**ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH SCIENCE**

**SCHOOL OF NURSING AND MIDWIFERY**

**DEPARTMENT OF PEDIATRICS CHILD HEALTH AND MIDWIFERY**

# PREVALENCE, RISKFACTORS AND HEALTH IMPACTS OF SUBSTANCE ABUSE AMONG STREET CHILDREN IN ADDIS ABABA, ETHIOPIA 2026 G.C

**By: - Henok Tafere (BSc)**

Primary advisor: - Dr. Rajalakshmi Murugan (PhD, Associate Professor)

Co advisor: - Mr. Yosief Tsige (MSc, Assistant Professor)

A THESIS TO BE SUBMITTED TO ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH SCIENCE, SCHOOL OF NURSING AND MIDWIFERY, DEPARTMENT OF PEDIATRICS CHILD HEALTH NURSING AND MIDWIFERY IN PARTIAL FULFILLMENTS OF THE REQUIREMENTS FOR MASTER OF SCIENCE (MSc) DEGREE IN PEDIATRIC AND CHILD HEALTH NURSING

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# Approval sheet

This is to certify that thesis prepared by Henok Tafere entitled: Prevalence, risk factors and health impacts of substance abuse among street children in Addis Ababa, Ethiopia 2026 E.C and submitted in partial fulfillment of the requirement for the master of science degree (MSc) in pediatric and child health nursing complies with the regulation of the university and meets accepted standards with respect to originality and quality

Primary advisor: - Dr. Rajalakshmi Murugan (PhD, Associate Professor)

sign_____date_____

Co advisor: - Mr. Yoseif Tsige (MSc , Assistant Professor)

sign_____date_____

Examiner

1. Dr. Fikadu Aga (PhD, Associate Professor)

sign_____date_____

2. Dr. Erdaw Tachbele (PhD, Assistant Professor)

sign_____date_____

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## LIST OF ACRONOMYS AND ABBREVATION

| | |
|---|---|
| ADHD | Attention Deficit Hyperactive Disorder |
| AOR | Agent Of Record |
| ASPD | Anti-Social Disorder |
| ETB | Ethiopian Birr |
| SPSS | Statistical Package for Social Science |
| PD | Parkinson's Disease |
| PTSD | Post-Traumatic Stress Disorder |
| SUD | Substance Use Disorder |
| UK | United Kingdome |
| UN | United Nations |
| UNICEF | United Nations Children's Emergency Fund |
| WHO | World Health Organization |

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# SUMMARY

**Introduction:** Street youth are generally categorized into children on the street (who work but return home), children of the street (who live on the street without family contact), Psychosocial stress, chronic hunger, and violence of the street environment frequently drive street-involved children to use accessible substances like volatile inhalants (glue/benzene) and khat as survival coping mechanisms. Where toxic chemical exposure and addiction directly trigger acute gastrointestinal and respiratory pathology, cognitive deficits, and aggressive social behaviors.

**Objective:** This study aimed to assess the prevalence, risk factors, and health impacts of substance abuse among street children in Addis Ababa, Ethiopia.

**Methods:** A community-based cross-sectional study was conducted among 626 street children across selected sub-cities from February 15 to March 5, 2026. A multistage sampling technique followed by consecutive sampling was employed. Data were collected via interviewer-administered questionnaires by trained nurses, entered into Epi Info 7.2, and analyzed using SPSS 27. Binary logistic regression was used to identify factors associated with substance abuse ($p < 0.05$, 95% CI).

**Results:** The overall prevalence of substance abuse was 62.6%. The most commonly abused substances were inhalants (80.6%), khat (67.1%), alcohol (44.4%), and cigarettes (44.1%).the strongest independent predictors significantly associated with substance abuse were using substances to cope with emotional problems AOR = 3.012 (1.702, 5.330), finding it difficult to refuse substances when offered AOR = 2.835 (1.396, 5.757), engaging in risk-taking or dangerous activities AOR = 2.367 (1.169, 4.795), and believing that substances help them survive street life AOR = 2.127 (1.053, 4.293)The most prevalent physical health impacts were stomach pain (51.0%), while difficulty concentrating (39.5%) was the leading psychological impact. Socially, physical altercations (29.7%) and engagement in illegal activities (22.7%) were highly reported.

**Conclusion and recommendation:** Substance abuse is a severe public health crisis in Addis Ababa, affecting nearly two-thirds (62.6%) of street children. The strong association with past trauma and easy substance access underscores the urgent need for multi-sectoral interventions focusing on trauma-informed rehabilitation, psychological support, and stricter regulation of volatile inhalants.



**Keywords:** Adolescent Street Children, Substance Abuse, Risk Factors, Health Impact, Addis Ababa.

# 1 INTRODUCTION

## 1.1 Background

Street children represent one of the most vulnerable populations globally, living and working in environments characterized by poverty, neglect, abuse, and social exclusion, with limited access to education, healthcare, and social services (1, 2).

These children are defined as those for whom the street has become their habitual place of residence or primary source of livelihood, often lacking adequate parental care or supervision (1).

United Nations Children's Emergency Fund (UNICEF) classifies street children into two categories: children on the street, who work on the streets but maintain occasional family contact, and children of the street, who live permanently on the streets with minimal or no family contact(1). Both groups are highly exposed to unsafe environments and health-risk behaviors, which increase their vulnerability to multiple physical, psychological, and social problems. Street life exposes children to emotional trauma, physical abuse, exploitation, and neglect, all of which often contribute to early initiation of substance use as a coping mechanism (2, 3).

According to the sources of United Nation (UN), there are up to 150 million street children in the world today. Chased from home by violence, drug and alcohol abuse, the death of a parent, family breakdown, war, natural disaster or simply socioeconomic collapse, many destitute children are forced to eke out a living on the streets, scavenging, begging, hawking in the slums and polluted cities of the developing world(4, 5).

InEthiopia's recent report by the Ministry of Labour and Social Affairs, the number of homeless people in Addis Ababa was around 24,000 in 2018; approximately 10,500 street children and 13,500 homeless adults(6).They are at high risk of sexual and physical exploitation(6). Evidence showed that 15.6% of the street children are practicing risky sexual activity, and 61.6% of the street children face health problems (7) .

The nature of continuous exposure to the street and its associated lifestyles makes street children vulnerable to the use of psychoactive substances. Street children's Substance use often commences with alcohol, tobacco and inhalants which are legal and easily accessible in most

countries. World Health Organization (WHO) estimates that globally, 25–90% of street children indulge in substance use (8).

Substance abuse among street children has become a major public health concern. Studies from different countries show that between 30% and 70% of street children use at least one psychoactive substance, including alcohol, tobacco, khat, cannabis, inhalants, and other illicit drugs (3). In large urban centers, prevalence can be as high as 65.4% with many children starting substance before the age of 15(9)For many of these children substances serve as temporary escape from hunger, cold, fatigue, stress, emotional pain, or fear associated with their living conditions(8, 9).

Several factors contribute to substance abuse among street children. Peer influence is one of the strongest factors, as children living in street groups are often pressured or encouraged to use substances, with 86.5% of children reportedly initiating substance use due to peer influence (10). Family-related factors also play important role, such as poverty, parental neglect, (11). In addition, structural and environmental factors, including prolonged exposure to street life, easy access to substances, lack of educational opportunities, and inadequate social protection mechanisms, significantly increase the risk of substance abuse(11, 12).

In Ethiopia, the number of street children is increasing due to rapid urbanization, rural-to-urban migration, unemployment, family disintegration, and poverty (10, 12).Research conducted in cities such as Addis Ababa, Jimma and Hawasa shows that substance use among street children is almightilyhigh, with prevalence rates is 30.8% to40.9% respectively (10, 13).

The health impacts of substance abuse among street children are extensive and multidimensional. Physically, children who use substances are more likely to experience malnutrition, stunted growth, respiratory infections, gastrointestinal problems, burns, injuries, and a higher Mentally, substance use is strongly associated with depression, anxiety, emotional instability, attention problems, substance dependence, and suicidal ideation, with studies reporting that 40% of street children who use substances suffer from mental health problems (7,9).

Socially and behaviorally, substance abuse contributes to early sexual initiation, risky sexual behavior, transactional sex, involvement in criminal activities, school dropout, and long-term social exclusion (4,10)

## 1.2 STATEMENT OF THE PROBLEM

Children living on the streets represent one of the most vulnerable populations and oppressed groups worldwide. Their daily lives are exposed to harsh conditions such as poverty, abuse, exploitation, and have very limited access to medical care and social services. According to the United Nations Children Fund, more than 150 million kids across the globe are estimated to live or work on the streets, and most of them are in low- and middle-income countries(1).

Living on the streets, exposes children to numerous health-risk behaviors, among them, substance abuse is one of the major and rapidly increasing public health concern. Evidence indicates that substance abuse among children living on the streets is much more prevalent than children living in a stable family environment. Studies from resource-constrained settings revealed that 30%-50% of street children are reported to have used at least one psychoactive substance, which may involve alcohol, tobacco, cannabis, and inhalants. (1, 3, 11)Research conducted in urban area of Africa and Asia have also announced prevalence rates reaching to as high as 40%-70%, in Bangladesh study 50% of street children are reported to have used at least one psychoactive substance, with initiation often occurring before the age of 15 years(8, 11).

For many of street children, substance use serves as coping mechanism from the miserable condition with which they struggle to suppress hunger, reduce stress, endure cold, and heal the emotional hurts resulting from the life of the street (11).

Multiple factors push the street children towards substance abuse. Peer influence within street children plays particularly strong role, and research has shown that the percentage of street children who started drug use because of the influence of their peers is 55% in Jimma town (10, 14). Family related factor including poverty, parental neglect, domestic violence, parental substance abuse, and family breakdown not only make one more vulnerable to migration to the streets but also increase the risk of substance abuse greatly (15).

The effects of substance abuse in street children penetrate their health on all three aspects; physical, mental, and social wellbeing. On the physical side, street children who use substances are more prone to malnutrition, respiratory infections, injuries, burns, gastrointestinal disorders, and in general, their immune system is weakened so that they are more likely to get infectious diseases such as tuberculosis and HIV/AIDS (3, 16).

From mental health perspective substance abuse is closely linked with depression, anxiety, emotional instability, and suicidal thoughts, in line with which the research shows that the percentage of substance-using street children who have mental health issues is around of 45% in Ethiopia, 40% urban Ethiopia settings(16, 17).Socially, substance abuse contributes to risky sexual behaviors, participation in transactional sex, getting involved in criminal activities, violence, and eventually social exclusion in the long run(18).

Despite high prevalence and severe consequences of substance abuse among street children, most existing studies have focused primarily on either prevalence rates or associated factors. There is limited evidence that comprehensively addresses the combined physical, mental and social health impacts of substance abuse among this population.

Such a serious gap in the crucial evidence needed greatly hampers the efforts to nurses, healthcare providers, policymakers, and non-governmental organizations in creating decisive, locally relevant programs for prevention and rehabilitation

## 1.3 SIGNIFICANCE OF THE STUDY

Addis Ababa's street children face critical substance abuse problems which threaten their health and well-being. Though growing globally, Ethiopia has limited data available to determine how substance abuse among its street children affects their health. This limited data limits government decision-makers from developing effective policies, services, and evidence-based programs to combat this issue. Therefore, this research aims to provide a better understanding of substance abuse among street children in Ethiopia and targeting solutions to addressing the issue more effectively.

The data generated from this investigation will serve as an important resource for academics and researchers who focus on the overall health of children, and on social work and care of marginalized children, as it will allow them to gain information about child substance use and to contribute to our overall understanding of these children and the need for targeted policy development.

These research findings will demonstrate that street children are vulnerable and face health risks that require urgent attention, and that more intervention is warranted to provide adequate support. Additionally, identifying what drives street children to use substances will help develop targeted programs to work with social workers, NGOS and community-based organizations in both prevention and rehabilitation.

Programs developed from this information should be able to reduce the incidence and severity of health complications, enhance psychosocial wellbeing and facilitate social engagement of affected street children. The study will also shed light on the consequences of substance abuse and the importance of family support in preventing a child from engaging in risky behaviors.

# 2 LITERATURE REVIEW

## 2.1 Prevalence of Substance Abuse

Substance abuse among street children is one of the major public health issue, in both developed and developing countries. Evidence from North America, particularly in Canada(cannabis 85% cigarettes 81.2% alcohol 80.3% illegal drugs 57.3%)and (19, 20) A national study in Canada revealed that nearly 63% of street-involved youth had used at least one psychoactive substance in the past year(20).

Similar patterns have been documented in Latin America. Research conducted in Brazil found that Over 60% had used substances in the preceding year. Alcohol and marijuana were the most common substances, more than 25% of the street children reported using tobacco and alcohol regularly, while 40% habitually used of inhalants (21).

In Africa, substance use rates among street children are often exceptionally high. In Mombasa, Kenya, a cross-sectional study revealed 56% of respondents had used inhalants such as glue and 50% had used non inhalants like miraa, bhang and alcohol. About 43% of the surveyed youth reported poly substances use, indicating a tendency to combine multiple substances (22).

The current use of psychoactive substances among those surveyed was displays characteristics of street-involved children in youth who reported using any substance, inhalants, or any non-inhalant. Inhalant (or glue) use was reported by 56% of respondents, while non-inhalant use was reported by 50%. Of non-inhalants reported, other was the highest (35%), followed by miraa (32%), bhang (27%), and alcohol (12%). Of youth who reported glue use, 71% also reported using a non-inhalant; of youth who reported non-inhalant use, 79% reported also using glue. Approximately 40% of all respondents reported using both inhalants and non-inhalants, and 43% reported using more than one substance (22).

Comparable findings have been observed in Nigeria, where a 2018 study reported substantial level of substance use among street children; heavy use of alcohol, nicotine, and cannabis was reported by 35.9%, 25.5%, and 12.1% of respondents, respectively. (23).

Research conducted in South Africa on street children residing in Pretoria revealed a 93.4% lifetime prevalence of substance use. Cannabis was most commonly at 90.1%, followed by inhalants (glue) 67%, and alcohol at 65.9%. The majorities of the substances used are generally

inexpensive, readily available, and consist of chemicals such as industrial adhesives, petrol, and cigarette tobacco(24).

Study form Ethiopia, support the high prevalence of substance use among street children. A study in Addis Ababa showed that 65% of street children had ever used psychoactive substances. The most being was glue sniffing 45%, khat chewing 35%, alcohol consumption30%, and cigarette smoking 25%(25, 26). A community-based cross-sectional study in Jimma town reported the prevalence of substance users30.8%, while in Bahir Dar city; the prevalence was as high as 55.8% (14, 27). Children who had been on the street for more than one year were found to have a higher prevalence 75% compared to the newly arrived children 40% (27).

## 2.2 Risk factor for substance abuse

### 2.2.1. Socio-Demographic Factors

In India, Kenya, and have found that male street children have a higher propensity of using substances are males than females. The prevalence of substance use among males was 60%, while among females; itwas 40% (2, 6, 10). Sex was not the only factor; age was also a very important one. In the age range of 10–14 years, the majority of children used to sniff, with the prevalence going up to 50%, whereas, for the age of 15–18 years, most of the adolescents had a history of alcohol and stimulant usage in a range of 65% (2, 5, 12).

