

Perception and Treatment Practices of Youths with Khat Chewing in Dessie Town, North-East Ethiopia: A Qualitative Study

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Research

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Abstract

Background: Khat (*Catha edulis*) chewing has been a highly prevalent practice among youth in Ethiopia. Although several studies investigated its adverse effects, there is a gap in evidence on treatment experience of youth with khat use. Therefore, this study explored the perception of youth on khat chewing and their treatment practice.

Methods: The study employed a qualitative study design. The data was gathered through in-depth interviews (N=6), focus group discussions (N=15) and key informants (N=2) interview using purposive sampling. Audio recorded data was manually transcribed and translated, and thematically analyzed.

Results: The study found that personal, social and environmental factors were responsible for the habit of chewing khat. Most respondents reported benefits or positive consequences of khat use. They endorsed that khat helps them to feel relaxed, relieve tension and stress, and feel happy, although many admitted feeling depressed after the effect wanes. It would also make them alert, active, and energetic. Participants also reported that khat was easily available and khat use was a social behavior. They learned it from their elders. To manage the negative effects of khat, participants took different coping measures such as drinking too much water, taking alcohols and milk to manage dehydration and break the feeling high.

Conclusion: Youth perceived khat use as habitual practice. They didn't have any modern treatment experience, except personal coping strategies. Future studies should emphasize on khat use literacy, screening, and treatment engagement especially for problematic khat users.

Background

Khat is a herbal product consisting of the leaves and shoots of the shrub *Catha edulis* [1]. It is cultivated primarily in Eastern Africa and the Arabian Peninsula [2]. Khat contains the alkaloids cathine and cathinone which have amphetamine-like properties and has been used for centuries in many African countries for its euphoric effect and as a sanctioned cultural practice [3].

Various experimental studies have indicated that khat as a substance could be recognized as a "natural amphetamine" [4–7]. Hence, the khat leaves are considered to produce only mild psychological addiction, cathinone is believed to have a higher addiction potential than amphetamine [4]. Khat has become a common practice in youth particularly among university students in developing countries like Ethiopia [8]. It has a potential effect on physical, mental, social and cognitive functioning of students. In low dose, khat can result in loss of appetite, hyperactivity, euphoria, and enhanced intellectual efficiency [5]. On the other hand, high dose and long-term consumption of khat have also resulted in various mental and neurological aberrations such as cognitive impairment, learning problems and behavioral abnormalities and has been associated with serious social, psychological, sexual, economic, and health problems such as dental, cardiovascular, gastrointestinal and genitourinary problems [2, 9].

In Ethiopia, khat chewing and other psychoactive misuse is becoming habitual and increasing at an alarming rate. For instance, in Ethiopia, psychoactive substances such as alcohol, tobacco, and khat are widely used by adolescents and youth. About 4.4% of Ethiopian adolescents and youth smoke cigarettes or other tobacco products [10]. Khat use was also the gate for tobacco and other drugs [11].

Youths, more importantly in high school, college and university students, chew khat to increase academic performance during exams and for recreational purposes [11]. The meta-analysis of 24 studies revealed that the overall prevalence of khat chewing practice among university students in Ethiopia indicated that almost more than one in five (23.22%) of students have been engaged in the use of khat [8].

Ethiopia is a youth populous country that comprises a significant proportion (33.8%) of the country's population [12]. Many diverse problems, including khat use, among youths have been a concern of the community and government since healthy youth population is imperative for the wellness of the nation.

Therefore, despite the evidence that khat is a highly prevalent practice among youth and several studies address its adverse effect, but there are knowledge gaps related to treatment-seeking like other psychiatric conditions [13]. As a result, the reasons for the variation on the multihued effects of chewing khat and low treatment-seeking practice require investigation on treatment practices of khat users including their coping mechanisms for adverse effects of the khat and available care, if any. In Ethiopia, a lot of studies have been conducted among high school, college and tertiary students. However, the findings of these studies indicate a quantitative report on the different magnitude, factors and effects associated with khat use which indicates that the voice of youth has not been systematically explored. Particularly in settings where khat use has a sociocultural component, like in Ethiopia, adolescents who use khat may also have different ways of perception regarding the effects of khat and different resources for coping from the potential adverse consequences. Therefore, the main aim of the current study was to explore the perception and treatment practices of youth with khat chewing in Dessie Town, North-Eastern Ethiopia.

