



Why Would Khat Chewers Quit? An In-Depth, Qualitative Study on Saudi Khat Quitters

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ABSTRACT. *Background:* Khat chewing, which has many adverse health and social consequences, is highly prevalent and socially accepted in the Jazan region of the Kingdom of Saudi Arabia. *Methods:* A qualitative study was conducted with 47 adult male former khat users regarding their khat initiation, continuance, and cessation, the amounts of khat they had used, and the health and social consequences of their use and cessation of use. *Results:* Participants noted a desire to show maturity, ease of availability of khat, and peer pressure as reasons for initiating khat chewing. Many noted long leisure times with little to do as a reason for continuing use. Negative consequences of khat use were seen in economic, health, familial, and sexual areas of their lives. After quitting khat use, participants saw improvements in all of these areas. *Conclusions:* A comprehensive community development program (CCDP) tackling, among other issues, the normalization of khat use, substantial leisure times with few positive activities, and misinformation about the “benefits” of khat use, as well as developing peer and family training programs to help prevent or stop khat use, would be useful to reduce khat chewing in this community.

Keywords: Abstinence, health consequences, khat chewing, qualitative study, social consequences

INTRODUCTION

Khat (*Catha edulis* Forsk) has been chewed since ancient times in Ethiopia, and its use spread to the east African countries (1) and down to South Africa (2). It also has been used in Yemen (South of the Arabian Peninsula) since the 6th century (3). Khat chewing has been considered a Muslim habit, and some authors relate its use to Muslim ceremonies (4–6). However, recently, its use has spread to various European (7–10), Asian (11), and Australian (12, 13) countries, as well as to the United States (14). The use of khat in these countries usually begins in African immigrant communities

and then spreads to other residents (15). Khat chewing is a slowly growing problem in the world, with its use growing most rapidly in Africa (16).

Khat is considered a natural amphetamine for its amphetamine-like action (3, 17–19). The main active substance in khat leaves is cathinone, which is converted to the less active substance, cathine, after harvesting (20–22). Khat is usually used at social gatherings (23, 24) for its mild psychostimulant effects, such as increased alertness, enhanced mood, and reduced need for sleep (9, 25–27), and as a sexual stimulant (28–30). However, chewing khat has many adverse health effects. It decreases the feeling of hunger and increases systematic sympathetic tone (31). It also accounts for a number of gastrointestinal tract problems: esophagitis, gastritis, and a delay in intestinal absorption, as well as the development of oral keratotic white lesions at the site of chewing (32). Moreover, it is associated with hypertension (25, 32–36), vasoconstriction of the coronaries, and

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FIGURE 1 Map showing the Jazan area in the south of Saudi Arabia and its relation to Yemen (Color figure available online).

myocardial infarction (25, 32, 34, 37–39). Early life onset use of Khat, excessive use, and self-medication use for war trauma may lead to the development of psychotic symptoms (40). A study using rats found that khat stimulates locomotor and stereotypic behavioral activity and can induce seizures (41). It also increases susceptibility to stroke and death (33, 42). Although mild doses of khat improve sexual motivation without much effect on performance, larger doses have been found to reduce motivation, performance, and sperm count in studies using rats (29, 43, 44). One study found that Khat chewing may also impair driving ability (45) and another found that khat chewing increases the risk of road accidents (46).

The Kingdom of Saudi Arabia (KSA) is an exclusive Muslim country located at the Arabian Peninsula. The Jazan area

of Saudi Arabia lies at the far southwestern corner of the country (Figure 1) and is adjacent to Yemen, where many types of khat trees are grown and where the prevalence of khat chewing is high (82% among men and 43% among women) (47). Khat chewing is also common in Jazan. Jazan University studies have shown that the prevalence of khat chewing among males is 48.7% (45.7% among males in rural areas and 61.7% in urban areas) (48). Its use is also high among male university and high school students (37.7% and 21.4%, respectively) (48–50).

This qualitative study seeks to explore the reasons for khat initiation, continuance, and cessation, the level of khat formerly used, and the health and social consequences of its use and cessation of use among a sample of male former khat users in Jazan, Saudi Arabia.

METHODS

An in-depth qualitative study was carried out on 47 adult male khat quitters in the Jazan area of Saudi Arabia (Figure 1). All of them had completely stopped Khat chewing at least 1 year prior to the interview. Quitters were recruited through a nongovernmental organization (NGO) working on khat prevention in Jazan through a local announcement, which asked quitters to volunteer for the study because it would help other chewers to quit. We used a semistructured interview questionnaire in this study with 11 open-ended questions.

