



ADDIS ABABA UNIVERSITY
COLLEGE OF HEALTH SCIENCES
SCHOOL OF MEDICINE
DEPARTMENT OF PSYCHIATRY
**UNVEILING THE INTRIGUING WORLD OF NON-
PRESCRIPTION OPIOID USE: A CAPTIVATING
EXPLORATION AT ST. PAUL'S HOSPITAL MILLENNIUM
MEDICAL COLLEGE (SPHMMC) AND ZEWDITU MEMORIAL
HOSPITAL (ZMH), ADDIS ABABA, ETHIOPIA**

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AT ST. PAUL'S HOSPITAL MILLENNIUM MEDICAL COLLEGE
(SPHMMC) AND ZEWDITU MEMORIAL HOSPITAL (ZMH),
ADDIS ABABA, ETHIOPIA: A MIXED-METHOD STUDY

BY; Melaku Tesfaye

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ACRONYMS AND ABBREVIATIONS

AAU	Addis Ababa University
AAHB	Addis Ababa Health Bureau
AIDS	Acquired Immunodeficiency Syndrome
AMSH	St. Amanuel Mental Specialized Hospital
APA	American Psychiatric Association
HIV	Human Immunodeficiency Virus
NLSRC	New Life Substance Rehabilitation Center
PWOU	Person with opioid use
SPHMMC	St. Paul's Hospital Millennium Medical College
UNODC	United Nations Office on Drug & Crime
WHO	World Health Organization
ZMH	Zewditu Memorial Hospital

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ABSTRACT

Background: *Opioids are psychoactive chemicals, including those that are synthetic, semi-synthetic, and naturally occurring. They are prescribed by doctors to treat both acute and chronic pain. Problematic Opioid use can be associated with different negative consequences including addiction, overdose death, and infectious diseases like Human immunodeficiency virus (HIV), hepatitis B virus (HBV), and hepatitis C virus (HCV) associated with injectable opioid use, as a result of repeated use or sharing of injection. In Ethiopia, there is a lack of understanding regarding the non-medical use of opioids.*

Objectives: *This study mainly aimed to explore the experiences of opioid users for non-prescription purposes at SPHMMC & ZMH, Addis Ababa, Ethiopia.*

Methods: *The study particularly employed a phenomenological qualitative design triangulated by descriptive-method study design. A total of 16 participants for the qualitative study were selected using a purposive sampling technique. Data were also gathered through semi-structured interviews and reviewing of three years of opioid users of the hospital data records. Thematic analysis method and descriptive statistics were utilized to analyze the qualitative and quantitative data respectively.*

Result: *In the quantitative data a total of 47 opioid users were found from both hospitals, with the most prominent number 40 (85.1%) being male, single 35 (74.5%), a first degree in education 22 (46.8) health professional 20 (42.6%). Regarding the patterns of use; the majority 31 (65.96%) of participants were using only one type of opioid with a higher percentage of tramadol use 18 (38.3%), 16 (34.04%) were using at least two types, the majority 36 (76.6%) of them use opioids in a daily basis. 24 (51.06%) of participants were polysubstance users. In the qualitative findings, 5 themes and 15 subthemes were emerged. Risky opioid use patterns were identified, such as bingeing, mixing with other substances, and repeated relapses with increased dose and frequency. Participants turned to opioids for reasons like medical prescriptions, recreation, experimentation, and expected benefits such as improved work performance and concentration. Prolonged use aimed to relieve psychosocial distress from*

bereavement, breakup, civil war exposure, unemployment, etc. Withdrawal symptoms, pleasure retention, and perceived performance enhancement were factors. Due to financial constraints and prescription prohibition, users employ various strategies, including illegal acts, to access opioids. Non-medical opioid use can lead to social, psychological, financial, and functional impairments. Participants' motivations for quitting opioids may vary, with obstacles like lack of awareness of services, perceived detox limitations, and financial constraints hindering treatment-seeking behavior.

Conclusions: Both the qualitative and quantitative findings found non prescribed opioid use in Ethiopia. This finding also indicated the seriousness of opioid misuse and its adverse consequences on different life aspects of the users.

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1. INTRODUCTION

1.1. BACKGROUND OF THE STUDY

Opioids are a bunch of psychoactive drugs comprising an extend of substances, counting opiates and their manufactured analogues, that act on the opioid receptors mu (μ), delta (Δ), and kappa (K) within the human body, discourage breathing, increment sentiments of pleasure, and block torment messages from the nervous system (1) . Opiates belong to a group of alkaloids extracted from the opium poppy plant (*Papaver somniferum*). However, opioid is a general term applied to the alkaloids from the opium poppy that are synthesized by the body and interact with the same specific receptors in the brain that can relieve pain and promote health (2).

Opioid substances can generally be divided into two groups: legal prescription medications (pharmaceutical drugs) including morphine, codeine, fentanyl, or methadone, and illicit or illegal substance like heroin (3). As evidenced by a variety of studies, such pharmaceutical opioids are administered for the treatment of a variety of painful conditions like patients with cystic fibrosis (4), cancer pain (5–7), as well as other non-cancer painful conditions (7) Also, there is evidence that medically prescribed opioids can be diverted or counterfeited besides their legal prescriptions.

Although opioid usage dates back thousands of years (8) , multiple studies have revealed that it is becoming more and more common now among various age groups and genders all over the world. According to the United Nations office on Drugs and Crime (UNODC) 2020 global drug report, sixty-one million individuals take opioid drugs worldwide (1). Additionally, there is evidence that problematic opioid usage is increasing outside of its intended medical use throughout the world in general, and Africa (9) as well as Ethiopia (10,11) in particular.

According to a multi-level analysis of international data on “polysubstance use and misuse or abuse of prescription opioid analgesics” , problematic opioid use is described in 3 classification: misuse, abuse, and addiction (12). They have defined misuse as the use of opioid drugs contrary to the directed pattern of use, regardless of the harm or

adverse effects, on the other hand, abuse is the intentional use of them for a nonmedical purpose, and addiction is a pattern of continued use with experience of or demonstrated potential for harm (12). However, according to the current edition of the Diagnostic and Statistical Manual of Mental Disorders, opioid use disorder is defined as a problematic pattern of opioid use for at least 12 months that manifests as at least two of the eleven types of symptoms like; use large amount or consume for a prolonged period, fail to cut down, strong desire, tolerance, withdrawal, etc. (13).

As shown by numerous studies, the misuse of prescription opioids can lead to an overdose death (1,14,15), and injectable opioids also carry a high risk of spreading infectious diseases like HIV, and hepatitis B and C due to the likelihood of sharing and frequent use of the injection/syringe (10,11,16,17). Other study shows that illicit opioids and misuse of prescription opioids are the main causes of drug-related deaths across the world, and the continuing rise in opioid-related mortality, especially affecting North America, Australia, and Europe, is a public health challenge (15).

Different quantitative studies showed that problematic opioid use is widespread in Africa (9,16,18,19) including in Ethiopia i.e. “heroin” (20). Previous studies focused on the prevalence and its associated factors, and the risk of some kinds of opioids such as injectable drugs for infectious diseases (9–11,16). In Addis Ababa, according to studies by Deyessa et al., and Demissie et al., there is an increase in the use of injectable opioid drugs, mainly heroin, and there is a high prevalence of HIV and other infections, like; HBV, HCV, and syphilis (10,11).

Despite a few studies demonstrating the relatively widespread use of injectable opioids, particularly heroin, in Ethiopia, studies on opioid usage beyond its prescription purpose are very scarce. As a result, the primary objective of this study was to investigate the experiences of non-medical opioid users in Addis Ababa. Furthermore, it determined the number of opioid users based on a chart review of opioid users in psychiatric intervention at St. Paul’s Hospital Millennium Medical College (SPHMMC) and Zewuditu Memorial Hospital (ZMH).

1.2. STATEMENT OF THE PROBLEM

Even though opioids are commonly prescribed by medical professionals for the management of pain, including acute pain such as after surgery or injury, such as oxycodone, hydrocodone, and morphine opioid drugs; chronic pain such as pain associated with cancer or chronic back pain (i.e. fentanyl, oxycodone, and methadone); and the management of diarrhea, such as loperamide and diphenoxylate opioids (21,22) misuse of them without a prescription or over the prescribed quantity causes several significant complications. Many researchers found that there is an increasing mortality rate and infectious diseases among misusers of opioid substances (21,22).

A review study showed that opioid consumption for non-clinical indications has increased in Africa as opioid trafficking channels have evolved globally to utilize African trading networks (9). The study further indicated that most studies are epidemiological and concerned with illicit injectable opioid drugs such as heroin. In Ethiopia, particularly in Addis Ababa, a few previous studies focused on the prevalence of HIV and other infections as well as injection behavior among people who inject drugs (11). Another study focused on “population estimation and harm reduction” among people who inject drugs (10). However, there is a scarcity of research on the beliefs and other settings of opioid use. Qualitative studies are needed to have a deeper understanding of person with opioid use (PWOU's) perspectives, including how they obtain drugs, their life trajectories with opioids, subjective suffering or psychosocial consequences, and coping techniques. These kinds of studies will help to give insight in designing and implementing specialized policy alternatives such as prevention, regulation, or health care. Given the scarcity of qualitative research utilized to understand the lived experience of non-prescription opioid users, this study could add to the existing literature on non-prescription opioid use in Ethiopia, encompassing both pharmaceutical medications and illegal opioids. As part of the first objective, it also quantified the number of opioid users who were receiving mental treatment in Addis Ababa psychiatric centers.

In general, this study will be a key step toward tackling Ethiopia's serious public health challenge of problematic opioid use and informing the development of targeted

prevention and treatment programs. It could answer the following major research questions.

1. What are the patterns of non-prescription opioid use among individuals at SPHMMC & ZMH?
2. What are the contexts of non-prescription opioid use among individuals at SPHMMC & ZMH?
3. What are the psychosocial impacts of non-prescription opioid use among participants at SPHMMC & ZMH?
4. What are the treatment experiences of individuals with non-prescription opioid use at SPHMMC & ZMH?

1.3. SIGNIFICANCE OF THE STUDY

The researcher hopes that the result of this study will provide endeavor benefits for clinicians, researchers, academicians, policymakers, the opioid users themselves, and the entire community in different ways. The study may help researchers in developing the understanding and screening tools necessary to comprehend opioid users' experiences from the time of diagnosis through treatment in their clinical practices. It can also add to the existing literature on the experience of non-prescription opioid use and can assist anyone conducting research in this field by providing a qualitative exploration of opioid users' experiences. In general, the significance of the study on the experiences of non-prescription opioids users at SPHMMC and ZMH is multifaceted and has important implications for public health and policy. It addresses the challenges of non-prescription opioid use in Ethiopia by uncovering user's experiences and patterns. This research can also greatly contribute to enhancing harm reduction programs related to non-prescription opioids in Ethiopia and help to enrich beneficial treatment programs in the country.

1.4. DELIMITATION OF THE STUDY

The focus of this study was the capital city of Ethiopia, Addis Ababa. The location of the city was chosen since prior research in the area revealed that both licit and illicit opioid drug use were widespread there. Additionally, the study concentrated on people who

took opioids without prescription for a known medical conditions.

