

Assessing the validity and reliability of a Severity of Dependence Scale for khat (SDS-khat)

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Results

Table 1: General sample characteristics

Variables	(n %)
Age	
18-40 years old	103 (50.5)
41 years old and above	101 (49.5)
Employment status	
Employed	72 (35.3)
Unemployed	132 (64.7)
Completed level of education	
High	70 (34.3)
Low	134 (65.7)
Social participation	
High	117 (57.4)
Low	87 (42.6)
Preferred reading language	
Both Arabic and English	86 (42.2)
Arabic and other	118 (57.8)
Place of birth	
UK and elsewhere	34 (16.7)
Yemen	170 (83.3)
Composite khat behaviour	
Low (<=5 scores)	130 (63.7)
High (>=6 scores)	74 (36.3)
Khat dependence	
Non dependent	100 (49.0)
Dependent	104 (51.0)
Smoking status	
Current regular tobacco smokers	91 (44.6)
Smoke tobacco with khat chewing	42 (20.6)
None current tobacco smokers	71 (34.8)
Regular tobacco smokers nicotine dependence (FTND) (n=91)	
Low (<=5 scores)	51 (56.0)
High (>=6 score)	40 (44.0)

The mean level of cathinone in 46 saliva samples was 7.98 µg/mL (SD±8.20). Different aspects of khat chewing behaviours including composite khat behaviour (Table 2) were found to be statistically significantly (*P< 0.05), associated with self reported khat dependency.

Table 2: Correlations of self reported SDS-Khat with khat chewing behaviours (n=204)

Khat chewing behaviours	Severity of Dependence on Khat (SDS-Khat)		Unadjusted OR (95%CI)
	Non Dependent N (%)	Dependent N (%)	
Khat chewing setting			
With other	94 (53.7)	81 (46.3)	1
Alone	6 (20.7)	23 (79.3)	4.45 (1.73-11.46)*
Number of days chewing			
2 days or less	75 (68.8)	34 (31.2)	1
3 days or more	25 (26.3)	70 (73.7)	6.18 (3.35-11.37)*
Time starting chewing			
Between 3:00 pm and onward	64 (57.1)	48 (42.9)	1
Between 1:00 -3:00 pm	36 (39.1)	56 (60.9)	2.07 (1.83-3.64)*
Current khat chewing/session			
Up to 1 bundle	70 (66.7)	35 (33.3)	1
1.25 bundles and more	30 (30.3)	69 (69.7)	4.60 (2.55-8.30)*
Previous khat chewing /session			
Up to one bundle	71 (67.6)	34 (32.3)	1
1.5 bundles or more	29 (29.3)	70 (70.7)	5.04 (2.78-9.14)*
Chewing more in first hours			
No	63 (64.9)	34 (35.1)	1
Yes	37 (34.6)	70 (65.4)	3.51 (1.97-6.24)*
Khat chewing session hours			
Up to six hours	72 (49.0)	75 (51.0)	1
More than 6 hours	28 (49.1)	29 (50.9)	0.99 (0.54-1.83)
Chewing even ill			
No	77 (61.6)	48 (38.4)	1
Yes	23 (29.1)	56 (70.9)	3.91 (2.13-7.15)*
Swallow khat juice			
No	9 (34.6)	17 (65.4)	1
Yes	91 (51.1)	87 (48.9)	0.51 (0.21-1.19)
Whole week not chewing			
Very easy or fairly easy	91 (75.8)	29 (24.2)	1
Fairly difficult or very difficult	9 (10.7)	75 (89.3)	26.15 (11.66-58.65)*
Composite khat behaviour			
Low	90 (69.2)	40 (30.8)	1
High	10 (13.5)	64 (86.5)	14.40 (6.71-30.89)*

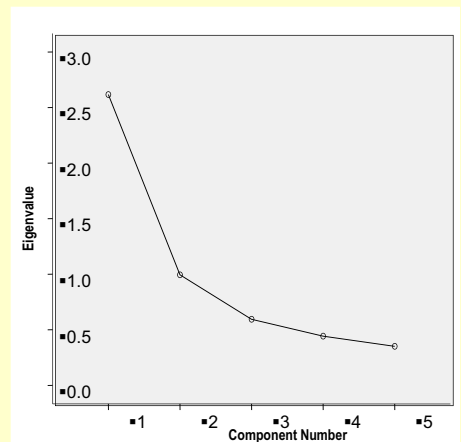
Using the conventional tests, the data set was established as appropriate for factor analysis (Tabachnick and Fidell, 2001, Kaiser, 1974 & Bartlett, 1954).

A single-factor solution accounting for 52.33% of variance was obtained from factor analysis with principle components extraction of the five items compromising the SDS-khat, confirming the unidimensionality of the scale. Five items made up SDS-khat, in the last 12 months:

- (1) Did you think your use of khat was out of control?
- (2) Did the prospect of not taking any khat make you anxious or worried?
- (3) Did you wish you could stop khat chewing?
- (4) Did you worry about your khat chewing?
- (5) How would you find it to stop or go without chewing khat?

Extraction of this factor was supported with the use of Catell' (1966) scree plot test (Figure 2) which revealed a clear break after the first component. The construct validity of the scale as a measure of dependence was supported by its significant correlation with the composite khat behaviour. The internal reliability of the SDS-khat was high (Cronbach's alpha coefficient=0.87) and the test re-test intra-class correlation coefficient (ICC) was 0.93.

Figure 2: SDS-khat Screeplot



Discussion

In line with this study finding, the validity and reliability of the SDS as a uni-dimensional scale for measuring drugs dependence has been demonstrated amongst different populations using different types of drugs (Gossop et al., 1995, Ferri, 2000, Topp and Mattick, 1997, Lawrinson et al., 2007, Gonzalez-Saiz et al., 2009).

Conclusion

In this sample of Yemeni khat chewers SDS-Khat is a valid research tool for measuring dependence upon khat. Further use in other samples is indicated.

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Aims and Objectives

The aims of this study were:

1. To identify factors that influence the practice of khat chewing in a sample of Yemeni khat chewers in Sheffield.
2. To cross-culturally validate SDS-Khat.

The objectives:

1. To establish demographic, psychosocial, socio-cultural and khat chewing behavioural data for khat chewers.
2. To validate self report khat chewing with biomarker cathinone
3. To test the psychometric characteristic of SDS-Khat and correlate SDS-Khat with individual and composite khat behaviours.

Methodology

This cross sectional study recruited a purposive sample of 204 male khat chewers aged 18 years and older selected during random visits to khat sellers. Data were collected through face to face structured interviews, validated with voluntarily saliva and expired carbon monoxide samples. Data collected were analysed using simple descriptive, simple logistic regression and factor analyses.

Figure: Recruitment into study