Methods

Study Design

A qualitative design was employed for this study. This design is appropriate for exploring the perception of youth on khat chewing as well as their treatment practices in the perspective of participants [14]. The design is also important to gain an in-depth understanding when there is no sufficient knowledge in the subject area.

Participants and sampling

Twenty-three youths were participated. Six were in the in-depth interview and the others participated in the two FGD with 6 and 9 members. In addition, two mental health professionals were participated in the in-

depth interview for exploring the existing treatment practices. During the interviews, the participants were encouraged to talk freely and could express their lived experiences and perceptions without interruption.

Data collection methods

Both in-depth interview and focus group topic guides were developed based on previous studies [15]. The topic guides which were used to collect data were semi-structured. The focus group discussions were guided by a guideline that mainly contains broader topics such as how khat use is part of their life, perception to khat and effects of khat, and their styles to manage effects khat use. Furthermore, the in-depth interview and focus group questions were employed flexibly to be easily understood and make the participants interactive. During the interviews, the participants were encouraged to talk freely and could express their lived experiences and perceptions without interruption.

Data analysis

The interviews and focus group discussions data were analyzed using thematic analysis methods. The first Author transcribed the tape records into Amharic, the language of the participants, using Microsoft word. Each written transcript was read several times while checking against the corresponding audio tape to ensure the accuracy of the transcribed data. Then, the Amharic transcribed data was translated into the English language. All phrases, sentences or paragraphs were highlighted and assigned a code after we set the codes. This process was repeated until all the data was coded. The coded data were then compared and codes with common elements were grouped to sub-themes and major themes. These themes and their supporting passages were continuously revised during the process of going through the transcripts. Data was scrutinized to ascertain its suitability within and across the category in a way that it gives meaning and answers to the research questions. All the transcription, translation, coding and categorization processes were conducted manually.

Ethical consideration

We first had gained a supportive letter from the department of Psychiatry, college of health sciences, Addis Ababa University. We also got permission from Dessie referral hospital. Participants were informed about the purposes of the study, the right to withdraw from the study at any time without any reasons or justifications and then consented. All the participants' information was confidential.

Results

Perception with khat chewing

The study also explored the perception of youth regards to the habit of chewing khat, perceived benefits of khat, perceived harms of khat, and perceived consequences of quitting khat.

Perceived factors for the habit of chewing khat

The major contributing factors reported for chewing khat were personal factors like: as a means to be relaxed, to enjoy with friends, to spend free time (*kill time*), to forget worries and manage stress, self-treatment from depression and to be active and energetic at work. Many emphasized recreational purpose of khat use, to be active and energetic during academic study. The experience of two respondents summarize as follows:

'I started chewing khat with my friends to be relaxed, enjoy, spend our leisure time and get out of a boring situation.' (IDM-05, age 23)

'I started chewing with my friends, to know and want to taste and experience its effects then we continue chewing.' (FGM -15, age 19)

In addition to personal factors, participants both in the in-depth interview and FGD were asked about the reasons how they started chewing khat, and they reported different factors such as the influence of their peers, learning from older adults and family members, easy accessibility, and absence of alternative youth focused recreational places. For example, one of the participants stated as:

'I started chewing to relate with my friends otherwise I will be alone. One day, they were chewing khat and gave me few sticks of khat and showed me how to chew. That's how I started chewing.' (IDM-03, age 22)

A 21-year-old boy also described the role of adult's influence for introducing khat use.