1.5. LITERATURE REVIEW

CLASSIFICATION OF OPIOIDS DRUG

Opioids are divided into three types based on their synthetic process such as, 'naturally occurring opioids' (i.e. Morphine, Codeine, Thebaine, Papaverine), semisynthetic (such as; Heroin, Dihydromorphine, Buprenorphine, Oxycodone, & etc.), and synthetic compounds (e.g. Pethidine, Fentanyl, Methadone, Alfentanil, Remifentanil, & others) (23,24). Opioids, on the other hand, can be classed as "agonists," "partial agonists," or "antagonists" based on their effect on opioid receptors or mode of action (24,25). In general, the table below highlights some unique types of opioid substances in terms of both synthetic form and mechanism of action as obtained from three different sources (23-25);

	Drugs	Mode of mechanism
Naturally occurring	<i>Opium</i>	-
	<i>Morphine</i>	Strong μ agonist, weak κ and δ agonist
	<i>Thebaine</i>	-
	<i>Papaverine</i>	-
Semi-synthetic	<i>Heroin</i>	Strong μ agonist
	<i>Hydromorphone</i>	Strong μ agonist
	<i>Hydrocodone</i>	μ agonist
	<i>Oxycodone</i>	μ agonist
Synthetic	<i>Meperidine</i>	Strong μ agonist
	<i>Levorphanol</i>	Strong μ and κ agonist
	<i>Fentanyl</i>	Strong μ agonist
	<i>Methadone</i>	Strong μ agonist

	<i>Propoxyphene</i>	μ agonist
	<i>Alphaprodine</i>	-
	<i>Lephaprodine</i>	-
	<i>Loperamide</i>	-
	<i>Diphenoxylate</i>	-
	Tapentadol	μ agonist, norepinephrine reuptake inhibition
	<i>Tramadol</i>	μ agonist, norepinephrine, serotonin reuptake inhibition

Table 1: List of opioids

PHARMACOLOGY OF OPIOIDS

OPIOID RECEPTORS

Opioid receptors are ‘G protein-coupled receptors’ found in the brain, spinal cord, skin, and gastrointestinal system (26) . Many studies have identified three distinct types of opioid receptors in the central nervous system (CNS) including mu (μ), delta (Δ), and kappa (K) receptors. They also have a common analgesic impact on brain circuits; nevertheless, each has distinct effects and distribution in different brain areas (26) . Additionally, some literature described a fourth additional receptor whereas σ (sigma) (23,29).

As described in a review of opioids by Ademikanra et al., Mu opioid receptor (mu for morphine): MOP-R has been linked to behavioral reactions including analgesia, hyper locomotion, respiratory depression, constipation, and immunosuppression (29) . It has been also implicated in behavioral responses, which include numbness, hyper locomotion, respiratory depression, convulsion, reduction of the efficacy of the immune system, euphoria as well as physical tolerance and dependence. Kappa opioid receptor (kappa for ketocyclazocine): Studies of KOP-R deficient mice suggest that “KOP-R agonists may help reduce pain related to internal organs.” Delta opioid receptor has been linked to the emergence of morphine tolerance (29). Dysphoria and hallucinations

are thought to be related to the σ receptors. Interactions in these regions also mediate spinal analgesia, delusions, and respiratory and vasomotor stimulation (23).

PREVALENCE OF PROBLEMATIC USE OF OPIOID

problematic opioid use could be defined by the misuse, abuse, and addiction behavior of the users (12). Misuse is the use of opioid drugs contrary to the directed pattern of use, regardless of the harm or adverse effects (12). A systematic review and meta-analysis on "Problematic Use of Opioids in Patients with Chronic Noncancer Pain" found that the prevalence in adults with chronic non-cancer pain was 36.3% (95% CI: 27.4 to 45.2%; $I^2 = 99.64\%$) (30). Another systematic analysis focused on the rates of problematic opioid use in chronic pain based on factors such as misuse, abuse, and addiction, implying that problematic opioid use is prevalent among chronic pain patients (31). Up on the study rates of misuse averaged between 21% and 29% (range, 95% confidence interval [CI]: 13%-38%), addiction was between 8% and 12% (range, 95% CI: 3%-17%) nevertheless rates of abuse low because it was reported in only a single study (31). In general, the worldwide prevalence of opioid use disorder is 0.29% (32). High -income nations have consumed opioids disproportionately, with low-income nations accounting for 6% of worldwide opioid usage (9,33).

As reported by Degenhardt et al., globally, "15.5 million" persons were dependent on opioids in 2010 (34). The study also discovered that the prevalence of opioid dependence worldwide ranged from 0.20 to 0.25, with males having a higher frequency (0.3%) than females (0.14), and ages ranging from 25 to 29 years (34). The incidence in Australasia, Western Europe, and North America was higher than the global pooled prevalence, according to the report. causes of opioid use (34). There is additional evidence that opioid use for non-prescription purposes is increasing throughout Africa. According to a literature review study on the "opioid epidemic in Africa and its impact", problematic opioids are spreading in Africa, and injectable drugs are more widespread (9). Similarly, in Ethiopia, injectable opioid drugs are widespread (10,11).

REASON FOR OPIOID USE

Opioids are mostly used for medicinal purposes. According to numerous studies, they are frequently prescribed to patients with a variety of illnesses, including cancer and non-cancer patients, to treat pain ranging from acute to chronic aches (4,5,7,35) . Nevertheless, an increasing number of people today use opioids for a variety of reasons without a prescription, aside from medicinal ones such as; to cope with stress and strain, to lessen the effects of traumatic experiences, to improve energy and sexual stamina, for recreational purposes because of the euphoric effect, and to induce sleep (29) . Poverty, crime, unemployment, and family lifestyle are also factors (18).

ADVERSE IMPACT OF PROBLEMATIC OPIOID USE

Opioid medications are crucial for treating pain (33) from a variety of sources, but they have a significant potential for addiction (36) using them excessively can have serious negative effects on one's health (37) . As evidenced by many studies it can lead to overdose death (1,18,30,32,38–40) and cause to spread of infectious diseases including HIV, hepatitis B (HBV), and hepatitis C (HCV), particularly associated with injectable opioids due to sharing of injection/ syringe (9–11,41–43) . According to the Centers for Disease Control and Prevention, opioid overdose deaths outnumber those caused by recent conflicts, car accidents, gun violence, and the human immunodeficiency virus in America each year (44) . Opioids are linked to a large range of problems and side effects (45) including sedation, dizziness, nausea, vomiting, constipation, physical dependence, tolerance, and respiratory depression (45–47) . In addition, there are economic effects resulting from problematic opioid use, and opioid problems can account for lost productivity, high medical costs, and a sharp drop in labor force participation (44).

2. OBJECTIVES

2.1. GENERAL OBJECTIVE

The general objective of this study was to unveiling the intriguing world of non-prescriptions opioid use among individuals at SPHMMC and ZMH Addis Ababa,

Ethiopia.

2.2. SPECIFIC OBJECTIVES

In this study the researcher intended to;

- Describe the frequency, dosage, duration, and contexts of opioid use among non- prescription opioid users at SPHMMC and ZMH in Addis Ababa, Ethiopia.
- Investigate the primary reasons and motivations for individuals to engage in non-prescription opioid use at SPHMMC and ZMH in Addis Ababa, Ethiopia.
- Explore perceived psychosocial impacts of opioid use among individuals engaging in non-prescription use, including the effects on mental health, social relationships, occupational functioning, and overall quality of life at SPHMMC & ZMH.
- Understand treatment seeking behaviors of non- prescription opioid users at SPHMMC & ZMH.

3. RESEARCH METHODS

3.1. RESEARCH DESIGN

The researcher intended to primarily use qualitative study to explore the experiences of opioid users who were using the drugs for non-prescription purposes. Particularly, a phenomenological qualitative design was used in this study. Because it focused on the in-depth analysis of participants' lived experiences, the meaning people assign to those experiences, and how participants interpret those experiences (48). Therefore, the main objective of this study can be easily accomplished using a phenomenological research method. As part of the first specific objective or to support the qualitative data descriptive study design was utilized.

3.2. STUDY SETTING

The study setting for the study was Zewditu Memorial (ZMH) and St. Paul's Hospital Millennium Medical College (SPHMMC).

I. Zewditu Memorial Hospital (ZMH):

It is located in Addis Ababa which is the capital city of Ethiopia, and it was founded in 1964 and it was built, owned, and operated by the Seventh-day Adventist Church, but was nationalized during the Derg regime in about 1976. It is also named after Empress Zewditu, the cousin and predecessor on the throne of Emperor Haile Selassie. Today, Zewditu Hospital is operated by the Ministry of Health https://en.wikipedia.org/wiki/Zewditu_Hospital, and has comprehensive services including psychiatric services and substance use disorder rehabilitation program.

II. St. Paul's Hospital Millennium Medical College (SPHMMC):

It is found in Addis Ababa which is the capital city of Ethiopia and was built by Emprior Haileslasie in 1969. It currently has above 700 beds with an annual average of 200,000 patients. Over 13 departments are available https://en.m.wikipedia.org/wiki/St._Paul%27s_Hospital_Millenium_Medical_College.

3.3. TARGET POPULATION

The target population of this study was non-prescribed opioid users at Zewditu Memorial Hospital (ZMH) and St. Paul's Hospital Millennium Medical College (SPHMMC).

3.4. SAMPLING TECHNIQUES AND SIZE

Both qualitative and descriptive studies were conducted at Zewditu Memorial Hospital (ZMH) and St. Paul's Hospital Millennium Medical College (SPHMMC). The Hospitals were chosen based on their accessibility and availability of substance use disorders rehabilitation services as well as outpatient treatment programs. A total number of 16 participants were selected for the qualitative data from both settings, with 10 at ZMH and 6 at SPHMMC. The participants were selected using a purposive sampling technique based on different criteria. First, the participants have an opioid use history. Second, the availability of personal contacts or addresses of the patient in the data record to trace them, and their willingness to participate in the study. In Addition, as

much as possible, heterogeneity criteria were considered. While five of the participants were traced through their contacts, and the other (11) of the participants were selected while they were admitted for detoxification.

3.5. ELIGIBILITY CRITERIA

Inclusion criteria

Qualitative data:

- Using opioid substances for non-medical purposes.
- Residents in Addis Ababa
- Opioid users on active clinic admission for detoxification

For chart Description:

- Diagnosis of any kind of opioid use disorder
- Patient chart in the last 3 years.

Exclusion criteria:

- Age < 18
- Other than the Amharic language speaker
- Opioid users with severe mental illness who can't provide a consent per the information obtained from chart review.
- Opioid users whose diagnosis was recorded with other comorbid disorders in patient registration books.

3.6. DATA COLLECTION METHODS

A semi-structured interview was utilized for the qualitative data. By using semi-structured interviews, qualitative data acquired to explore the main study objectives, and a topic guide prepared to address the entire research objectives targeted to be examined. In-depth interviews also used to gather extensive information from participants to address almost all of the research questions of the study. The interview was conducted entirely in Amharic. In addition to the in-depth interview, any types of body marks that may be linked with injectable opioids had observed during the data

collection periods and documented as witnesses of the data collector. In addition, took notes and audio records of the interview have taken through a smart phone. notes were taken and recorded during the interview. In addition to the qualitative data, descriptive data was acquired from three years of patients with opioid use disorder medical records in the two selected Hospitals to support the qualitative data. In the chart review, only obtained descriptive data regarding the number of patients who were in outpatient and inpatient interventions for their opioid use based on each specific socio-demographic characteristic. Specifically, the descriptive data was partially utilized to address the first objective of the study through a self-prepared checklist concerning socio-demographic characteristics and patterns of opioid use.

3.7. DATA MANAGEMENT AND ANALYSIS

The gathered qualitative data were transcribed verbatim and translated into the English language. It is also managed using open code software and with the assistance of the software, the analysis is done through a thematic analysis method by following six procedures as stated by Braun et al., such as familiarizing with data, generating initial codes, searching for themes based on the initial coding, reviewing of the themes, defining, and labeling the themes, and finally producing the report of thematic data analysis (49) . The descriptive data was analyzed using descriptive statistics such as frequency and percentage. Then, the analyzed data were presented by utilizing a table. The descriptive data was also analyzed manually.

3.8. DATA QUALITY ASSURANCE

To ensure the quality and accuracy of this study the researcher was trying to use the following strategies in the research process. Open-ended and non-judgmental questions were used while conducting the interview. The interviews have been done in a safe and quiet room at ZMH and SPHMMC to reduce any disturbances or interruptions that would affect the result of the interview. Some of the translated data were cross-checked by the research teams and some corrections have been made. Additionally, established the themes discussed with the advisors. Some of the initial coded data were reviewed by the research members. Each interview data was carefully coded after a repeated and

thorough review. Subsequently, five main themes and fifteen subthemes identified through a hybrid thematic analysis approach, aligning with the research objectives and the gathered data.

