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The experiences of people who quit khat and the health care professionals who support them

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Running title: Experience of khat users & support staff

Abstract

Background: This study aimed to explore the barriers and enablers to quitting khat from the perspective of users and the barriers and enablers to supporting users to quit from the healthcare professional (HCP) perspective.

Methods: A qualitative study using semi-structured interviews and the Theoretical Domains Framework (TDF) to collect and analyse data.

Results: Overall 10 khat users and 3 professionals were interviewed. Beliefs about the consequences of continued use facilitated user's decisions to quit. Social influences were a barrier and enabler. For professionals, the social influence of other colleagues and working together was key in enabling them to support clients. Social / professional role and identity was also an important enabler, as professionals saw supporting users to quit as an integral part of their role. A range of behaviour change techniques was identified as potential ways in which quit attempts could be more successful, from the user and professionals perspective.

Conclusions: The study reveals the complexity of khat chewing and quitting from the perspective of khat users, such as the varied influence of family and friends. It also identifies the many barriers and enablers that professionals experience when supporting individuals to quit, such as working with other professionals. There is little evidence for the effectiveness of current quit khat services or little information outlining how they were developed. Current services would benefit from evaluating the effectiveness of the interventions using established methodology. Recommendations for practice in the field of substance misuse have been identified.

Keywords: Catha, Drugs, Quit

Introduction

Khat (also known as catha edulis) is a plant where the leaves are chewed or stewed to drink. It is common practice in African and Middle Eastern countries such as Somalia and these communities living in the UK[1]. The main effects of chewing khat are similar but not as strong as amphetamines, which can make people feel very energetic and alert[2]. Khat is typically used for long periods in social groups with family/friends[3], ranging from one to two hours up to 12 hours[4]. Prevalence rates vary considerably outside the UK. In Ethiopia, 8.7% of 10,468 khat users self-reported using khat daily[5]. There is little published data regarding the prevalence in Europe[1]. The Advisory Council on the Misuse of Drugs (ACMD) estimate there are approximately 88000 users in the UK, with 50000 users in London[6].

Khat was classified as a class C drug in the UK in 2014, restricting fresh leaves being imported. There are suggestions it is being bought in a dry, powdery form, which is mixed with water and drunk and has milder positive effects than chewing[7]. After approximately two hours of usage, users often start to feel anxious, inability to concentrate and insomnia[8]. Khat has also been associated with an increased conflict response[9] and excessive use of more than two bundles daily has been linked with oral health problems and liver failure[4].

The evidence for khat use affecting mental health is mixed[10]. Current data is insufficient to suggest a causal relationship between using khat and long-term psychopathology[11]. Excessive usage could

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exacerbate existing psychological problems in users[12]. The withdrawal symptoms from quitting include the user feeling lethargic, slight trembling and with a desire to continue chewing[4].

Little research has looked at the support services available or their effectiveness in helping users to quit (i.e. barriers/enablers to supporting an individual to quit) and useful behaviour change techniques [13]. This could potentially be used for devising effective quit support programmes. There is no published evidence available about the quit support programmes available in the countries in which the substance is banned, indicating it may be up to the individual to quit of their own accord. At the time of publishing, there were five khat programmes aiming to support users to quit in England. Details of these services are limited, hence their content and the evidence for their effectiveness remain unknown. There is variation within the services in offering generic substance misuse advice or targeting khat specifically. The present study aimed to:

1. Identify the key barriers and facilitators of quitting khat from the user perspective.
2. Identify the key barriers and facilitators health care professionals face in supporting users to quit.

Methods

This was a qualitative study using semi-structured interviews guided by the Theoretical Domains Framework (TDF)[14], a framework of 14 domains developed for behaviour change research to understand barriers and enablers to performing a behaviour (table 1).