'In the countryside there was a ceremony called "Du'a"-prayer among elderly people. I usually attend the ceremony and I started chewing khat there with them.' (IDM-02, age 21)

Similarly, the participants of the FGDs also emphasized the role of peer pressure as illustrated below by the quote from one of the participants:

'I remember how I chewed khat for the first time. Some of my friends used to chew khat just in the place I used to spend my time, and I started it by seeing them. Then after I tasted it once, I also become a regular user until now.' (FGM-10, age 22)

Regarding environmental factors, participants also explained that khat is publicly soled as well as planted in the farms by which it is easily accessible for youths to taste/experiment. One participant interviewed supported the provided the explanation in the following way:

'When I was in the countryside, all the farms were covered with khat, and our families and relatives were sellers of khat. So, we observed people buying and selling khat, and it was accessible easily. Then, I tried it and started in a small amount there.' (IDM-01, age 24)

Participant's perception with khat

This is a salient finding in the understanding of the participant's perception regards to the habit of chewing khat. In this study, youth's perceived khat from the perspective of experienced effects and intended benefits. For instance, it was perceived as a means for happiness and as an antidepressant, which helped them to be relaxed, free from tension and stressed situation and also considered as an entertainment. Furthermore, khat was also seen as something like a drug that makes someone alert, active, energetic and then depressed. To illustrate these, one of the participants described the situation as:

'For me, khat is something like a drug, but helps for spending time, to be enjoyed, to be free from tension and stressed situation. It is just an antidepressant "ገሳሳ ገሳሳሳ" (IDM-05, age 23)

However, khat was also described as something basic like food which someone needs to do a job. It is also considered as a catalyst for many other things such drinking alcohol, smoking cigarettes. One of the participants illustrated this as follows:

'Khat is something basic like food for me. It is also like a drink- 'Ambo-wuha' [sparkling mineral water] which you take while eating. You just chew to satisfy your need and be comfortable then you will be relaxed and do your routines. So, I take it as one of the basic things needed [for me] during the afternoon. Unfortunately, khat is also a catalyst to many things. For instance, it pushes you to drink alcohol and smoke cigarettes.' (IDM-03, age 22)

On the other hand, participants also mentioned khat as part of the community's traditional practice which is commonly used [by the community] and given to them [the youth] as illustrated by the following quote:

'It is a cultural tradition and most people, including our fathers, use it for positive purposes such that they become positive thinkers and wish to a good thing for others. For instance, they pray to those who do not have jobs to help them get what they wanted, and they also pray to all things in the world.' (IDM-01, age 24)

'I See khat as a part of a tradition in the community which is transmitted from generation to generation, and that is what we observed when growing up. So, now it's just like a cultural practice that is common among teachers, schools or universities and communities. Therefore, I used khat because my community gave it to me, made me use it, and I said it is part of our culture.' (FGM-09, age 23)

However, a few FGD participants also described khat as parts of a life trajectory that everyone should pass through and taste it.

Perceived benefits of khat

The study also enquired about the perceived benefits of khat among individual respondents and FGD participants. It was described from a different perspective such as participants pointed out that khat helps someone not to be easily fatigued when working, and it also helps to forget worries. Participants also mentioned that khat was beneficial to solve serious issues or to help one another by creating an

opportunity to discuss together, to get fun, and to strengthen social relationships accordingly. One of the participants described these:

'Let me give you an example, our mothers come together in the traditional coffee ceremony for different purposes, like to have fun, for discussing serious issues, and to help one another. If one of them faced a problem, they solve it through discussion while drinking coffee. The same is true for men or among our fathers. Everyone brings their khat, come together and discuss the same as our mothers. Therefore, khat is beneficial to discuss together and strengthen the social relationship.' (IDM-01, age 24)

Similarly, some participants in the FGDs also raised that khat was useless, but its benefits were temporary. It had a cyclical effect. A 19 years old FGD participant explained this:

'I can say khat has benefits, but its benefits are temporary. When we see someone doing a task using khat and doing without chewing khat, they are not the same. You work more actively and get inspired when you chew khat. So, I have got a lot of benefits from khat just like I can do my works and achieved it when I chew, but I become very weak and depressed at night.' (FGM-12, age 19)

Perceived harms of khat

In this study, an attempt was also made to explore the negative experiences of participants from khat chewing. Most of the respondents stated that khat causes physical harm (loss of appetite, drying of the mouth, intestinal and kidney problems), economical problem (spend a lot of money), relationship problems, and low self-esteem.