3.9. ETHICAL CONSIDERATION

While conducting this study, APA 'Ethical Principles of Psychologists and Code of Conduct' for research and publication guidelines (50) were considered from data collection to reporting the result, such as; ethical clearance was obtained first before conducting the study from Addis Ababa University's institutional review board of the psychiatry department and Addis Ababa Health Bureau (AAHB) and SPHMMC ethical review board. Before conducting the interview, each participant was provided with written consent and asked about their willingness to participate in the study. The right to withdraw from their participation in the study at any stage was explained and respected. We also did not anticipate significant harm to participants because of participation in the study. Active suicidal behaviors or other serious risks related to opioid use or trading were assessed as part of the research, considering a safety plan for the individual, but there were no cases found at serious risks. Participants initially identified through their medical records and contacted via their phone numbers were notified that their contact details were accessed with approval from the research ethics committee. Before agreeing to take part in the interview, they were briefed on the study's objectives and would be sent an information sheet by email. Participant data was anonymized for confidentiality. Furthermore, the interviews were carried out without including and disclosing the data for staff members of the selected research settings, ensuring that the participants received quality services.

4. FINDINGS

4.1. QUANTITATIVE FINDINGS

Medical records of People with opioid use at ZMH and SPHMMC were reviewed to understand patterns of opioid use from 2021 to 2023. Over the three years, a total of 47 opioid users have received treatment in both outpatient and inpatient clinics, with 23 at

ZMH and 24 at SPHMMC. The sociodemographic data of the participants are presented.

4.1.1.SOCIO-DEMOGRAPHIC CHARACTERISTICS

Characteristics	Category	Number	Percent
Sex	Male	40	85.1
	Female	7	14.9
Age	18-25	18	38.3
	26-30	20	42.6
	31 and above	9	19.1
Educational Status	Below grade 12	13	27.7
	Diploma	3	6.4
	Degree	22	46.8
	Master and Specialty certificates in medicine	9	19.1
Marital Status	Single	35	74.5
	Married	11	23.4
	Divorced	1	2.1
Occupation	No record Not recorded	1	2.1
	Student	7	14.9
	Health Professional	20	42.6
	Unemployed	9	19.1
	Others*	10	21.3
Living resident	Addis Ababa	33	70.2
	Outside of Addis Ababa	14	29.8
*family business, messenger, surveying, garage work, teaching			

Table 2: Sociodemographic Characteristics

As illustrated in Table 2, the dominant number of users 40 (85.1%) were male with the minimum and maximum ages of users being 18 and 50 years respectively. Concerning the educational background of opioid users, the majority of users 22 (46.8%) had a first degree.

Regarding marital status, the highest number of opioid users 35 (74.5%) were single. Additionally, the highest number 20 (42.6%) of users were health professionals. Out of the total number of visited opioid user's majority of the patients 33 (70.2 %) were from Addis Ababa.

4.1.2.PATTERNS OF OPIOID USE

The participants' patterns of opioid use are displayed in the next two tables.

Type of opioid		Number	Percent
Only one opioid use	Tramadol	18	38.3
	Pethidine	10	21.3
	Oxycodone	1	2.1
	Morphine	1	2.1
	Heroin	1	2.1
	Total	31	65.96
At least two types of opioid use	Tramadol, Pethidine & Morphine	3	6.4
	Pethidine & Tramadol	5	10.6
	Pethidine, morphine, codeine, tramadol	2	4.3
	Pethidine, heroine	1	2.1
	Morphine, pethidine	2	4.3
	Tramadol, heroin	2	4.3
	Morphine, tramadol, heroin	1	2.1
	Total	16	34.04

Table 3: Types of opioids used by the participants

According to the obtained data from patients' medical records, opioid users who visited both hospitals have had an experience of using only one kind of opioid 31 (66%) or multiple types of opioids (at least two kinds of opioid) 16 (34%). From the total, a high number of opioid users use only tramadol 18 (38.3 %), and only pethidine 10 (21.3%).

Variables		Number	Percent
Duration of Opioid Use	Below a year	4	8.5
	Between 1 to 3 years	23	48.9
	More than 3 years	19	40.4
	No record	1	2.1
Frequency of Opioid use	No record	9	19.1
	More than daily*	22	46.8
	Daily	14	29.8
	3- 5 times in a week	2	4.3
Forms of Using Opioid	No record	7	14.9
	Tablet	9	19.1
	Injection	20	42.6
	Both	11	23.4
Received type of treatment	No record	2	4.3
	Detox	25	53.2
	Psychotherapy	2	4.3
	Both	18	38.3
Number of Admission to the selected hospital	Up to two times	31	66.0
	More than two times	14	29.8
	Only have OPD Follow-up	2	4.3
Age of starting opioid	before 18 years	7	14.9
	between 18 to 29 years	28	59.6
	after 30 years	7	14.9
	No record	5	10.6
opioid and other psychoactive substance patterns of use			
Other types of psychoactive substances use	Number	Percent	
Absent of other substance use (sub)	23	48.94	
≥ 1 opioid & 1 others sub*	4	8.51	
≥ 1 opioid & 2 others sub [#]	7	14.89	

≥ 1 opioid & 3 other sub [^]	4	8.51
≥ 1 opioid & > 3 other sub ⁺⁺	9	19.15
List of Other substances identified through the chart review; - Stimulants: Khat* (1), # (4), ^ (4), ++ (5), Tobacco* (2), # (6), ^ (5), ++ (6), cocaine⁺⁺ (2), crystal meth⁺⁺ (2). - Depressant: Alcohol# (3), ^ (2), ++ (3). - Hallucinogens: shisha[^] (1), ++ (3), cannabis[^] (1), ++ (5). - Others: ketamine ⁺⁺ (1), Cough syrup⁺⁺ (1), clonazepam⁺⁺ (1).		

Table 4: participants' patterns of opioid Use

Regarding the form of taking opioids, the majority 20 (42.6%) of the participants were using injectable opioids, Regarding the frequency of use, the highest number of users 22 (46.8) were using opioids more than one time daily and the majority of the users 31 (66.0 %) had up to two times of admission. On the other hand, the majority of opioid users, 24 (51.06%), have a history of using other types of psychoactive substances, with 9 (19.15%) using more than three different psychoactive substances. Additionally, tobacco and khat were used by 19 and 14 participants respectively.

4.2. QUALITATIVE FINDINGS

4.2.1. PARTICIPANT'S PROFILE

A total of 16 participants were included in the interview from both settings: 10 from ZMH and 6 from SPHMMC. Two of the participants were female, and the other fourteen were male. Five of the participants were interviewed after being traced to their contact number, while the remaining eleven were interviewed while they were admitted for detoxification. Out of the total, eight participants were healthcare professionals.

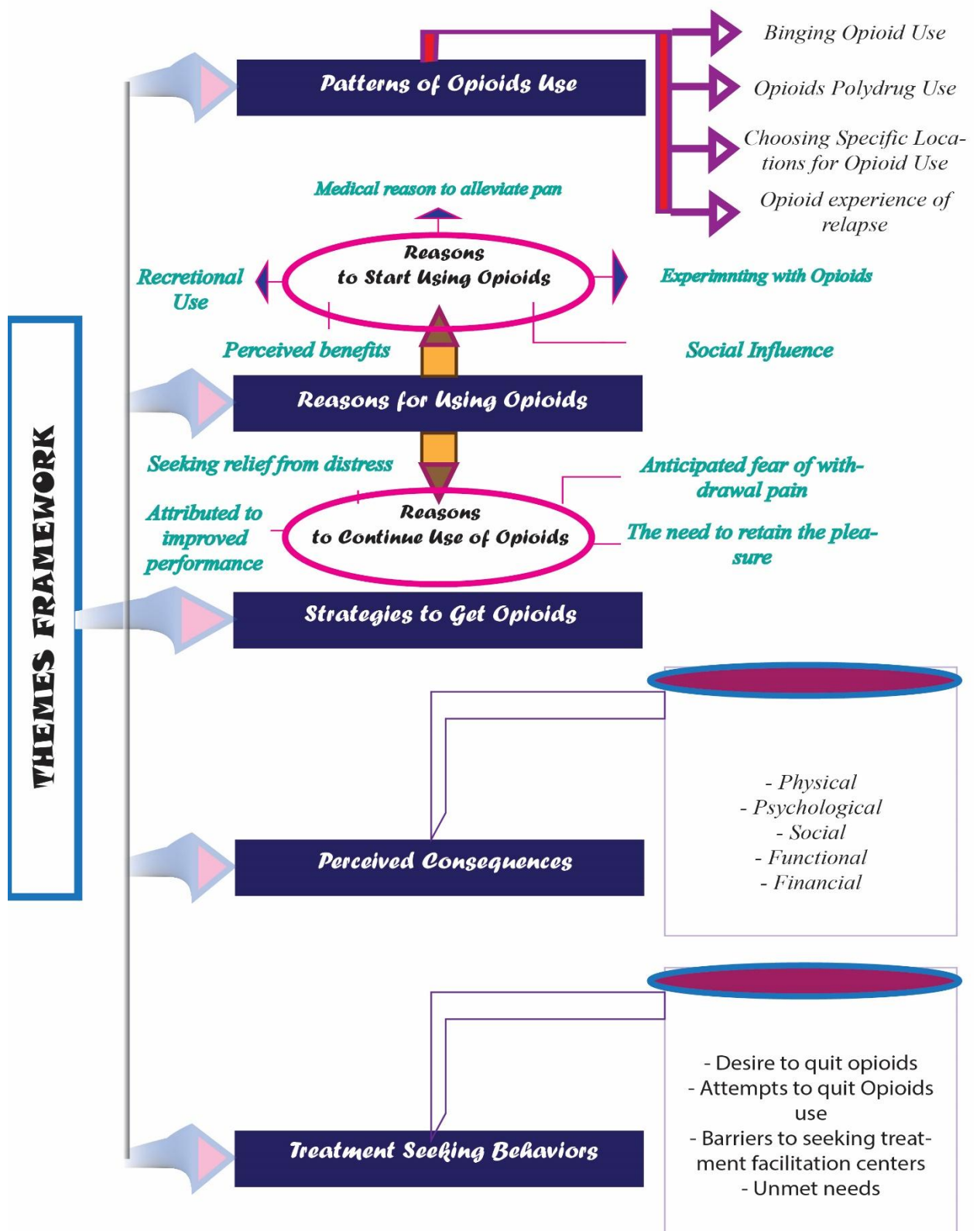


Figure 1: Themes Framework

4.2.2. PATTERNS OF OPIOID USE

Bingeing opioid use

Participants use opioids daily in excessive amounts repeatedly over a short period. Commonly used opioids were tramadol, pethidine, morphine, heroin, and codeine. Participants highlighted the easy availability of tramadol and pethidine compared to the other opioids, as well as large doses.

Here is one of the experiences pethidine users' have:

"I used to take 15 to 20 ampules per day, in milligrams; it means 1500 to 2000 mg" [male, 34 years, health professional].

Another participant with tramadol said that:

"I was taking up to seven strips [per day] before I came here. One strip contains ten pills, and seven strips mean seventy pills. So, it's a total of more than three thousand milligrams that I was taking." [male, 22 years old, student]

Morphine and heroin were reported as less frequently used opioids due to difficulties in access and their expensiveness, according to some respondents. In addition to these reasons, others mentioned the severity of morphine's side effects. One participant was described as:

"I use morphine for a long time; I use it as an extra as it is expensive and hard to get it consistently." [male, 20 years old, college student]

Aside from a high intake of opioids, other participants mentioned frequently switching opioid drugs based on their potency, some of whom specifically favored pethidine.

Opioids polydrug use

Opioid polydrug use is mixing different types or formulations of opioids or with other psychoactive substances simultaneously or consecutively. Many participants mix and use opioid pills, either with other opioid drugs or with *alcohol*, *cannabis*, diazepam or other drugs. Participants reported using codeine, which they called alone, and combining it with other opioids like tramadol. One of the participants explained:

"We take codeine as syrup, and we add pills to it and mix it before drinking it. We mix the pills with our drinks; they are mostly taken that way." [Male, 20 years old, college student].