Education was pointed out as a very strong protective factor against the possibility of drug use in the mentioned studies in Kenya, South Africa, and Ethiopia. Drug use prevalence among street children who had never been to school was reported to be more than 60%, whereas in children, those who had gone to at least primary school, it was 35% (12–14). The low economic condition has always been linked with a higher possibility of using drugs; generally, such prevalence tends to go beyond 65% (4, 9).

### 2.2.2 Family history of substance abuse

Family history plays a significant role in the development of substance abuse among street children. Study conducted in Canada highlighted that Substance abuse often runs in families, suggesting a genetic predisposition. The risk of developing substance abuse increase if a close family members use drugs, such as parents sibling, has history of alcohol or substance use(20). Around 13% of adolescents in this study reported that their family members used drugs, with an

additional 9% reporting that their family members were still using drugs. Group had family members who used drugs and another 9% had family members who were still using drugs (20).

In various studies conducted in Nigeria, South Africa, and Ethiopia, it was found that children with family history of substance use had a prevalence rate of substance abuse at70%**,** whereas those without such a background had prevalence 40%(23, 24, 27). The prevalence rate was particularly high when mother had a history of substance use, reaching 80% in Ethiopia studies (26, 27).

The overall stability of the family environment, including factors such as parents' separation, domestic violence, neglect, and lack of supervision, was a strong contributor to substance abuse as evidenced in the study of Ethiopia where the affected children presented the prevalence rate 65% for substance abuse (28).

**2.2.3 Environmental factors;-**

An individual’s environment is prominent risk factors for the development of substance abuse. A teen that lacks parental involvement or lives in an abusive home often will turn to drugs and alcohol to cope with their emotions. Teens are faced with peer pressure and can easily be influenced to experiment with substances to fit (25).

A study in Brazil study that peer initiation was common pathway in to substance use, with almost half (48.3%) of street children reporting that their first from friends on the street. Additionally, 52.1%of the participants reported using substances in groups as way of feeling accepted(21). One of the most important determinants of rate of substance use is what children have experienced over the length of time they have been living on the streets(21).

Similarly, studies in India demonstrated a clear relationship between the length of time spent on the street and severe substance use. Street children who had been living on the streets for 1-5 years had a 65.4% prevalence of substance dependence, while this increased to 82.1 for those who had been on the streets for more than five years (29).

Research in Kenya study also emphasized the importance of peer networks, with 89.2% of children who participated in the study reported that they had used substances as a result of their friends using them. Additionally, the majority(76.5%) of participants in the study reported that they were first offered substances by older per-perience street children(22). In South Africa, a

study found that peer influence and demonstrated that adolescents who believed that most of their peers were substance users were 5 times more likely to be substance users themselves. The perception of peers substance use was one of the strongest predictors of substance use initiation (24).

In Nigeria, the prevalence of substance use among street children increased significantly after spending time on the streets. Initially, 61.5% of children who had been the streets for 1-4 years were substance users, and this increase to 85.3% after 5 years, with many of them being poly substance users the study found that there was a substantial increase in the number of children on the streets who were substance users(23).

A study in Ethiopia, found that themajority53.6% of those surveyed agreed that ‘peer pressure ‘is the number one reason that influenced the min to substance use. Older street youths were noted as often being role models to younger street youths in substance abuse for survival purposes(30).

### 2.2.4 Personal trait factor

Personal traits and psychological factors also play a significant role in substance abuse among street children. In Canada, studies have shown that 63% of teens who have low self-esteem are more prone to substance use (31).in the Down in the United States (US), about 71% of individuals with social anxiety turn to alcohol to deal with it (31). In Portugal, 54% of teens who like taking risks end up trying substances (32).

Trouble handling emotions also plays a big part; about 60% of people in studies who have substance issues say they struggle with their feelings (45). finally, a United Kingdom (UK) study found that 27% of people who use substances deal with their problems in unhealthy ways (2).

Mental health disorders are strongly associated with an increased risk of substance abuse. Studies conducted in Argentina and Pakistan have shown that individuals with mental health disorders such as depression, attention-deficit/hyperactivity disorder (ADHD) or post-traumatic stress disorder, are more likely to turn to Substances as way coping with painful feelings Substances such as anxiety, depression and loneliness, and can make these problems even worse (33, 34) .

Certain mental health conditions, such as Anti-Social Personality Disorder (ASPD) have a 15.5% Substance abuse rate. Bipolar disorder is next at 14.5%. For anxiety disorders it is 4.3%. Post-traumatic stress disorder (PTSD) and ADHD are both associated with Substance Abuse. Any

serious mental illness, such as schizophrenia or any other psychotic illness increases the chances of developing Substance abuse. For some other mental health disorders the rate of Substance abuse is 40-50% versus 4-5% for the general population (35).

### 2.2.5 Social and Psychological Factors

Evidence from quantitative studies indicates that substance abuse is strongly influenced by a range of social and psychological conditions. Social isolation has been identified as one of the most influential factors, with studies from North America reporting that a substantial proportion of substance users associate increased drug use with persistent feelings of loneliness (36).

Family environment also plays a critical role. Research shows that individuals who grow up with parents or siblings who misuse substances face a considerably higher risk of developing similar behaviors, highlighting the intergenerational nature of substance abuse(37) .

Psychological factors further compound this risk. Low self-esteem has been consistently linked with substance use, with studies from Canada indicating that individuals with poor self-image are more likely to rely on drugs or alcohol as coping mechanisms (38). Similarly, children experiencing social anxiety frequently report using substances to reduce distress and manage symptoms, as documented in studies conducted in the United States (39)(51).

Difficulties in emotional regulation are also commonly observed among substance users, particularly within therapeutic populations, where many individuals report turning to substances as a form of self-medication when unable to manage emotional stress effectively (39).

## 2.3 Health Impacts of Substance Abuse among Street Children

### 2.3.1 Physical Health Impacts

Substance abuse among street children presents serious and multifaceted risks to physical health.. Research from India has documented a high burden of health complications among substance-using street children, including liver-related conditions and impaired growth The study revealed that 53 people had headaches, 19 stomach pains, 35 gastrointestinal difficulties, 2 bloody diarrhea and vomiting, 57 respiratory illnesses, 4 liver problems, 2 skin diseases, 3 dental problems, 9 weight loss, and 30 other health concerns. Respiratory problems were the most frequent, affecting 57 people. Other health difficulties included respiratory illnesses, liver problems, skin infections, tooth problems, weight loss, and other health problems.(11, 40).

Similarly, findings from Nairobi reveal that inhalant use among street children is frequently associated with respiratory illnesses and skin infections, largely due to unsafe living environments and poor hygiene (41, 42). In Ethiopia, a significant number of street children have reported untreated injuries linked to substance-related violence, further aggravating their overall health status and limiting access to timely medical care (26).

#### 2.3.2 Mental Health Impacts

The mental health consequences of substance abuse among street children are equally severe. Research consistently shows high rates of anxiety, depression, and post-traumatic stress disorder among street-connected children who use substances (43). In Brazil, many street children reported using substances as a coping strategy for traumatic experiences such as violence, neglect, and chronic homelessness (21).

Comparable findings from South Africa demonstrate a strong association between substance abuse and symptoms of severe depression among street children, underscoring the psychological vulnerability of this group (44). These findings highlight the urgent need for integrated mental health and psychosocial support services tailored to the unique needs of street children.

#### 2.3.3 Social and Behavioral Impacts

Substance abuse also profoundly affects the social functioning and behavior of street children. Studies indicate that substance-using street children often experience heightened social isolation from families and peers, reinforcing cycles of homelessness and dependency (10).

In South Asia, findings suggest that substance-abusing street children are more likely to encounter conflicts with law enforcement, further marginalizing them from formal support systems and social services(45)

Research conducted in Kenya has shown that substance use is frequently linked to engagement in risky and antisocial behaviors, including theft and violence, as a means of sustaining substance dependence(22).These social and behavioral consequences not only compromise immediate well-being but also significantly reduce opportunities for social reintegration and long-term recovery.

# Conceptual Frame Work of the Study

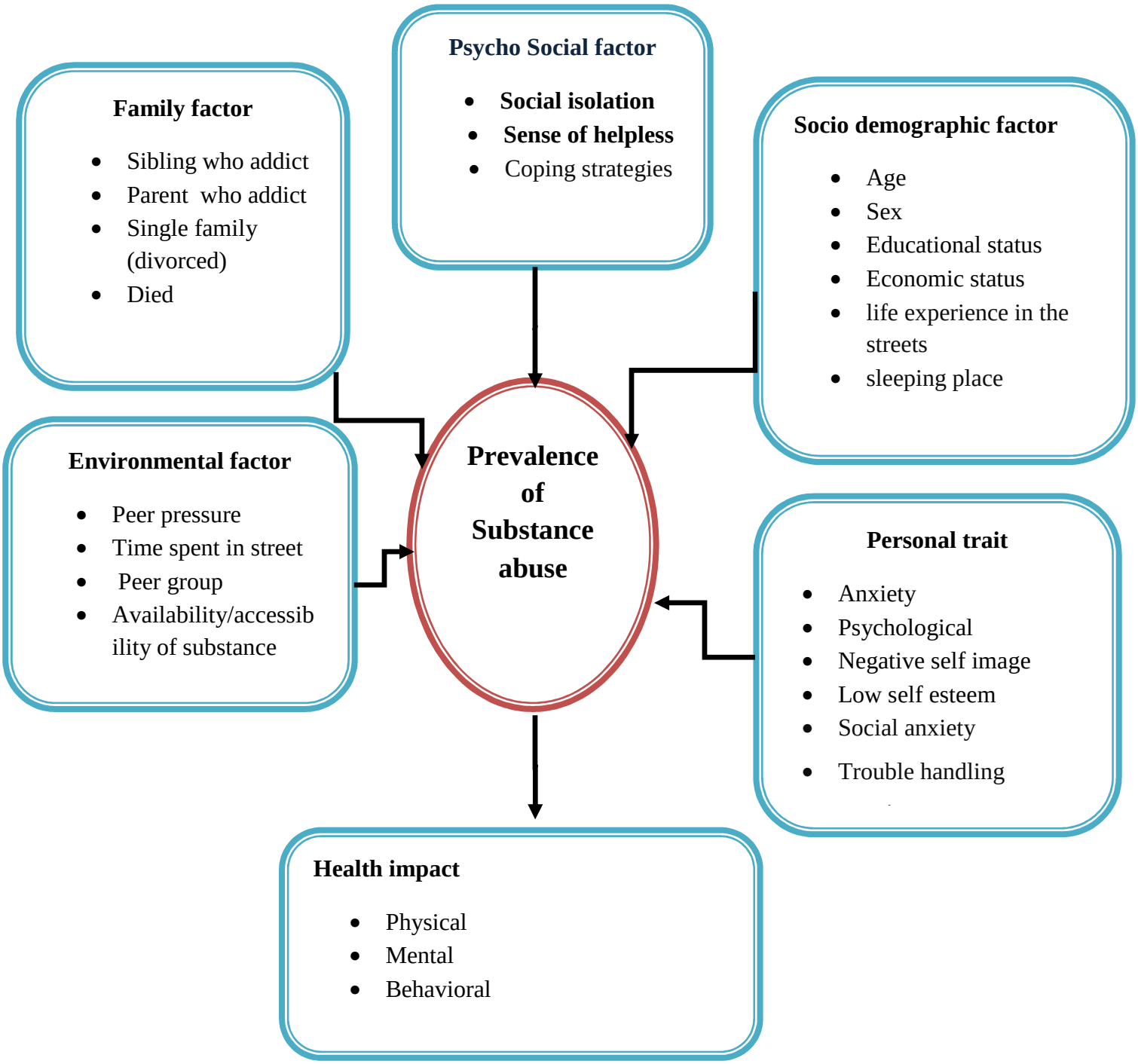



**Figure 5. 1**Conceptual framework for a study adapted from different literatures (15, 19, 29, 32, 34, 41)

# 3 OBJECTIVE OF THE STUDY

## 3.1General Objective

- To assess the prevalence Risk factor and health impact of Substance abuse among Street children in selected sub cities of Addis Ababa,2026

## 3.2Specific Objective

- ✓ To determine the prevalence of substance abuse among street children in selected sub cities of Addis Ababa, Ethiopia
- ✓ To identify the risk factors of substance abuse among street children in selected sub cities of Addis Ababa, Ethiopia
- ✓ To evaluate the health impact of substance abuse among street children in selected sub cities of Addis Ababa, Ethiopia

# 4 MATERIALS AND METHOD

## 4.1 Study Design

Community based Cross sectional study design was conducted for this study with quantitative approach

## 4.2 Study Period

The study was conducted from January to June 2026 G.C

## 4.3 Study Area

The research was being performed in Addis Ababa, the Capital city of the Federal Democratic Republic of Ethiopia. It holds the country's political, economic, and administrative center together and is governed by a special charter. Addis Ababa is divided into 11 sub-cities and 116 woredas and covers around 540 km²; its population is around 5 million**.** The city has been heavily affected by urbanization, rural–urban migration, poverty, and unemployment, all of which are major factors in the rise of street children (46, 47).

Gullele Sub-city is positioned in the northern sector of Addis Ababa. The term "Gullele" refers to a mountain region that is Gullele, which has been known to have settlements on higher grounds. The sub-city area is about 30.2 km², and it is subdivided into 10 woredas accommodating a population of 350,000 and more. Gullele is made up of different types of residential areas, slum settlements, and small businesses. The mingling of economic hardships, population increase, and poor housing in Gullele causes street children and Substance use (46, 47).

Kolfe Keranio Sub-city is located in the western part of Addis Ababa. The term "Kolfe Keranio" comes from two localities that were historically recognized: Kolfe and Keranio, which were initially rural and later incorporated into the city as it grew. The total area of the sub-city is approximately 61 km², which makes it one of the largest sub-cities, and it is further partitioned into 15 woredas for administrative purposes. The population of Kolfe Keranio is estimated to be over 550,000 people. Street children are present in this sub-city because of the high population density, large market areas, transport corridors, and low-income settlements. (46, 47).

Addis Ketema Sub-city is in the central area of Addis Ababa and its name comes from the Amharic phrases meaning “New City,” which in turn reflects its history of being the main urban

settlement during the expansion of Addis Ababa. This particular sub-city is very small considering its area but has an astonishingly high population density. Its total area is around 7.4 km² while the administration has divided it into 10 woredas. The total population of the place is estimated to be over 300,000 residents. The sub-city area comprises besides Merkato, the largest market in East Africa, and a number of transport terminals. These factors make it very likely that a considerable number of street children will be found there since they will be involved in informal economic activities and will also be highly vulnerable to substance abuse (46, 47).

### 4.4 Population

#### 4.4.1Source and Study Population

#### 4.4.2Source population

The sources of population are all adolescent street children at Addis Ababa city.

#### 4.4.3Study population

The study populations are street children living in selected sub city during data collection period.

