

## Review on Causes and Consequences of Khat Consumption among Rural Youths in Ethiopia

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**Abstract:** Khat (*Catha edulis*) is a plant which its fresh leaves and buds is chewed. It is mostly produced in Ethiopia and in some countries of eastern Africa and currently distributed all over the world. In Ethiopia, khat is a means of livelihood for millions of farmers and khat traders. However, its psychoactive action has largely hampered the socio-economic and health status of the society. Social cases such as; having a family growing khat, having a family member chewing khat, having a friend who chews khat, smoking cigarettes, drinking alcohol and being male are all factors increasing the odds of khat use among rural youths. Most of youths start khat chewing at primary high school and they had used for academic purposes. Among the causes, unemployment is the most important which makes rural youths vulnerable to khat. Even though khat is becoming the style of living for Ethiopian youths, it has a huge socio-economic and health effects over the population. The involvement of the youngsters (with age interval of 18-30), in khat chewing has negatively affected labor productivity. Diversion of money in order to buy further khat is one from other socio-economic problems. Due to the associated depression effect of khat chewing, the youngsters have allotted lesser time for agricultural activities. Khat chewing creates family disturbances and society health instability. Unprotected sex behavior which leads numerous youths to HIV/AIDS and other sex borne diseases comes due to problematic khat use. Therefore, awareness creation on its adverse social, economic and health effects are highly recommended.

**Key words:** Causes • Consequences • Khat Chewing • Prevalence • Rural Youth

### INTRODUCTION

The ever green plant called Khat (*Catha edulis*) was considered as originated in Ethiopia, dated around 13 century and it is grown mostly in Ethiopia, Yemen and Kenya [1]. Khat use was observed in Ethiopia in 15<sup>th</sup> century and the practice was transferred to the South-West of the Arabian Peninsula [2]. Its leaves and buds, are chewed commonly in certain countries of East Africa and Arabian Peninsula as a social tradition. The habit of Khat chewing has been spread to many countries including the US and Western Europe on account of the spread of Yemeni, Somali and East African communities to these regions [3, 4].

Khat production and consumption was rapidly increased with the causes of rapid rise are debated. According to Belwal and Teshome [5], the expansion in the 1990s and early 2000s was a product of market forces, as khat fetched higher profits for farmers. Khat is produced mostly by smallholder farmers, who sell their yields at trading centers for onward distribution or export. More than three million Ethiopian farmers now grow khat, which offers higher and more consistent sale prices than other commodities [6]. Gebissa [7] suggested that income from a half hectare of khat can be six times greater than Ethiopia's per capita income.

In Ethiopia, Khat using has been described as common in many populations. The study conducted by Haile and Lakew [8] on 30,625 populations, from those

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21,080 (68.8%) respondents were rural residents and at higher odds to chew khat as compared to their urban counterparts. A survey conducted at Jimma University on a total of 619 and from those 237 are from rural area indicated that, a total of 74.3% chewers started chewing khat before joining university, (25.7%) started chewing after joining university, mostly in their first year (60.5%). The main reason given for starting khat chewing was for study purposes (54.6%), followed by Socialization purposes (42.3%). The majority of current khat chewers (66.9%) reported that they started khat chewing after the age of 15 years. The mean (SD) age for starting khat chewing was 17.2 (3.2) [9]. The khat chewing is most commonly practiced among male gender compared to female [10]. Megersa *et al.* [11] suggested that, khat is used as socializing drug widely consumed among males than females. But when compared to participation of different partaker khat producers, khat traders and consumers were habituated to khat chewing.

Khat accounting 13.4% of the export earnings, it is the third largest export crop, next to coffee and oil seed in Ethiopia. Hence, it plays a considerable role not only in the national economy, but also it is a major income source for millions of farming households and traders who directly or indirectly depends on it. But on the other hand, its psychoactive central stimulation substance, Cathinone and Cathine, are widely abused in East Africa, particularly in Ethiopia; where Khat chewing is a daily routine and deeply integrated socio-cultural norm in the country. This psychoactive action has largely hampered the social, economic and health status of the society [11, 12].