Another participant, who had been using *tramadol*, *morphine*, and *heroin* stated:

"There was a time when we mixed it with alcohol... There were many occasions when we took opioids by mixing with alcohol and most of the time with cannabis" [male, 34 years].

Additionally, there were reports of injecting pethidine combined with a high dose of diazepam among participants with suicidal behaviors.

Here is the experience one of the pethidine users had:

"... I used diazepam. I combined pethidine with diazepam for two days to kill myself. I took forty mg, unlike other times when I used only five mg. [male, 28 years old, health professional]

Choosing specific locations for opioid use

Participants often seek safe, calm, and trustworthy environments to regularly take opioids. They took a separate room; sometimes they rent it for the specific purpose of opioid use, in the bathrooms, in their bedrooms, in a church compound, or other private places. Participants shared their experiences as follows:

"I choose safe places to use it (opioid). If I'm not able to use it at home, I usually prefer silent places; sometimes I use it in the bathroom." **[male, 30 years old, health professional]**

"I didn't take it (opioid) outside for a room. There is a room I rent for a cheap price, just one hundred birrs." **[male, 34, health professional]**

Some have noted a difference in their opioid use, experiencing pleasure when consuming them in a stable and quiet environment as opposed to a noisy or open space. Participants not only preferred a specific location to enjoy the euphoric effects of opioids but also highlighted other reasons for wanting to use them in a particular place. These reasons included a fear of judgment from others and a desire to protect themselves from potential physical harm that could result from overdosing on opioids. One of the participants described that:

"I want my privacy. First of all, nobody knows that I use it. There is also the effect that I experience when I take the medication associated with the place. I recognize the difference in the euphoria related to the place. For example, if there is noise in the place, I might not find the feeling that I am looking for, and I also feel uncomfortable if people see me taking it, so I might not find the feeling I am supposed to feel. I usually use it alone; I have used it with a friend, but the feeling is less than using it alone." **[male, 30 years old, health professional]**

Experience of relapse

Many participants reported relapse after quitting their use. Participants explained various factors contributing to the repeated relapse. These are detailed in the section below on reasons for continued opioid use. Additionally, the frequent exposure to opioids in the work environment and transitions due to work were highlighted. Health professionals emphasized their work environment and frequent exposure to opioids while administering them to patients at the clinic as major triggers for their relapse. Participants also explained that when they see reminders of opioids such as syringes,

pill packets, and ampules, it strongly triggers the urge to use them. One pethidine user who has been in the outpatient follow-up from one of the two settings mentioned that:

“I believe it is connected to the fact that I could easily find it at my workplace, and when I saw it there, I resumed in an attempt to distract myself from my depression.” [female, 26 years, health professional]

Participants also noted the recurring nature of opioid relapses without clear explanations.

4.2.3. REASONS FOR OPIOID USE

4.2.3.1. REASONS TO START USING OPIOIDS

The initiation of opioid use stems from various reasons. In short, five categories, described below, can be linked to the decision to start taking opioids.

Medical reason to alleviate pain

Some participants are introduced through medically prescribed opioids. Participants, particularly who are health professions, reported that they initially began using opioid drugs for medical reasons. They reported experiencing severe pain in various parts of the body, including the back, paralysis, leg pain, pain below the waist, and pain related to coronary artery disease. Some of them reported having clear medical evidence and were prescribed the drugs by a physician, while others started based on their assessment of their pain symptoms without medical investigations or hospital visits. For example, participants reported as follows:

“Initially, I had severe back pain, prompting me to start pethidine for the first time. It was prescribed by a doctor because Tramadol was ineffective. [female, 26, health profession]

“The reason I first tried pethidine was due to leg pain. When I initially started

taking it, I had just started a new job and experienced a chilling sensation in the area of leg pain. The pain was so severe that it immobilized me, and at one point, I even fell during the summer. As I am a health professional, I began to wonder why I couldn't manage the pain with this medication. [male, 33 years, health professional]

Other participants also reported that some healthcare professionals prescribe Tramadol to manage patients' pain without any medical investigation, even if the pain is medically unexplained. They also expressed concern that healthcare professionals may administer this medication without considering its addictive nature and the possibility of the pain potentially attributed to psychological conditions.

"I had severe back pain and I started the tramadol with a doctor's prescription. I still have associated with depression. My first diagnosis was also depression, and it was severe. In short, I had somatic pain that was unmanageable and had no medical findings. For that reason, I also had a psychiatric follow-up at" [female, 34 years old, health professional]

Experimenting with opioids

Experimenting with opioids, driven by the curiosity to test their effects was another reason. This experience was accompanied by the unique pleasure and happiness. Certain number of healthcare professionals were identified as gateways to obtain the opioids. Participants also emphasized that their frequent exposure to opioid medications during their patient care and academic study inspires them to test the effects of opioids by experimenting on themselves. Participants described that:

"I was curious to try it during my internship, and when I started the first dose, my friends injected me. You know, I always want to try new things, which is how I started... I used to try other medications before that to understand the symptoms and their names. [male, 30 years old, and a health professional]

Other participants were also stated as:

“The first time I used pethidine was during my gynecology internship. Pethidine is prescribed for pain during labor, and at that time, we were unfamiliar with pethidine. Subsequently, we decided to administer a reduced dose of fifty milligrams of pethidine to her (the mother who is laboring) and to keep the rest for ourselves just for trial.” [male, 27 years old, health professional]

Social influence

Peer pressure and modeling were identified as other significant factors leading to opioid use. Participants highlighted the initial introduction by others, with the brain subsequently developing a strong and persistent craving for opioids. Some participants, especially at the high school level, mentioned that imitating other students who were in a state of euphoria after taking opioids led them to try opioids themselves. Participants stated that:

“I was prompted to use it [Tramadol] after observing my friends... Yes, some of my friends were using it. So, I have started to use it, saying, why not deviate from them? Then after, I started to notice its benefit and got in more.” [male, 22 years old, student]

Other participants with tramadol use reported that:

“I began taking Tramadol while in school. During lunchtime, as I observed the students having fun, I wondered if you remembered how, you were during the break time at high school. Weren't you losing energy and feeling lethargic? However, watching the students enjoying themselves, being active, and moving around to mini-media songs made me question what they were taking and how it affected them. It made me wonder about its effects. Eventually, I decided to try it, thinking it wouldn't kill me to experiment.” [male, 23 years]

In addition, acquiring knowledge about opioids, such as heroin, from university students

who consumed them, along with prior exposure through various movies, was reported as another way to get around opioid use. A participant who underwent treatment for alcohol addiction were more exposed to tramadol and morphine, suggesting that certain healthcare professionals unethically provide opioids to addicted individuals. A participant with heroin, tramadol, morphine, and other psychoactive drugs claimed that:

"To be honest, I had no idea that morphine and tramadol were being used for these kinds of things. I had only heard of heroin, marijuana, and others. It was only during my time in rehabilitation that I became aware of and gained access to these drugs, sparking my interest. During my admission to rehab for recovery, I had communication with both the people who took it and the healthcare personnel who provided it. I so started using them there with them." **[male, 34 years]**

Recreational use

Other participants also reported turning to opioids in search of pleasure and to suppress their distress. Participants who experience severe grief also often seek strong and short-acting drugs for relief. On the other hand, losing satisfaction with previously consumed substances was reported as a reason for starting opioids to seek greater enjoyment. Some of the participant's reports are highlighted below;

"I started as a fan and then I experienced a lot of horrible things in my life, just as I was about to start using. It was just a matter of losing the people around me, both of my sisters and my father. Yes, I don't want to go into the house, and I want to forget about it, and then it grew worse." **[male, 20 years, college student]**

"I first tried it for fun with a friend while working at the hospital on night duty. After visiting patients, we indulged in a bit of khat, and alcohol, and even smoked weed, but found ourselves unsatisfied. Upon discovering pethidine in the pharmacy, we decided to try it..." **[male, 28 years, health professional]**

Perceived benefits

Another reported reason for turning to opioids was the belief that opioids enhance cognitive abilities to accomplish a particular task. Music producers and sound recorders, in particular, mentioned the demanding nature of their activities, often performed during late hours, as a reason for turning to opioids. They also highlighted their experience of experimenting with various opioids, including illicit drugs like heroin. One of the respondents expressed;

"I like rapping and recording, and when I take drugs, it inspires me to rap, it is better to record while you are high because it will give you new ideas, so I started using it. I also use other drugs like cough syrup; other rappers also use these drugs and rap. [male, 30 years, dropped out of school]"

Aside from the above mentioned reasons, participants reflected that loose regulations or prohibitions on opioids, especially in the past, facilitated easy access. Participants acknowledged the availability of opioids like tramadol, pethidine, and morphine through local dealers, with some mentioning that pharmacists also sell opioids. One of the participants said;

"They [pharmacists] gave me it [pethidine] easily; it's money; no problem if you have money in Addis Ababa." [male, 30 years, health professional]."

4.2.3.2. REASONS FOR SUSTAINED OPIOID USE

After starting opioids for any of the reasons mentioned earlier, participants reported a strong inclination to continue opioid use. According to their report, the following four major reasons were identified for their ongoing opioid use.

Anticipated fear of withdrawal pain

Participants emphasized the seriousness of opioid withdrawal. According to their reports, the fear of withdrawal symptoms emerges when attempting to stop or decrease opioid

consumption. They reported withdrawal symptoms including, respiratory depression, headache, diarrhea, involuntary movement, arthralgia, sweating, and chilling sensations. These symptoms ultimately result in developing anxiety about stopping or reducing their opioid intake, along with other reasons for continued use among many participants. Furthermore, participants mentioned experiencing fainting and falling while trying to quit opioids. A participant who attempted to quit Pethidine on himself many times shared his account as;

“I was falling, I had respiratory depression, I just had the headache and diarrhea left, and I just had involuntary movements, respiratory depression all day. I just don't control them; it is very difficult. I can't take the air out and take it in. I was very congested at that time, just on my leg and my neck. Above all, I can't breathe and there's nothing that bothers me more than it. For such reason, I just take the pethidine, then” [male, 34 years, health professional].

Participants reported experiencing psychological and social challenges due to their withdrawal, including depression and a lack of interest in social interactions and communication.

One participant who uses tramadol shared his experience as follows;

“If I take it, I'm energetic and humble while talking with families, friends, and others. However, when I stopped taking it all such things disappeared; even I didn't want to talk with me despite others. Just you lost confidence, I have no word how I can express it.” [male, 23 years]

The need to retain the pleasure

Participants noted that the pleasure experienced from initial opioid use can linger in memory, leading to persistent cravings that are challenging to forget or erase. Moreover, an abrupt dose escalation was also reported. In addition, an abrupt dose escalation was reported. For example, some of the participants were reported as follows;

A participant who turned to opioid [Pethidine] use for the reason of experimentation was reported as;

“It’s because I want the feeling, it was amazing and surprising and sometimes I use pethidine to get a good feeling.... It was the feeling that was unique and having euphoria! I was out of the state that I was in, and I never experienced such a thing, it could not possibly have happened in a normal state without the medication’s help, it made me want that feeling again, and then I tried to use three and four ampules to get that feeling.” **[male, 30 years, and health professional]**

Another participant who initially started tramadol due to peer pressure mentioned;

“I suddenly had a powerful, pleasant, unfamiliar emotion. That’s why I’ve always enjoyed it. And back then, I was in love with it. Indeed, on the initial day. I’m just delighted about it, it’s awesome, and the sensation is overwhelming because I didn’t use it before.” **[male, 21 years, dropped out of university].**

Seeking relief from distress

Psychosocial stressors, such as breakups, divorces, unemployment, and involvement in civil war, were reported as additional factors contributing to continued opioid use. Participants initially prescribed for medical reasons reported experiencing pleasure and pain relief upon initial intake, which led them to continue using opioids to manage personal or social distress.