Khat users and healthcare professionals (HCP) were interviewed. Self-reported khat users (previous or current) aged 18 or over were included. Non English speakers and participants with existing self-reported mental health conditions were excluded. HCPs were those working in substance misuse services in the UK with direct experience of supporting users to quit on a one to one or group basis.

Snowball sampling was used as recruitment was predicted to be difficult. Organisations working with people using khat in London were contacted. Eligible participants were asked to make contact if interested in taking part and incentivised with a £10 voucher. For HCPs, recruitment began in khat-specific quit services in London and was expanded to include UK wide services due to poor recruitment. Face to face or telephone interviews were offered to all conducted by the primary researcher. Two interview topic guides were produced for khat users and HCPs based on the TDF, designed to elicit barriers (preventative factors) and enablers (assisting factors) across the domains and their relationship to quitting khat (service users) and supporting people to quit (HCPs) (table 1). The study aimed to recruit 10 to 13 participants in each group or until saturation occurred (when no new themes emerged) (15). The interview schedules were amended as data collection ensued to ensure questions were accurately eliciting concepts of interest.

Table 1. Theoretical Domains Framework (14)

Domain (definition[1])	Constructs	Sample question from this study (khat user / HCP)
1. Knowledge (An awareness of the existence of something)	Knowledge (including knowledge of condition /scientific rationale) Procedural knowledge Knowledge of task environment	What do you know about what the law currently says about using khat in the UK? Are you aware of any interventions available to support people to stop using khat?
2. Skills (An ability or proficiency acquired through practice)	Skills Skills development Competence Ability Interpersonal skills Practice Skill assessment	What skills do you need to make sure you don't start using khat again? What skills do you need to support a service user to stop using khat?
3. Social/Professional Role and Identity (A coherent set of behaviours and displayed personal qualities of an individual in a social or work setting)	Professional identity Professional role Social identity Identity Professional boundaries Professional confidence Group identity Leadership Organisational commitment	How does your culture impact on your use of khat? To what extent do you consider helping someone to stop using khat part of your role?
4. Beliefs about Capabilities (Acceptance of the truth, reality, or validity about an ability, talent, or facility that a person can put to constructive use)	Self confidence Perceived competence Self-efficacy Perceived behavioural control Beliefs Self-esteem	How confident are you that you could stop using khat if you wanted to? How confident do you feel to support a service user to stop using khat?

| | Empowerment | |
	Professional confidence	
5. Optimism (The confidence that things will happen for the best or that desired goals will be attained)	Optimism Pessimism Unrealistic optimism Identity	How hopeful are you that you will stay away from using khat in the future? How hopeful are you that your service users will stay away from using khat in the future
6. Beliefs about Consequences (Acceptance of the truth, reality, or validity about outcomes of a behaviour in a given situation)	Belief outcome expectancies Characteristics of outcome expectancies Anticipated regret Consequents	Have you ever experienced any positive effects from using khat? What positive outcomes have those who used your service for support with stopping khat reported from attending your service?
7. Reinforcement (Increasing the probability of a response by arranging a dependent relationship, or contingency, between the response and a given stimulus)	Rewards (proximal / distal, valued / not valued, probable / improbable) Incentives Punishment Consequents Reinforcement Contingencies Sanctions	What would encourage you to stop using khat? What encourages you to support service users to stop using khat?
8. Intentions (A conscious decision to perform a behaviour or a resolve to act in a certain way)	Stability of intentions Stages of change model Transtheoretical model and stages of change	Do you think you will start using khat again? Do you intend to support your next service user reporting using khat to stop?
9. Goals (Mental representations of outcomes or end states that an individual wants to achieve)	Goals (distal / proximal) Goal priority Goal / target setting Goals (autonomous / controlled) Action planning Implementation intention	How important is stopping using khat for you? How important is it for you to support service users to stop using khat?
10. Memory, Attention and Decision Processes Memory (The ability to retain information, focus selectively on	Attention Attention control	How much of your day involves thinking about using/or using khat?