The worsen the involvement of the youngsters (with age interval of 18-30/Youths/) in khat chewing is that it has negatively affected labor productivity; since 84% of them spent more time in khat chewing with a session of  $6.1 \pm 3.13$  hours of chewing per day. Due to the associated depression effect of khat, the youngsters have allotted lesser time for agricultural activities [11]. In reality, youths are highly participated in khat uses with its adverse effects. The reasons facilitating youth khat consumption are identified as the consequences related with social, economic and cultural situations. Considering these realities, it is aimed to review the evidences in different journals, research papers and thesis regarding the causes and consequences of khat consumption among rural youths in Ethiopia.

**Objectives:** General Objective

- To Review the Implications of Khat consumption among rural youths in Ethiopia.

Specific objectives

- To review the causes and consequences of khat consumption among rural youths.

**Causes and Consequences of Khat Consumption among Rural Youths in Ethiopia**

**The Concept and Definition of Youth:** The word youth is defined in some countries as the young person whose age bracket ranges from childhood ends to beginning of adulthood. Other countries define youth as a young person who start to engage themselves in activities considered by the community as expression of adulthood. These variations indicate that there is no globally agreement up on definition of youth. But, as different literatures showed the definition of youth based on age is most suitable for research and policy purposes. The UN uses the persons ranged between age group of 15-24 for definition of youth. The African Youth Charter defines youth as person in the age group 15-35 [13]. According to Ethiopia's national youth policy (2004), Youth is defined as the persons those whose age is ranged between 15-29 years [14].

**The Concept of Substance Abuse:** According the definition in Mariam Webster the word substance is defined in different terms. The related definition with this purpose is “something (such as drugs or alcoholic beverages) deemed harmful and usually subject to legal restriction” (Mariam Webster).

World Health Organization defined Substance abuse as the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs [15]. According to the Diagnostic and Statistical Manual of the American Association, 4<sup>th</sup> Edition (DSM-IV), the term substance abuse is defined as a pattern of use which leads to clinically significant impairment or distress as manifested by one or more of the following in a 12 month period: recurrent substance use in physically hazardous situations such as driving under the influence of the substance; recurrent substance use resulting in failure to fulfill major obligations at work, home or school; recurrent drug use leading to legal problem such as arrest for substance use, related disorderly conduct etc.; continued drug use despite having a persistent or recurrent social or interpersonal problem caused by use of the substance” [16].

**Definition of Prevalence of Khat Chewing:** According to Rothman *et al.* [17], the prevalence is defined as “the proportion of the population that has a disease at a

specific point in time.” The prevalence of khat chewing is different in different categories. For instance, there is different prevalence of khat across gender, age, residential area, religion, region etc.

**Theoretical Perspectives on Youth Substance Use or Abuse:** The Social development Strategy /Model (SDS) developed by scholars Hawkins and Catalano was used for understanding youth drug use and abuse. It is mostly helps to understand youth drugs issues through addressing risk and protective factors. The social development model is a synthesis of social learning, social control and differential association theory [18]. The Social Development Strategy identifies risk factors that contribute to the development of the five most common adolescent behavioral problems, including: substance abuse, delinquency, teen pregnancy, school drop-out and violence.

According to this model, risk factors are conditions that increase the risk or likelihood that the aforementioned problems to emerge in adolescence and young adulthood. On the contrary, protective factors safeguard them from exposure to risks and hence reduce the likelihood in displaying such behavior. Both risk and protective factors encompass four spheres where young people grow up: peer and individual (e.g. friends who engage in problem behavior, constitutional factors, etc.), school (lack of commitment in school), family (e.g. family history of problem behavior, etc.) and community e.g. availability of drugs, etc. [19].