Those who volunteered to participate were asked not to mention their names or other identifying information during the interview or afterwards unless they chose to support the NGO and participate in its activities. A verbal informed consent was taken from each participant before the interview. The informed consent mentioned that the participant could refuse to answer any of the interview questions and that he could stop the interview at any time without mentioning a reason. Trained NGO social workers were responsible for conducting the interviews. The study and the informed consent procedures were cleared by the research ethics committee of the Scientific Research Center at Jazan University. None of the participants stopped the questioning, although some of them (17) refused to answer one or two questions at most.

As none of the available software for qualitative analysis is available in Arabic, we preferred to do the analysis of the results manually. The investigators, with the help of social workers, grouped similar answers and answers with similar meanings. Additional review was done by a group of Saudi colleagues to be sure that grouping of response categories was acceptable according to the local language. Analysis of the results was done manually by El-Setouhy and reviewed by both investigators.

RESULTS

Forty-seven male Saudi khat quitters agreed to participate in this study. All of them were living in the Jazan area. Their ages ranged from 20 to 70 years old (median = 42). Most of the participants were married (44/47). Approximately one third of them were teachers, and nearly all of them were governmental employees or retired governmental employees.

Khat Initiation and Usage Characteristics

Younger age groups (<49 years; $n = 31$) initiated khat use at the middle school age (12–15 years), whereas the older age group (>50 years; $n = 16$) started at an older age (18–29 years). One of the primary reasons for initiating khat chewing was a participant's feeling that it is a sign of maturity, imitating their fathers or respected relatives. Another main cause for initiation of khat chewing and smoking was

peer pressure. The common words they used to describe their reasons for initiation were "To be a man," "To prove myself," and "Why not? It is normal." Most of the participants started chewing khat when it was offered to them for free by their friends or colleagues (41/47); only a few of the participants started to chew khat by stealing it from their fathers or relatives. A few of the participants (3/47) were living in the Fifa Governorate, where khat is grown. They said "all those living in Fifa chew khat, as it is normal and available everywhere." Those working in the army who came to Jazan during the Huthy war at the Saudi/Yemeni border started to chew khat in response to the stress of the war (2/47).

Participants mentioned that the availability of khat, the social acceptability, and its use for social gatherings in the Jazan area were additional factors leading to their initiation of khat chewing. However, nearly all of the participants considered these latter factors as being more associated with their continuing use of khat rather than their initiation of use. Participants indicated that the main reason for continuing to chew khat was having substantial leisure time and no hobbies (39/47). Many of them said, "I have nothing to do, with the hot weather and the kids busy with their lessons, except to gather with my friends to chew khat."

Most of the participants (38/47) used to chew khat daily, spending 50–150 Saudi Riyal (SR; US \$13–\$40)/day. One of the participants had been spending 800 SR/day chewing khat. One mentioned that he was spending two thirds of his monthly salary on khat chewing; another two mentioned that they were spending all their salaries chewing khat and that they often borrowed money from their relatives. An older participant calculated how much he spent on khat during his life and reported that it totaled approximately 2 million Saudi Riyal. One participant also sold khat and another one said that his father was a pusher.

Reasons for Cessation

Deciding to quit was often due to multiple reasons. The most common reasons were feeling guilty for giving up prayers (12/47), feeling lost and neglecting family, especially kids (11/47), accumulation of debts (11/47), work neglect and frequent absenteeism (10/47), and impaired health (7/47). Some participants also cited disturbed marital relations as well as poor sexual relations (7/47), which were mainly in the form of erectile dysfunction, with some participants experiencing ejaculations without erections. Additionally, 3 of the quitters decided to quit before getting married and noted that the adverse sexual effects of Khat are prevalent.

Although sexual and religious factors were the most pressing reasons for quitting, many additional reasons were provided. These factors included getting older and having other health problems, insomnia, and restlessness. Other health factors included "bowel problems," mainly, severe constipation, loss of appetite, and disturbance in bowel movements. None of these symptoms was a quitting factor by itself. Users

who initiated khat chewing while in the army quit when the Huthy war ended. Four of the participants quit in response to a tragic accident that had happened to them or one of their children. The participant who was selling Khat quit after a beggar to whom he had given some money came to the participant's house to buy khat.