Physical effects

It was reported that the habit of chewing khat causes loss of appetite which also causes weight loss, drying of the mouth, intestinal constipation, and urine retention which also causes kidney problems. Here are two respondents explained the experienced effects of khat:

'Yes, khat hurt me in many ways. I lost weight because I usually don't have appetite for food after khat use. It also causes constipation, gastric pain and drying of the mouth.' (IDM-05, age 23)

Economic effects

The effect of khat on the economy was also raised by the respondents of the study. One of the respondents described the economic impacts of khat as:

'If you take my experience, it has been 8 years since I started khat. So, when you calculate these years by 50 Birr [daily budget for khat] plus other additional costs like water and sprite (soft drink), it's too much expense. I would have been rich if I had saved this money that I spent on khat.' (IDM-06, age 24)

Psychological effect

Again, the study participants reported that the habit of chewing khat causes psychological effects like confusion, poor self-care, low self-confidence, and low self-esteem. One female respondent said;

“Once, you become addicted to khat, you don’t care about your protocol or self-care.” (IDF-04, age 19)

A 17 years old boy also reflected his views as:

‘It causes a lot of harm. First, it lowers your self-confidence and you look yourself as inferior or feel below other persons. (FGM-13, age 17)

Social effect

The study also revealed the effects of khat on social relationships. It was reported that khat affects one's relationship with families as well as the entire community. It causes failures in fulfilling social duties and leads to conflict with families. These were described by one of the female respondents as follows:

‘The worst thing I face was that I cannot go home after chewing khat because my families nagged me. Then, I would go home late at night and even spend the rest of the night drinking alcohol after the khat. So, this behavior will lead to conflict with your families. Then, the community will undermine you because they suppose you to respect and have good relationship with your families.’ (IDF-04, age 19)

This was also explained by 23 years old FGD participant as:

‘Khat makes me isolated from people because I don’t want to contact people after chewing. For example, there was a situation of mourning in our neighborhood, but I could not go there because I was chewing. Later, my relationship became terminated.’ (FGM9, age 23)

Perceived needs of treatment for khat users

This study had also explored the perceptions of youth regarding the needs of treatment for khat users. Most of the respondents believe that there are khat users who need treatment. As per the information gained from the respondents, those who chew khat the whole day through the night, since they haven't got enough rest, will be vulnerable to other problems. Those who are addicted to khat and cannot do anything without it would also go for modern treatment. Moreover, those exposed to health problems like intestinal constipation and gastric problems as a result of chewing were not eating well were among the candidates for treatment. Those who are polysubstance users such as drinking alcohol and smoking cigarette or ganja (cannabis) were perceived in need of treatment. Supporting this view one of the respondents described the needs of treatment for khat users as:

'Some youths chew khat continuously and use other substances such as smoke cigarettes, ganja (cannabis), and drink alcohol, and this leads them to do unsafe sex and commit a crime. When they become high (stimulated), they don't know what they are doing. So, these guys should be helped with treatment.' (IDM-05, age 23)

Similarly, this was also mentioned in the FGD as reported in the following way:

'I believe there are khat users that need treatment, especially those who are addicted and those who haven't teeth that use ground khat should need treatment.' (FGM-12, age 19)

Participant Treatment Experiences related to khat

The study also enquired about the professional treatment experiences of khat users and was triangulate by key informants (mental health professionals). It was found that most of the respondents had no experience and did not sought professional treatment for khat. Health professionals said that khat users would manage the effects of khat by themselves. They also added that the personal belief - 'khat is a cure for different health problems by itself' might be the reason for youths not to seek treatment. On the other hand, participants also reported that they saw khat users who visited their health care facilities by those who seek help for khat associated medical problems such as gastric problems, constipation, and problems related to appetite loss.