### 4.5Sample Size Determination

The sample size for this study was determined using the single population proportion formula, based on a previous study conducted in Hawasa town, Ethiopia, which reported a 44% prevalence of substance abuse among street children.(13)

The formula used was:

$$\frac{\left(Z\frac{\alpha 1}{2}\right)^2 P(1-P)}{w^2}$$

Where:

n = required sample size

Z = standard normal deviate at 95% confidence level (1.96)

p = prevalence of street children who use substances (0.44)

d = margin of error (0.05)

Deff= design effect =1.5

$$n = \frac{\left(Z\frac{\alpha 1}{2}\right)^2 P(1-P)}{w^2} n0 = \frac{(1.96)^2 0.44(1-0.44)}{0.05^2} = 378.4$$

n=379

Add 10% non-response rate = 37.9

After adding a 10% non-response rate, the final sample size became:

= 417

417*1.5 = 625.5~ 626

n_final = 626

Thus, a total of 626 street children's were included in the study.

**Proportional Allocation**

Nh = Nh/N = n

Kolfe keranio subcity 626/3000 × 1200 = 250

Gulele subcity 626/3000 × 1000 = 209

Addis ketema subcity 626/3000 ×800 = 167

The calculated sample size (n = 626) was distributed among the three selected sub-cities using proportional allocation based on the number of street children in each area.

The overall population of street children across Kolfe Keranio, Gulele, and Addis Ketema sub-cities was 3000. The allocation for each sub-city was determined by using the proportional allocation formula, where the sample assigned to each sub-city was obtained by dividing the number of street children in that specific sub-city by the total population (3000) and then multiplying by the overall sample size (626).

Based on this calculation, 250 participants were assigned to Kolfe Keranio (1200 street children), 209 participants to Gulele (1000 street children), and 167 participants to Addis Ketema (800 street children).

### 4.6 Sampling Technique and Procedure

Addis Ababa, the capital city of Ethiopia, is administratively divided into 11 sub-cities. A multistage sampling technique was employed to select the study participants.

In the first stage, out of the 11 sub-cities, three sub-cities (Gullele, Kolfe Keranio, and Addis Ketema) were selected using a lottery sampling method.

In the second stage, the total sample size (n = 626) was proportionally allocated to each selected sub-city based on the estimated number of street children in each sub-city.

In the final stage, eligible street children were selected from each sub-city using consecutive sampling technique until the allocated sample size for each sub-city was achieved.

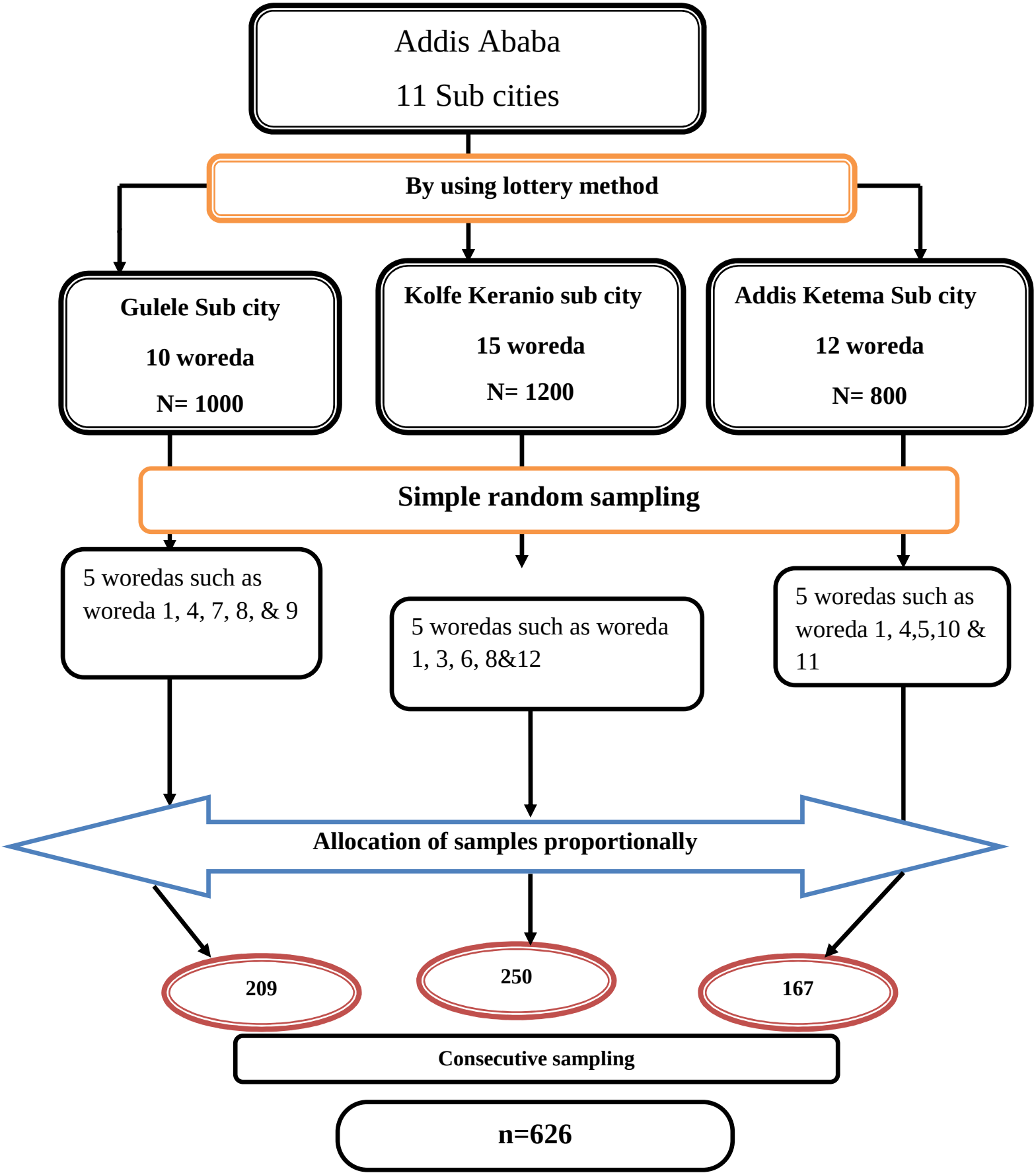



**Figure 5. 2Schematic presentation of sampling procedure used to select study subjects from Addis Ababa selected**

### 4.7Eligibility Criteria

#### 4.7.1 Inclusion criteria

Participants will be included if they meet all the following criteria:

- Street-connected children aged 12 –18 years, residing or spending substantial time in selected Sub-City.
- Children who spend all or most of their time on the street, either: “of-the-street” children (fully living on the street with minimal family contact), or “on-the-street” children (spending significant daytime hours on the street but returning home at night).
- Children who have lived in street in selected Sub-City for at least two weeks, ensuring adequate exposure to the local environment.

#### 4.7.2 Exclusion criteria

- Children who are critically ill, incapacitated, or under acute intoxication and cannot respond reliably.
- Children with severe cognitive or communication impairments that prevent participation.

### 4.8 Study Variable

#### 4.8.1. Dependent Variables

- Prevalence of substance abuse
- Health impacts associated with substance use

#### 4.8.2. Independent Variables

❖ **Socio-demographic Factors**

- Age (years) , Sex , Educational status , Place of origin, Duration on street ,Type of street involvement ,Daily income, Sleeping place

❖ **Family-related Factors**

- Orphan hood status (single parent, died) , Parental substance use Sibling who addict

❖ **Environmental Factors**

- Availability of substances near residence, Accessibility of substances , Peer group, Peer pressure to use substances ,Membership in street groups, Available of drug,

❖ **Psychosocial Factors**

- Exposure to abuse or violence , social anxiety ,Coping strategies, Social isolation and Sense of helpless

❖ **Personal trait Factors**

- Anxiety , Psychological , Negative self image , Low self esteem, Social anxiety and Trouble handling emotions

### 4.10 Operational Definition

**Street Children:** Children aged 10–18 years who spend most of their time living or working on the streets, either unaccompanied or partially supported by family(1)

**Substance Use:** Psychoactive substance use includes alcohol, tobacco, khat, inhalants (glue , benzen), and any other psychoactive drugs relevant in the local context, irrespective of frequency (48).

**Prevalence:** The occurrence of street children reporting use of any substance in the last three months in Addis Ababa, Ethiopia (10)

**Risk Factors:** Socio-demographic, peer, family, and psychosocial characteristics that put one at higher risk for substance use, including peer pressure, family substance use, abuse, and stress (15)

**Health Impact:** Self-reported physical or mental health consequences due to substance use-including infections, weight loss, cough, depression, anxiety (49).

### 4.9 Data collection Tools and procedures

#### 4.9.1 Data collection tool;

Data collection tool was prepared by reviewing different literature and using standardized tool by WHO Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST) is standardized and validated screening tool developed to assess life time and current use of alcohol;, tobacco, and other psycho active substances as well as the level of substance related risk(50).

The data was being collected by 3 trained nurse with 1 supervisor by using Data Gathering Instrument the WHO Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST) are two validated instruments from which a structured interviewer-administered questionnaire were used to gather data. The questionnaire has four sections includes health effects, risk factors, substance use patterns, and socio-demographic traits. The lifetime and last three months' worth of substance use, frequency, quantity, and related health or social issues was measured. These tools are appropriate for street children with low literacy levels because they have been validated among adolescent populations and can be administered by interviewers(51).

The questionnaire has four basic sections

**Section A. Socio-demographic** information of the respondents such as age, Sex, level of education, life experience in the streets, family background, and income source.

**Section B: Prevalence of substance abuse**, which examined lifetime, current substance use, types of substances, frequency of substance use, and age at which substance use began.

**Section C: Risk factors for substance abuse**, including factors related to socio demographic factor, family, environment, mental health disorder, and Personal trait factor, social and psychological factors.

**Section D: Effects of substance abuse** on physical, mental, and behavioral issues related to health

### 4.9.2 Data collection procedures

Data collection was done through face-to-face interviews using a structured interviewer-administered questionnaire. Data collection was carried out by three trained BSc nurses, under the close supervision of one supervisor at MSc level.

Before the administration of questionnaires, each participant was informed about the purpose of the study and their informed consent/assent should be sought. Personal identifiers were excluded to maintain confidentiality, and participation is strictly on a voluntary basis.

The MSc supervisor was monitor the data collection process closely and conduct daily supervision. Completed questionnaires will be reviewed daily to check for completeness and consistency. All necessary corrections will be made immediately.

### 4.9.3 Data Quality Assurance

To ensure the data quality, the questioner was adapted from the world health organization (WHO) standard tools and relevant literature. The questioner was prepared in English, translated into Amharic, and back translated into English to maintain consistency.

Completed questioners were checked daily for completeness and consistency. Data was coded entered, and cleaned before analysis to minimize errors.

Training on the study objectives, interview techniques, ethical principles, confidentiality, and approaches for appropriate communication with street children were imparted to the data collectors and supervisor before actual data collection.

### 4.9.4 Data Processing and Analyzing

The quantitative data after collected; the data was coded and cleaned up manually before entered in to software. Then, the data on the completed questionnaire was being entered and to Epi info version 7.2 software and exported to SPSS(version 27) for analysis. Descriptive statistics was used to describe socio–demographic characteristics of youth street children and also Binary logistic regression analysis was applied to identify Risk factors associated with substance Abuse. Likewise, Bivariable analysis was conducted to show the association between each independent variable with dependent variable and also Multivariable analysis was applied to show the relationship between multiple independent variables and dependent variable. Furthermore, the significance test cut of values were $P < 0.05$. In addition, adjusted odds ratio (AOR) with 95% confidence interval (CI) will be used to make interpretations of the result.

### 4.11 Result Dissemination

The research work finding will be disseminated to Addis Ababa university college of health science department of Pediatric and child health Nursing. Similarly, the result finding will be communicated to Gulele, Kolfe keranio and Addis ketema sub cities through seminar workshop in order to take measurements on the recommendations which are mainly identified by researchers.

### 4.12 Ethical Consideration

Ethical approval was obtained from Addis Ababa University College of health science, department of Nursing and midwifery ethics committee. Ethical clearance and supportive letter was obtained from the college. In addition, official permission was secured from relevant administrative bodies of the selected sub cities and concerned office before the data collection begins. The data collection among all the respondents that participate in the study was volunteers based. The study was taken to assure respect, dignity and freedom of each youth street children participating in the study. Information on the study and procedure of the study was given to all study subjects orally. Oral consent/Assent/ was obtained before administrating the questionnaire and confidentiality of information among participants was assured by omitting their names and personal identifiers throughout the study.

# 5 RESULTS

## 5.1 **Socio-demographic characteristics of the participants**

A total of 626 street children participated in the study, yielding a response rate of 100%. More than half of the respondents 343 (54.8%) were aged 14 years or younger, indicating that a substantial proportion of street-involved children were in the early stages of adolescence. The majority of participants were male 418 (66.8%), suggesting that boys constituted the predominant population of street children in the study area. Slightly more than half of the respondents 328 (52.4%) originated from rural areas, highlighting the contribution of rural-to-urban migration to the street child population.

Regarding living arrangements, only 67 (10.7%) of the participants lived with their families, while a small proportion 85 (13.6%) resided in shelters, indicating limited access to stable living conditions. Daily labor/carrying goods 143 (22.8%) and shoe-shining 140 (22.4%) were the most common income-generating activities. Concerning daily earnings, 171 (27.3%) participants reported earning 100–300 ETB per day, whereas 152 (24.3%) earned less than 50 ETB per day, reflecting generally low and unstable income levels among the respondents.

**Table 5. 1Socio-demographic characteristics of street children in Addis Ababa, Ethiopia, 2026 (n = 626)**

| Variables | Characteristics | Frequency | Percentage |
|---|---|---|---|
| Age | ≤ 14 | 343 | 54.8 |
| | 15 & 16 | 144 | 23.0 |
| | ≥ 17 | 139 | 22.2 |
| Gender | Male | 418 | 66.8 |
| | Female | 208 | 33.2 |
| Birth place | Urban | 298 | 47.6 |
| | Rural | 328 | 52.4 |
| Reason for street life | Poverty | 127 | 20.3 |
| | Family Conflict | 134 | 21.4 |
| | Death of family | 130 | 20.8 |
| | Peer influence | 112 | 17.9 |
| | Other | 123 | 19.6 |

| | | | |
|---|---|---|---|
| Sub-city | Addis Ketema | 167 | 26.7 |
| | Kolfekeraniyo | 250 | 39.9 |
| | Gulele | 209 | 33.4 |
| Length of stay in street | 1-3 years | 206 | 32.9 |
| | 4-7 years | 229 | 36.6 |
| | 8-10 years | 191 | 30.5 |
| Level of education | Illiterate ( cannot Read and Write) | 118 | 18.8 |
| | Read and write | 142 | 22.7 |
| | Primary | 119 | 19.0 |
| | Secondary | 132 | 21.1 |
| | Dropped out | 115 | 18.4 |
| Condition of living | Street / Market | 64 | 10.2 |
| | Shelter | 85 | 13.6 |
| | Rented room / With friends | 63 | 10.1 |
| | Families | 67 | 10.7 |
| | Under the bridges | 74 | 11.8 |
| | Hotel veranda | 69 | 11.0 |
| | Marketplaces | 73 | 11.7 |
| | Others | 131 | 20.9 |
| Source of income | Begging | 114 | 18.2 |
| | Daily Labour/carrying Goods | 143 | 22.8 |
| | Shoe shining | 140 | 22.4 |
| | Other | 229 | 36.6 |
| Average children income per day | <50 ETB | 152 | 24.3 |
| | 50-100 ETB | 150 | 24.0 |
| | 100-300 | 171 | 27.3 |
| | >300 ETB | 153 | 24.4 |
| Family contact | None | 211 | 33.7 |
| | Occasional | 217 | 34.7 |
| | Regular | 198 | 31.6 |

## 5.2 Prevalence of substance use among street children in Addis Ababa

The figure below shows the prevalence of substance abuse among the study participants. The result indicates that 390 (62.3%) of respondents reported substance use, while 236 (37.7%) did not use substances, demonstrating a relatively high prevalence in the study population.

