exposure.

Perceived accessibility was similar to the pattern of prevalence. The difficulty scores were lower for alcohol, cigarettes, miraa, and marijuana compared to heroin, cocaine, and cannabis-infused foods. Around 27.6% said that miraa was very easy to buy, 24.0% of the respondents answered the same with respect to alcohol, and 24.0% gave the same response with regard to marijuana. Over half stated that heroin and cocaine were very hard/could not be obtained. These answers suggest that targeting of preventative measures should be based on those substances that are most accessible in daily life, but that substance control surveillance should be kept on substances that are less commonly used.

Only those learners who answered the source and reason questions in such a way that they were deemed as valid responses were used for those analyses. Among 45 source responses, friends and peers accounted for 22.2%, bars and clubs 17.8%, villagers or community members 15.6%, and sellers or dealers 13.3%. Markets or centres also accounted for 13.3%. A few people referred to school staff, security staff, house or other sources. The distribution reveals that it was not only in the school compound that the supply was set, but also in social and community networks.

When asked why they used the products, 116 of these respondents gave valid answers, with a majority that expressed peer pressure as the main reason (32.8%). This was followed by stress – 21.6% and, depression – 11.2% and bad company – 11.2%. Lack of guidance, idleness, poor role models, pleasure seeking, poverty, and media influence were also stated. These findings prove that individual curiosity is not the only factor responsible for drug abuse. It represents social reinforcement, emotional stress, free time and environmental accessibility.

Table 5

Leading Reported Sources and Reasons for Drug Use

Category	Response	Frequency	Percentage
Source (n = 45)	Friends/peers	10	22.2%
Source (n = 45)	Bars/clubs	8	17.8%
Source (n = 45)	Villagers/community	7	15.6%
Source (n = 45)	Sellers/dealers	6	13.3%

Source (n = 45)	Market/centre	6	13.3%
Reason (n = 116)	Peer pressure	38	32.8%
Reason (n = 116)	Stress/depression	25	21.6%
Reason (n = 116)	Bad company/groups	13	11.2%
Reason (n = 116)	Mass-media influence	7	6.0%
Reason (n = 116)	Idleness/leisure	6	5.2%

Percentages use the valid responses to each open-ended item, not the full learner sample.

Peers are prominent, which is consistent with social learning theory. Certain behaviour changes are more likely to be attempted and maintained when models are available, it is easy to access, and the social approval seems to outweigh the perceived risk. Peer substance use is likewise an important correlate among Nigerian adolescents, as found by Lawal et al. (2025). The current study provides evidence that peers were an influence and were also reported as a source of supply. Stress and depression were the second leading cause found, thereby adding the psychological aspect, which is not addressed in many prevalence studies. It advocates for service reduction as well as coping-skills training and readily available mental health care. If the punishment is only taken, that might deter learners who may have emotional problems coupled with substance use.

4.3 Drug Abuse and Stress-Related Experiences

4.3.1 Reported Stress and Behavioural Indicators

The dependent outcome domain was created from stress-related experiences. When asked about observable stress among drug-taking learners, the majority said none; while fewer than half said none when asked about concentration and/or physical symptoms and withdrawal from important activities, the vast majority said none when asked about preoccupation with getting drugs. Overall, 64.1% said that the pupils who consumed drugs looked stressed. Furthermore, 62.3% said they were preoccupied with obtaining drugs, and 68.2% said they used drugs despite stress or having memory problems.

School trouble and concentration were the most copiously answered. The majority (73.4%) indicated that learners who use drugs were poor learners and caused problems, and 71.1% indicated that learners who use drugs were not able to concentrate, experienced shakiness, restlessness, nausea, seizures or sensed things that were not present. An additional 60.7% said that affected students decreased engagement in activities that were once important or of interest to them. These indicate that both emotional, cognitive, behavioural, and physical consequences have been reported.

The indicators are to be viewed as perceptions of the learner and self-report, and not as clinical diagnoses. Items sometimes involved more than one symptom, and the cross-sectional design did not investigate whether use preceded stress. However, the uniformity between various indicators gives real-life examples of leads that learners with the characteristics of substance abuse are in need of psychological evaluation, and not simply disciplinary action.

Table 6

Selected Stress-Related and Behavioural Indicators (N = 387)

Indicator	Yes, n (%)	No, n (%)
Learners who use drugs appear stressed	248 (64.1)	139 (35.9)
Preoccupation with obtaining drugs	241 (62.3)	146 (37.7)
Poor academic performance and trouble at school	284 (73.4)	103 (26.6)
Withdrawal from important activities	235 (60.7)	152 (39.3)
Continued use despite stress or memory problems	264 (68.2)	123 (31.8)
Concentration, restlessness, or related symptoms	275 (71.1)	112 (28.9)

The indicators are descriptive and do not constitute a causal or correlational test.

4.3.2 Psychological Distress and Beliefs about Stress Relief

An independent psychological distress item included learner-reported experiences of three or more symptoms during the year prior to the survey: extreme mood swings, social isolation, significant changes in eating or sleeping, depression, thoughts of suicide, hopelessness, suicidal attempts, acting in a way to hurt yourself, or thinking about suicide. Reaching this descriptive threshold were 142 learners (36.7%), and 245 learners (63.3%) did not. Proportion is very high, suggesting a significant need for school-based mental health screening and intervention, but not necessarily a mental health disorder. The case study analysis of learner beliefs provided some potentially important mechanisms. Overall, 35.4% thought drug abuse helps to cope with stress. Among other items, 47.8% agreed/strongly agreed that

students in their school thought that drug abuse decreased stress levels. These beliefs can lead to self-medication, as the initial experience of relaxation or disinhibition might be confused with successful coping despite the consequences of later concentration difficulties, conflict, withdrawal, or dependency.

