

Khat & Mental Illness: Reviewing the evidence

Dr. Nasir Warfa

Senior Lecturer & Deputy Director of Mental Health
Studies

Centre for Psychiatry,
Queen Mary, University of London

October 2009

n.warfa@qmul.ac.uk

Can khat use cause mental illness?

- There has been an ongoing international concern about a causal relationship between Khat use and mental disorder.
- Associations between khat use and severe psychiatric disorders have repeatedly been reported in the medical literature.
- In the UK, community concerns and media reports about the relationship between khat use and psychological problems have led to calls for the reclassification of khat under the UK Misuse of Drugs Act.

Selected Publications

- **Warfa, N.**, Klien, A., Bhui, K., Leavey, G., Craig, T., Ajab, A., Stansfeld, A. S. (2007) –khat use, mental illness: a critical review. *Social Science & Medicine*. 65. 309-318
- **Warfa N.**, Bhui K., Craig T., Mohamud S., Stansfeld S., McCrone T., Thornicroft G., Curtis S. (2006)- Post-migration residential mobility, mental health and health service utilization among Somali refugees in the UK: A Qualitative Study, *Health & Place*, (12) – 503-515
- McCrone P., Bhui K., Craig T., Mohamud S., **Warfa N.**, Stansfeld S., Thornicroft G., Curtis S. (2005). Mental Health Needs, Service Use and Costs among Somali Refugees in the UK. *Acta Psychiatrica Scandinavica*; 111 (5): 351-7.
- Bhui K., Mohamud S., **Warfa N.**, Craig T., Stansfeld S. – (2003) Cultural adaptation of mental health measures: improving the quality of clinical practice and research, *British Journal of Psychiatry* 2003; 183: 184-186
- Bhui K., **Warfa N.**, Phillips K., Nandy K., Griffiths S. (2005) A Qualitative Analysis of Dual Diagnosis and Ethnicity (accepted for publication)
- Bhui, K., Craig, T., Mohamud, S., **Warfa, N.**, Stansfeld, S., Thornicroft, G., Curtis, S. & McCrone, P. (2006) Measuring psychiatric disorders among Somali refugees: geographical area & sampling frame influences on prevalence estimation. *Soc Psychiatry Psychiatr Epidemiology* . xx:1-9
- Bhui K., **Warfa N.**, Edonya P., Bhugra D. (2006) – A Comprehensive Review of Cultural Competence in Mental Health (Manuscript submitted)
- **Warfa et al.**, (2006)- Demographic, socio-economic and immigration correlates of depression, PTSD and all mental disorders among Somali refugees: A quantitative study (Forthcoming).

Aims

In the light of this urgency, this presentation aims to review:

- (a) the evidence that Khat use can cause mental disorders.
- (b) the extent to which the use of Khat can be detrimental to mental wellbeing.

What are the criteria for cause–effect relationships’?

- A causal association is found when a change in exposure leads to a change in disease outcome.
- Measures such as relative risk and odds ratios are
- often used to determine the strength of the association with causal direction implied by observed dose–response relationships
(e.g., see Warfa et al 2007, for more details).

Methods

- A detailed search of medical and psychiatric databases for clinical case reports and quantitative articles on khat use and mental illness from 1945 to 2005.
- The databases included psychoINFO, MEDLINE, PubMed and Inhenta.
- Some articles were obtained through the British Library and through manual identification
- Backward and forward citation tracking and cross reference checking were also conducted.
- 449 articles. Of these, 41 papers matched our inclusion criteria, and 24 met the full criteria for inclusion in the final analysis of our report.

Results of the case reports

Case Study:	Location	Participant
Giannini & Castellani 1982;	USA	North African patient
Yousef <i>et al</i> 1995;	UK	4 Somali patients
Pantelis <i>et al</i> 1989;	UK	3 Somali patients
Nielen <i>et al</i> 2004;	Holland	2 Somali male patients
Jager & Sireling 1994;	UK	Male Somali patient
Alem & Shibre 1997;	Ethiopia	Male Somali patient
Carothers 1945;	Kenya-	2 Som & Mnyamwezi patients
Stephen & Mathew 2005;	Australia	Somali male patient
Crithlow 1987;	UK	Somali female patient
McLaren 1987;	UK	Ethiopian male patient
Gough & Cookson 1984;	UK	Yemeni male patient
Granek <i>et al</i> 1988.	Israel	3 Yemenis