aspects of the environment and choose between two or more alternatives)	Decision making Cognitive overload / tiredness	What factors are important for you in deciding how you will support someone to stop using khat?
11. Environmental Context and Resources (Any circumstance of a person's situation or environment that discourages or encourages the development of skills and abilities, independence, social competence, and adaptive behaviour)	Environmental stressors Resources / material resources Organisational culture /climate Salient events / critical incidents Person x environment interaction Barriers and facilitators	Are there certain situations that you might use khat/find it difficult to not use khat? Do you have enough of the necessary resources to support service users to stop?
12. Social influences (Those interpersonal processes that can cause individuals to change their thoughts, feelings, or behaviours)	Social pressure Social norms Group conformity Social comparisons Group norms Social support Power Intergroup conflict Alienation Group identity Modelling	What impact did/do your family and friends have on your decision to use khat? How does the service user influence your approach to supporting them to stop using khat?
13. Emotion (A complex reaction pattern, involving experiential, behavioural, and physiological elements, by which the individual attempts to deal with a personally significant matter or event)	Fear Anxiety Affect Stress Depression Positive / negative affect Burn-out	If you think about stopping using khat, how does that make you feel? To what extent do emotional factors influence whether or not you support someone to stop using khat?
14. Behavioural Regulation (Anything aimed at managing or changing objectively observed or measured actions)	Self-monitoring Breaking habit Action planning	If you wanted to stop using khat, how would you do this? In your role as a professional, what do you see as the barriers to people stopping khat?

Analysis was based on TDF guided by similar studies[16-18] taking a combined content[19] and framework analysis approach[20]. The transcripts were coded for the presence of TDF domain constructs (table 1). Microsoft Word and Excel were used to analyse results in five stages (figure 1). Agreement between researchers on the presence of domains in one randomly selected user and one HCP transcripts were calculated by comparing the coding allocated to each utterance, noting agreement/disagreement and calculating this as a percentage of the total number of utterances. Results were analysed separately for khat users and HCPs, using a continuous consultation and critique process. Any instances of 'expressed importance' (where participants specifically mentioned the importance of a particular theme) were noted.

The study was approved by City, University of London, Psychology Research Ethics Committee (Reference: PSYCH(P/F) 14/15 113).
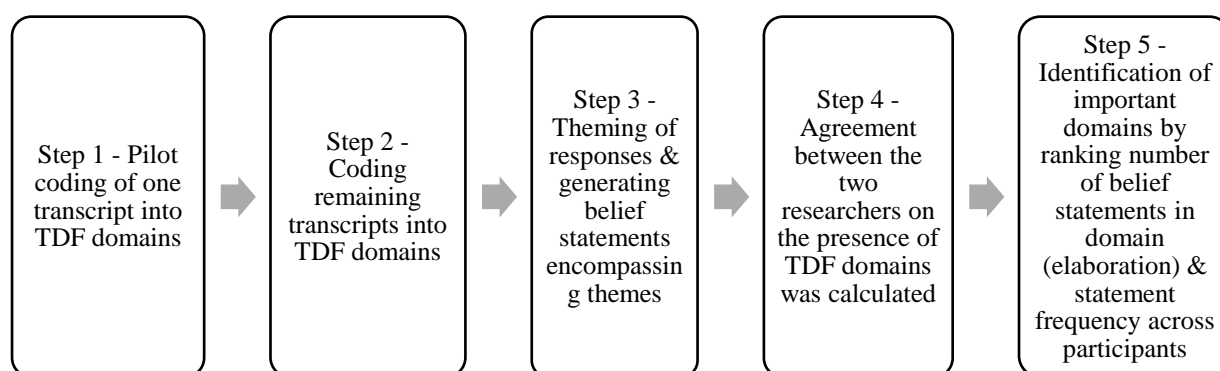