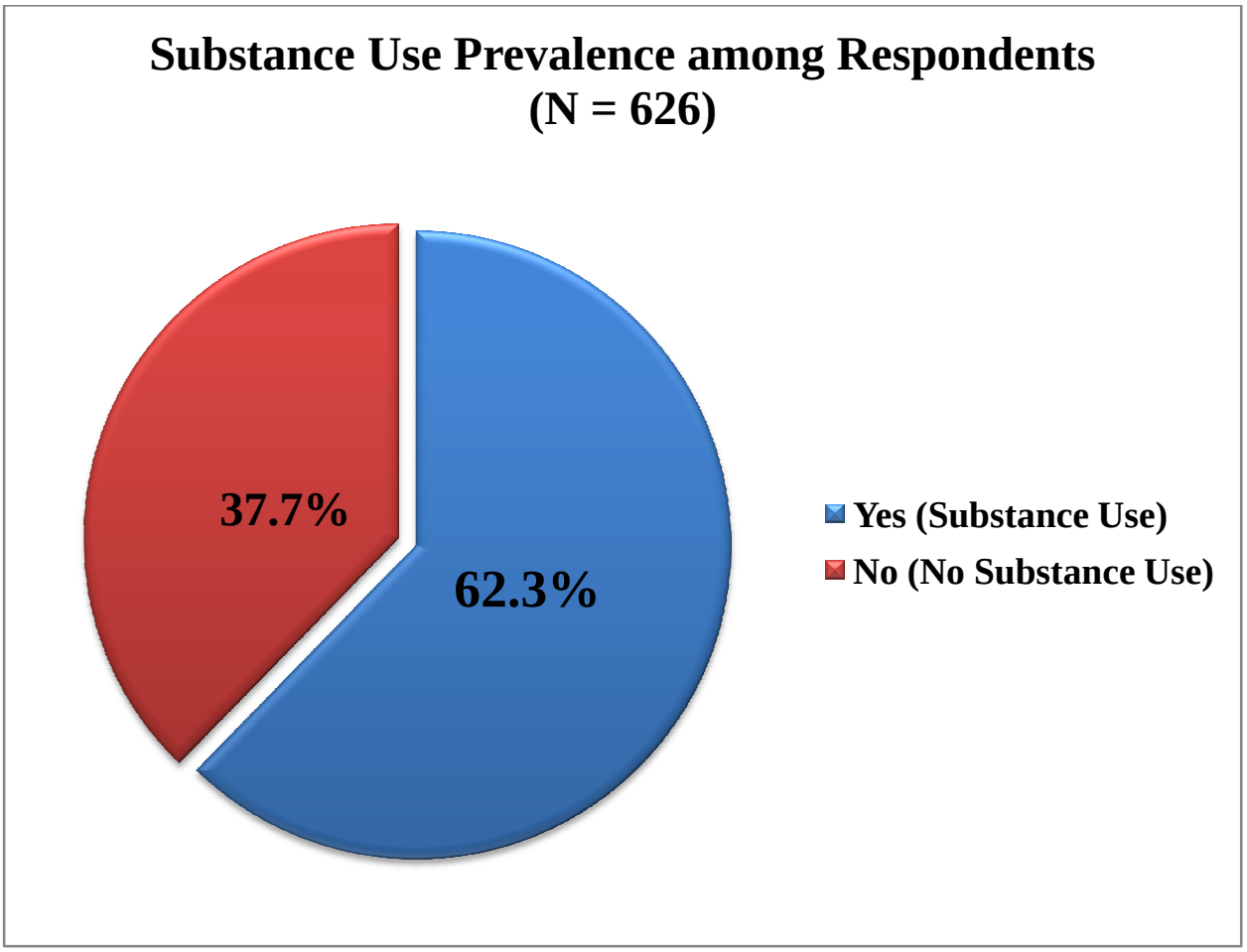



**Figure 5.3Prevalence of Substance Abuse among Street Children in Addis Ababa, Ethiopia**

### 5.3 Substance use characteristics of respondents

The study shows the substance use characteristics of respondents. Amongthe total of 624street children,390 (62.3%) of the street children used at least one substance in their life time. Among those the study revealed that inhalants were the most commonly used substances among the respondents, with 316 (80.6%) participants reporting use. This was followed by khat chewing, reported by 263 (67.1%) respondents. Moreover, 175 (44.6%) respondents used shisha, 174 (44.4%) consumed alcohol, and 173 (44.1%) smoked cigarettes. In addition, 157 (40.1%) respondents used other substances, while 155 (39.5%) reported marijuana use.

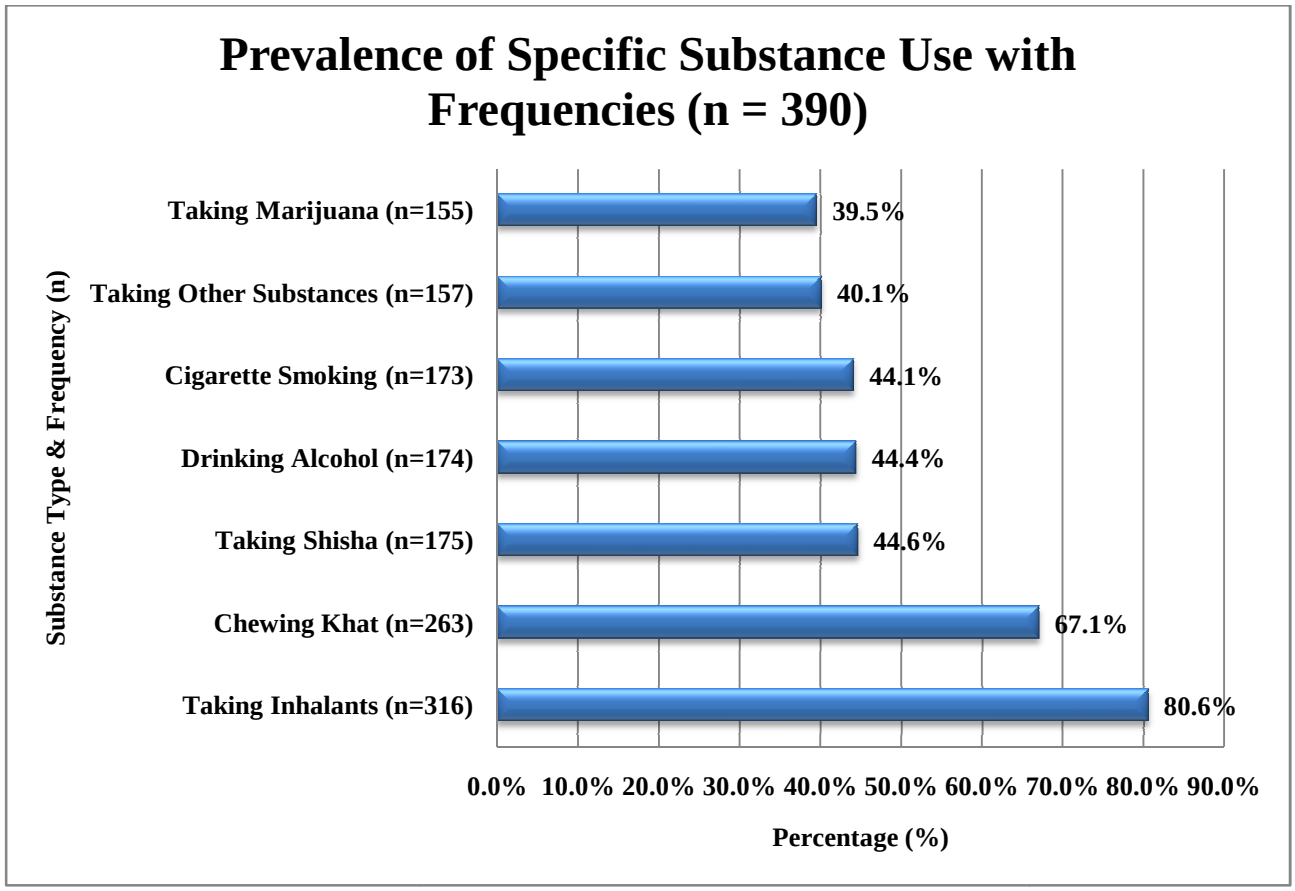



**Figure 5. 4Types of substances used among street children in Addis Ababa, Ethiopia, 2026**

### 5.4 Age at initiation of substance use among street children in Addis Ababa, 2026

The age at initiation of substance use among respondents showed a relatively consistent pattern across different substances.

The mean age at first smoking was 12.46 ± 1.441 years, while for khat use it was 12.65± 1.361 years. Similarly, the mean age at first alcohol use was 12.94 ± 1.479 years. Inhalant use had a mean initiation age of 14.44 ± 1.88 years, whereas cannabis use was slightly lower at 11.90 ± 1.655 years. Shisha use had a mean initiation age of 12.32 ± 1.670 years, and other substances showed a mean age of 12.17 ± 12.17 years.

The minimum age of initiation ranged from 8 to 12 years, while the maximum age was consistently 18 years across all substances. Overall, these findings indicate that most respondents initiated substance use during early adolescence, around the age of 12 years, highlighting early exposure as a significant concern

**Table 5. 2Age at first substance use among street children in Addis Ababa, Ethiopia, 2026 (n=390)**

| Variable | n (frequency) | Minimum Age | Maximum Age | Mean + SD |
|---|---|---|---|---|
| 1st Smoke | 173 | 9 | 17 | 12.46 ± 1.441 |
| 1st Chat | 267 | 10 | 18 | 12.65 ± 1.361 |
| 1st Alcohol | 178 | 11 | 18 | 12.94 ± 1.479 |
| 1st Inhalant | 317 | 8 | 17 | 11.90 ± 1.655 |
| 1st Marijuana | 157 | 12 | 18 | 14.11 ± 1.344 |
| 1st Shisha | 184 | 10 | 18 | 12.32 ± 1.670 |
| 1st Other Substance | 166 | 10 | 18 | 12.17 ± 1.509 |

### 5.5 Frequency of Substance Use among Respondents by Type of Substance

This table reports the frequency of substance use among respondents by type of substance. The overall findings show that inhalants were the most frequently used substance on a daily basis. Khat had the highest number of monthly users, while alcohol was most commonly used rarely. Cannabis showed relatively higher stop-rates. Overall, inhalants, khat, and alcohol were the most commonly used substances.

**Table 5. 3 Frequency of Substance Use among Respondents by Type of Substance among street children in Addis Ababa, Ethiopia, 2026 (n=390)**

| Substances | Daily | | Weekly | | Monthly | | Rarely | | Stopped | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage | frequency | Percentage | Frequency | Percentage |
| Smoking | 35 | 20.2 | 37 | 21.4 | 42 | 24.3 | 32 | 18.5 | 27 | 15.6 |
| Khat | 53 | 19.9 | 50 | 18.7 | 65 | 24.3 | 46 | 17.2 | 53 | 19.9 |
| Alcohol | 34 | 19.2 | 39 | 22.0 | 26 | 14.7 | 41 | 23.2 | 37 | 20.9 |
| Inhalant | 77 | 24.3 | 58 | 18.3 | 72 | 22.7 | 57 | 18.0 | 53 | 16.7 |
| Cannabis | 29 | 18.1 | 35 | 21.9 | 30 | 18.8 | 33 | 20.6 | 33 | 20.6 |
| Shisha | 42 | 22.7 | 29 | 15.7 | 42 | 22.7 | 42 | 22.7 | 30 | 16.2 |
| Other substance | 38 | 22.9 | 34 | 20.5 | 40 | 24.1 | 28 | 16.9 | 26 | 15.7 |

## 5.6 Risk factors related to substance abuse among street children

### 5.6.1 Family related factors

Based on the study findings on risk factors for the initiation of substance use among street children several family-related factors were identified. Familiar substance use emerged as a highly prevalent risk factor; with 366 respondents (58.5%) reporting living with a family member who misused substances, a dynamic that directly normalizes substance use behaviors for children. Among these households, paternal substance use was the most prominent risk configuration, accounting for 222 (60.8%), followed by maternal substance use in 66 (18.1%) and both parents in 38 (10.4%). Household instability further compounded this risk, as a total of 370 respondents (59.1%) experienced domestic conflict or violence before leaving home, and 273 individuals (43.6%) suffered from parental neglect, both of which serve as severe traumatic triggers that frequently drive children to self-medicate through early substance abuse. Interestingly, when evaluating regular parental monitoring as a protective factor, the majority of the children 426 (68.1%) rated their prior supervision as good, whereas 173 respondents (27.6%) noted moderate supervision and only 27 respondents (4.3%) classified it as poor, revealing a critical paradox where children may have normalized highly dysfunctional, abusive environments before the ultimate collapse of supervision on the street left them highly vulnerable to substance initiation.

**Table 5. 4 Family-related factors of substance abuse among street children in Addis Ababa, Ethiopia, 2026 (n = 626)**

| Family related factor | Category | Frequency | Percentage |
|---|---|---|---|
| Family member uses substances | Yes | 366 | 58.5 |
| | No | 260 | 41.5 |
| Types of Care giver who uses substances | Father | 222 | 60.8 |
| | Mother | 66 | 18.1 |
| | Both | 38 | 10.4 |
| | Other care giver | 39 | 10.7 |
| History of family | Yes | 370 | 59.1 |

| | | | |
|---|---|---|---|
| conflict or violence before street life | No | 256 | 40.9 |
| History of parental neglect before street life | Yes | 273 | 43.6 |
| | No | 353 | 56.4 |
| Regular parental supervision before street life | Good | 426 | 68.1 |
| | Moderate | 173 | 27.6 |
| | Poor | 27 | 4.3 |

### 5.6.2 Environmental related Factors

The table presents the environmental factors associated with substance use among respondents. Based on these, 317 respondents (50.6%) had easy access of the substance sin their area while 309 respondents (49.4%) couldn't access the substance easily. In terms of exposure to physical violence on the street, 443 respondents (70.8%) experience it whereas 183 respondents (29.2%) did not experience the physical violence. Similarly, 318 respondents (50.8%) experienced sexual abuse or exploitation while 308 respondents (49.2%) did not experience sexual abuse or exploitation.

Regarding sleeping in unprotected places 468 respondents (74.8%) was sleeping in unprotected places whereas 158 respondents (25.2%) did not sleep in unprotected places. Finally 327 respondents (52.2%) agreed that street life make it difficult to avoid substance while 299 respondents (47.8%) disagree.