Similarly, key informants (mental health professionals) also confirmed that they had no experience or did not see clients who seek treatment specific to khat use. They only saw khat users with comorbid with other psychiatric problems such as schizophrenia, mood disorder, depression, and anxiety disorder.

Perceived Coping Measures for the effects of Khat

This study also revealed different perceived measures for reducing the effects of khat through probing systematically. Respondents reported taking various measures to manage the effects of khat at different consumption times such as measures taken before consumption of khat, measures taken during consumption of khat, and measures taken after consumption of khat.

Coping techniques before chewing the khat

These were perceived measures taken before chewing to prevent and reduce the adverse effects of khat. Loss of appetite was reported adverse effect of khat and to minimize this effect, feeding well before chewing was an alternative measure taken by khat users. Below is one of the respondent's experience:

'I had never sought treatment due to khat because I eat properly, and I had balanced myself with the khat by eating well because at night [after chewing khat] you might not eat.' (IDM05, age 23)

Similarly, participants from group discussion also perceive eating well in morning and lunchtime before chewing as one of the means to fill gaps in one's daily calories or to compensate for the appetite loss which occurs after chewing.

'Khat has problems, it causes loss of appetite at night to me, so, I eat my meals in the morning and daytime.' (FGM-08, age 23)

Coping techniques during chewing the khat

These are also measures taken during the chewing process which is believed to minimize or moderate the effects of khat. It was reported that khat makes someone feeling high to the extent of uncontrollable and causing a kind of confession, constipation, drying of the mouth. It also retains urine and causes kidney problems. Thus, participants drink too much water to increase urination and minimize drying of mouth and intestinal constipation. A drink called 'Meqni' which is a mix of milk and tea is also believed to return to the normal mood and have a calming effect from the effect of high feeling after khat use. To illustrate this, one of the interviewees said:

'Ahh... Meqni is a drink which she [mentioned sales women name] prepares by mixing tea with milk and it has a calming effect which makes you moderately calm when you become at a state of emotionally heightened 'ሰላም ሰላም ሰላም ሰላም ሰላም ሰላም' And it is just making you neither have an elevated mood nor to feel depressed after chewing, and it helps to be cool down and return to normal mood.' (IDM-06, age 24)

Another respondent also reported:

'I have never experienced any problem until now because I use a large amount of water when I chew. So, I have never sought help.' (FGM-14, age 20)

Coping techniques after chewing the khat

These are also perceived measures that are believed to reduce or control effects that occur after the consumption of khat. As users reported above, khat users also complain of sleep problems and experience of low mood after chewing or at night. Some respondents argue drinking cold milk at night helped make oneself calm and to get have sleep and also soften intestine. Besides, taking alcohol after chewing also perceived as having a refreshing effect and as a coping measure to curb the low mood. One of the participants thought "I drink cold milk at night these help me to soften my intestine." (FGM-14, age 20). Another respondent also confirmed this by saying:

'Khat does not cause any harm to me because I drank milk most of the time at night and that was helping me because I did not feel comfortable when I didn't drink at all.' (FGM03, age 23)

A nineteen years old female participant also describes:

'There is something called "Chebsi" which is drinking alcohol after chewing to be calm and to get sleep otherwise you become tired in the morning even you may not wake-up easily.' (IDF-04, age 19)

Despite the aforementioned perceived coping measures, participants also took provisional measures regards to effects they had experienced. For example, measures for effects regard to gastric pain were; quitting chewing until recover, taking medicines from the pharmacy, and for effects regards to expenses; allocating money for daily expenses. A respondent explains this:

'There was even a time that I worry about khat rather than eating food. Since I start chewing until three or four years, I couldn't resist it. But now I try to figure out through updating myself with a plan, for example, I allocate money for my lunch and to khat and live my life the way I am today.' (IDM-06, age 24)

On the contrary, some respondents mentioned they cannot resist the effects of khat and struggling with its effect.