Figure 1. Data analysis process

Results

A majority of the 10 khat using participants were male (70%), with an average age of 43 (SD = 16.1; range 22 to 68 years). Two participants openly admitted to still using khat, whilst the remainder had quit. All participants were of Somali origin (first and second generation) living in London. After analysis of these 10 interviews, data saturation was reached. The three HCPs were specialist stop khat support workers (two males, 66%) in their roles for an average of 10 years (SD = 2.3; range 9 to 13 years). Analysis revealed the emergence of many similar belief statements, but saturation was not reached due to the restricted number of eligible professionals to recruit from.The user interviews were on average 25 minutes long (SD = 13.6; range 10 to 50 minutes) and HCP interviews 65 minutes (SD = 25.7; range 36 minutes to one hour 21 minutes). Agreement between the two researchers on the presence of TDF domains was 69% for users and 79% for HCP.

Khat users

A total of 616 participant utterances were coded into 11 of the 14 TDF domains and synthesised into 75 belief statements. All statements were classified as enablers or barriers to quitting, or both. Except skills, reinforcement and emotions, all domains were mentioned by at least one user and had at least one associated belief statement. Beliefs about consequences and social influences were the domains with the highest level of elaboration, with 12 and 10 belief statements, respectively (table 2) and will be elaborated upon here.

Table 2 - Ranked domains and level of elaboration for khat users

TDF Domain (rank order)	No. of participants	Level of elaboration

	mentioning domain (max = 10)	No. of belief statements within the domain	No. of belief statements with expressed importance
Beliefs about Consequences	10	12	2
Social Influences	10	10	2
Knowledge	10	2	0
Behavioural Regulation	9	7	0
Optimism	9	2	1
Intention	9	1	1
Memory, Attention and Decision Processes	8	5	0
Environmental Context and Resources	7	5	1
Beliefs about Capabilities	6	3	1
Goals	4	4	3
Social / Professional Role and Identity	2	3	0
Emotions	0	0	0
Reinforcement	0	0	0
Skills	0	0	0

Beliefs about consequence contained 12 belief statements, centred on the negative consequences of chewing khat, and so were enablers to the process of quitting. Participants discussed the effects they experienced while using khat and the benefits experienced after quitting in the same utterances. All participants spoke extensively about the physical and mental effects of using khat: "I will be crazy, not good. It's not good for health…it affect you, damage you… Gum, your teeth." P5

"[Khat] used to stop my going to see my family and friends. Just sleep, get up, not eating properly… It used to give me that low feeling… depression. Sometimes it used to give me [thoughts of] suicide as well." P1.

The negative effects were more salient than the positive effects and the benefits experienced from quitting outweighed the positive effects experienced from chewing: "You feel excited and happy. Yes. But after a few hours, it's coming like – (indicates down)… low." P1

Other participants mentioned difficulties with attention and motivation. They were unable to go about their daily activities, encouraging them to quit: "Every time I used it in the week I wasn't in any state to be able to go to work, to do anything. I was tired. I wasn't concentrating so it was only on weekends." P8. Eight participants discussed the financial effects; buying khat was expensive and quitting saved money, making it an enabler to quitting: "It's very important [to stay abstinent] for your health being and also for your financial wellbeing. You'll be safe from those two, that's the main thing". P3

For six participants, their khat usage impacted on family and social relationships negatively and therefore was an enabler to quitting, subsequently improving their relationships. For one participant, she expressed the importance of staying abstinent from khat due to the detrimental effect she felt it would have on her family life: "[It is] very important [I stay abstinent] because I know now that my husband is not staying with me if I do that and now it is my children. I wouldn't dare." P8

Almost half the participants also spoke of their concerns about continuing to use khat post ban and prosecution, which was a clear enabler to quitting: "I think it was more because it was illegal and I didn't want anything to come of it." P8. For two of the participants using khat was a way to forget their surroundings, which they perceived to be a positive effect. Chewing khat served a particular purpose and so acted as a barrier to quitting: "[I thought to myself] Let me not remember that, let me do this", so I'm going to use khat this way." P8. One participant mentioned that he was still using khat, but it was of poorer quality post ban, an enabler to quitting: "The quality is… close to crap… It's more expensive."

