

Clinico-Epidemiological Study Of Khat Consuption In Mahajanga Madagascar

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Abstract – Introduction: Khat is an alkaloid plant same as amphetamine and responsible for psychostimulant effects.

Methodology: This is a descriptive, cross-sectional study among people taking khat in Mahajanga I cityside.

Results : One hundred khat users were included in the study. The sex ratio was 15.6 and the average age 31.72 ± 10.5 years-old. The first time to take khat was average about 19.37 ± 5.88 years. Fifty-seven percent of consumers had informal works. Khat was daily taken in 59% during an average time about 5.05 ± 2.30 hours. Khat was claimed used to have pleasure in 80% of cases. Seventy-six percent of consumers had already tried in vain to stop it. Cigarettes, alcohol and cannabis were almost associated with khat in a portion respectively 70%, 42%, and 9%. Forty-five percent declared spending 10,000 to 20,000 Ariary every session time. Thirty-one percent of khat users declared having debts because of khat; Some 44% admitted having negative family economic impact and 18% an negative ones on work. Eleven percent of consumers had insomnia.

Conclusion : La consommation du khat reste un problème socioéconomique non seulement pour le consommateur mais aussi pour sa famille. Une sensibilisation et éducation sur les effets négatifs de la consommation du khat sur la santé et la vie sociale seraient nécessaires. Personal disturbances and negative family resources impacts were observed on khat takers. Sensitisation about awareness within health education are recommended.

Keywords – psychostimulant effects, family impact, insomnia, Khat, withdrawal syndrom

I. INTRODUCTION

Khat (*Catha edulis forsk*) represents one of recent worldwide "less"-known product than cannabis, tobacco, alcohol, cocaïn or the others psychoactive products. Its psychostimulant effects were due to Alkaloids called Cathin and Cathionin, with chemical structure near Amphetamin [1]. Literacy [2] reported that long time ago, people living especially in the East of Africa, in the Arabic Peninsula (in Yemen, in Arabie Saoudite or in Somalia) experienced mental exciting by taking regularly this plant by chewing. Thirty years now, consuption of this plants raises and became worldwide due especially to means of conveyance, internet or migration trips and WHO acclaimed that Khat and its synthesis products belongs to the class of drugs creating reversible dependance but less than opioïd, alcohol or tobacco ones [3]. Recently, Khat consuption was found expanded, till its planting area in the Faritany of Antsiranana to the large part of Madagascar island especially in Majunga cityside, where consuption became common daily practise. Young people and adults are concerned. However, any large scientific research carried about was not found. Thus, the aims of this study are to describe social and demographic profile of khat users, their expected and experienced effects, the social, professional and mental impacts.

II. METHODS

Descriptive and transversal research was carried out about people taking khat in the Majunga I townside. Interviewing lasted two weeks in September 2020. Selection of participants was done in the marketplace itself. Were included khat users living in Majunga I city, men or women, aged between 18 to 60 years-old and consumption duration less than one month. Data was recorded then analyzed by SPSS 20th Version Software.

III. RESULTS

One hundred khat users was registered, almost between 25 to 34 years-aged with 44% and 22% for those between 18 to 24 one. Middle age was $31,72 \pm 10,5$ with extrem age as 18 and 59. Sex ratio was 15,6 with 94 men against 6 women. Seventy five percent among khat takers were Musilms. Fifty seven percent of them had informal works, 28% in an unpaid sector and 15% had formal jobs. The most concerned was married and single people with 36% and 31% respectively. Thirty five of them were in high-school and 34% in college. The age of the first experience of khat was between 10 to 15 years in 25 % and at 16 to 20 in 46 %. Fifty nine declared having daily khat use. They affirmed spending 10.000 till 20.000 ariary per use in 45 %. Sixty six percent of khat users declared taking the product within a group especially in the afternoon on 2 to 4 pm. Consumption lasted in an average duration of $5,05 \pm 2,30$ hours with the extrem duration : 1 to 12 hours. The main motivation declared by khat takers was to improve attention (75%), to increase endurance while working (58%), to relax (42%), to improve sexual performance (18%) and for sexual pleasure (11%). The average duration of abstinence was $4,53 \pm 5,76$ months and the most frequently reported withdrawal symptoms were: irritability (33%), uncomfotability (25%), sadness state (10%), insomnia (8%). Tobacco, alcohol, cannabis and cola were the most associated with khat at repectively 70%, 42 %, 9% et 5%. Due to Khat, 31% if users declared in debt and 22% in a conflict with their surrounding people because of their consumption. The most psychiatric disorders found were : insomnia in 11 %, auditive illusion in 3%, anxiety in 2% and visual illusion in 1 %. No signal was detected in 78% of khat takers.

IV. DISCUSSION

This study showed average age of khat users at $31,72 \pm 10,5$ years old with extrem at 18 and 59 one. The age range between 25 to 34 years was the most concerned at 44 % (n = 44). However, the study done by Wondemagegn and co. in Ethiopia in 2017 [50] observed the preponderance of the group of 15 to 24 years-old with 59.9% of cases with an average of 22.3 years-old. That is lower than what this study found. In Ethiopia, the average age was 21,89 years and in Kelya 30 [51,52]. The present study demonstrates high average age than the other ones. The reason why would be the selection criteria of the others studies which included youngest cases.