Here is one of the participant’s witnesses;

“It’s just those things, you feel bored when you are alone and that’s why I love it, even if there are bad things about it, it’s made me go through so much, it’s just those feelings of despair that you just become a loser but that thing also helps you not to be and that’s why I love it even though the drug hurts me.” **[male, 20 years, college student]**

Attributed to improved performance

Additionally, other participants reported that they were using opioids to accomplish tasks and academic purposes as opioids were perceived to help with being active, energetic, and increasing concentration. *A participant with tramadol use described that;*

“...I usually use it to able to be concentrate on my studies. I was interested and used to reading books. When I use tramadol, I can focus on my studies and be able to read long time, I might keep reading throughout the night...” [male, 22 years, student]

4.2.4. STRATEGIES TO ACCESS OPIOIDS

Participants had different unique experiences of using various tactics to acquire opioids. In particular, participants from the health profession have confessed to unethical conduct in obtaining opioids. This involves prescribing opioids intended for medical procedures for personal consumption, urging patients to buy more expensive opioids needlessly, and substituting expensive opioids with cheaper alternatives for personal benefit, such as prescribing pethidine to a patient and using it themselves while giving the patient tramadol instead.

“It is because of the patients, we use this medication during labor for free, and the medication is available for them and if we want, we can order the medication for them from the pharmacy and we can take it for ours then, that is how I have it. I spent 2000 birrs per day, but if I was around work, I usually prescribed it for the patients after they bought that I would take it for myself and I would give the substitution (tramadol) for the patient. There are methods, the first method is to order patients to buy, and the second option is to order the patients even if it is from private, they might need the half and I will take the half” [male, 30 years, and health professional]

Another strategy mentioned by the health professional was writing their prescriptions from their workplace. One participant with a tramadol vial described that;

“I bought it from a pharmacy anywhere; it was sold with a normal prescription until recently. It was not difficult to buy because I wrote the prescription myself, so you could find it anywhere you go.” [female, 34 years, health professional]

Other participants also mentioned obtaining opioids from illegal drug dealers or pharmacists. They also highlighted using various methods to access them from pharmacists, like through friendships, through acquaintances of the pharmacists, and directly requesting them, with the condition that the pharmacists were aware of their “addiction” to opioids. A participant with tramadol use stated that;

“Before it was available at the pharmacy without a prescription. After that, there is a very friendly pharmacist. Because I have been there for a long time, he also knows why I use it and how I will suffer if I lose it. Otherwise, I never used to buy at the black market.” [male, 22 years, student]

4.2.5. PERCEIVED CONSEQUENCES OF PROBLEMATIC OPIOID USE

Participants identified various impacts of opioid use on their lives, including both positive and negative effects. The upcoming section outlines these impacts categorized into physical, psychological, and social effects.

Physical adverse consequences

Injectable opioid users expressed concerns about the locations on their bodies where they were injected. This was confirmed by the witness of the data collector during the time of the interview, they had visible spots and scars on their hand associated with their injections. Many participants also mentioned that they did not share syringes and had been tested for infectious diseases such as HIV, syphilis, and hepatitis, and reported a negative result. On the other hand, the repeated use of syringes was also reported by other participants.

“I don't use the syringe repeatedly. I spent a lot of money on Pethidine and the syringe is 5 Birr, because of that I think there is no reason not to spend.” [male, 34, health professional]

“I was not sharing it and I only used it once... Yes, I was checked (HIV and hepatitis diseases) and I'm negative.” [male, 30 years, health professional]

Participants who reported binge opioid use highlighted the resulting complications and worsened physical harms. Participants highlighted that overdosing on tramadol and pethidine, or simultaneous intake of different opioids or other psychoactive substances were identified as highly risky behaviors leading to physical harm and prolonged loss of consciousness. Additionally, frequent falls due to fainting were reported and participants shared experiences of suffering physical consequences such as bleeding, broken or chipped teeth, and injuries that left scars on various parts of their bodies, including their face and head, due to excessive opioid use. Some of the participant's witnesses are described below;

“I took it one time [Tramadol, codeine, morphine] and there was blood coming from my mouth, I didn't wake up for several hours, I don't know, that's what people told me, other times I woke up early, 6 minutes, but that day I waited about 20 minutes and I didn't take it after that time” [20 years, freshman college student].

Other participants with pethidine use said that;

“This stitched-up look on my face is a result of a trauma I experienced. I overdosed, I took more than ten ampules, don't remember when I was taken to the eleventh, I lost consciousness and I failed I don't remember how it happened, and when I was awake, I had a hard time getting up my nose was broken because I failed so badly. My tooth was chipped at the moment” [male, 30 years, and health professional]

Additionally, a decrease in appetite, dry stomach or gastric issues, tremors, and jerky movements were reported by respondents. Others also indicated more severe physical consequences of morphine compared to other opioids, citing instances of excessive vomiting and fainting. One of the participants mentioned;

"When I was using it excessively my short-term memory started to damage, and I have gastric problems and tremor and jerky movements" **[male, 30 years, and health professional]**

Others described intense physical discomfort throughout their body while ceasing opioids and they attributed this to the decrease in natural opioids production due to continuous use of external opioids.

Psychological adverse consequences

Participants reported different psychological adverse consequences conditions related to opioid use exhibited a range of experiences. While some mentioned feelings of depression, loss of interest, boredom, and loneliness, others found opioids to offer comfort and enjoyment. According to their accounts, the challenge of ceasing or reducing opioid intake, even briefly, involved intense emotional distress, including sensations of anxiety, loss of concentration, irritability, and reduced self-confidence.

Others also reported experiencing serious complications or acute psychological adverse consequences such as confusion and loss of consciousness. Here is a participant witness;

"Yes, I can't walk a certain way; I think I'm going to fall, and most of the time I'm talking to myself, walking around, saying I'm not going to fall, and worrying about what would happen after I fall." **[male, 20 years, college student]**

Social Impacts

Various negative social consequences of opioid use were reported. Participants highlighted that opioid use led to social disconnection, including reduced interaction with

others and limited participation in social events like family gatherings, weddings, funerals, visiting sick loved ones, and others. However, other participants mentioned that opioids helped them have better social interactions, emphasizing how opioid use improved their social communication.

The way opioids lead to social disconnections was noted as varied among participants. For some, it was reported that the euphoric effect of opioids made them feel whole and led to a desire for solitude, damaging their relationships with others. One participant stated that,

"When I use Pethidine, I just think that I don't need anyone, I feel I'm complete enough on myself, I just perceive as I have all things and can do everything"
[male, 34 years, health professional].

Other participants also highlighted that after using opioids, they experienced a loss of energy, leading them to withdraw from social interactions. On the other hand, others noted that opioids provided them with the energy to participate in social activities and communicate more effectively. On the contrary, they also highlighted that behavioral changes associated with opioid withdrawals hindered them from fully engaging in their social lives and often served as a reason to withdraw from others. Here is one participant witness;

"I separated from my lifetime friends. Because my character has changed through time. For example, if I take it today, I will play and talk to them peacefully, but if I don't take it, I will seem to be an unknown person, my characteristics will have changed... I have irritability that reaches a level that you can't control; the word that comes out of your mouth may not be good...." **[male, 22 years, student]**

"Yes, you wouldn't want to talk to anyone, and it will make you irritable when it starts going. The medication doesn't last; it can last a day at most. At the end of the day, your body gets very tired, making you irritable." **[male, 20 years, college student]**

Another social negative consequence reported was the stigma associated with opioid use. Participants mentioned experiencing a lack of trust, faith, self-devaluation, discrimination and missed work or promotion opportunities due to being labeled as addicts. Additionally, participants mentioned that others often labeled them as sick and used them as a joke.

“When you have different behavior at different times of the day, your family uses you as a joke. Instead of being distracted, others think of you as an addict.”
[male, 20 years, college student]

Moreover, the obtained data indicates that frequent opioid use leads to divorce, breakups, and conflicts with intimate partners. *“...I used to have a fight with my girlfriend for this thing, she used to say why do you use it?”* **[male, 30 years old]**. The respondent reported that these issues were connected to both direct effects like lack of interest and behavioral changes when using or stopping opioids, as well as indirect effects related to financial impact.

Functional impairment

The repeated use of opioids led to negative consequences on the participants' functionality, affecting their education, occupation, and day-to-day recreational activities. Due to opioid dependency, some participants mentioned quitting their jobs, frequent work absenteeism, and rushing through work due to their craving and obsession for opioids, even if it involved risky tasks. Moreover, there were reports of repeated delays and dropouts in education due to opioid use. Participants attributed these impacts to frequent hospital admissions for opioid use and a loss of energy leading to decreased motivation and financial problems caused by spending income on opioids. Some of the participants said:

“My education was impacted, I stopped learning for 2 years to go to rehabilitation and that creates big questions for my families and friends... I think it was a problem in my work, I will be eager to finish my work it might be surgery to use

the opioids, I will be thinking that the pharmacy might be closed so I will be in a hurry and people might get confused because of my act.” [male, 30 years, and health professional]

Another participant also emphasized that;

"I dropped out of school as I frequently fell. I was even admitted to the hospital, and after that, I was at home for four months being treated by my family, and that was how I stopped learning." [male, 20 years, college student]

Financial Impacts

The repeated use of opioids had a notably adverse impact on participants' finances. Nevertheless, some respondents experienced a positive effect on their income as they resorted to illegal drug dealing due to their ongoing opioid use and inability to afford the drugs, as well as it has a positive contribution for pharmacists and other illegal drug dealers.

One of the participants claimed that;

“My pay was 12500 birrs (ETB) [=\$219.70], but with extra earnings, I made around 20000 ETB [=\$351.5] birr (ETB) monthly. However, my daily expenditure on pethidine was consistently [2 days’ interval use] 2000 ETB [=\$35.15], resulting in a monthly expense of approximately 30000 ETB [=\$527.24] for pethidine consumption alone. This was insufficient, leading me to venture into drug dealing. In comparison, my regular job became supplementary in terms of income compared to the profits from drug dealing.” [male, 28 years, health professional]

According to the participant's report, the financial impact of opioids varied depending on the type, frequency, and amount of use. For instance, tramadol users incurred lower costs compared to pethidine users, while morphine and heroin were reported to be as expensive as other opioids. Participants discussed their experiences of frequently

borrowing, deceiving, and begging for money from family, friends, or even strangers on the street. Some shared how these actions negatively impacted their social relationships, leading to conflicts, frequent arguments, and loss of trust from others. In addition, they mentioned its adverse effects on their psychological well-being by resulting feelings of remorse and inferiority. Some of the participants' reports are highlighted below.

"I could spend Up to 1500 ETB [=\$26.37] daily, it might be more than that, but on average it was 1500 birr [=\$26.37]. I didn't only take it [money] from my family; I could also ask from my friends and anyone I met on the street. It could be from someone I don't know. I didn't mind at the time, but after I took the pethidine and calmed down, I felt so bad that I regretted all those people's eyes on me, and because my life is like this, I feel like I'm inferior." **[male, 34 years, health professional]**

Another participant with tramadol uses also claimed that;

"I was asking my families... I also lie, for example, if I was about to buy something for a person, I would tell them higher prices..." **[male, 30 years old, dropped out of school]**

Others also shared their experiences of selling personal and household items to cover opioid expenses, such as laptops, phones, clothes, TVs, and more. Some participants mentioned a tendency to prioritize opioids over basic needs and recreational activities, which eventually led to malnutrition and poor self-care due to the direct financial impact.

One participant stated that,

"It has greatly impacted me financially. The funds from my duties, salary, and occasional overtime work— were all directed toward it. I used to give up meals, selling household items like TVs, decoders, and surprisingly, even furniture like seats, tables, phones, and irons. At one point, I even contemplated selling my bed..." **[male, 33 years, health profession]**

Another participant also stated that;

“After that, I began to view the expenses I spent on other activities for enjoyment as a cost, as I perceive them concerning the money needed for pethidine... Consequently, I am even reluctant to spend on essential items like food, and clothing, and consider them as luxuries or additional expenses.” [male, 34 years, health professional]

Some participants highlighted that pharmacies are now selling opioids at inflated prices, potentially causing them a severe financial strain, emphasizing spending a substantial cost daily on opioid consumption. One of the participants stated;

“I used to buy tramadol, which is locally made and normally costs 25 birr. However, pharmacists sell it to us for 160 to 200 birr, assuming that as opioid users, we are willing to pay any price. I used about seven strips of tramadol daily, so, at 200 birr per strip, I spent around 1,500 birr daily.” [male, 22 years, student]

Contrary, other people profit financially from opioid use apart from pharmacists and illegal drug dealers related to the ban like acquaintances of users who are aware of where to get opioid drugs and then resell them at a higher price.