P6 One participant felt khat affected society overall and so the ban was a positive thing that encouraged him to quit: "Because it has a mental effect, social effect, for a society and on a individual level." P7

For two participants, using khat led to using other substances and the concurrent use was a barrier to quitting, as using one would tempt them to use others. For one participant, this meant he quit using all substances together: "Khat made me drink as well... So I stop drinking, I stop khat, I stop smoking." P1. Participants also expressed opposing views about the difference between using khat in the UK and abroad. Two users felt that chewing khat was unhealthier in the UK than it was in other countries due to the farming methods. One participant thought khat available in the UK was grown with additional chemicals in comparison to Somalia: "This khat which one I used to eat in Somalia, is different than with the fluoride. But here they are brought from Kenya, too much chemicals. It's unhealthy." P5. Whilst another participant felt that the khat was more potent in Somalia than in the UK: "[Khat in the UK did not] taste like same but it was like fresh… you get more high." P1. These beliefs were both enablers as participants recognised the negative effects of using khat (whether home or abroad), encouraging quitting.

Social Influences was well-elaborated with ten belief statements. Culture was a key social influence for all participants, but individuals differed. Nine participants felt khat was a normal part of their culture, making it a barrier to quitting: "It's something with the heritage it has and our people back home chew it but as a person… your kinship – they chew it as well." P6. For one participant, however, he disagreed and was clear that khat was not part of his culture. He felt it was introduced later amongst people in Somalia and so was a habit rather than a cultural practice. Therefore, for him perceived cultural links could be considered an enabler to quitting, as it may be easier to break a habit than to dismiss cultural practice: "I wouldn't say culture, some time ago, Somali people they don't chew at all… it's not part of culture but it's a part of entertainment'". P7

Eight participants spoke about their family and friends using khat in social situations, which was a barrier to quitting. Two participants spoke about the importance of using khat with their friends, as it stimulated conversation and offered protected time to spend together. It was the norm regarding socialising: "Everybody else around you is doing it. It's the norm and you don't think any different of anybody. I know all my friends used to use it as well, so it is more of a social thing." P8. For one participant she used khat when she was lonely, which was in contrast to other participants' social use: "It was like a chilling thing as well, like sometimes when you're lonely or sometimes it's just something to turn to." P9. After quitting, participants discussed avoiding socialising with the friends they used to chew khat with in a bid to stay abstinent: "If I see my old friends who I used to chew, if I mix with them I might go back to that khat." P1

All of the participants, however, said their family and friends encouraged them to quit, by reminding them of the consequences of using khat and encouraging them to spend time together as a way of distracting them from thinking about it, an enabler to quitting: "The family [said]… "You are going through a negative life. We can't support you, we can't tolerate you, every time you are angry and upset." P4

Within this domain, one female participant spoke about the difficulty of disclosing her usage: "If you had asked me a few years ago, I wouldn't have spoken to you. It was all a secret and I never talked about it." P8. Participants also spoke about how they sought help in quitting from healthcare professionals but also their mosque. For one participant, his religious beliefs enabled him to quit: "I go to Kaaba. The Qur'an, you have to read the Qur'an. People there are very clean, they support you. They were saying, "This is a drug, this is not good for you." It's good to go back to your religion, it's going to be help you… We are human, we are making mistakes. But Allah [God] say, "You'll never forbid my forgiveness." That's why I said, "No." P4. For two of the participants, seeking professional help enabled them to quit:

"[Support worker] helped me, he helped me. Because I used to drink a lot as well… He gave me advice and, because he used to help people and stop khat as well." P1

Healthcare professionals

A total of 444 participant utterances were coded into 13 of the 14 TDF domains and synthesised into 82 belief statements. All domains except memory, attention and decision processes were mentioned by at least one HCP and had a number of associated statements, which were barriers or enablers to supporting an individual to quit, or both. Social influences and social/professional role and identity were the domains with the highest level of elaboration with 10 and nine belief statements, respectively (table 3) and will be elaborated upon here.