The combination of distress and perceived relief produces a cycle that schools must break. Students under pressure might turn to drugs for a quick fix, might be in with their friends and then could be subjected to further academic and behavioural repercussions, further fueling pressure. This pattern is called the Person–Environment Fit Model, which means a lack of fit between the person's demands and coping resources. Alternatives that enhance fit through strengthening of counselling, peer support, family communication, and meaningful co-curricular experiences. The findings are consistent with those of Frade et al. (2013), who noted increased stress symptoms in adolescent regular drug users. They also reflect those of Elom et al. (2025), which correlated drug abuse with mental health disorders among secondary school students in Nigeria. The current study provides evidence and reveals the beliefs, suggested by the county, that may alternatively be ways of learners interpreting the use of drugs as coping strategies. But at present, the evidence is only descriptive, rather than inferential as are the studies listed above.

This is also aligned with Mutiso et al. (2022), who reported that Kenyan students had co-occurring substance-use and mental-health issues. Okanga et al. (2025) stated that students in Universities in Vihiga were using drugs because of stress and anxiety. The current study indicates that integrated intervention should be introduced prior to university and be integrated in the school guidance system since similar themes were identified among secondary school learners.

Table 7

Psychological Distress and Selected Perceptions (N = 387)

Indicator	Frequency	Percentage
Reported three or more psychological distress symptoms	142	36.7%
Believed drug abuse makes stress easier to manage	137	35.4%
Agreed/strongly agreed that learners believe drugs reduce stress	185	47.8%
Reported that drug-using learners appear stressed	248	64.1%

4.3.3 Qualitative Findings and Integrated Interpretation

Learner responses were reinforced by interviews with school personnel. Affected learners were described by one headteacher as being ‘low and stressed up.’ A teacher counsellor indicated that some learners appeared to have low morale and came to school under strain. However, the participants also associated drug use with a lack of concentration, withdrawal, behaviour and not being able to follow normal school routines. Although these observations did not give a clinical diagnosis, one could see that there were changes related to stress that were noticeable to adults who were working with learners in terms of their welfare. The percentages in the quantitative results were further supported by qualitative findings. Appearing stressed as such was not just a feeling, but manifested itself through low morale, diminished energy, isolation from others, lack of concentration or a disturbance in behaviour. For this integration, it is a good example of convergent design. The survey determined the percentage of indicators reported and the interviews demonstrated some insight into how the indicators were observed in the life of the school.

The contribution to existing knowledge is therefore threefold. First, the study describes a comprehensive pattern of substance use in a County with documented drug abuse, but lacking a comprehensive profile. Second, it demonstrates that peer supply, peer pressure and motives in relation to stress factors all function together, instead of separately. Thirdly, it obviously restricts the claim to descriptive co-occurrence, and it determines the inferential analysis that is needed in the next research. One methodological limitation is the lack of a complete correlation or regression between drug abuse and stress, which does not detract from the results. Using descriptive evidence, priorities can be identified, screening can be informed and hypotheses can be developed. Future research should include validated stress measures, a distinction between frequency and intensity of drug use, correlation, regression, or longitudinal designs. These would identify if stress causes use, or if use causes subsequent distress, or if stress and use are mutually reinforcing.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The study established that drug abuse was prevalent among the sampled secondary school learners in Vihiga County. The most commonly reported substances were alcohol, marijuana, shisha, cigarettes, inhalants, cannabis-infused foods, kuber, cocaine, and heroin. No differences were found in use by year level, sex or setting. Males reported using more for most substances and peer and community networks had been identified as important routes of access.

The concern for stress-related findings emerged as significant with regard to psychological and behavioural factors. The majority of responses thought that drug-using learners seemed stressed; they were more likely to continue to use drugs when stressed or due to memory loss, they were likely to become less involved or to avoid participating in significant activities, and they had trouble concentrating or related indicators. More than one-third reported three or more psychological distress indicators. Thus, the paper brings to a conclusion that a unified approach of drug use prevention and mental health support is needed. Does not finish by saying that drug abuse brought about stress or that there was a significant statistical association because the appropriate inferential test was not carried out.

5.2 Recommendations

Drug prevention is best started at an appropriate age in primary schools, and continued throughout adolescence in Upper secondary school. Programmes should not narrowly target the use of one substance, but be reflective of alcohol, marijuana, miraa, tobacco, edibles (as a new emerging product) and inhalants. Prevention messages need to make a distinction between experimentation and repetition and question how substances might provide consistent stress relief. Guidance and counselling departments should regularly carry out a confidential psychosocial assessment at least once a year and arrange for a structured follow-up for learners with more than one distress indicator. Teacher counsellors need training in early identification, brief supportive intervention, referral to suicide risk, and substance-use screening. School responses must support confidentiality and must not be stigmatising of those seeking assistance.

Peer educators need to know how to defy pro-drug attitudes, identify any indicators of drug use and call on an adult for help instead of handling severe instances by themselves. There needs to be a joint monitoring mechanism for bars, markets, informal outlets, and other access points around schools by parents, local administrators and community policing structures. Day schools must be treated with extra special care since pupils are constantly transferred between community settings on a daily basis. Education authorities need to improve the linkage between schools, health facilities, mental health professionals and rehabilitation services. In future research, more objective measurements of stress should be employed with the help of inferential analysis to determine direction and amount. Useful longitudinal studies would be able to determine if increased stress leads to drug use, if increased drug use leads to an increase in stress, or both processes happen at the same time.

Declaration of Interest

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