4.2.6.HELP-SEEKING BEHAVIORS

Desire to quit opioid

Participants expressed their wish to stop using opioids, but the motivations differed among them. Some struggled due to the restricted access to opioids without a prescription, causing concerns about future availability, even if they found alternative means at present. Others cited financial constraints as a primary factor. Additionally, some highlighted their desire to quit stemmed from recognizing the psychological, physical, and social harm associated with opioid use, as previously mentioned.

On the contrary, there were participants with tramadol and pethidine use who expressed their desire to keep using it by carefully balancing the dosage, considering the euphoric

effects. Here below are some samples of participants' reports.

“The only reason is the feeling that I get from it, I might think that it might not be that bad if I take 1 or two” [male, 30 years, and health professional]

A participant who follows his treatment at the outpatient clinic also claimed that;

“I don’t want to stop using. It is better for me to use the tramadol than to drink and it is a lifestyle, if you see the rappers, it is their lifestyle.” [male, 30 years, dropped out of school]

Attempts to quit Opioids use

Attempts to quit opioid use were reported, often resulting in unsuccessful cycles of stopping and restarting. Participants described adopting various strategies including religious intervention, gradual tapering, and substituting with other drugs perceived as less addictive. Commonly reported substitutes were sleep aids like sleep pills and alcohol, stimulants like coffee and Coca-Cola, and crystal meth. Participants disclosed that they consumed the crystal meth orally and through injections. According to their account, they purchased it from a Nigerian supplier at a high price, thinking it could replace opioids as they believed it was less addictive. However, it ultimately led to a more significant financial burden for them. Participants also acknowledged the challenges of breaking free from opioid dependence even if utilizing such mentioned strategies. Others also reported suffering associated with quitting from opioid use even when they tried to tap, and they did it for a few days. A participant from the outpatient clinic said that;

“There are times that I thought of stopping, it’s until I convince myself well, but it is also like a cycle I will stop and start again. I know that my consumption is going to shorten the days of my life and kill me, but I have tried many things like going to church and reading the Bible, but I am adopted to it, and I even came here due to overdose. After coming here, I am increasing the chance of staying like this, and after sometimes I will stop completely.” [male, 20 years, college student]

Barriers to seeking treatment from health care facilities

Participants discussed their past experiences with barriers to seeking treatment for opioid use. These included a lack of information about available rehabilitation centers, a lack of awareness about their addiction, fear of being labeled, and financial challenges. Some participants, particularly those in the healthcare field, expressed concerns about withdrawal symptoms, considering that the rehabilitation centers they were aware of used tramadol for detoxification, which they considered to be a less effective opioid detoxification drug for managing withdrawal symptoms.

Others have also mentioned experiencing repeated relapses, which led to feelings of shame for returning to a treatment center. They expressed concerns about health professionals not understanding them upon readmission, fearing they might be seen as a joke.

Unmet needs

Participants from both settings also mentioned complaints about the hospital environment, such as poor security, uncomfortable wards, and the absence of activities that could help improve mood and reduce cravings. In addition, the duration given for opioid detoxification was complained by the participants, emphasizing it is short for opioids.

“Primarily focuses on stabilizing or managing withdrawal symptoms without progressing to the next step. For instance, the opioid treatment lasts up to six months but is followed by ongoing OPD follow-up after controlling withdrawal symptoms in a week, which can lead to relapse. I, for example, relapsed soon after discharge. My concern is its time management and lack of patient control, even if there is a pharmacy on-site where patients can self-administer the medication.” [male, 30 years, health professional]

“You don’t have any comfortable environment... You would spend the whole day alone without having anything that used to distract you.” [female, 34 years, health professional]

However, participants from both settings reported feeling comfort and satisfaction with

the service and care provided by the physicians. They highlighted that the detoxification process was easier with close physician support and feeling safe to reduce or stop their use compared to the fear of withdrawal they initially experienced when trying to quit on their own. As a result, they preferred hospital admission for detoxification rather than attempting to quit independently.

5. DISCUSSION

This study highlights the pattern and experiences of non-prescription opioid users. It deeply uncovers the masked world of non-prescription opioid use in Ethiopia through a thorough exploration of the following specific objectives: 1) patterns of non-prescription opioid use; 2) the primary reasons and motivations for individuals to engage in non-prescription opioid use; 3) perceived psychosocial impacts of non-prescription opioid use; and 4) non-prescription opioid users treatment-seeking behaviors. Although there is no available qualitative research in this area in Ethiopia.

Up on the obtained data from patient's medical records, a prominent number 40 (85.1%) of participants from the three years of opioid user visits to the two selected hospitals were male. Previous studies show that health professionals are also identified as more vulnerable to opioid use than other groups of individuals. In this study, bingeing on opioids and sudden alterations in usage frequency have been identified. This was supported by the descriptive data, with the majority (46.8%) from the participants using opioids more than twice daily. Consistent with prior research (51,52), this study revealed a pattern of combining opioids with alcohol and benzodiazepines. Furthermore, it indicated two other substances being mixed with opioids, namely codeine and cannabis, which were not identified in previous studies.

In the descriptive data, Tramadol was identified as the most used type of opioids, followed by pethidine. This study found that individuals have specific preferences for opioid use environments, such as seeking a secure, stable, and quiet place. These preferences are linked to concerns about privacy and the perception of the euphoric effects, which can vary based on the environment. Quiet settings were found to enhance the effects more than public spaces or noisy environments. However, there is

a lack of prior research on this topic. Furthermore, the study noted an increased incidence of opioid relapses among the participants.

This study highlighted plenty of reasons why individuals are motivated to use opioids and analyzed within two subthemes such as; reasons to start using and sustained use of non-prescription opioids. However, such identified reasons are not aligned with a single theory, rather it supports the notion of multiple substance addiction theories, such as biological theory, reward circuit theory, disease model, social learning theory, socio-economic theory, and environmental theory.

In terms of initiation, both external and internal factors were identified. Specifically, five main contributing factors were found: medical prescription, curiosity for experimentation, peer pressure, recreational purposes, and perceived benefits of opioids. Consistently, other study shows two main pathways for initiating opioid use; medical and recreational pathways (53) . Several studies additionally highlighted the previous history of psychoactive substances both illicit like heroin (53) , and marijuana (54) and licit substances i.e. alcohol, and tobacco (54) shifting to prescribed opioid misuse, believing that prescribed opioids are safer, less risky, and have reduced harm compared to illicit substances like heroin, cannabis, and others (53,55), as well as getting to be high (54). However, the quantitative finding of this study could not able to indicate this association pretty well. But, it shows more than half of the participants had a history of at least one other psychoactive substance.

On the other hand, the gateway theory argues that using one milder-effect drug can lead to trying stronger, more addictive substances (62,63). Although the quantitative finding lacks technical support applied to see this association, the qualitative finding of the current study, on the other hand, supports this notion. It highlighted the patterns of switching to opioid use from previous consumption of other psychoactive substances (e.g. khat) relating to its effect. Conversely, this study may be aligned with the argument of behavioral economics theory in which the easy availability of substances could increase the use (62), specifically the loosened regulation regarding non-prescription opioid use in the past in Ethiopia found to be facilitating easy access though.

Contrary to the current study, other studies explain a higher prevalence of substance

use among less well-educated society (62). But, in the current study, the number of medical professionals and participants at a higher level of educational background weighted than others. Rather their awareness of the drugs caused them to try to use it. According to social learning theory, opioid use can be started through learning within a social environment through observation or listening to others (62). This study also seems to be consistent with this explanation. It found related factors as another means to turn into opioid use. These include; peer pressure, social media influence, and modeling through musicians, rappers, and others perceiving using of substances as a lifestyle of people with such profession. But not strongly supported.

According to certain neurobiological and reinforcement perspectives, the motivation for ongoing opioid use can be seen as a result of neurobehavioral stimulus-response learning, where drug use habits are frequently carried out automatically (56,57). Based on this hypothesis, opioid use can be conditioned through association with the reward obtained from its use, providing both positive and negative reinforcement for the users (57). Regarding the positive reinforcement hypothesis, this study highlighted various reasons that participants were motivated to use opioids such as seeking to be high and active, perceiving it increases energy, concentration, work performance, and cognition. Other studies have also pointed out that the motivation for continued use can be linked to the euphoric feeling acquired from its use (55).

Negative reinforcement is defined as "the process by which the removal of an aversive stimulus (or subjectively aversive state) increases the probability of a response" (56). For example, this study found that continuing to use opioids intending to avoid both subjective and external aversive conditions such as psychological and somatic types of opioid withdrawal pain, including respiratory depression, headache, diarrhea, involuntary movement, arthralgia, sweating, and chilling sensations, feelings of depression, lack of interest in social interactions, and communication with others. These mentioned withdrawal symptoms are also consistent with the DSM-5 opioid withdrawal criteria (13). The result of this study highlighted that past experiences of pains either associated with opioid withdrawal or taper contribute to conditioned withdrawal fear and contribute to ongoing use of opioids to avoid the aversive withdrawal symptoms.

Several studies have consistently emphasized the significance of the fear of withdrawal symptoms in maintaining opioid use (58).

Our research suggested that aside from withdrawal symptoms leading to continued use as a negative reinforcement, there was also a decrease in pain tolerance observed in the absence of opioids, followed by an increase with prolonged use. This could potentially bolster the disease model theory that 'addiction', including desire and craving is linked to an abnormality in the structure or function of the CNS leading to impairment (XX). Thus, this perceived pain that might be caused by neuronal changes associated with opioid use would be another aversive stimulus that might later lead to continued use of opioids as a means to remove such pain (negative reinforcement).

Our finding further indicates loosened pain tolerance (especially in participants who started opioids for medically unexplained somatic pain) when opioids are not present, followed by an increase with prolonged use. This could support the disease model theory that 'addiction', which includes desire and craving, is connected to an abnormality in the structure or function of the CNS resulting in impairment (62). Therefore, the perceived pain possibly caused by neuronal changes from opioid use could serve as another aversive stimulus that may later drive continued opioid use to alleviate such pain (negative reinforcement). This also implies that healthcare professionals need to be curious while prescribing opioids.

Although some clinical studies have supported the notion that opioid withdrawal symptoms play a crucial role in opioid use, the probability of this is lower compared to using opioids to obtain positive rewards (56,59). This may be because the experience of such aversive symptoms varies from individual to individual (60). This study found additional aversive conditions that can lead to continued opioid use to avoid the distress related to divorce, breakup, bereavement, unemployment, and exposure to combat. The self-medication model of addiction proposes that individuals intentionally use drugs to treat psychological symptoms from which they suffer (62,64). Thus, this finding could provide additional evidence for the implication that people can use opioid drugs, perceiving to treat psychological symptoms, including depressive symptoms i.e. sad feelings, loneliness, and medically unexplained somatic pain that might be a diagnosis

of somatic symptom disorders up on the DSM-V criteria.

Additionally, this finding suggests that medically prescribed opioids can be misused to alleviate distress caused by external factors, potentially leading to abuse. Studies on diverted opioid use have identified various risk factors for misuse, including sociodemographic factors, pain and drug-related issues, genetics and environment, psychosocial and family history, psychopathology, and alcohol and substance use disorders (60,61).