From the above statement factors which are predictors of the problems, the presence of protective factors can neutralize the “harm” that are associated with risk factors. These protective factors include: Healthy beliefs and clear standards for behavior as linked by families, schools, communities and peer groups; strong attached bonding and relationships with at least one adult (can be parents, relative, etc.), who has healthy beliefs and clear standards for young people; individual characteristic of the young person, such as a positive social orientation, high intelligence and resilient temperament. The model is concerned with the socializing processes of the children and the process involving the following constructs: giving opportunities for children’s positive and meaningful engagement, providing the skills for children to participate in these involvements and giving recognition and corrective feedback to them as reinforcement for pro-social involvement [19].

From this model, it is important to note that these common risk factors would predict diverse problem behaviors, such as the five listed above. They can be present across development, with some factors becoming more striking than others depending on the course of human development. More importantly, the number of risk factors is proportional to the chance of demonstrating problem behaviors and the presence of protective factors would neutralize such effects [20]. According to this model therefore, addressing these underlying problems shown in the risk factors, finding ways to minimize them and increasing the protective factors are the most effective ways to tackle any adolescent issues including substance abuse. Furthermore, if these various factors are tackled effectively, the result would also mean that the range of adolescent problem behaviors can be reduced [19].

**Production and Marketing of Khat:** In Ethiopia the production of khat has increasing through time to time. The reason for increment is tried to have seen in different studies. For instances, Feyisa and Aune [21] have suggested the primary reasons for increasing production are economic value, market opportunities, favorable prices and decreasing productivity of crops. The authors witnessed that in the 1980’s households who were mainly producers of food crop shifted to production of khat in the 1990’s and in 2000’s. They also suggested that, lack of oxen for plowing, soil erosion, weed infestation and the prevalence of pests and diseases were also motivated farmers to shift from food crops to khat production.

The fluctuation of the prices in coffee also made many farmers to switch from production of coffee to khat. Besides to price fluctuations coffee and other crops, the price of khat has been remained constant or increasing as a result of an increasing demand from local, regional consumers market [22]. Next to price stability, khat has become attractive to farmers because it can be planted all year, in a variety of soils and usually on terraced hillsides and marginal land. Moreover, it is also pest resistant, requires minimal inputs and produces range of secondary benefits such as wood for fuel, construction material and medicine [21-23].

**Prevalence of Khat Chewing in Ethiopia:** The prevalence of khat chewing was varied across age, gender, residential area and region. The survey conducted by including un-weighted total adult populations of 30,625 in the age range from 15-59 years old revealed that the overall

prevalence of khat chewing in the 30 days preceding the survey was 15.3%. The prevalence of khat chewing among adult men was higher 22.6% as compared to females 9.1%. The prevalence of khat chewing in rural places was higher 16.6% as compared to urban areas 11.2%. Regional variability was observed regarding khat chewing in Ethiopia. Khat chewing was highly prevalent in Harari regional state where above half of the population chew khat (53.2% reported). The prevalence in Dire Dawa was the second highest 44.9%, followed by Oromia 26.4% and Somali regional state 26.0%. The lowest prevalence was found in Tigray regional state 1.1% [8].

### **Causes for Khat Consumption among Youths**

**Social Causes:** The qualitative research methods conducted on Somali community by participating youths revealed that khat using is linked with social integration. During the study one of the Focal group members said “It is impossible to chew khat and at the same time to mix and interact with other Somalis who do not chew even those from your own village let alone to interact with non-Somalis.” Their poor engagement with others is attributed to their altered sleep-wake cycle, the degree of use and the isolating nature of locations where khat is chewed [24].

The survey conducted by Megersa *et al.* [11] in Jimma Zone, Mana district among 102 respondents including youths showed that, Khat chewing is a profound habit and part of social and cultural construct. In the study area, the result from 78.2% of respondents indicated, khat chewing plays important social participation role in ceremonies such as weddings in positive way. Hence 85.2% of khat chewers chose to chew in groups compared to those who selected to do it alone (14.8%).

On the other hand, reasons for khat consumption linked with having family and friends with users. For instance, the research evidence held up on High school students in Sidama Zone showed that, having a family growing khat, having a family member chewing khat, having a friend who chews khat, smoking cigarettes, drinking alcohol, ever practicing sex and being male are all factors increasing the odds of students' khat use [25].