It was observed the majority of men with 94% (n=94) with sex ratio at 15,6. Similarly, Wondemagegn and co. in Ethiopia in 2017 [50] found a sex ratio of 8.55 and the male proportion was 89.5% . Similarly, according to Warsame in a Thesis in Uganda in 2014 [53], the majority of khat users were men 235 (55.7%) while 187 (44.3%) were women. In Madagascar, because of traditionalism behavioural heritage, it was generally observed preponderance of shyness in women that maybe explain less drug taking by them.

In the present study, Musilms are largely identified among khat users at 75% (n=75). Religion was the same with 44,2% in Ethiopia found by the study of Wondemagegn and Co. in 2017 [50]. However, Abdeta and Co. in Ethiopia at the same time found that Orthodox christians were the most khat users in 39,7% [51]. Other studies [53,54] showed association muslim's obedience and khat users compared with the other religions. Maybe, it was thought that khat improves attention and devotion. Somehow, the Muslim religion is the dominant in the western part of Madagascar, particularly in the region of Boeny and then, in the place where this study was carried out.

Most of the khat takers in the present study had informal work or self-employee with 57% (n=57), followed by unpaid work with 28% (n=28) and the formal jobs (people working in private or public services) with 15% (n=15). Wondemagegn and Co. in Ethiopia in 2017, [50] found informal sector was 43.6%, which was lower than this study. Unpaid work was 36.1% and the formal sector 20.3%, that were higher than this study .

The average duration of chewing khat found in this study was 5.05 ± 2.30 hours, which is same as other studies [51, 61]. Afternoon was the most chosen time to take khat in the present study like in others one [62, 63]. Because chewing khat requires long time and almost during work, it maybe the reason why people working in informal sector was largely concerned in this study.

More than a third part of khat users in the present study were married, i.e. 36% (n=36) and the proportion of single people was 31% (n=31). It was the contrary in other studies [49, 51].

Khat was taken daily in 59% (n=59) of users in this study, which is not found in other studies [51, 53, 60]. Joblessness would be one of the major factor explaining disponsibility to take drugs such as khat.

Khat users in this study declared consumed it in order to improve attention in 75% (n=75), to intensify work skills in 58% (n=58), to be relaxed in 42% (n=42), to have sexual pleasure in 11% (n=11) and to increase sexual performance in 18% (n=18) of cases. In fact, it was claimed by authors such as AL-Abed and Co. in 2014 in Yemen [64], that the consumption of khat increases energy and relieves depression and tiredness. In the same way, the research directed by Al'Absi and Co. in 2013 and Damena and Co. in 2011 in Ethiopia [65,66] demonstrated that consumption of khat aims to increase attention, self-confidence, creativity, imagination, communication abilities. It would be due to its amphetamine-like cerebral activity that euphoria and exciting would the effects for users.

In the present study, the majority of khat users spent between 10,000 to 20,000 Ariary per session, i.e. 45% (n=45) of cases. That is similar in Kenya and much higher in Ethiopia [51, 52].

Moreover, because of khat, 31% (n=31) of users in this study had loans or debts. Similarly, the Gezon's research in Madagascar in 2013 [55] published 44 % cases of massive debt declared by khat users. Interviews with consumers revealed that users can regulate their expenses according to life needs. Then, when the khat's price is high, some people decided to stop the chewing.

Eighteen percent (n=18) of khat users admitted impact of khat on work. The loosing time of chewers can conduct them to reduction of productivity and a joblessness. Economic impacts were reported by litteracies [50,52,55].

In the present study, any psychiatric impact was found in 78% (n=78) of khat users. For those declaring to be disturbed, insomnia was the most mentioned with 11% (n=11) of cases. Hassan et al's research in Yemen in 2007 claimed [37] that frequently, khat induces insomnia and anxiety. Then, khat users try to fight against by taking sedatives or alcohol together. In the study done by Wondemagegn and Co. in Ethiopia in 2017 [50], the consumption of khat was significantly associated with depression and anxiety. The consumption of khat can induce a significant degree of mood disorders, particularly depression in healthy subjects. Therefore, it may exacerbate symptoms in patients with anxiety and depression [76,77].

V. CONCLUSION

Khat users declared spending time and money. Serious consequences were found for health, social life and economy. This study is distinguished by a higher average age of khat takers. Sociodemographic, economic and psychiatric informations were similars to other studies. Then, it is important to make sensitization of the community about the negative effects of chewing khat. Close collaboration with authorities about legislation and education is recommended to aware people of khat impacts on health, social and professional life.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors declare no conflict of interest.

Statement of ethical approval

The present research work does not contain any studies performed on animals/humans subjects by any of the authors. Permission to conduct the study was obtained from Department of Psychiatry, Analankininina Toamasina University Hospital, Madagascar.

Statement of informed consent

Informed consent was obtained from the patient included in the study. The patient information was kept confidential during and after study period.

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