Outcome reported

- Ingestion of khat caused symptoms of manic psychosis (Giannini & Castellani 1982)
- Khat chewing induced psychosis (Yousef *et al* 1995)
- Khat chewing can induce at least two kinds of psychotic reaction (Pantelis *et al* 1989)
- Patients with Khat abuse may develop severe psychotic states (Nielen *et al* 2004)
- Chewing Khat caused a paranoid psychosis (Jager & Sireling 1994)
- Khat induced brief episodes of psychosis (Alem & Shibre 1997)

- Insanity was clearly precipitated by a herb *Catha edulis* (Carothers 1945)
- Khat psychosis could be an increasing occurrence in Australia (Stephen & Mathew 2005)
- Khat-induced paranoid psychosis (Crithlow 1987)
- Khat use should be enquired after in patients from this region (Ethiopia) presenting with psychotic illness (McLaren 1987)
- Khat induced schizophreniform psychosis (Gough & Cookson 1984)
- Khat induced hypnagogic hallucinations (Granek *et al* 1988).

Quantitative Studies

Study	Location	Evidence
Kennedy <i>et al</i> 1983	Yemen	CS: 706 Yemenis
Dhadphale & Omolo 1988	Kenya	CC: 100 Kenyans
Elmi 1982	Somalia	CS 7845 Somalia
Litman 1986	Isreal	CS: 136 Isreali Yemenis
Griffiths <i>et al</i> 1997	UK	CS: 207 Somalia
Odenwald <i>et al</i> 2005	Somalia	CS & CC 4854 Somalis
Numan 2004	Yemen	CS: 800 Yemenis
Alem <i>et al</i> 1999	Ethiopia	CS: 10468 Ethiopians
Bhui <i>et al</i> 2003	UK	CS: 180 Somalis
Bhui <i>et al</i> 2006	UK	CS: 143 Somalis
Ahmed and Salib	UK	CS & CC: 52 Somalis
Hassan <i>et al</i> 2002	Yemen	PP: 200 Yemenis

Outcome reported

- The starting age for khat use and excessive khat chewing were both related to the onset of psychotic symptoms (Odenwald *et al* 2005)
- There was no significant difference between the chewers and non-chewers but when the quantity chewed was excessive, the incidence of psychiatric morbidity significantly increased (Dhaqqhale & Omolo 1988)
- Current khat users were more likely to have suicidal ideas than non-users (Bhui *et al* 2003)
- A higher risk of mental disorders was found among Somalis who used Khat (Bhui *et al* 2006)
- The prevalence rate of psychopathology was not higher among khat users than among abstainers (Litman *et al* 1986).
- Khat use was associated with increased loquacity, increased and decreased concentration, Constipation, Anorexia, Insomnia & headaches (Elmi 1983).

Reported outcome

- There was a significant increase of mood disturbance in the khat user group than in the control group (Hassan *et al* 2002).
- Few diseases or conditions occurred with enough frequency to permit detailed analysis and fewer were associated with khat use (Kennedy *et al* 1983).
- Khat use is not linked to psychological morbidity and any association that is found may reflect an interaction with other environmental factors (Numan 2004).
- The level of psychological dysfunction was similar in both khat users and non-users (Ahmed & Salib 1998).
- Mental distress has not been shown to be associated with khat use (Alem *et al* 1999).
- Current khat users were more likely to have suicidal thoughts than non-users (Bhui *et al* 2003)
- Some adverse psychological problems were associated with khat use (Griffiths *et al* 1997).

In Summary

1. Although excessive khat use seems to exacerbate psychological problems caused by pre-existing stressors, there is no agreement as to the effects of khat use and the development of psychiatric disorders.
2. This suggests that people with experiences of mental illness and khat use may have a complex and multi dimensional profile of health and social care.
3. Unfortunately, the inadequate designs of some of the studies have contributed to the general confusion about khat use and psychological problems.
4. The long-term effects of khat use on mental health warrants urgent attention and longitudinal research.

Limitations with current evidence

- Relied on convenience sampling strategies
- Lack of Longitudinal Studies
- Lack of validated research instruments
- Lack of control for confounders
- Many other limitations

Where shall we go from here?

- In spite of decades of research, our understanding of the psychiatric implications of khat use remains very poor.
- So we shall we go from here?
- Could this conference work and agree on a position statement?