**Academic and Other Causes:** In many different studies researchers were tried to identify the reasons that youths especially students used khat frequently. From those reasons, academic purposes, increased energy for work, to get improved self-esteem, improved confidence and etc

are counted. According to Derso and Dagne [10] report, peer pressure, academic purpose and stress reduction were the major reason claimed for initiation and continuation of khat chewing among youths. Khat is primarily used for its stimulant effect. Users report that Khat intake results in increased energy levels and alertness, improves self-esteem, creates a sensation of elation, enhances imaginative ability and the capacity to associate ideas and improves the ability to communicate [26].

According to finding of a cross-sectional study conducted in Jimma University in 2008 on 528 students to assess the academic, health and psychological effect of Khat on mature students showed that, among 63.52% of males and 54.9% of females Khat chewers, 46.3% of the students reported the reason for chewing was for focus and concentration on their studies [27].

Gerfu [28] reported that most chewers (42.9%) started khat chewing for mild euphoria and excitement, similar to that conferred by strong coffee. Feeling of well-being, sense of euphoria and increased energy levels, increased alertness, increased ability to concentrate and addiction to khat chewing were the other reasons mentioned for khat chewing, in that order. Kalix [29] reported that, the reason for most youths chewing Khat is a method of increasing energy and elevating mood in order to improve work performance.

**Unemployment:** Many researchers tried to identify the causes of youth khat consumption by using different variables in different areas of Ethiopia. From those variables unemployment is the most important and current critical issue Ethiopian youths. A cross-sectional community-based study conducted in Jimma City by participating 1200 individuals to assess Khat Chewing and Mental Distress revealed that 21.0 % of khat chewers were youths who are unemployed [30]. Saddichha *et al.* [24] reported that unemployment constitutes 48: 58% additionally to negative social impacts linked to problematic khat use, including family breakdown and poor social integration. Sebsibie [31] identified unemployment as the cause of drug addiction of youths in addition to enjoyment, failure in academic achievement, family disagreement, Hopelessness and peer pressure. Megersa *et al.* [11] reported that, the loss of work hours due to spending of 84% of youngsters' on Khat chewing with larger session of chewing (6.1±3.13 hours during day time); decreased economic production, malnutrition and diversion of money in order to buy further khat was

directly linked to absenteeism and unemployment, which may in turn result in a fall in overall national economic productivity.

On the other hand, The New York Times on (July 22, 2017), by Kimiko de Freytas-Tamura reported that “For Ethiopia’s Underemployed Youth, Life Can Center on a Leaf”. He adds his interview with one Government official, “Most alarming, the Ethiopian authorities say, is the number of young people in this predominantly young nation now consuming khat. About half of Ethiopia’s youth are thought to chew it. Officials consider the problem an epidemic in all but name. The country’s government, which rules the economy with a tight grip, is worried that the habit could derail its plans to transform Ethiopia into a middle-income country in less than a decade a national undertaking that will require an army of young, capable workers, it says. Khat is legal and remains so mainly because it is a big source of revenue for the government. But there are mounting concerns about its widespread use”.

In line with Ethiopian unemployment case neighboring countries of Ethiopia faces related problem with youth khat uses. To show some; The study conducted by using descriptive research design with 90 youth’s interview in Garowe, Somalia focusing one cost, unemployment, peer pressure and perceived benefits revealed that Youth chew khat due to idleness which 16.67% of the respondents strongly agreed, other 47.78% responded agreed, 8.88% undecided, 17.78 disagreed while the rest 8.89% of the respondents reacted strongly disagree [32]. It indicates that unemployment is the most important cause of youth to start chewing khat.

The national census of Kenya reported the majority of khat users among residents are either unemployed or under-employed; 31.3% of the population over five years was unemployed; 21.6% were seeking work; 32.3% were economically inactive; and 14.8% had their unemployment status unclassified [33].

