

# Psychotic patients with khat abuse in Somalia: the burden of their caregivers



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## Background:

Khat abuse is a risk factor for symptom relapse and behavioural problems among psychotic patients in the countries neighbouring the Horn of Africa (Bimerew et al., 2007). Previous studies show that a high percentage (namely 46.6%) of psychotic patients in the city of Hargeisa, Somalia, use khat (Odenwald et al., 2005). This study also shows that the amount of khat consumed prior to onset of psychotic symptoms correlates significantly with the risk for aggression measured by the PANSS (Positive and Negative Syndrome Scale [Kay et al., 1987];  $r = 0.50$ ,  $p = 0.005$ ,  $N = 30$ ). Our current treatment research project which accompanies a group of psychotic patients with comorbid khat use shows that many of the caregivers chain these patients in order to preclude them from chewing khat (figure 1). This study intends to explore the burden of the mostly female caregivers to chronic psychotic patients in Somalia, a country without appropriate mental health care services. We especially aim at showing the association between khat-induced psychotic exacerbation and caregiver burden.

Figure 1: Patient in chains



Figure 2: Conducting the interview with one of the few male caregivers (person on the left)



## Methods:

In a case-control study conducted in Hargeisa, North Somalia, 25 caregivers of male psychotic patients were compared to 25 matched relatives of healthy men in the same neighbourhood. A structured interview conducted by international mental health professionals assessed the severity of depression (PHQ9; Kroenke et al., 2001), stigmatization and social exclusion (figure 4). Additionally, we assessed the number of traumatic events experienced, related symptoms of Post Traumatic Stress Disorder (PDS; Foa et al., 1997) as well as khat consumption (Amphetamine Mono urine test Oekonomed GmbH, Darmstadt, Germany; Odenwald et al. 2008). Statistical testing included paired Student's t-test and Wilcoxon-Test.

## Results:

The two caregiver groups did not differ with regard to the number of traumatic events experienced, PTSD diagnoses and consumption of khat.

We found that

- 20 out of 25 psychotic patients (80%) have chewed khat during the last year,
- 15 (60%) of them have chewed khat during the last month before the interview took place.

Figure 3 shows the severity of positive symptoms of psychosis (paranoia, other delusions, hallucinations, thought disorder) prior to treatment onset among 15 patients. It shows a clear association between current khat use (positive test outcome) and psychopathology. The urine test outcome explained 20% of the variance of the BPRS (Brief Psychiatric Rating Scale) Positive Symptom subscale ( $R^2 = 0.196$ ;  $p < .1$ ; Figure 3).

Concurrently, caregivers of psychotic patients were found

- to have more depressive symptoms than the control group ( $M = 6.48$ ;  $SD = 5.37$  vs.  $M = 3.20$ ;  $SD = 3.58$ ;  $p < .012$ ),
- to suffer more from stigmatization ( $M = 4.40$ ;  $SD = 2.53$  vs.  $M = 1.44$ ;  $SD = 1.90$ ;  $p = .000$ )
- and to report a lack of social integration ( $M = 7.20$ ;  $SD = 4.91$  vs.  $M = 11.64$ ;  $SD = 5.18$ ;  $p = .002$ , with a higher mean indicating better social integration; figure 5).

Figure 4: Items assessing social exclusion

		Yes	No
• If you needed a personal advice who of the following groups would you ask?	extended family	<input type="checkbox"/>	<input type="checkbox"/>
	local officials	<input type="checkbox"/>	<input type="checkbox"/>
	people from mosque neighbourhood	<input type="checkbox"/>	<input type="checkbox"/>
	Others: _____	<input type="checkbox"/>	<input type="checkbox"/>
	2) In the last week, how many days have you gotten together with people to play games or cards, to watch TV or to listen to the radio, to celebrate some occasion, to chat or to chew? _____ days		

Figure 3: BPRS Positive Subscale (minus 1) and outcome of the khat urine test

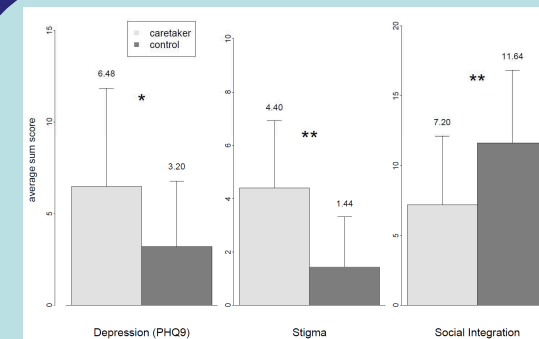
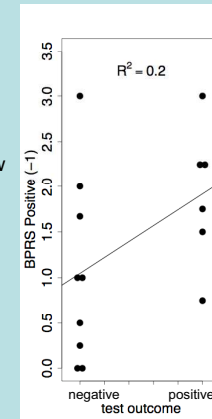


Figure 5: Significant differences between caregivers and controls

## Conclusions:

Results indicate that caregivers of chronic psychotic patients in North Somalia suffer from depressive symptoms, stigmatization and social exclusion to a significantly higher degree than their neighbours. We conclude that khat abuse by psychotic patients increases caregiver burden seriously, as khat abuse aggravates the patient's aggressiveness and partly explains their psychotic symptoms.

In countries like Somalia the widespread use of khat is part of daily life and thus complicates the course of psychotic disorders. Additionally, there is no adequate mental health structure in those countries. Therefore, we propose that effective family intervention strategies be developed and evaluated urgently to minimize the caregiver burden. Khat abuse by psychotic patients needs to be reduced in order to improve pathology and burden, not only for themselves but also for their family members.

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