Discussion

The findings of this study have stated different perceived reasons for the habit of chewing khat such as chewing to be relax, to forget worries and stress, to be active and energetic at work. These results go in line with previous reports of [16–18]. Social and environmental factors such as use of a family member and having a friend with khat use were also frequently reported by participants. These factors could be well explained by the social cognitive theory [19]. According to social cognitive theory, individuals do not function only through imitating others' behaviors just because they believe that many acts in a certain way.

In this study, Participants had mixed views regards to the habit of chewing some perceives positively, it contributes to the pursue happiness which allowed them to be relaxed, free from tension and stressful situation. Other similar positive perceptions were also mentioned in [16, 17, 20]. Khat is again seen as a kind of drug used as a 'hiding place' from depressed mood. A qualitative study performed among young Somalis also reported that khat was perceived as a drug, as like anti-depressant and a painkiller [21, 22]. But the authors highlighted that khat use was viewed as it has negative effects on the body. In addition, khat also as perceived as a traditional practice which is common among teachers, schools or universities and communities that had been transferred from generation to generation. The theory of descriptive norms has also been suggested that the wider the perceived extent of a behavior, the higher is the possibility that individuals will consider their engagement in a certain behavior as normative [19]. Similarly, a study from Sweden among Somali refugees also found that the habit of chewing khat as a medium for cultural and community cohesiveness and as a positive social activity [22]. On the other hand, khat was also defined as something basic like food just like when someone eating food, it needs something to drink like "Ambo-wuha-mineral water" for digestion and to feel comfortable, the same as to khat makes someone to relax and pushes to use other substances to maintain this feeling. This result also ties with previous studies with traditional khat countries like Somali [21, 22]. Even though the

majority of the participants reported perceived positive effects of khat, they had also reported negative effects of khat like it causes loss of appetite, drying of mouth, intestinal constipation, and urine retention. These findings were also consistent with previous studies of [2, 21, 22].

The finding of this study indicated different patterns of coping measures and activities like feeding oneself very well, drinking too much water and Meqni (a mixture of milk with tea) and taking alcohols and cold milk in order to manage or minimize effects like constipation, urine retention, control the psychological effects and to get sleep after consumption. This result was also highlighted by previous findings [15, 16, 21].

Conclusion

The study found the views and perceptions of youth on the habit of chewing khat and treatment practices. Khat was perceived as a habitual behavior. There were diverse perceptions of youths towards khat use. Some perceive as positively such as its significance to be alert, active, and energetic. Others perceived as a medium for community cohesiveness and as an important agent for social activity. There were also negative perceptions including harms on health, economic and social life of the users. The most important medical adverse effects were gastric pain, intestinal constipation, confession and sleep problems. The study found different coping measures and activities such as feeding well, milk, and alcohol to manage and control different adverse effects. The study will be an important formative stage for future quantitative studies focusing on khat use among Youth.

Abbreviations

FGD

Focus depth interview group discussion

IDI

In-depth interview;

EDHS

Ethiopian Demographic Health Survey

EPHI

Ethiopian Public Health Institute

UNODC

United Nations Office on Drugs and Crime

Declarations

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Availability of the data and materials

The tools used for the study and the data that supports the findings in the study are fully available through request.

Author's contribution

All the three Authors were equally contributed to the study and had substantial input to prepare the manuscript. All authors read and approved the final manuscript.

Competing interests

The authors declare that they have no competing interests.

Ethics approval and consent to participate

The study was approved by the Ethics committee of the School of Psychology, Addis Ababa University. Data was collected after obtaining informed consent, which also included consent for the digital recording of interviews for those who participated in the qualitative interviews and consent for publication.

Consent for publication

Not applicable.

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Tables

Table 1 Socio demographic characteristics of participants for In-depth Interview and FGD (N=21).

In-depth Interview Participants	
Age	<u>No of participants</u>
18-24	6
Sex	<u>No of participants</u>
Male	5
Female	1
Year of khat use experience	<u>No of participants</u>
1 - 4 years	2
≥5 years	4
FGD Participants	
Age	<u>No of participants</u>
16-24	15
Sex	<u>No of participants</u>
Male	15
Year of khat use experience	<u>No of participants</u>
1 - 4 years	9
≥5 years	6