### **Khat Chewing Consequences**

**Socio-Economic Consequences:** Many khat users have different attitude towards khat use. As different findings indicated, a group of khat users have knowledge about its adverse effects, but they do not stop chewing while others have no awareness about its negative side. The survey conducted by Habtamu [34] could be considered as the reflections of the divided beliefs that exist in the country towards attitude of Khat and its adverse effects. He asked one anonymous person who

lived in Addis Ababa that chewed khat for about twenty two years “*his main concern*” the effect of khat on the generation of the country. The person has replied that “*...khat brought peace, tolerance, friendship and kindness in our society. I see no threat from khat when used on purpose and is not associated with other drugs or alcohol*”. Another anonymous person who chewed khat for about eight years also replied for the same question that “*...chewers need to know what to do with the energy they gain from khat. You can use it either way - constructively or to knock yourself down*” [34].

However, Gebissa explained those who know the traditional practice of chewing is not a problem by itself, by far from the mere attitude towards khat. The problems arise when khat is taken with other dependent drugs or alcohol. Gebissa has described this situation as “*...existing research does not distinguish between traditional khat users and contemporary khat abusers (who chew to kill time and cap the chew with alcohol), khat is important culturally and economically for those who grow it*” [22].

According to Megersa *et al.* [11] report, per capita consumption of male khat chewer was one bundle (0.50Kg) with cost of 1.50 USD per day; while the per capita consumption of women was half bundle (0.25 Kg) which cost them 0.75 USD. Similarly, the annual total consumption of khat was 180 kg and 52Kg for male and women, respectively; which made the average cost per annum 270 USD and 78 USD for male and women, respectively. This indicated that this much money would have been used for another beneficial purposes. The result revealed that chewers spend money for buying khat without considering cost-benefit analysis. Similar to this, Ambaye[35] reported that in the neighbor of our country Yemen, those who chew khat regularly spend large amount of money and this creates a big problem against the family budget. Rural youths were the part of these vulnerable groups.

**Age Related Consequences:** Studies have identified that the mean age of khat users was between 15 and 32 which was considered as productive age. For instances, Megersa *et al.* [11] reported that, The involvement of the youngsters (with age interval of 18-30), in khat chewing has negatively affected labor productivity; since 84% of them spent more time in khat chewing with a session of 6.1±3.13 hours of chewing per day. Due to the associated depression effect of khat, the youngsters have allotted lesser time for agricultural activities. Their finding also

revealed that vulnerability to the associated risky behaviors of khat like: alcohol drinking, cigarette smoking and exposure to HIV/AIDS due to unprotected sex with implication of unsuccessful adult outcomes was the resulted from engagement of these socio-economically active parts of the community. The finding of Kebede *et al.* [26] showed, larger effect sizes risky sex behavior were associated with younger age of 15-19 years among in school khat chewers and being out-of-school was strongly associated with self-report of unprotected sex that was highly indicated daily Khat intake was associated with unprotected sex among khat user youths. This may leads many youths vulnerable to HIV/AIDS and other sex-borne diseases.

**Marital Problems:** The literature indicating the effect of khat chewing on marital status was rare in Ethiopian case. However, Megersa *et al.* [11] reported 52.8% of married farmers were accustomed to khat chewing than singles (36.15) and the result indicated that these much number of chewers are vulnerable to divorce due to reduced sexual activity, low erectile and ejaculatory responses between married couples which finally could lead to lack of strength in sexual intercourse and thereby terminating a marriage association through divorce in Mana district.

Similar to this evidence, an In-Depth Qualitative Study conducted in Saudi on Khat chewers to assess Why Would Khat Chewers Quit? Replied that married khat chewers face disturbed marital relations as well as poor sexual relations. In this study, one anonymous participant was said “*My wife used to laugh at me having ejaculations without erections, but now we both enjoy having gotten rid of khat.*” Another man was said “*What would you expect of a man with no money and unable to make love with his wife? That is what khat was doing to me.*” Another one said, “*My mother cried of happiness looking at me back home early and sitting with my kids.*” They felt that quitting let them regain their marital, family and social stability [36].