**Table 5. 5 environmental related factors among street children in Addis Ababa, Ethiopia, 2026 (n = 626)**

| Environmental factor | Yes (frequency ) | Percentage | No (frequency) | Percentage |
|---|---|---|---|---|
| Substances are easily available in the area | 317 | 50.6 | 309 | 49.4 |
| Duration of street life >1 year | 228 | 36.4 | 398 | 63.6 |
| Exposure to physical violence on the street | 443 | 70.8 | 183 | 29.2 |
| Experience of sexual abuse or exploitation | 318 | 50.8 | 308 | 49.2 |
| Sleeping in unprotected places | 468 | 74.8 | 158 | 25.2 |
| Street life makes it difficult to avoid substance | 327 | 52.2 | 299 | 47.8 |

### 5.7 Psycho social related factors

The results in the table show mental and psychological factors associated with substance use among respondents. Regarding this, 399 respondents (63.7%) felt sad, hopeless or depressed while 227 respondents (36.3%) did not feel sad, hopeless or depressed. Accordingly, 178 respondents (28.4%) felt anxious, worried or fearful whereas 448 respondents (71.6%) didn't feel anxious, worried or fearful.

In terms of traumatic events, 377 respondents (60.2%) experienced traumatic events while 249 respondents (39.8%) did not experience traumatic events. Similarly, 216 respondents (34.5%) experience difficulty of sleeping due to stress and 410 respondents (65.5%) did not experience it.

The finding indicates that 395 respondents (63.1%) had thought of self-harm whereas 231 respondents (36.9%) had never thought of self-harm. Accordingly 332 respondents (53.0%) agreed that emotional problems lead to substance use while 294 respondents (47.0%) did not agree emotional problems lead to substance use.

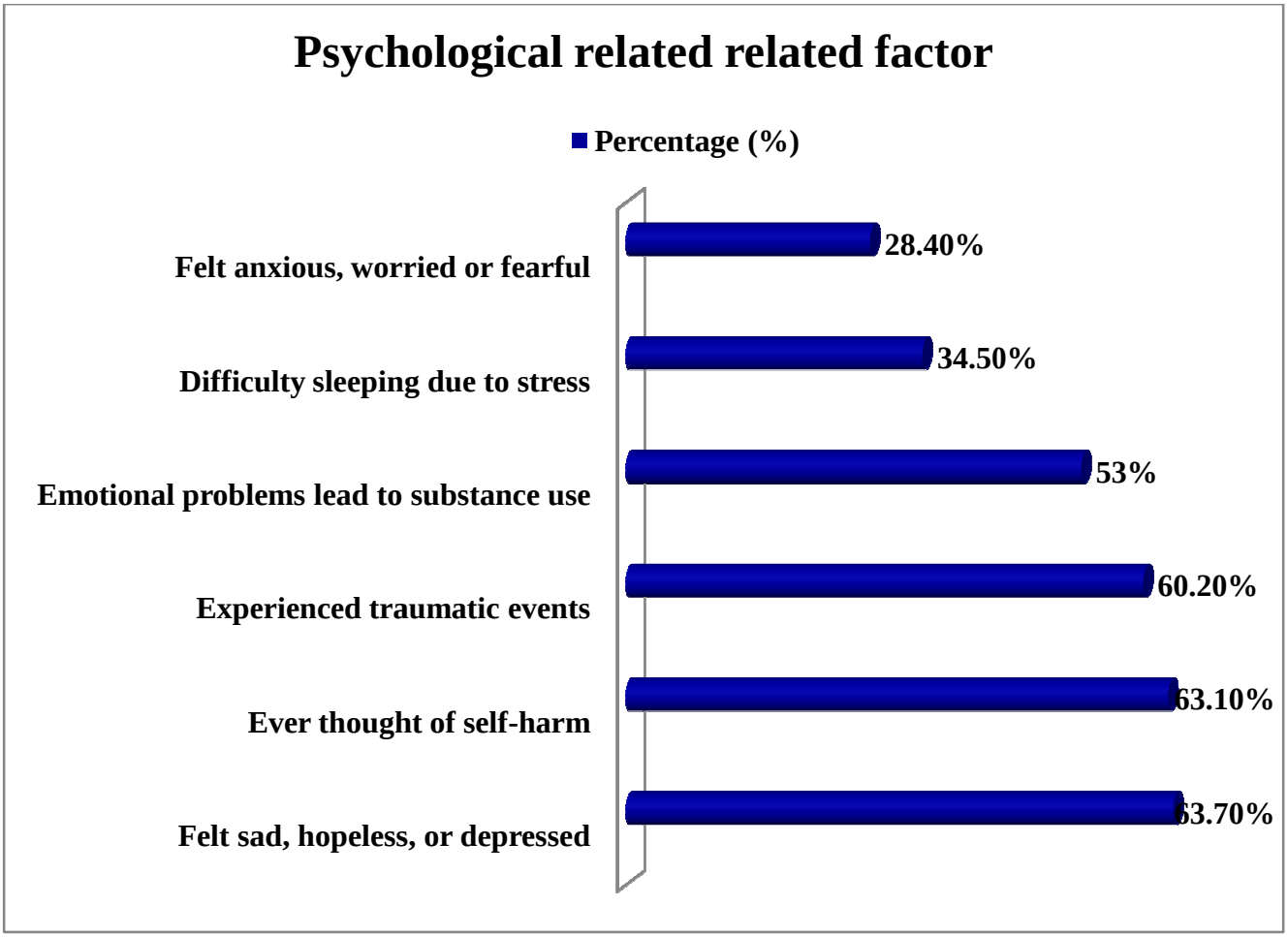



**Figure 5. 5 percentage of street children reporting selected psychological factors, Addis Ababa, Ethiopia 2026 (n=626)**

## 5.8 Personal trait related factors

This table presents personal factors associated with substance use among respondents. More than two-thirds of the respondents, 428 (68.4%), reported using substances to cope with hunger, cold, or fatigue, while 198 (31.6%) did not report such use. Regarding emotional regulation, 317 (50.6%) of respondents experienced difficulty controlling emotions such as anger and sadness.

In terms of behavioral characteristics, 363 (58%) of respondents reported engaging in risk-taking behaviors, while 263 (42%) did not. Similarly, 139 (22.2%) reported low self-confidence or poor self-esteem, whereas the majority, 487 (77.8%), did not report low self-esteem.

Furthermore, 477 (76.2%) of respondents reported difficulty refusing substances when offered, while 149 (23.8%) did not experience such difficulty. Finally, 480 (76.7%) believed that substance use helps survival on the street.

**Table 5. 6 Personal trait related factors among street children in Addis Ababa, Ethiopia, 2026(n = 626)**

| Personal factor | Category | Frequency | Percentage |
|---|---|---|---|
| Use substance to cope hunger , cold, or fatigue | Yes | 428 | 68.4 |
| | No | 198 | 31.6 |
| Difficulty of controlling emotion / anger, sadness/ | Yes | 317 | 50.6 |
| | No | 309 | 49.4 |
| Risk taking behavior | Yes | 363 | 58 |
| | No | 263 | 42 |
| Low self confidence /poor self esteem/ | Yes | 139 | 22.2 |
| | No | 487 | 77.8 |
| Difficulty of substance when offered | Yes | 477 | 76.2 |
| | No | 149 | 23.8 |
| Belief that substances help survival on the street | Yes | 480 | 76.7 |
| | No | 146 | 23.3 |

## Bivariate and multivariate logistic regression analysis of factors associated with substance abuse

After adjusting for potential confounders, street children who had experienced traumatic events were nearly two times more likely to abuse substances compared with those who had not experienced traumatic events (AOR = 1.92, 95% CI: 1.13–3.25). Children who reported emotional problems that made them want to use substances were three times more likely to abuse substances than their counterparts (AOR = 3.01, 95% CI: 1.70–5.33). Similarly, those who engaged in risky or dangerous activities had more than two times higher odds of substance abuse (AOR = 2.37, 95% CI: 1.17–4.80).

Street children who found it difficult to refuse substances when offered were approximately three times more likely to abuse substances compared with those who could refuse them (AOR = 2.84, 95% CI: 1.40–5.76). Likewise, respondents who believed that substances helped them survive street life had about two times higher odds of substance abuse than those who did not hold such beliefs (AOR = 2.13, 95% CI: 1.05–4.29).

On the other hand, parental or caregiver alcohol use (AOR = 0.56, 95% CI: 0.34–0.93), living on the street for more than one year (AOR = 0.57, 95% CI: 0.33–0.99), exposure to physical violence (AOR = 0.34, 95% CI: 0.19–0.60), experience of sexual abuse or exploitation (AOR = 0.39, 95% CI: 0.18–0.84), sleeping in unsafe places (AOR = 0.15, 95% CI: 0.08–0.27), feelings of sadness or hopelessness (AOR = 0.05, 95% CI: 0.03–0.08), thoughts of self-harm (AOR = 0.48, 95% CI: 0.28–0.82), and low self-esteem (AOR = 0.31, 95% CI: 0.15–0.61) were significantly associated with lower odds of substance abuse.

**Table 5. 7** Bivariate and Multivariable Logistic Regression Analysis of Factors Associated with Substance Abuse among Street Children in Addis Ababa, Ethiopia, 2026

| Independent Variables | COR (95% CI) | Biv p-value | AOR (95% CI) | MV p-value |
|---|---|---|---|---|
| **Either Parents or Care Giver Use Alcohol** | 1.84 (1.26 – 2.69) | .132 | 0.561 (0.339, 0.928) | **.025*** |
| **Conflict or Violence Before street life** | 1.49 (1.23 – 1.80) | **.002*** | 0.889 (0.552, 1.433) | .630 |
| **Experience / Lack of Neglect** | 1.78 (1.36 – 2.33) | **<.001*** | 1.296 (0.806, 2.082) | .284 |
| **Regular visit before street life** | 1.36 (1.13 – 1.64) | **.002*** | 0.760 (0.470, 1.228) | .262 |
| **Availability of substance around work** | 1.49 (1.26 – 1.77) | **.001*** | 1.376 (0.634, 2.983) | .420 |
| **Living on street more than a year** | 1.84 (1.26 – 2.69) | .132 | 0.569 (0.328, 0.987) | **.045*** |
| **Exposed to physical violence** | 0.89 (0.88 – 3.59) | .416 | 0.338 (0.191, 0.598) | **.000*** |
| **Experienced sexual abuse/exploitation** | 1.48 (1.27 – 1.76) | **.001*** | 0.390 (0.181, 0.840) | **.016*** |
| **Sleeping on unsafe/unprotected places** | 0.46 (0.36 – 0.58) | **<.001*** | 0.147 (0.080, 0.273) | **.000*** |
| **Difficult to avoid substances on street** | 1.49 (1.25 – 1.78) | **.001*** | 0.714 (0.357, 1.428) | .341 |
| **Felt sad/hopeless in last 6 months** | 0.37 (0.28 – 0.48) | **<.001*** | 0.046 (0.026, 0.083) | **.000*** |
| **Felt anxious/worried/fearful** | 1.85 (1.50 – 2.28) | .056 | 0.992 (0.565, 1.742) | .979 |
| **Experienced traumatic events** | 1.84 (1.26 – 2.69) | .132 | 1.919 (1.134, 3.247) | **.015*** |
| **Difficulty of sleep due to stress** | 1.58 (1.19 – 2.10) | .319 | 0.862 (0.493, | .600 |

| | | | | |
|---|---|---|---|---|
| | | | 1.505) | |
| **Ever thought of harming yourself** | 1.78 (0.91 – 3.58) | .567 | 0.478 (0.280, 0.818) | **.007*** |
| **Emotional problems making you want to use substance** | 1.80 (1.21 – 2.15) | .418 | 3.012 (1.702, 5.330) | **.000*** |
| **Using substance to cope with hunger/cold/fatigue** | 2.67 (2.01 – 3.55) | **<.001*** | 1.565 (0.822, 2.981) | .173 |
| **Ever find it hard to control emotions** | 1.57 (1.13 – 2.18) | .458 | 0.785 (0.389, 1.584) | .498 |
| **Taking risks / Enjoy dangerous activities** | 1.57 (1.12 – 2.20) | .458 | 2.367 (1.169, 4.795) | **.017*** |
| **Do you feel low self confidence or poor self esteem** | 1.80 (1.21 – 2.15) | .418 | 0.305 (0.152, 0.613) | **.001*** |
| **Do you find it difficult to refuse substance when offered** | 1.84 (1.26 – 2.69) | .132 | 2.835 (1.396, 5.757) | **.004*** |
| **Do You believe substance help you survive Street life** | 1.64 (1.56 – 4.69) | .332 | 2.127 (1.053, 4.293) | **.035*** |

***Statically significant**

**CI=confidential interval**

**COR= crude odds ratio**

**AOR= adjusted odds ratio**

## 5.9 Health impact of substance abuse

### 5.9.1 Physical Health Impacts of Substance abuse among street children

The research investigated the correlation between substance use and physical health outcomes in a sample of 626 street children located in Addis Ababa. The results from cross-tabulation revealed distinct differences in physical health conditions between substance users and non-users. In terms of frequent headaches, 222 substance users (56.6%) reported experiencing them frequently, in contrast to 214 non-users (34.3%). Additionally, 20 individuals from both groups (5.1%) indicated that they sometimes experienced headaches. The link between substance use and frequent headaches was found to be statistically significant. Stomach pain or nausea was reported by 200 substance users (51.0%) and 211 non-users (53.5%). Furthermore, 9 substance users (2.3%) and 6 non-users (1.5%) stated that they sometimes experienced stomach pain or nausea. This relationship was also statistically significant. Breathing issues were more prevalent among substance users, with 118 (30.1%) experiencing such problems compared to 42 (10.6%) non-users. Simultaneously, 192 (48.7%) non-users reported experiencing breathing problems occasionally. The difference was statistically significant. Sleep disturbances were noted by 108 substance users (27.6%) and 37 (9.4%) non-users, while 327 (83.0%) non-users reported experiencing sleep problems sometimes. This association was likewise statistically significant. Loss of appetite was reported by 153 (39.0%) substance users and 209 (53.0%) non-users, with 3 (0.8%) non-users indicating they experienced this occasionally. The association was statistically significant. Extreme fatigue or weakness was reported by 94 (23.9%) substance users compared to 40 (10.2%) non-users, while 392 (66.0%) non-users reported experiencing these issues sometimes. The association between substance use and extreme fatigue or weakness was statistically significant.