This finding has highlighted some tricks that participants use to obtain opioids in their daily experiences, as well as the adverse consequences of opioid use, including physical, psychological, social, functional, and financial consequences. In the current study, the number of recognized heroin users was relatively small in comparison to other opioids. Alongside heroin injection, the study also noted other opioids being consumed in injectable form that could present infection risks, including Tramadol, Pethidine, and Morphine. Despite the detection of needle sharing and repeated usage, infectious disease was not reported. However, several previous studies on injectable drugs, including heroin from opioid medications, have shown a significant risk of disease transmission due to repeated use and needle sharing. Two prior studies carried out in Ethiopia, particularly in Addis Ababa, have reported a higher prevalence of injectable drugs, with a larger proportion being heroin, and a higher number of users testing positive for transmitted diseases such as HIV, HBV, HCV, and syphilis (10,11). As the participants were not undergoing blood test for the research purpose the credibility of the current study concerning to the infectious disease may be low compared to the previous studies mentioned above.

Deaths due to overdose opioid use have become a significant concern across different studies. We also found various experiences of opioid overdosing among participants, leading to severe physical harm and prolonged periods of unconsciousness. These findings shed light on the gravity of opioid overdose deaths, highlighting the necessity for comprehensive national strategies to prevent opioid misuse.

In terms of treatment-seeking behaviors, this study indicated that participants expressed their previous experience of a desire to stop using opioids, including the difficulties they

faced during the cessation process. Whereas a previous qualitative study highlighted the significance of support from others such as family, friends, and fellow patients who shared their own experiences to start and persist through the challenging journey of ending opioid use (58). In addition, it also emphasized the importance of having positive, reliable, and non-judgmental healthcare professionals involved in the healthcare process (58). This study uniquely suggests that the fear of judgment and stigma acts as a barrier for individuals using opioids to seek treatment, particularly following relapses. Moreover, the severe symptoms of opioid withdrawal can lead to reluctance in trying to quit or reduce opioid use.

6. STRENGTHS AND LIMITATIONS OF THE STUDY

Working on participants who are difficult to reach and unaddressed public issues in Ethiopia could be the main strength of this study. Further strengths include, this study ensures the quality of the findings by applying different techniques like triangulating by quantitative data, member checking, using open-ended questions, and others. On the other hand this study have different limitation that implying to the necessary of a wide range of additional study. One limitation of this study is that the sample may not be representative of different subgroups of Opioid users such as those with opioid use disorder diagnosed with a comorbid severe mental illness and under 18 years old. The quantitative data could also not be generalizable, as it only indicates the number of opioid users in the selected setting, and the sample size is small. All the inherent limitations of secondary data, particularly record review, also apply to the current study. Opioid users who did not seek healthcare may have had a different experience. Furthermore, there may be recall bias among participants regarding their past experiences.

7. CONCLUSION

Based on the findings of this study, the following conclusions are drawn:

- Misuse and abuse of various opioid drugs are common in Ethiopia. This study offers insight into the reasons for starting and persisting in the non-prescription

use of opioids. It discovered that individuals were first exposed to opioids in two ways: through legitimate medical prescriptions for valid medical reasons, but later shifted to abusing them for non-medical motives. Other reasons for deliberate misuse comprised experimentation, recreation, peer pressure, modeling, and perceived benefits of opioids. In addition, it also highlighted easy availability of opioids in Addis Ababa within different contexts.

- There was frequent use of opioids with an abrupt dose escalation, and a higher tendency to develop opioid tolerance and dependency. This consequently, found to be leading to a variety of risks and complications such as; opioid overdose, and physical as well as psychological damage.
- This study suggests a higher likelihood of opioid relapse.
- Prior other psychoactive substances use was identified among some of the participants.
- Different patterns of opioid use that may pose a hazardous risk for users such as mixing opioids with other types of drugs or psychoactive substances, bingeing on opioids, and poly-substance use were identified.
- Although opioid drugs are prohibited from being sold over the counter in Ethiopia, this study reveals that users are still able to obtain opioids for non-prescription purposes by utilizing various strategies such as establishing good relationship with the pharmacists, through second person like the acquainted of the pharmacists, self-prescriptions (the health professionals in particular), deceiving, and others.
- Despite medical treatment, this study shows that individuals continue to use opioids for non-medical purposes to alleviate psychosocial distress, for recreational purposes, to enhance social interactions and performance, and with the intention of avoiding the negative effects of opioid withdrawal.
- Attempting to quit or taper opioids without professional support after developing tolerance and dependency was found to be challenging and caused anxious feelings for further attempts among the participants.
- Various barriers to seeking treatment for opioid withdrawal were identified. These include a lack of awareness about the availability of rehabilitation or detox

centers for opioids, uncertainty about the existence of treatment facilities for opioid use in Ethiopia, and concerns about the effectiveness of the detoxification medication particularly tramadol which is commonly provided at the treatment centers, as well as stigma.

8. RECOMMENDATIONS

Taking this finding into account, the following recommendations are forwarded for harm. First, when health professionals prescribe opioid drugs to patients, they could consider the following points into account:

- 1) Due to the euphoric and addictive nature of opioid drugs, patients may be inclined to misuse them instead of using them for pain management as intended. Therefore, it is important to assess the patient's status through appointments and provide psychoeducation initially about the addictive nature of these drugs.
- 2) If there is no medical evidence available for the patient, clinicians should consider the possibility of psychogenic somatic disorders and should either refer or seek consultation from mental health professionals before going to prescribe opioids even those with low efficacy.
- 3) Improving pain management practices could play a crucial role in preventing prolonged opioid use.

For mental health professionals: Given the seriousness of opioid withdrawal symptoms and multiple relapses, mental health professionals should integrate psychotherapy during the detoxification processes.

Providing person-centered and holistic care, while also addressing stigma, can significantly enhance the recovery process for individuals struggling with problematic opioid use.

For policymakers:

We commend implementing stronger regulations and control over pharmacists and users for non-medical purposes.

The Ministry of Health is expected to design and implement a comprehensive prevention program and guidelines for harm reduction in opioid use in addition to treatment.

We also commend to health care facilities, particularly ZMH and SPHMMC, improve and make their medical recording systems efficient so that patients can be easily traced for clinical follow-up or research purposes.

Further studies:

Large-scale quantitative studies that indicate the burden of the problem and intervention studies for better care of people with opioid use are warranted.

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APPENDICES

Informed Consent

English Version

Title of the research project: Patterns of Opioid Use and Experiences of the Users for Non-Prescription Purposes in Addis Ababa, Ethiopia: Mixed Method Study Design

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Phone +251115538734

My name is Melaku Tesfaye, and I am a graduate student in the clinical psychology program at Addis Ababa University. As part of my training, I'm conducting a qualitative study on "*Patterns of opioid use and experiences of the users for non-prescription purposes at Zewditu Memorial Hospital*". I am inviting you to participate in the study because you have a history of opioid use that fits the requirements to be the study participant as noted in your record at the hospital. Involvement in the study is voluntary, so you may choose to participate or not. The next sections explain more about the study and read in detail before you going to have any decision. Additionally, please feel free to ask any questions that you may have about the research, I will be happy to explain anything in greater detail.

Purpose of the Study: the obtained data will be used to explore patterns of opioid use and experiences of opioid users including contributing factors of opioid use, psychosocial impacts, and help-seeking behaviors of opioid users.

Procedure: If you have willing to participate in the study, first you have to sign the consent. Then after, you will be interviewed for at least 30 minutes regarding the study objectives. The interview will be recorded and if you have any marks on your body

relating to your opioid use photograph may be taken. Finally, you will be provided a chance to consult a professional if you have any thoughts regarding your opioid use.

Risk/Discomfort: There are no known risks in participating in the study.

Potential benefits: The research may not be of direct benefit to you. However, the information you will provide us will help clinicians, researchers, academicians, policymakers, or other opioid users to understand the pattern of opioid use and lived experiences of the users.

Confidentiality: All your identity information will be kept safe. All files including audio records, signed consent, and notes taken while the interview will also be kept securely. The information obtained from you and other participants will be coded to protect your subject's name. No names or identifying data will be used while discussing with the advisor or reporting the data. After the data have been fully analyzed the file describing your identity will be destroyed. Having said that, there are some exceptions we may breach your confidentiality were as if there is any suicidal or homicidal behavior traced to your opioid use, we are obedient to inform the legality.

Right, to refuse or withdraw: you have a right to withdraw at any point if you choose not to continue participating in the study.

Compensation: Will not have any compensation for participating in this study.

Cost/Reimbursements: Your transportation cost will be paid.

I voluntarily agree to participate in this research program: Yes ☐ No ☐

I have received, read, and kept a copy of the information letter. I have had the opportunity to ask questions about this research and I have received satisfactory answers. I understand the general purposes, risks, and methods of this research. I consent to participate in the research project.

Name of participant_____

Signature_____

Date_____

Amharic Version

የስምምነት ፈቃድ ጽሁፍ

የጥናቱ ርዕስ: በአዲስ አበባ ከተማ ውስጥ ከሃኪም ትዛዝ ውጪ የሚወሰዱ የአፒሮይድ ዕቃዎች አጠቃቀም እና የተጠቃሚዎች ተሞክሮ።

የጥናቱ ባለቤት ስም: መላኩ ተስፋዬ

አማካሪ: ዶክተር አወቀ ምህረቱ እና ዶክተር ዮናስ ባህረጥበብ

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የአዲስ አበባ ዩኒቨርሲቲ ሳይካትሪ ትምህርት ክፍል ስልክ ቁጥር: +251118962052

የአዲስ አበባ ዩኒቨርሲቲ ስነምግባር ኮሚቴ ቢሮ: +251115538734

ስሜ መላኩ ተስፋዬ ይባላል፤ በአሁኑ ሰአት በአዲስ አበባ ዩኒቨርሲቲ በስነልቦና ህክምና ዘርፍ ሁለተኛ ዲግሪዬን እየተማርኩ እገኛለሁ። እንደ ስልጠናዬ ክፍል “በአዲስ አበባ ውስጥ ከሃኪም ትዛዝ ውጪ የሚወሰዱ የአፒሮይድ መድሃኒቶች አጠቃቀም እና የተጠቃሚዎች ተሞክሮ” በሚል ርዕስ ጥልቅ የሆነ ጥናታዊ ጽሁፍ እያደረኩ ስለሆነ እርሶም ከህክምና መዝገብ እንደተመለከትነዉ አንዱ የነዚህ መድሃኒቶች ተጠቃሚ ስለነበሩ እና የጥናቱን ቅድመ ሁኔታ ስለምያሟሉ የጥናቱ ተሳታፊ እንዲሆኑ በትህትና እንጠይቃለን። ተሳትፎዎ በርሶ በጎ ፈቃድ ላይ የተመሰረተ ሲሆን የመሳተፍም ሆነ ያለመሳተፍ መብቶ የተጠበቀ ይሆናል። ቀጣይ ክፍል ስለጥናቱ ያብራራል ስለሆነም የትኛውም ዉሳኔ ከመወሰኖና ፈቃድን ከመስጠቱ በፊት እባክ በጥልቀት ያንበቡት። በተጨማሪም ማንኛውም ሊጠይቁን የፈለጉት ጥያቄ ካለ መልስ ለመስጠት ዝግጁ ነን።

የጥናቱ አላማ: ከርሶ የምናገኘዉ መረጃ ስለ አፒሮይድ መድሃኒቶች አጠቃቀም እና የተጠቃሚዎች ተሞክሮ ምን እንደሚመስል እንድንመረመር ያገለግላል። በተጨማሪ ለአፒሮይድ አጋላጭ ምክንያቶች፣ የተጠቃሚዎች ማህበራዊና ስነልቦናዊ ተጽኖዎች፣ እና የህክምና ፍላጎቶቻቸው ለማሰስ ያግለግላል።

የጥናቱ ቅደም ተከተል: የዚህ ጥናት ተሳታፊ ለመሆን ፍላጎት ካለዎት በቅድምያ የስምምነት ጽሁፉ ላይ መፈረም ይጠበቅቦታል፤ ቀጥሎ ጥናቱን በተመለከተ ቢያንስ ለ 30 ደቂቃ የሚቆይ ቃለመጠይቅ ይኖርታል። በተጨማሪ ቃለመጠይቁ የድምጽ ቅጂ እንደሚኖረዉ ልናሳስቦት እንወዳለን። በመጨረሻም አፒሮይድ ከመጠቀም ጋር በተያያዘ ማንኛውም ሙያዊ እገዛ ካስፈለገት የማማከር እድል ልንሰጠት ዕንቅጥለን።