**Academic Consequences:** Under this statement it is important to see the available evidences regarding the effect of khat consumption on academic performance while most of high level students were under the age of youth and as well as from rural areas. The study conducted to identify Khat chewing among Ethiopian University Students showed About a fourth of university students, 24.0%, have everchewed khat and about 1 in 8 reported chewing khat during the academic year in which

the study was conducted [37]. The other study conducted at Jimma University reported that the number of students who use khat was 35% in the university and that there is a significant variation in khat use among students across different categories. For instance, male (85%), female (15%); urban (52%), rural (48%); khat growing areas (37%), non-khat growing areas (63%), relationship with khat-users (54%), no relationship with khat-users (46%); all of which had statistically significant differences. The minimum aged respondents participated in this study was 18 years and the maximum age was 34 years [38]. The growing similar study conducted in Jimma University has shown 26% of Jimma University students chew khat. Among the chewers 36.5% were chewed khat 2-3 times a week, 35.1% daily, 25.7% weekly and 2.7% occasionally with the mean starting age of chewing was 17.2 (3.2) [9].

A plenty of evidences indicated that students consume khat for academic purposes. Among the self-reported reasons given by students; to wake up or avoid sleep, to get energized for study, to increase academic performance [37, 39] are raised especially among high level students.

Students have positive expectation of khat for their academic performance conflicts with existing evidences of negative effects of khat on academic performance [37]. According to Kassa *et al.* [25] report, Students’ khat use increased the odds of students’ poor academic performance or failing in their academics, but they have not addressed the reason for how it cause the effects. However Abdeta and his relatives [9] came with the new ideas regarding khat withdrawal symptoms in Ethiopia. According to their result, most frequently reported with drawal symptoms were feeling depressed, craving and feeling fatigued. Factors those were significantly associated with khat chewing were male gender, attending a place of worship daily/2-3 times per week, currently using ganja/cannabis, current smoking cigarettes and having family members who chew khat. These things may be harmful to academic performance of students.

**Health Consequences:** In different literatures khat was reported as it is legal, or government has silent about its adverse effects particularly in Ethiopia and may be considered as part of the lifestyle in some parts of the countries, while it has a potential for development of dependence social healthy disturbance. Not only khat chewing, most of khat user can accustomed highly with associated risking behavior of khat such as smoking,

using alcohol beverages, as well as coffee and soft drinking than non-chewers. These addictive behaviors during and after khat chewing was common to break the aftermath effect of khat, which is known as insomnia- a condition of users to overcome withdrawal effect and they played harmful role to hasten susceptibility of sexually-transmitted diseases, including HIV/AIDs. Similarly the one associated behavior; cigarette smoking, has been disposing the household members to its secondary smoker effect, especially to infants and pregnant women [11]. They cited the report of Damena *et al.* [30] that corresponds to their result regular khat chewing behavior of youths was the predisposing factor to gastritis and peptic ulcer disease, mental illness and cardiac arrhythmia.

The other study of Hoffman and Al'Absi [40] has shown that abusing of chewing khat has an adverse health effects such as cognitive deficits, impairments in executive function, deficits in episodic memory, lack of attention and working memory, high rates of affective distress and psychiatric disorders, decreased appetite and increased blood pressure and heart rate. Other effects such as insomnia, anxiety, irritability, agitation and aggression also reported in addition to withdrawal symptoms which include inertia, nightmares, trembling, depression, sedation and hypotension.

### CONCLUSIONS

In most communities khat chewing is perceived positively. It is considered as prohibit and social construct. This can make rural youths vulnerable to khat consumption. On the other hands, it has adverse social effects such as; family and social disturbances. While most youths start khat chewing at school, they have been used in a sense of academic purposes; to get more focus and concentration on their studies. However, it has been reported that khat chewing has reduced academic performance of the students. Khat consumption and associated risking behaviors such as; smoking and drinking alcohol has adverse health effects especially among youths. Unprotected sexual intercourse which leads majority of youths including rural youths to HIV/AIDS and other sex-borne diseases was occurred through problematic khat use. These could also reduce human resources and youth productivity. In general, the damage through khat production have seen greater than its contribution in country economic development. Therefore, identification of the causes of khat consumption and its consequences

among youths help in decision making for important solutions.

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