Table 3 - Ranked domains and level of elaboration for healthcare professionals

TDF Domain (rank order)	No. of participants mentioning domain (max = 3)	Level of elaboration	
		No. of belief statements within domain	No. of belief statements with expressed importance
Social Influences	3	10	3
Social / Professional Role and Identity	3	9	3
Environmental Context and Resources	3	8	1
Skills	3	7	5
Beliefs about Consequences	3	5	0
Reinforcement	3	4	1
Beliefs about Capabilities	3	3	1
Goals	3	2	0
Knowledge	2	3	1
Intention	2	1	0
Emotions	2	1	0
Optimism	2	1	0
Behavioural Regulation	1	2	0
Memory, Attention and Decision Processes	0	0	0

Within social influences, HCP discussed the characteristics of their clients in detail and how this affected their work. All three HCPs spoke about working closely with other professionals to support clients, such as colleagues in local mental health services, an important enabler to supporting users to quit: "That's really important to us [to support each other] because it's a very difficult job… We say that, "I've been working with a client and I think maybe you can start working with him and I think that that might help." P12. They all also spoke about the positive influence of their colleagues, such as being able to seek practical and moral support, an important enabler to supporting clients to quit: "The encouragement and also the support we offer each other. That's really important to us." P12

They spoke about the influence of the local community, who did not see khat as a drug, thus a barrier to them offering support: "It took us a very long time for us to build this group of client and to access our services because the community did not see Khat as a drug at all. It was actually a big, big struggle for us". P10. HCPs also spoke about how the clients influenced the way in which they worked, such as gender. Female clients expressed the opinion that women should not use khat and so they only told people they could trust. They were more concerned than male clients about ensuring confidentiality and worried about being judged for using khat. Females specifically wanted to receive support from a female worker: "There's a big stigma about Somali women using khat and other drugs. The women are very

secretive, they only tell people who they trust". P12

All of the professionals spoke about client motivation. Motivated clients enabled them to offer support effectively, but unmotivated clients made it difficult: "The willingness… if it's within the client side, they want to change, that eagerness and motivation. It's very important factor for me because it will make my life and my job ten times easier." P10. Once a client had stopped using khat, it enabled HCP to support them further and made the process easier: "With khat once thrown out of their system they've realised they have… health problem". P10

One barrier mentioned by all three HCP was the difficulties in supporting people with other issues e.g. addictions. Priority would be given to addressing issues more salient to clients than quitting, such as mental health concerns, through working with them directly or referring them to another organisation. For other clients, the practicality of addressing their additional needs meant that the support offered took longer (e.g. arranging interpreters for those with language barriers): "You might need to work with the mental health service to refer them for medication... The other normal problem where people need a lot of help…. It is almost you have to take them different places even, in the local authority… because they cannot communicate in any way." P13. One HCP expressed the importance of clients understanding that their khat usage was causing the problems they had sought support for: "The most important factor is… how they see the problem and how motivated they are. At what stage they are in. Because people go different stages, they've gone pre-contemplation". P12

Within social, professional role and identity, HCP spoke about the requirements of their role and how they enacted these. All three participants specifically mentioned that helping people to stop using khat was part of their role: "It's very, very important that we support client to stop or reduce their khat use because I think that's my job." P10. The HCP did this in a number of ways, including enabling clients to monitor their khat usage or quit status (n = 2), helping clients to problem solve (n = 2), develop action plans and set goals for quitting (n = 2), teaching clients about the consequences of using khat and the benefits of stopping (n = 2) and for one HCP providing emotional support: "We also do emotional support work whereby we have one-to-one where they talk about different issues… emotional issue, family issue, and if they are ready to do some counselling or psychological therapy, we refer them onto that". P10