**Table 5. 8Physical Health impacts of substance use among street children in Addis Ababa, Ethiopia, 2026 (n = 626)**

| Health Outcome | Substance Users (n, %) | Sometimes Users (n, %) | Non-Users (n, %) | Sometimes Non-Users (n, %) | Chi-square p-value |
|---|---|---|---|---|---|
| Frequent headaches | 222 (56.6%) | 20 (5.1%) | 214 (34.3%) | 20 (5.1%) | <0.001 |
| Stomach pain/nausea | 200 (51.0%) | 9 (2.3%) | 211 (53.5%) | 6 (1.5%) | <0.001 |
| Breathing problems | 118 (30.1%) | 0 (0%) | 42 (10.6%) | 192 (48.7%) | <0.001 |
| Sleep problems | 108 (27.6%) | 0 (0%) | 37 (9.4%) | 327 (83.0%) | <0.001 |
| Loss of appetite | 153 (39.0%) | 0 (0%) | 209 (53.0%) | 3 (0.8%) | <0.001 |
| Extreme fatigue/weakness | 94 (23.9%) | 0 (0%) | 40 (10.2%) | 392 (66.0%) | <0.001 |

### 5.9.2 Mental Health Impacts of Substance abuse among street children

This research also evaluated the relationship between substance use and mental health among 626 street children in Addis Ababa. The cross-tabulation analysis revealed significant disparities between substance users and non-users across all mental health metrics. Feeling sad or depressed was noted by 101 (25.8%) substance users and 98 (25.0%) non-users, while 135 (34.4%) individuals in both categories reported experiencing such feelings occasionally. The association was statistically significant. Anxiety was reported by 148 (37.8%) substance users and 82 (21.0%) non-users, while 151 (38.5%) individuals in both groups indicated they experienced anxiety occasionally. The association was statistically significant. Difficulty concentrating was reported by 155 (39.5%) substance users compared to 232 (59.0%) non-users, while 83 (21.1%) non-users reported experiencing this issue occasionally. The association was statistically significant. Memory issues were reported by 150 (38.0%) substance users compared to 82 (20.8%) non-users, while 151 (38.5%) individuals in both groups indicated they experienced memory problems occasionally. The association was statistically significant. Feelings of hopelessness about the future were reported by 97 (24.7%) substance users compared to 153 (38.8%) non-users, while 81 (20.6%) non-users reported experiencing such feelings occasionally. The association was statistically significant. Irritability or mood swings were reported by 88 (22.4%) substance users compared to 232 (59.0%) non-users, while 217 (55.4%) substance users

indicated they experienced these feelings occasionally. The association was statistically significant. Thoughts of self-harm were reported by 114 (29.1%) substance users compared to 180 (45.7%) non-users, while 54 (13.8%) substance users and 114 (29.0%) non-users reported having such thoughts occasionally. The association was statistically significant. Mental stress was reported by 141 (36.0%) substance users compared to 98 (25.0%) non-users, while 135 (34.4%) individuals in both groups

**Table 5. 9Mental Health impacts of substance use among street children in Addis Ababa, Ethiopia, 2026 (n = 626)**

| Health Outcome | Substance Users (n, %) | Sometimes Users (n, %) | Non-Users (n, %) | Sometimes Non-Users (n, %) | Chi-square p-value |
|---|---|---|---|---|---|
| Experienced anxiety | 148 (37.8%) | 151 (38.5%) | 82 (21.0%) | 151 (38.5%) | <0.001 |
| Difficulty concentrating | 155 (39.5%) | 0 (0%) | 232 (59.0%) | 83 (21.1%) | <0.001 |
| Memory problems | 150 (38.0%) | 151 (38.5%) | 82 (20.8%) | 151 (38.5%) | <0.001 |
| Feeling hopeless | 97 (24.7%) | 81 (20.6%) | 153 (38.8%) | 81 (20.6%) | <0.001 |
| Irritability/mood swings | 88 (22.4%) | 217 (55.4%) | 232 (59.0%) | 0 (0%) | <0.001 |
| Thoughts of harming self | 114 (29.1%) | 54 (13.8%) | 180 (45.7%) | 114 (29.0%) | <0.001 |
| Mentally stressed | 141 (36.0%) | 135 (34.4%) | 98 (25.0%) | 135 (34.4%) | <0.001 |

### 5.9.3 Social and Behavioral Impacts of Substance Use among street children

The research investigated the relationship between substance use and social/behavioral outcomes among 626 street children in Addis Ababa. Cross-tabulation analysis revealed mixed yet generally significant differences between substance users and non-users across various social indicators. In terms of involvement in physical altercations, 117 (29.7%) substance users indicated participation compared to 124 (31.4%) non-users, while 66 (16.8%) from both groups reported occasionally being involved in fights. This association was statistically significant ($p = 0.005$). Likewise, conflict with friends was noted by 61 (15.5%) substance users in contrast to 142 (36.0%) non-users, with 62 (15.7%) from both groups experiencing conflict occasionally.

This association was statistically significant (p = 0.024). Regarding issues with law enforcement, 77 (19.6%) substance users reported such problems compared to 36 (9.1%) non-users, while 165 (42.0%) from both groups indicated experiencing police-related issues occasionally. However, this association was not statistically significant (p = 0.115). In terms of missed work or daily activities, 109 (27.8%) substance users reported missing activities compared to 135 (34.3%) non-users, while 47 (12.0%) from both groups indicated occasionally missing activities. This association was statistically significant (p = 0.003). Regarding engagement in theft or illegal activities, 89 (22.7%) substance users reported involvement compared to 124 (31.5%) non-users, while 65 (16.6%) from both groups reported occasionally engaging in such activities. However, this association was not statistically significant (p = 0.205). Concerning risky sexual behavior, 102 (26.0%) substance users reported such behavior compared to 128 (32.5%) non-users, while 46 (11.7%) from both groups indicated occasionally engaging in risky behavior. This association was statistically significant (p = 0.015). Regarding expenditure on substances, 131 (33.3%) substance users reported this behavior compared to 32 (8.1%) non-users, while 143 (36.4%)

Concerning the increased frequency of substance use over time, 88 (14.5%) of substance users indicated a rise in usage compared to 39 (9.9%) of non-users, whereas 164 (41.8%) from both categories reported occasionally increasing their use. This correlation was not statistically significant (p = 0.573). In conclusion, 96 (24.4%) substance users reported encouraging others to use substances, in contrast to 128 (32.5%) non-users, while 44 (11.2%) from both groups stated they sometimes encouraged others. This relationship was also not statistically significant (p = 0.102). In summary, the results suggest that substance use was notably linked to various social and behavioral outcomes, including physical altercations, conflicts with friends, missed activities, and risky sexual behaviors, whereas other factors did not demonstrate a statistically significant association.

**Table 5. 10Social and Behavioral Health impacts of substance use among street children in Addis Ababa, Ethiopia, 2026 (n = 626)**

| Health Outcome | Substance Users (n, %) | Sometimes Users (n, %) | Non-Users (n, %) | Sometimes Non-Users (n, %) | Chi-square p-value |
|---|---|---|---|---|---|
| Involved in physical fight | 117 (29.7%) | 66 (16.8%) | 124 (31.4%) | 66 (16.8%) | 0.005 |
| Conflict with friends | 61 (15.5%) | 62 (15.7%) | 142 (36.0%) | 62 (15.7%) | 0.024 |
| Problem with police | 77 (19.6%) | 165 (42.0%) | 36 (9.1%) | 165 (42.0%) | 0.115 |
| Missed work/daily activities | 109 (27.8%) | 47 (12.0%) | 135 (34.3%) | 47 (12.0%) | 0.003 |
| Engaged in stealing/illegal activities | 89 (22.7%) | 65 (16.6%) | 124 (31.5%) | 65 (16.6%) | 0.205 |
| Risky sexual behavior | 102 (26.0%) | 46 (11.7%) | 128 (32.5%) | 46 (11.7%) | 0.015 |
| Spend money on substance | 131 (33.3%) | 143 (36.4%) | 32 (8.1%) | 143 (36.4%) | 0.075 |
| Started using substance more frequently | 88 (14.5%) | 164 (41.8%) | 39 (9.9%) | 164 (41.8%) | 0.573 |
| Encouraged others to use substance | 96 (24.4%) | 44 (11.2%) | 128 (32.5%) | 44 (11.2%) | 0.102 |

# 6 DISCUSSION

The current research revealed that the rate of substance use among street children in Addis Ababa was 62.6%, signifying that over half of the participants had utilized at least one psychoactive substance. This outcome highlights a significant public health concern affecting children involved in street life.

This finding aligns with a study carried out in Addis Ababa, which indicated that 65% of street children had previously used substances such as glue, khat, alcohol, and cigarettes (25, 26). Likewise, research conducted in Bahir Dar (55.8%) and Jimma (30.8%) reported prevalence rates and (14, 27). These parallels imply that substance use is notably widespread among urban street populations in Ethiopia. Similar results have been documented in Kenya (56%), and Brazil (60%) (21, 22, 24). This suggests that, irrespective of geographical context, street children are frequently subjected to high-risk environments that facilitate substance use.

The marginally lower prevalence observed in the present study compared to South Africa (93.4%), may be attributed to variations in measurement methods (lifetime versus current use) and the accessibility of substances. The elevated prevalence noted in this study may be attributed to factors such as poverty, peer pressure, inadequate parental supervision, trauma, and the easy availability of substances in urban areas. Life on the streets subjects children to survival-related stressors that heighten their dependence on psychoactive substances as coping strategies.

The majority of the respondents were male, comprising 66.8% of the sample, and substance use was notably more prevalent among males. This observation aligns with research conducted in Kenya, India, and Ethiopia(75%- 90%) which indicated a higher incidence of substance use among male street children (2, 6, 10). This trend may be attributed to the greater exposure of males to street environments and high-risk peer groups. Most of the participants fell within the age range of 12 to 14 years, accounting for 54.8% of the total, which suggests an early introduction to street life. Comparable studies indicate that substance use tends to escalate with age, largely due to extended exposure to street conditions and peer influence (2, 5, 12). Furthermore, the educational levels among participants were notably low, which corresponds with findings that a lack of education heightens susceptibility to substance use by diminishing awareness and limiting opportunities for a structured life. (12–14).

This research revealed that 58.5% of participants had a family member who engages in substance use, while 59.1% reported a background of family conflict or violence. These results provide strong corroboration for studies conducted in Nigeria, South Africa, and Ethiopia, which indicated elevated substance use among children from families with substance-using members (23, 24, 27). The influence of family substance use on children may arise from both genetic predisposition and behavioral imitation. Furthermore, family conflict and neglect frequently drive children to the streets, thereby heightening their exposure to peer-influenced environments that promote substance use. This observation reinforces the notion that dysfunctional family dynamics are significant predictors of street life and substance abuse.

The research indicated that 50.6% of participants had easy access to substances, while 70.8% had encountered physical violence, and 50.8% disclosed experiences of sexual abuse or exploitation. These results are in agreement with studies conducted in Kenya and Brazil, where peer influence and exposure to street environments were identified as significant factors in the initiation of substance use (21, 22). Street settings significantly normalize the use of substances. The presence of violence, unsafe sleeping conditions, and exploitation heightens psychological distress, prompting children to resort to substance use as a means of coping. Extended exposure to street life elevates risk, as evidenced by research in India and Nigeria that demonstrates an increase in substance dependence correlating with longer durations spent on the streets (23, 29).

A significant number of respondents reported experiencing psychological distress: 63.7% felt sad or hopeless, 60.2% faced trauma, and 63.1% had contemplated self-harm. These results are consistent with findings from Brazil and South Africa, which highlighted elevated levels of depression and trauma among street children who use substances.(21, 44).

Mental distress heightens susceptibility to substance use as children seek to manage emotional suffering. Nevertheless, substance use exacerbates psychological issues, establishing a detrimental cycle of addiction and mental health disorders.

The research revealed a robust and statistically significant correlation ($p < 0.001$) between substance use and mental health issues, such as depression, anxiety, memory difficulties, irritability, stress, and suicidal ideation. Substance users exhibited a higher likelihood of experiencing anxiety (37.8%), feelings of sadness (25.8%), and thoughts of self-harm (29.1%). These results align with studies conducted in South Africa and Brazil, which identified strong

associations between substance use and depression among street children (21, 44). This phenomenon may be attributed to the bidirectional relationship between substance use and mental health disorders, where individuals resort to substances for emotional relief, ultimately exacerbating their mental health conditions. The results underscore the critical necessity for integrated mental health services tailored for street children.

The research indicated a significant correlation between substance use and physical altercations ($p = 0.005$), disputes with peers ($p = 0.024$), missed engagements ($p = 0.003$), and hazardous sexual conduct ($p = 0.015$). These results align with findings from studies conducted in Kenya and South Asia, which documented heightened levels of violence, antisocial conduct, and risky sexual behaviors among street children who use substances (22, 45). Substance use may compromise decision-making abilities and heighten impulsivity, resulting in perilous actions. Nevertheless, certain behaviors, such as issues with law enforcement and theft, did not show statistical significance in this research, potentially due to underreporting or variations in law enforcement interactions. In summary, substance use plays a role in fostering social exclusion and diminishes opportunities for rehabilitation and reintegration into society.

The research revealed a significant correlation ($p < 0.001$) between substance use and various physical health issues, such as headaches, stomach pain, respiratory difficulties, sleep disturbances, fatigue, and decreased appetite. These results align with findings from studies conducted in India and Kenya, which identified respiratory and gastrointestinal issues among users of inhalants and other substances (40, 41). The notably high rate of inhalant use (80.6%) observed in this study may account for the considerable respiratory health challenges. In Ethiopia, comparable research has indicated that untreated injuries and adverse health outcomes are prevalent among street children, primarily due to violence and insufficient access to healthcare (26). The use of substances exacerbates these issues by impairing immune function and increasing exposure to risky situations.

5.6 Overall Interpretation In summary, the findings suggest that substance use is highly prevalent among street children in Addis Ababa and is shaped by a mix of socio-demographic, familial, environmental, and psychological influences. There is a strong link between substance use and negative mental, physical, and social health outcomes. These results are in agreement with the majority of studies conducted in Africa and internationally, reinforcing the notion that street life significantly contributes to substance abuse behaviors. The findings underscore the critical need

for comprehensive intervention programs that prioritize family support, street outreach initiatives, mental health services, and strategies for preventing substance abuse.

# 7 CONCLUSION AND RECOMMENDATION

## 7.1 Conclusion

This study assessed the prevalence, risk factors, and health impacts of substance abuse among street children in Addis Ababa, Ethiopia. The findings revealed that substance use is highly prevalent, affecting nearly two-thirds of the study participants (62.6%), indicating that substance abuse is a major public health problem among street-involved children.

The study identified multiple interrelated risk factors contributing to substance use, including socio-demographic characteristics (male sex, early adolescence, and low educational status), family-related factors (family conflict, parental substance use, and neglect), environmental factors (easy access to substances, exposure to violence, sexual exploitation, and prolonged street life), and psychological factors (depression, trauma, and suicidal thoughts).

Furthermore, substance use was significantly associated with adverse mental health outcomes such as depression, anxiety, stress, memory problems, and suicidal ideation. It was also strongly associated with physical health problems including headaches, respiratory illnesses, sleep disturbances, fatigue, and gastrointestinal problems. In addition, substance use was linked with negative social and behavioral consequences such as physical fights, conflict with peers, missed daily activities, and risky sexual behaviors.

Overall, the study concludes that substance abuse among street children is driven by a complex interaction of individual, family, and environmental factors and results in severe physical, psychological, and social consequences. This highlights the urgent need for comprehensive prevention and intervention strategies targeting street children in Addis Ababa.