Feeling lost was another infrequent reason to quit. One of the quitters said, "I was chewing khat by myself and felt chewing khat was making me lose myself, my family, my work, and even my entire life; that is why I decided to quit." Although it was common for wives to be pressuring their husbands to quit, the quitters responded more strongly to the pressure of their children. They all experienced regrets regarding their neglect of their children. One participant whose son became a religious leader (shikh) said, "I was unable to look at his eyes until I quit."

Personal and Social Consequences of Cessation

One third of quitters experienced no physical symptoms in response to quitting. Some quitters experienced bad tempers and nervousness (4/47), expressed via treating their wives and children badly, feeling sleepy most of the time, sleeping longer, and feeling hungry all of the time. Some of them experienced feelings of depression and/or anxiety and easy fatigability (3/47). Most of these symptoms lasted for 7–14 days (average of 10 days). Most of those who experienced withdrawal symptoms received good support from their families, especially their mothers and/or wives. Some were supporting themselves through, as they said, "praying and being closer to God." One said, "Those who consider Khat not addictive are deluding themselves. It is an addiction that no one can get rid of easily except with God's help." Most of the quitters became more religious and started to pray most of the scheduled prayer times in the mosques (44/47). One of them said, "I felt I was leaving the garbage life to be back to my religion and my family." Another one was chosen to be the Muazzin (responsible for the call to prayers) of the mosque.

Khat quitters experienced many changes on the social level, most of them positive. They became closer to their children, wives, and parents. Many of them felt that their wives were the happiest about their quitting. One of them said, "My wife was so happy for my quitting to the extent that I was afraid that she might have a nervous breakdown if I went back to khat." 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.

Although participants generally denied sexual problems, many of them expressed their happiness at getting better erections and having a better sexual life after quitting (21/47). One of them 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 wife used to

laugh at me having ejaculations without erections, but now we both enjoy having gotten rid of khat."

Participants felt that they had better health, had saved extra money, did not owe money anymore, had a better working life, and paid their debts. Quitters experienced better sleeping patterns (41/47), relief of their chronic constipation (23/47), a much better appetite (22/47), a better way of living (20/47), playing sports (18/47), and having their own house and car/s (18/47). One of them mentioned, "I sold my car to buy khat and was living in a small ramshackle house; now, I have two cars and a good house." Diabetic quitters and those who had diabetic relatives and/or friends had thought that chewing khat helped them to control their blood sugar. They realized after quitting that this belief was not true.

The response of the community to the quitters varied. Their families were supportive and encouraging, whereas khat-using friends were mostly against participants quitting. A friend of one of the quitters offered him 10,000 SR (US \$2667) to go back to chewing khat with the group. One of the quitters said, "Some of my friends are like Satan's assistants or they are even more dangerous than Satan himself." After quitting, the participants started to make friends who do not use khat, although "this was the hardest part" according to many of them.

DISCUSSION

Khat chewing is an endemic social and cultural habit in the Jazan region of Saudi Arabia. The semiopen border between the Kingdom of Saudi Arabia and Yemen in this area is a major factor for the khat trafficking from a low- to a high-income country.

Our quitters (47 adult males) were all Saudi living in the Jazan area. Although most of them initiated khat chewing at the age of 12, the older age group (>50 years) initiated at an older age. This drop in the age of initiation reveals the failure of prevention strategies. In contradiction to Saudi law and the Islamic rulings that prohibit khat selling, trafficking, and/or use (51, 52), khat is widely available and accepted by the community in the Jazan region, especially in the Fifa Governorate, where it is grown. The Egyptian smoking prevention program faced a similar problem, as smoking is prohibited religiously but is still highly prevalent (53, 54). This explicitly shows that an intensive role should be played by religious leaders to actively prevent khat chewing. Although stigmatization of smoking is a controversial issue (55–57), stigmatization of khat use would help to diminish khat social dependence and community acceptance.

Our quitters explained that erroneous beliefs maintained their khat use in Jazan. Many diabetics still believe that khat chewing controls blood sugar, although many studies have proved no effect of khat chewing on blood sugar (58–60). This belief comes from the fact that khat chewing reduces users' appetite (27) and the thinking that less food intake may

reduce blood sugar levels in diabetics. Our diabetic quitters did not experience any disturbance in their blood sugar after quitting. Another erroneous belief about khat is its positive effect on one's sexual life. Although this belief is still controversial and needs to be further investigated (43, 61, 62), our quitters experienced a better sexual life after quitting. These mistaken beliefs need to be discussed within the community to help khat users to quit and to hinder initiation.