All of the HCP had personal experience of khat through their or family/friends usage. This helped them to empathise with their clients through reflecting on their own experiences of quitting and the support they would have liked: "I remember years ago when I used to chew khat… at that time there was no one to help… I used to struggle, really. And to help someone, I think, come out of their difficulties, that's really rewarding." P12. They all also mentioned how their own religious principles and understanding of culture guided their practise: "It's something Islamically when someone trusts you with information or anything that they trust you with, you must not tell anyone else." P12. For one HCP, he felt that he had a duty as a practitioner to support people whatever their circumstances: "This is your role and your duty to help. Sometimes even though they can impact your emotions" P12

Discussion

The present study aimed to identify the key barriers and enablers to quitting khat from the perspective of khat users and supporting those who use khat to stop from the HCP perspective.

The most important domains for khat users were beliefs about consequences and social influences. In beliefs about consequences, users spoke extensively about the negative consequences of using khat and the benefits of quitting, broadly grouped around effects on physical health (i.e. eating, sleeping and oral health), mental health (mood), motivation and attention, financial effects (costs of using khat and financial loss through unemployment) and the effects on family and social relationships. The negative

effects of using khat encouraged them to quit and the positive effects they experienced after quitting encouraged them to stay abstinent.

Participants in the present study identified both positive and negative effects on their mood, such as feeling very social and an exacerbation of existing mental health conditions. Previous studies have highlighted similar positive and negative effects of chewing khat[21, 22]. In the present study, participants spoke about the differences between using khat in the UK and abroad. UK khat was thought to be unhealthier and therefore harder to quit than when abroad. Patel, Wright and Gammampila [23] however found that 28% of khat users felt that khat was stronger in Somalia than the UK, 27% felt it was stronger in the UK than Somalia and 45% felt there was no difference.

Khat was used in conjunction with other substances, such as tobacco and alcohol, supporting previous findings[23-25]. This may be because smoking is thought to enhance the effects of khat use[26].

Participants spoke about the influence of family and friends, cultural norms and religious beliefs on their khat chewing behaviour. Many participants used khat in social settings with friends and occasionally, family. Users did, however, recognise the impact using khat could have on their family, and more often family members encouraged and supported them to quit and stay abstinent. Almost all participants, however, felt that chewing khat was a cultural practice that was a normal part of social gatherings. Similarly, Patel, Wright and Gammampila[23] found that 70% of recent khat users stated their family were aware of their khat use, 4.4% felt using khat was part of the Somali tradition and 40.3% used it to socialise. This could indicate that for UK khat users, while their families are aware of their usage and perhaps may have a more relaxed attitude towards it, they would still like them to quit. Practising religion outwardly (reading the Qur'an) and inwardly (repentance and seeking forgiveness) also influenced and encouraged quitting behaviour. This is the first time that this has been identified in khat studies but is similar to smoking cessation, where highlighting religious beliefs and rulings can potentially increase the effectiveness of campaigns[27].

Seeking professional support was found to be useful in helping participants to quit, a key finding to emerge from the study, indicating a need for khat support services (a khat specific quit service or a support service staffed by workers who understand the wider context around using khat). As indicated by the ACMD report[1] however, and the primary researchers' attempts at recruiting HCPs for the study, there are very few services available in the UK and there is a lack of evidence for the effectiveness of available services.

HCPs revealed the complexity of their role and highlighted barriers and enablers to supporting people to quit. The most important domains identified were social influences and social/professional role and identity. HCPs spoke about the benefits of working closely with other professionals inside and outside their organisations to better support clients. These relationships also benefitted HCPs, as they were able to access advice, feel supported and motivated by their colleagues. The literature suggests that multidisciplinary working can be advantageous in treating substance misuse, but good working relationships are needed in order to facilitate this[28].