## 7.2 RECOMMENDATIONS

Based on the findings of this study, the following recommendations are forwarded:

**1. For Government and Policy Makers**

Strengthen child protection policies targeting street children through coordinated social welfare and health services.

Develop and implement national programs aimed at substance abuse prevention and rehabilitation among street children.

Improve access to safe shelter, education, and basic services for vulnerable children to reduce street involvement.

**2. For Health Institutions**

Integrate mental health and substance abuse screening services within primary healthcare and outreach programs targeting street children.

Provide accessible psychological counseling and trauma-informed care services for substance-using children.

Strengthen community-based rehabilitation programs focusing on both physical and mental health recovery.

**3. For Social Affairs and NGOs**

Expand outreach programs that provide education, food, shelter, and rehabilitation services for street children.

Implement peer-based intervention programs to reduce peer influence on substance use.

Provide life skills training and reintegration support to help street children return to family or educational settings.

**4. For Families and Community**

Strengthen family counseling and parenting education programs to reduce conflict, neglect, and substance use within households.

Promote community awareness about the consequences of substance abuse and the importance of child supervision and protection.

**5. For Future Researchers**

Conduct longitudinal studies to better understand the long-term effects of substance abuse among street children.

Further investigate the effectiveness of intervention programs aimed at reducing substance use in street populations.

Explore qualitative studies to understand lived experiences of street children in relation to substance use and coping mechanisms.

## 7.3 Strengths and Limitations of the Study

### 7.3.1 Strengths of the Study

This study has several strengths that enhance the reliability and relevance of its findings. First, the study included a relatively large sample size of 626 street children, which improves the statistical power and generalizability of the results within the study area.

Second, the study assessed substance use comprehensively by including multiple substances such as alcohol, khat, cigarettes, inhalants, marijuana, shisha, and other drugs, providing a broad understanding of substance use patterns among street children.

Third, the study examined not only the prevalence of substance use but also its associated risk factors and health impacts (physical, mental, and social), giving a holistic view of the problem. Additionally, the use of structured questionnaires and statistical analysis (including cross-tabulation and significance testing) increased the scientific rigor of the study.

Finally, the study provides locally relevant evidence from Addis Ababa, which can be useful for policymakers, health professionals, and non-governmental organizations working with vulnerable children.

### 7.3.2 Limitations of the Study

Despite its strengths, the study has several limitations. First, the study used a cross-sectional design, which limits the ability to establish cause-and-effect relationships between substance use and associated factors.

Second, the study relied on self-reported data, which may introduce recall bias and social desirability bias, especially for sensitive issues such as substance use, sexual behavior, and mental health problems. Some respondents may have underreported or over reported their experiences.

Finally, some variables such as mental health conditions were measured using self-reported indicators rather than clinical diagnosis, which may affect the precision of the findings.

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## ANNEXES

**Annex 1: English Version Information Sheet**

**Research title**: prevalence risk factor and health impact of substance abuse among street children in selected sub cities Addis Ababa, Ethiopia.2025/26

**Introduction:** This information sheet will be prepared to explain the research project that you are asked to join by individual research investigator. The research team includes Addis Ababa University College of health science student, data collectors, supervisors and advisors.

**Name of Principal investigator**

1. **Henok Tafere**

**Name of Organization:** Addis Ababa University College of health Science

**Purpose of the Research project:** The purpose of this research project is to assess the prevalence risk factor and health impact of substance abuse among street children

**Procedure:** The study uses community based cross sectional quantitative study through interviewer administered questionnaire. Permission will obtained from Addis Ababa University College of health Science

**Risk and/or Discomfort**

There is no risk or discomfort that study participants will face by participating in this research except devotion of time for interview. Every piece of information will be kept confidential.

**Benefits:** Study participants in this research project, there might get some direct benefits regarding about the prevalence of Substance Abuse, its risk factors and its consequence

**Confidentiality:** The information collected for this research study will be kept confidential and information collected by this study will be stored in a file without name, instead a code number will be assigned for it and not be realized to anyone except the principal investigator.

**Right to Refusal:** Respondents had the full right to refuse from participating in research and had also the full right to leave from the study at any time they wish, without losing any of their right.

**Persons to contact:** This research study is reviewed and approved by the ethical committee of Addis Ababa University College of health Science

. If want to know more information I can contact the committee through the stated addresses below. **Contact Address:** HenokTafereNigussie: Address Phone: 0912342300/0966796259

**Annex 2: English Version Participants Consent Form**

Addis Ababa University College of health Science

**Dear Participants;**

Hello my name is Henok Tafere I am here on behalf of Post graduate Pediatric Nursing students at Addis Ababa University College of health Science

I am going to conduct a study on the prevalence risk factor and health impact of substance abuse among street children Substance Abuse is no longer just part of the seedy underbelly of society as it has exploded into the open streets, reaching nearly every corner of civilization. The once silent killer is claiming more victims than ever before, and in horrific manners. Sadly, drug abuse continues to maintain a strangle hold on adolescences stripping away their chances for stable, happy and productive life, the purpose of this study is to assess the prevalence risk factor and health impact of substance abuse among street children This study is approved by the Review committee of AAU college of Science.

- I have been given detailed information about this study
- I had the opportunity to discuss any question with the researchers
- I understand that my participation in study is voluntary & I agree to take part in this study

Agree ☐

Participant code _____

Address phone number 09 66 79 62 59

Thank you for your participation

**Prevalence, Risk Factors, and Health Impacts of Substance Abuse among Street Children in Addis Ababa, Ethiopia**

**STANDARD QUESTIONNAIRE**

**SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTIC**

| | | | |
|---|---|---|---|
| 101 | Age | _____ years | |
| 102 | Sex | 1 = Male 2 = Female | |
| 103 | Place of birth | 1. Rural<br>2. Urban | |
| 104 | Reason for street life | 1. Poverty<br>2. Family conflict<br>3. Death of family<br>4. Peer influence<br>5. Other | |
| 105 | Sub-city | 1. Addis Ketema<br>2. Kolfe Keranio<br>3. Gulele<br>4. Other | |
| 106 | Length of stay on the street | _____ months / years | |
| 107 | Educational status | 1. Illiterate ( cannot Read and write)<br>2. Read and write<br>3. Primary /<br>4. Secondary<br>5. Dropped out | |
| 108 | Current living condition | 1. Street / Market<br>2. /Shelter /<br>3. Rented room / With friends<br>4. Families<br>5. Under the bridges<br>6. Hotel veranda | |

| | | | |
|---|---|---|---|
| | | 7. Marketplaces<br>1. Others specify | |
| 109 | Main source of income | 1. Begging<br>2. Daily labor / Carrying goods /<br>3. Shoe shining<br>4. Other | |
| 110 | Daily income | 1. <50 ETB<br>2. 50–100 ETB<br>3. 100–200 / ETB<br>4. >300 birr ETB | |
| 111 | Family contact | 1. None<br>2. Occasional<br>3. Regular | |

SECTION B: PREVALENCE OF SUBSTANCE USE

(Adapted from WHO-ASSIST and UNODC tools)

| | Substance | Ever Used | Age First | Frequency |
|---|---|---|---|---|
| 201 | Do you smoke Cigarettes | 1. Yes<br>2. No | ____ yrs | 1. Daily /<br>2. Weekly /<br>3. Monthly /<br>4. Rarely /<br>5. Stopped |
| 202 | Do you chewing Khat | 1. Yes<br>2, No | ____ yrs | 1. Daily /<br>2. Weekly /<br>3. Monthly /<br>4. Rarely /<br>5. Stopped |
| 203 | Do you drink Alcohol | 1. Yes<br>2, No | ____ yrs | 1. Daily /<br>2. Weekly /<br>3. Monthly / |

| | | | | |
|---|---|---|---|---|
| | | | | 4. Rarely /<br>5. Stopped |
| 204 | Do you take Inhalants | 1. Yes<br>2, No | ____ yrs | 1. Daily /<br>2. Weekly /<br>3. Monthly /<br>4. Rarely /<br>5. Stopped |
| 205 | Do you take Cannabis | 1. Yes<br>2, No | ____ yrs | 1. Daily /<br>2. Weekly<br>3. Monthly /<br>4. Rarely<br>5. Stopped |
| 206 | Do you use Shisha | 1. Yes<br>2, No | ____ yrs | 1. Daily<br>2. / Weekly /<br>3. Monthly /<br>4. Rarely<br>5. / Stopped |
| 207 | Did you take Other substances | 1. Yes<br>2, No | ____ yrs | 1. Daily<br>2. / Weekly /<br>3. Monthly<br>4. / Rarely /<br>5. Stopped |

**SECTION C: RISK FACTORS FOR SUBSTANCE USE**

**1: Family-Related Risk Factors**

| Code | Question | Response Options |
|---|---|---|
| 301 | Did either of your parents/caregivers use alcohol or other drugs? | 0. No 1. Yes |
| 302 | Which parent/caregiver used substances? | 0. Father<br>1. Mother |

| | | |
|---|---|---|
| | | 2. Both |
| 303 | Was there frequent conflict or violence in your family before street life? | 0. No<br>1. Yes |
| 304 | Did you experience neglect or lack of care from parents/caregivers? | 0. No<br>1. Yes |
| 305 | Were your parents/caregivers regularly supervising you before street life? | 0. Good<br>1. Moderate /<br>2. Poor |

**5.1 Table 2: Environmental (Street-Related) Risk Factors**

| Code | Question | Response Options |
|---|---|---|
| 400 | Are substances easily available in the area where you live/work? | 0. No<br>1. Yes |
| 401 | Have you been living on the street for more than one year? | 0. No<br>1. Yes |
| 402 | Have you been exposed to physical violence while living on the street? | 0. No<br>1. Yes |
| 403 | Have you experienced sexual abuse or exploitation on the street? | 0. No<br>1. Yes |
| 404 | Do you sleep mainly in unsafe or unprotected places? | 0. No<br>1. Yes |
| 405 | Does street life make it difficult to avoid substance use? | 0. No<br>1. Yes |

**5.1 Table 3: Mental Health–Related Risk Factors**

| Code | Question | Response Options |
|---|---|---|
| 501 | Have you felt sad, hopeless, or depressed for most days in the last 6 months? | 0. No<br>1. Yes |

| | | |
|---|---|---|
| 502 | Do you often feel anxious, worried, or fearful? | 0. No<br>1. Yes |
| 503 | Have you experienced traumatic events (abuse, assault, severe loss)? | 0. No<br>1. Yes |
| 504 | Do you have difficulty sleeping due to stress or worry? | 0. No<br>1. Yes |
| 505 | Have you ever thought about harming yourself? | 0. No<br>1. Yes |
| 506 | Do emotional problems make you want to use substances? | 0. No<br>1. Yes |

**5.1 Table 4: Personal Trait–Related Risk Factors**

| Code | Question | Response Options |
|---|---|---|
| 601 | Do you use substances to cope with hunger, cold, or fatigue? | 0. No<br>1. Yes |
| 602 | Do you find it hard to control your emotions (anger, sadness)? | 0. No<br>1. Yes |
| 603 | Do you enjoy taking risks or doing dangerous activities? | 0. Low<br>1. Moderate<br>2. High |
| 604 | Do you feel low self-confidence or poor self-esteem? | 0. No<br>1. Yes |
| 605 | Do you find it difficult to refuse substances when offered? | 0. No<br>1. Yes |
| 606 | Do you believe substances help you survive street life? | 0. No<br>1. Yes |

SECTION D: HEALTH IMPACT OF SUBSTANCE USE

D1. Physical Health Impact

| | | |
|---|---|---|
| 701 | Frequent headaches | 0 = No 1 = Sometimes 2 = Yes |
| 702 | Loss of appetite | 0 = No 1 = Sometimes 2 = Yes |
| 703 | Chronic cough or breathing difficulty | 0 = No 1 = Sometimes 2 = Yes |
| 704 | Stomach pain or digestive problems | 0 = No 1 = Sometimes 2 = Yes |
| 705 | Fatigue or weakness | 0 = No 1 = Sometimes 2 = Yes |

D2. Mental Health Impact

| | | |
|---|---|---|
| 801 | Feeling sad or depressed | 0 = No 1 = Sometimes 2 = Yes |
| 802 | Sleep disturbance | 0 = No 1 = Sometimes 2 = Yes |
| 803 | Feeling anxious or worried | 0 = No 1 = Sometimes 2 = Yes |
| 804 | Difficulty concentrating | 0 = No 1 = Sometimes 2 = Yes |
| 805 | Loss of interest in daily activities | 0 = No 1 = Sometimes 2 = Yes |

D3. Social and Behavioral Impact

| | | |
|---|---|---|
| 901 | Involvement in fights or violence | 0 = No 1 = Sometimes 2 = Yes |
| 902 | Problems with police or authorities | 0 = No 1 = Sometimes 2 = Yes |
| 904 | Stealing to obtain substances | 0 = No 1 = Sometimes 2 = Yes |
| 905 | Missing work/shelter due to substance use | 0 = No 1 = Sometimes 2 = Yes |
| 906 | Social isolation or conflict with others | 0 = No 1 = Sometimes 2 = Yes |

*Annexes of Amharic version*

**አባሪ 1፡-የአማርኛየመረጃመግለጫ (Information Sheet)**

የጥናቱርዕስ፡-

በአዲስአበባከተማበተመረጡክፍለከተሞችበሚገኙየጎዳናተዳዳሪህፃናትላይያለውንየሱሰኝነትመጠን፣ ተጋላጭየሚያደርጉሁኔታዎችእናየሚያስከትለውየጤናተፅእኖግምገማ፣ 2018 ዓ.ም (2026 G.C)።

***መግቢያ፦***

***ይህመረጃሰጭጽሑፍበግልተመራማሪውአማካኝነትእንዲሳተፉለተጠየቁበትየምርምርፕሮጀክትማብራሪያለመስጠትየተዘጋጀነው።የምርምርቡድኑየአዲስአበባዩኒቨርሲቲየጤናሳይንስኮሌጅተማሪን፣ መረጃሰብሳቢዎችን፣ተቆጣጣሪዎችንእናአማካሪዎችንያካትታል።***

የዋናው ተመራማ ሪስም፡-ሄኖክ ታፈረ

የትምህርትተቋሙስ፡-አዲስአበባዩኒቨርሲቲየጤናሳይንስኮሌጅ

የምርምርፕሮጀክቱዓላማ፡-የዚህምርምርፕሮጀክትዓላማበጎዳናተዳዳሪህፃናትላይያለውንየሱሰኝነትመጠን፣ ለሱሰኝነትየሚያጋልጡሁኔታዎችንእናየሚያስከትለውንየጤናተፅእኖመገምገምነው።

የጥናቱሂደት፡-ጥናቱበማህበረሰብላይየተመሠረተመጠይቅንበመጠቀምየሚከናወንየቁጥርጥናት (quantitative study) ነው።ለዚህምፈቃድከአዲስአበባዩኒቨርሲቲየጤናሳይንስኮሌጅተገኝቷል።

ሊያጋጥሙየሚችሉአደጋዎችእናምቾትማጣት፡-በዚህጥናትላይበመሳተፍዎምክንያትለቃለ-መጠይቁከሚሰጡትጊዜውጭየሚያጋጥምዎትምንምዓይነትአደጋወይምምቾትማጣትየለም። ማንኛውምመረጃበሚስጥርይጠበቃል።