አደጋ: በዚህ ጥናት በመሳተፍዎ የሚደርስበት ምንም አይነት አደጋ አይኖርም።

ጥቅም: በዚህ ጥናት በመሳተፍዎ በቀጥታ የሚያገኙት ማንኛውም ጥቅም ላይኖር ይችላል። ነገር ግን እርሶ የሚሰጡን መረጃ

ለህክምና ባለሞያዎች፣ ለአጥኚዎች፣ ስራአተ ትምህርት ላይ ላሉ፣ ህግ አዉጪዎች፣ እና ሌሎች የአፒሮይድ ተጠቃሚዎች ስለአፒሮይድ አጠቃቀምና የተጠቃሚዎች የህይወት ልምድ እንዲረዱበት ጥቅም ላይ ሊዉል ይችላል።

ሚስጥራዊነት፡ ማንኛዉም ማንነቱን የሚገልጹ መረጃዎች እነሱም የድምጽ ቅጂ፣ የስምምነት ፊርማ መዝገቦ ወይም በቃለመጠይቁ ወቅት የሚመዘገቡ ማንኛዉም መረጃዎች ሚስጥርነታቸው የተጠበቀ ነዉ በተጨማሪም ጥናቱን በምንገልጽበት ወቅት ስሞንና የርሶን ማንነት ሊያሳዩ የሚችሉ ነገሮች አንጠቀምም ይልቁንም ሚስጥራዊ ስያሜ በመስጠት የምንገልጸዉ ይሆናል። በመጨረሻም እርሶ የሰጡን መረጃ በደምብ ከተጤነ በኋላ አጠቃላይ የርሶን ማንነት ሊገልጹ የሚችሉ መረጃዎች በሙሉ የምናጠፋቸው ይሆናል። ነገር ግን ይህ እንዲህ እንዳለ የሚሰጡን መረጃ ሚስጥርነታቸው ማንጠብቅባቸዉ ሁኔታዎች አሉ እነርሱም ከአፒሮይድ አጠቃቀምዎ ጋር በተያያዘ የራስ ማጥፋት ወይም ሌሎችን ሰዎች የመጉዳት ሁኔታ ካገኘን ለህግ አካል አሳልፈን ለመስጠት እንገደዳለን።

ካሳ፡ ጥናቱ ላይ በመሳተፍዎ ምንም አይነት የሚያገኙት ካሣ አይኖርም

በጥናቱ ያለመሳተፍ ወይም የማቋረጥ መብት፡ ጥናቱ ላይ አለመሳተፍዎ ሆነ ከጀመሩ በኋላ ለማቋረጥ ቢፈልጉ መብቶ የተጠበቀ ነዉ

ወጪ፡ በጥናቱ ምክንያት የሚያወጡት የመጓጓዣ ወጪ በኛ የሚሸፈን ይሆናል።

በዚህ ጥናት ላይ በፈቃዴ ለመሳተፍ ተስማምቻለሁ አዎ _____ አልተስማማሁም _____

ስለጥናቱ እና ስምምነቱ የሚመለከቱ መረጃዎችን ለማንበብ እና ግልባጬም ለመቀበል ችያለዉ። ጥናቱን የተመለከቱ ጥያቄዎችን ለመጠየቅ እድሉን አግኝቻለዉ እናም ጥያቄዎቼ በበቂ ሁኔታ ተመልሰዉልኛል። ስለሆነም፣ በዚ ጥናት ለመሳተፍ ተስማምቻለዉ።

ስም _____

ፊርማ _____

ቀን _____

Chart Description Data Format

Socio-demographic characteristics

ID: _____

Sex: Male ☐ Female ☐

Age: _____

Educational status _____

Marital status _____

Occupation: _____

Residence _____

Living with _____

Patterns of opioid use

Kinds of opioid use _____

If any comorbid disorder _____

Duration of opioid use _____

Frequency of opioid use _____

Routes of opioid administration _____

Type of psychopharmacological treatment

Type of psychosocial treatment

Any other adjective treatment

Duration of stay in the hospital

Frequency of admission (if there is a relapse)

Topic Guide

Patterns of opioid use

1. What types of psychoactive drugs do you use?
2. How often do you use opioids?
3. When did you begin to use opioid for the first time?
4. How long have you been using opioids?
5. Do you use other psychoactive substances other than opioid? If yes, what are they? Why do you use them?
6. Have you noticed any significant changes in amount of your opioid use over time?
7. Have you ever tried to either to stop or cut down using opioid?
 - What challenges have you encountered while trying to reduce or stop your opioid use?
8. What routes of administration do you use?

Identifying contributing factors of opioid use:

1. What drives you to consume opioids?

Probe:

- Psychological factors
- Socio-economic factors
- environmental factors
- Situational factors
- Others....

2. What are your reasons for using opioid?

Contexts of opioid use

1. How do you obtain your opioids?

Explore the perceived psychosocial impacts of opioid use:

- 1) How did opioid use have impacted your relationship with significant people in your life?
- 2) How is opioid impacts physical health?
- 3) How is opioid impacts mental health?
- 4) How have your feelings or thoughts changed since using opioids?
- 5) How do opioid use have influenced your daily activities?
 - Career
 - Academic performance
 - To make fun or enjoyment
- 6) How has opioid use impacted your financial situation?

Experiences in treatment

1. What did you do to cope from repeated non-prescribed opioids use?
2. What kind of help have you sought for your opioid use?
 - Medical
 - Psychosocial
 - Traditional
3. Are there any organizations or services that have provided particularly helpful or useful support for your opioid use?
4. Who have helped you to seeking and attending the intervention?
5. How do you perceive the quality and effectiveness of help that you have received?
6. Have there been any barriers or challenges in accessing help for opioid use?
7. How is your treatment engagement after discharge?

Close-up

Anything about the unique feature of non-prescribed opioid use

final remarks that you want to emphasize



ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCE,
DEPARTMENT OF PSYCHIATRY

ጤና ሳይንስ ኮሌጅ
የአእምሮ ሕክምና ት/ክፍል

ቁጥር: MF/PSY/24/16

ቀን: 22/01/16

ለ: ጳውሎስ ሚሊንየም ሜዲካል ኮሌጅ

ከ: ዶ/ር ባርኮት ሚልክያስ

የአእምሮ ሕክምና ትምህርት ክፍል ኃላፊ



ጉዳይ: ትብብር እንዲደረግ ስለመጠየቅ:

በአዲስ አበባ ዩኒቨርሲቲ ጤና ሳይንስ ኮሌጅ የአእምሮ ሕክምና ትምህርት ክፍል በክሊኒካል ሳይኮሎጂ ማስተር ፕሮግራም የመጨረሻ አመት ተማሪ የሆኑት መለኩ ተስፋዬ በዚህ አመት ለትምህርት ማሟላት የሚሆን ጥናት ለማድረግ ዝግጅት አጠናቀዋል፡፡

ስለዚህ "Patterns and Experiences of Opioid Users for Non-Prescription Purposes At Zwuditu Memorial Hospital, St.Paul General Hospital and New Life Rehabilitation Center: A Mixed-Method Study Design" Addis Ababa Ethiopia በሚል ርዕስ የመመረቂያ ፅሁፋቸውን እንዲሰሩ የትምህርት ክፍሉ የፈቀደ ሲሆን ጥናቱን በሚያደርጉበት ሰአት እስፈላጊውን ትብብር እንዲደረግላቸው በትምህርት ክፍሉ ስም በአክብሮት እንጠይቃለን፡፡

ከሰላምታ ጋር

ፋክስ/Fax:251-011-551-33-99

P.O.Box 9086

TEL.: 251-011-896-20-52

መልስ በሚሰጡበት ጊዜ የእኛን የደብዳቤ ቁጥር ይጥቀሱ

IN REPLY REFER TO OUR RE.NO.



አዲስ አበባ ከተማ አስተዳደር ጤና ቢሮ
City Government of Addis Ababa Health Bureau

REF.N.O. 1034/2024

DATE 25/11/15

TO:

- ZEWUDITU MEMORIAL HOSPITAL

Subject: Request to access Facilities to conduct approved research

This letter is to support MELAKU TESFAYE to conduct research which is entitled as "PATTERNS AND EXPERIENCES OF OPIOID USERS FOR NON-PRESCRIPTION PURPOSES AT ZEWUDITU MEMORIAL HOSPITAL, ADDIS ABABA ETHIOPIA: A MIXED-METHOD STUDY DESIGN." The study proposal was duly reviewed and approved by Addis Ababa Health Bureau IRB, and the principal investigator is informed with a copy of this letter to report any changes in the study procedures and submit an activity progress report to the Ethical Committee as required. Therefore we request the Health facility and staffs to provide support to the Principal investigator.



With Regards

Ethical Clearance Committee

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ቡድን መ/

Cc

- MELAKU TESFAYE
- ETHICAL CLEARANCE COMMITTEE

MSRU
To: - Research..... dep't
Zewditu memorial hospital

Subject: - Request to access departments to conduct approved research

The letter is to support Mr/Ms/Dr ...Melaku Tesfaye

On the research topic of

Patterns & Experiences of Opioid users for non prescription
purposes at Z.M.H.....

the study proposal was duly reviewed and approved by Addis Ababa Health Bureau IRB and the approval letter was left to our department (Training and research directorate).

Therefore we request the department and staffs to provide support to the principal investigator.

With regard


Dr. Solomon Dabalo Gucheta
Ph.D., M.Sc., B.Sc.
Solomon Dabalo Gucheta
Training & Research Directorate
Director

Ref. No. Pm23/333

Date 30/11/2023

Institutional Review Board (IRB) of St. Paul's Hospital Millennium Medical College (SPHMMC)

Ethical Clearance

Research Title: -Patterns and Experiences of Opioid Users for Non-prescription purposes At (SPHMMC) and Zwuditu Memorial Hospital Addis Ababa A MIXED-Method Study

Principal Investigator: - Melaku Tesfaye

The IRB of SPHMMC has reviewed the above mentioned research proposal and made the following decision:

- Approved:- x
- Approved with recommendation:-
- Approved on condition :-
- Disapproved:-

The decision is valid for 12 months and the research should be conducted in compliance with the protocol/proposal approved by the IRB of SPHMMC. Any subsequent revision/amenment of the protocol/proposal needs approval before conduct of the research. The researcher should also submit written summaries of the research status to the IRB every 03 months. Upon the conclusion of the study, manuscripts and thesis work to the final/completed research project needs to be submitted to the IRB.

IRB Chair:

Signature: 

Date: Noember 28, 2023

Cc:

- Vice Provost for Academic and Research
- IRB

Melaku Tesfaye

SPHMMC



Ref. No. Pm23/333

Date: 30/11/2023

Institutional Review Board (IRB) of St. Paul's Hospital Millennium Medical College (SPHMMC)

Ethical Clearance

Research Title: -Patterns and Experiences of Opioid Users for Non-prescription purposes At (SPHMMC) and Zwuditu Memorial Hospital Addis Ababa A MIXED-Method Study

Principal Investigator: - Melaku Tesfaye

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IRB Chair:

Signature: 

Date: November 28, 2023

Cc:

- Vice Provost for Academic and Research
- IRB
- Melaku Tesfaye
- SPHMMC



Handwritten notes in Amharic:
ከጠቅላይ ሚኒስትር
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15/11/23
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Declaration

I the undersigned, declare that this thesis report is my original work, where my work is indebted to the work of others, it has not been accepted or presented for a degree in this or any other university and that all sources of materials used for the thesis have been fully acknowledged.

If proven otherwise, I understand that appropriate actions will be taken based on the Senate Legislation of Addis Ababa University and the Guidelines provided by the Ministry of Education.

Name: Melaku Tesfaye

Signature: _____

Date: _____

This thesis has been submitted for examination with my approval as University Supervisors.

First supervisor: Dr Awoke Mihretu

Signature: _____

Second supervisor: Dr Yonas Baheretibeb

Signature: _____