Participants spoke about the clients themselves and how their characteristics and behaviours made it more difficult to support clients to quit, such as client's additional substance use (e.g. alcohol) or experiencing additional health problems (e.g. mental health issues), did not have self-awareness of their substance misuse issues or currently using khat. NICE guidance on managing multimorbidity defines it as the presence of two or more long term health conditions, including physical/mental health conditions[29]. The guidelines recommend HCPs consider the interaction between a person's conditions and current treatments and the effect on their quality of life. Beneficial non-pharmacological treatments (e.g. diets or exercise programmes) are also recommended. The HCPs in the present study indicated they had discussions of this nature with clients and recognised quitting khat may not always be the top

priority.

HCPs spoke about the gender of their clients. Female clients were concerned about ensuring confidentiality and worried about being judged for using khat and specifically wanted support from a female worker. Gender differences in the acceptability of khat use was also raised, highlighting the stigma associated with women using khat, supporting the reports of users within this study and previous research[30, 23].

HCPs defined their role as including supporting their clients to quit through problem-solving, developing goals/action plans and monitoring usage and quit status. In the UK, khat users were found to be reluctant to seek support from a doctor or any other services for support with the negative effects of chewing and even if a user did approach a professional, there was a lack of awareness about khat usage and its effects amongst those professionals who do not originate from khat chewing communities[23]. This is in line with the sentiments expressed by the HCPs in the present study, who felt their personal experiences of khat helped and encouraged them to support clients more effectively. They felt it was their duty and were led by their religious values and understanding of the client's culture.

The study reveals the complexity of khat chewing and quitting from the perspective of users. It identifies the many barriers and enablers that HCPs experience when supporting individuals to quit. There is little evidence for the effectiveness of current quit khat services or little information outlining their development. These findings indicate the ways in which people could be supported to quit and services need to ensure these areas are covered. Current services would benefit from evaluating the effectiveness of the interventions and mapping it onto these findings using established methodology[31]. Alternatively a novel intervention could be developed using established methodology[32] and assessing against the APEASE (Acceptability, Practicability, Effectiveness/cost-effectiveness, Affordability, Safety/side-effects, Equity) criteria[33] for final inclusion.

One of the strengths of this study was using the TDF, which allows intervention developers to consider the full range of barriers and enablers to behaviour and map these onto established behaviour change techniques to make an informed decision about which techniques would fit a potential intervention based on current evidence[33]. Using this approach ensures that the intervention is developed in systematic, evidence-based fashion.

The study does have a number of limitations. Data saturation was not reached for HCPs, additional participants in this group would allow for further investigation of the key issues from the perspective of different organisations. However, this is also limited by the restricted number of services and the number of eligible professionals to recruit from. Recruitment overall was challenging. Despite the primary researcher's connections with professionals working with the Somali community it was difficult to recruit participants to take part, especially females. This could indicate cultural stigma associated to female khat use. All the female khat users in this study opted for telephone interviews indicating there may still be a taboo for female users even amongst a UK population, where attitudes towards female substance misuse are more relaxed than other countries[34].

Another limitation of the study is the belief statements were not coded back into the domains by a blinded researcher as recommended[20]. This would have increased the reliability of the data, ensuring that the belief statements accurately reflected the TDF domains.

Conclusions

For khat users, it was clear there were a number of influential factors that encouraged khat use and a number of barriers and enablers to quit. The negative physical and mental effects, as well as the social impact of chewing on family relationships and finances, were important reasons for quitting. Gender influences were also important, with female participants discussing hiding their khat usage from their

family and friends due to perceived stigma. HCPs showed the complexity of their role and spoke about the benefits of working closely with other professionals to better support clients. Their role included supporting clients using a range of behaviour change techniques, ensuring confidentiality and taking a non-judgemental approach. They identified relevant skills needed to work with clients to support them to quit, such as being able to tailor the support offered and interpersonal skills.

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