ጥቅሞች፡-የዚህጥናትተሳታፊዎችስለሱሰኝነትስርጭት፣ ለሱሱተጋላጭስለሚያደርጉሁኔታዎችእናስለሚያስከትለውጉዳትቀጥተኛግንዛቤሊያገኙይችላሉ።

ሚስጥራዊነት፡-ለዚህጥናትየተሰበሰበውመረጃበሚስጥርይጠበቃል። መረጃውያለስምበኮድተለይቶየሚቀመጥሲሆን፣ከዋናውተመራማሪውጭለማንምአካልአይገለጽም።

የመቃወምመብት፡-ተሳታፊዎችበጥናቱላይላለመሳተፍሙሉመብትአላችሁ፤ እንዲሁምበማንኛውምሰዓትምንምዓይነትመብትዎሳይነካጥናቱንአቋርጦየመውጣትሙሉመብትአለዎት።

ለተጨማሪመረጃ፡-ይህጥናትበአዲስአበባዩኒቨርሲቲየጤናሳይንስኮሌጅየኮሚቴተገምግሞየጸደቀነው።

የመገናኛአድራሻ፡-ሄኖክታፈረንጉሴ፤ስልክ፡- 0912342300 / 0966796259

አባሪ 2፡የተሳታፊዎችስምምነትቅጽ

አዲስአበባዩኒቨርሲቲየጤናሳይንስኮሌጅ

ውድተሳታፊዎች፤ጤናይስጥልኝ፤ስሜሄኖክታፈረይባላል።

እዚህየተገኘሁትከአዲስአበባዩኒቨርሲቲየጤናሳይንስኮሌጅየድህረ-ምረቃየህፃናትነርሲንግ (Pediatric Nursing)ነው።

በጎዳናተዳዳሪህፃናትላይያለውንየሱሰኝነትመጠን፣

ተጋላጭየሚያደርጉሁኔታዎችእናየሚያስከትለውየጤናተፅእኖላይጥናትላካሂድነው።

በአሁኑወቅትሱሰኝነትበህብረተሰቡውስጥተደብቆየሚኖርሳይሆንበየአደባባዩወጥቶበየቦታውየሚታይአሳሳ ቢጉዳይሆኗል።ይህበአንድወቅት "ዝምተኛገዳይ" ተብሎየሚታወቀውችግርአሁንላይከምንጊዜውምበላይበርካታሰለባዎችንበአሰቃቂሁኔታእየገደለይገኛል።

በሚያሳዝንሁኔታየዕፅሱሰኝነትበታዳጊዎችላይከፍተኛተጽዕኖእያሳደረሲሆን፣የተረጋጋ፣

ደስተኛእናውጤታማህይወትየመኖርእድላቸውንምእየነጠቃቸውይገኛል።

የዚህጥናትዓላማበጎዳናተዳዳሪህፃናትላይያለውንየሱሰኝነትስርጭት፣

ተጋላጭየሚያደርጉሁኔታዎችንእናየጤናተፅእኖዎችንመገምገምነው።

ይህጥናትበአዲስአበባዩኒቨርሲቲየሳይንስኮሌጅየክለሳኮሚቴየጸደቀነው።

ስለጥናቱዝርዝርመረጃተሰጥቶኛል።

ከተመራማሪዎቹጋርማንኛውንምጥያቄለመወያየትእድልአግኝቻለሁ።

በጥናቱላይተሳትፎዬበፈቃደኝነትላይየተመሰረተመሆኑንተረድቻለሁ፤

በጥናቱምላይለመሳተፍተስማምቻለሁ።

እስማማለሁ

የተሳታፊኮድ (Participant code) _____

ስለተሳትፎዎእናመሰግናለን!

**መደበኛመጠይቅ**

በአዲስአበባከተማየመንገድልጆችመካከልየንጥረነገርአጠቃቀምመጠን፣አደጋምክንያቶችእናየጤናተፅዕኖ

**ክፍል A፡ማህበራዊ–ዴሞግራፊክመረጃ**

| ኮድ | ጥያቄ | መልስአማራጮች |
|---|---|---|
| A1 | ዕድሜ | _____ ዓመት |
| A2 | ፆታ | 1=ወንድ<br>2=ሴት |
| A3 | የትውልድቦታ | 1. ገጠር<br>2. ከተማ |
| A4 | ወደጎዳናሕይወትያመጣዎትምክንያትምንድንነው? | 1. ድህነት<br>2. የቤተሰብግጭት<br>3. የቤተሰብሞት<br>4. ጓደኞች<br>5. ሌላ |
| A5 | የሚኖሩበትክፍለከተማ | 1. አዲስከተማ<br>2. ኮልፌቀራኒዮ<br>3. ጉለሌ<br>4. ሌላ |
| A6 | ወደጎዳናሕይወትከመጡምንያህልጊዜሆኖት? | _____ ወር /_____ ዓመት |
| A7 | የትምህርትደረጃ | 1. መፃፍናመንበብየማይችል<br>2. መንበብናመፃፍ<br>3. አንደኛ<br>4. ሁለተኛ |
| A8 | አሁንየሚኖሩበትሁኔታ | 1. መንገድ |

| | | |
|---|---|---|
| | | 2. መጠለያ<br>3. ኪራይ<br>4. ጓደኞች<br>5. ቤተሰብ |
| A9 | ዋናየገቢምንጭ | • ልመና<br>• ዕለታዊሥራ<br>• ጭነት<br>• ጫማመጥረግ<br>• ሌላ |
| A10 | ዕለታዊገቢ | <20 ብር<br>1. 20–50 ብር<br>2. 51–100 ብር<br>3. >100 ብር |
| A11 | ከቤተሰብጋርግንኙነትአሎት? | 1. የለም<br>2. አንዳንድጊዜ<br>3. መደበኛ |

**ክፍል B፡የንጥረነገርአጠቃቀም (ASSIST & UNODC)**

| መድኃኒትአይነት | ተጠቅመዋል (አዎ/አይ) | የመጀመሪያዕድሜ | የአጠቃቀምድግግሞሽ |
|---|---|---|---|
| ሲጋራአጭሰውያቃሉ | 2. አዎ<br>3. አይ | ____ ዓመት | 1. ዕለታዊ<br>2. ሳምንታዊ<br>3. ወርሃዊ<br>4. አልፎአልፎ<br>5. አቁሟል |
| ጫትይቅማሉ? | 2. አዎ<br>3. አይ | ____ ዓመት | 1. ዕለታዊ<br>2. ሳምንታዊ |

| | | | |
|---|---|---|---|
| | | | 3. ወርሃዊ<br>4. አልፎአልፎ<br>5. አቁሟል |
| አልኮልተጠቃሚኖት? | 1. አዎ<br>2. አይ | _____ ዓመት | 1. ዕለታዊ<br>2. ሳምንታዊ<br>3. ወርሃዊ<br>4. አልፎአልፎ<br>5. አቁሟል |
| ማስቲሽእናመሰልነገሮችንይጠቀማሉ? | 1. አዎ<br>2. አይ | _____ ዓመት | 1. ዕለታዊ<br>2. ሳምንታዊ<br>3. ወርሃዊ<br>4. አልፎአልፎ<br>5. አቁሟል |
| ካናቢስ | 1. አዎ<br>2. አይ | _____ ዓመት | 1. ዕለታዊ<br>2. ሳምንታዊ<br>3. ወርሃዊ<br>4. አልፎአልፎ<br>5. አቁሟል |
| ሺሻ | 1. አዎ<br>2. አይ | _____ ዓመት | 1. ዕለታዊ<br>2. ሳምንታዊ<br>3. ወርሃዊ<br>4. አልፎአልፎ<br>5. አቁሟል |
| ሌላ (ይግለጹ) | 1. አዎ<br>2. አይ | _____ ዓመት | 1. ዕለታዊ<br>2. ሳምንታዊ<br>3. ወርሃዊ<br>4. አልፎአልፎ |

| | | | |
|---|---|---|---|
| | | | 5. አቁሟል |

### 5.1 ክፍልሐ: የንጥረነገርአጠቃቀምየቤተሰብተያያዥ

| ኮድ | ጥያቄ | የምላሽአማራጮች |
|---|---|---|
| ረ1 | ወላጆች/እንክብካቤሰጪዎችአልኮልወይምሌላመድኃኒትይጠቀሙነበር? | 1. =አይ,<br>2. =አዎ |
| ረ2 | የትኛውየቤተሰብአካልይጠቀምነበር? | 1. አባት<br>2. እናት<br>3. ሁለቱም |
| ረ3 | ጎዳናላይከመውጣቶበፊትበቤተሰብውስጥግጭትነበር? | 1. =አይ,<br>2. =አዎ |
| ረ4 | በቤተሰብዎችልተኝነትወይምየእንክብካቤእጥረትእናዳለተሰምቶሃል/ሻል? | 1. =አይ,<br>2. =አዎ |
| ረ5 | ከጎዳናበፊትየወላጆችክትትልሁኔታ | 1. ጥሩ<br>2. መጠነኛ<br>3. ደካማ |

### 5.1 ሠንጠረዥ 2: የአካባቢ (ጎዳናተያያዥ) አጋላጭሁኔታዎች

| ኮድ | ጥያቄ | የምላሽአማራጮች |
|---|---|---|
| ኢ1 | አደንዛዥእፅበአከባቢዎበቀላሉበቀላሉይገኛል? | 1, =አይ<br>2, =አዎ |
| ኢ2 | ከ1 ዓመትበላይበጎዳናኖረሃል? | 1. =አይ<br>2. =አዎ |
| ኢ3 | ጎዳናላይመኖርከጀመሩበኋላለአካላዊለአካላዊጥቃትተጋልጧል? | 1. =አይ<br>2. =አዎ |

| | | |
|---|---|---|
| ኢ4 | በጎዳናሕይወትዎየወሲብአደጋተጋልጠውያቃሉ? | 1. =አይ<br>2. =አዎ |
| ኢ5 | ብዙጊዜደህንነትየማይሰማህቦታላይትተኛለህ? | 1, =አይ<br>2, =አዎ |
| ኢ6 | የጎዳናሕይወትአደንዛዥመጠቀምመተውንአስቸጋሪአድርጎታል? | 1. =አይ<br>2. =አዎ |

### 5.1 ሠንጠረዥ 3: የአእምሮጤናተያያዥአደጋሁኔታዎች

| ኮድ | ጥያቄ | የምላሽአማራጮች |
|---|---|---|
| ኤም1 | ባለፉትስድስትወራትየሐዘን/ተስፋመቁረጥስሜትተሰምቷታል | 1. =አይ<br>2. =አዎ |
| ኤም2 | የጭንቀት/ፍርሃትስሜትአሎት? | 1. =አይ<br>2. =አዎ |
| ኤም3 | ለአሰቃቂክስተትተጋልጠውያቃሉ /መንገላታት, የጥቃት/ | 1. =አይ<br>2. =አዎ |
| ኤም4 | በጭንቀትወይምበፍርሀትጨምክንያትየመተኛትችግርአጋጥሞትያቃል? | 5. =አይ<br>6. =አዎ |
| ኤም5 | ራስዎንለመጉዳትአሰብውያቃሉ | 1. =አይ<br>2. =አዎ |
| ኤም6 | የሀዘንየድብርትስሜትሲሰማዎትእነዚንአደንዛዥእፅይወስዳሉ | 1. =አይ<br>2. =አዎ |

### 5.1 ሠንጠረዥ 4: የግለሰብባህሪተያያዥአደጋሁኔታዎች

| ኮድ | ጥያቄ | የምላሽአማራጮች |
|---|---|---|
| ፒ1 | ረሀብ/ድካምለመቋቋምአደንዛዥእፆችንይጠቀማሉ | 1. =አይ<br>2. =አዎ |
| ፒ2 | አደንዛዥእፁስሜትለመቆጣጠርአስቸጋሪአድርጎበታል | 1. =አይ<br>2. =አዎ |

| | | |
|---|---|---|
| ፒ3 | አደገኛእንቅስቃሴላይይሳተፋሉ | 1. ዝቅተኛ<br>2. መጠነኛ<br>3. ከፍተኛ |
| ፒ4 | በራስመተማመኔዝቀተኛነውብለውያስባሉ | 1. =አይ<br>2. =አዎ |
| ፒ5 | ይህንንሱስእንዲያቆሙቢጠየቁለማቆምከባድነውብለውያስባሉ | 1, =አይ<br>2, =አዎ |
| ፒ6 | የጎዳናሕይወትንለመቋቋምእነዚህአደንዛዥእፅችጠቃሚናቸውብለውያምናሉ? | 1. =አይ<br>2. =አዎ |

### 5.1 ክፍልመ: የመድኃኒትአዘልቀላሽጤናዊተጽዕኖ

### 5.1 መ1: የአካላዊጤናተጽዕኖ

| ኮድ | ምልክት | 0=አይ 1=አንዳንዴ 2=አዎ |
|---|---|---|
| አገ1 | ተደጋጋሚራስምታት | 0=አይ 1=አንዳንዴ 2=አዎ |
| አገ2 | ምግብፍላጎትመጥፋት | 0=አይ 1=አንዳንዴ 2=አዎ |
| አገ3 | ሳል/መተንፈስችግር | 0=አይ 1=አንዳንዴ 2=አዎ |
| አገ4 | የሆድህመም | 0=አይ 1=አንዳንዴ 2=አዎ |
| አገ5 | ድካም/ደካማነት | 0=አይ 1=አንዳንዴ 2=አዎ |

### 5.1 መ2: የአእምሮጤናተጽዕኖ

| ኮድ | ምልክት | 0=አይ 1=አንዳንዴ 2=አዎ |
|---|---|---|
| አጤ1 | ሐዘን/ድብርት | 0=አይ 1=አንዳንዴ 2=አዎ |
| አጤ2 | የመተኛትችግር | 0=አይ 1=አንዳንዴ 2=አዎ |
| አጤ3 | ጭንቀት | 0=አይ 1=አንዳንዴ 2=አዎ |
| አጤ4 | ትኩረትእጥረት | 0=አይ 1=አንዳንዴ 2=አዎ |
| አጤ5 | ፍላጎትመጥፋት | 0=አይ 1=አንዳንዴ 2=አዎ |

### 5.1 መ3: የማህበራዊእናየባህሪተጽዕኖ

| ኮድ | ሁኔታ | 0=አይ 1=አንዳንዴ 2=አዎ |
|---|---|---|
| ማብ1 | በፀብላይመሳተፍ | 0=አይ 1=አንዳንዴ 2=አዎ |
| ማብ2 | ከፖሊስጋርችግር/መጋጨት/ | 0=አይ 1=አንዳንዴ 2=አዎ |
| ማብ3 | ስርቆትላይመሳተፍ | 0=አይ 1=አንዳንዴ 2=አዎ |
| ማብ4 | ሥራ/መጠለያማጣት | 0=አይ 1=አንዳንዴ 2=አዎ |
| ማብ5 | ከሰውመገለል | 0=አይ 1=አንዳንዴ 2=አዎ |