Peer pressure always plays a major role in drug abuse and smoking initiation (63–65). Our results showed that negative peer pressure was a force in the initiation of khat use and hindered quitting. However, positive peer pressure would be protective in these areas (66–69). Peer training programs can help in changing the role of peer pressure from negative to positive. Such programs have been successfully used in the prevention of human immunodeficiency virus (HIV) (70, 71), hepatitis C (72), smoking (73), and narcotic use (74, 75).

Some Khat quitters responded positively to pressure from their children to quit. This can be explained by their feeling that they were not meeting their children's mental, physical, and economic needs, similar to alcohol drinkers (76). Adding to this was the negative impact of khat use on the family finances, which mainly affected their children. Our quitters, like other khat users in Africa (77), reported that they were spending as much as 100% of their monthly salary chewing khat. Participants' poor work performance and absenteeism also led them to be hesitant or unable to look their children in their eyes and is evidence of the effectiveness of the positive pressure of having children.

A few publications discuss medical treatments to help khat users quit (78, 79). However, none of our quitters sought medical advice when quitting. This is likely because khat has mild or no withdrawal symptoms, unlike opiates, whose use can lead to severe symptoms during withdrawal (80). The support of their families was the most helpful factor for participants to maintain abstinence from khat. Training family members, especially mothers and children, through family therapy about ways to support their quitters would be very helpful (81).

Study Limitations

We faced some difficulties in obtaining certain details from khat quitters. First, we were unable to get information about alcohol use and other drug use. Although all drugs, including khat, are prohibited by the Saudi law, the law is much looser in Jazan regarding khat than other drugs, especially alcohol, which is nominated in the Holy Quran. Therefore, we were unable to relate khat use or quitting to the use of other drugs. Furthermore, Jazan being a closed community makes it difficult to obtain information from husbands about their wives. We were unable to know if quitters' wives were khat chewers or not. The conservative community also made it difficult to obtain in-depth information regarding sexual side effects.

The generalizability of our results is limited by our small sample size ($N = 47$). This small size is due to the fact that eligibility was restricted to absolute quitters, i.e., those who decided not to use khat even during social events in an area where khat is culturally and socially acceptable. We encountered many potential participants who had stopped chewing khat except for during social events.

Recommendations

The failure of drug use preventive strategies has led the Saudi National Committee for Narcotics Control (NCNC) to develop a national strategy to combat drugs. One of the 7 main objectives of this strategy is to develop new preventive tools (82). Substantial leisure time is one of the main contributing factors to the high prevalence of khat chewing in Jazan. Living in a hot, humid climate, being governmental employees, working few morning hours, and have nothing to do after work are other contributors. All of these factors need to be addressed.

Our results should be very helpful in developing an effective prevention program for khat use. Reviewing the causes behind quitters' initiation, continuation, and quitting of khat chewing clearly shows that khat is a deeply rooted community problem. Most khat chewers have substantial leisure time, which they use to gather with friends and chew khat. Therefore, concerted efforts should be directed to developing a comprehensive community development program (CCDP) in the Jazan region, with khat elimination as a major objective. This CCDP should include various community, religious, health, and society leaders, in addition to policy makers, in order to allow every community partner to bear some responsibility and to have an ownership in khat elimination. The CCDP should tackle the excessive leisure time of residents in efforts to make that time productive rather than destructive. The CCDP should also include peer training and family training programs for different age groups and both genders, with 3 main objectives: stigmatization of khat use, changing negative peer pressure to use khat into positive pressure not to use, and to assert a gentle, effective pressure on users to quit. Other programs should include a strategic plan for behavior change and reduction of risk-taking behavior, following behavior change models such as Prochaska and DiClemente's stages of change (83–85). The CCDP should include training and upgrading of the knowledge and attitudes of religious leaders and health professionals to deliver the right messages in an effective manner. Health professionals and families should also know that khat quitting has no or mild symptoms and that the main need of quitters is social support. In conclusion, we believe that a comprehensive community development program in Jazan would be the only way to overcome the khat-chewing problem in this community.

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