



The Prevalence of a Positive Screen for Anxiety and/or Depressive Symptoms P112 in HIV-1 Infected Patients in the UK - The CRANlum Study

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Background

- The prevalence of HIV infection in patients with pre-existing psychiatric diagnoses is considerably higher than in the general population [1]. The most common psychiatric disorder to affect people living with HIV is depression, and in fact has been shown to be 2 to 3 times more common than in the general population [2] with rates ranging from 22% to 50%.
- In comparison, the Psychiatric Morbidity Survey, published in the UK in 2001, reported that symptoms of depression, poor concentration and forgetfulness, depressive ideas and anxiety were present in 10% of the general population [3]. The reported prevalence of depression varies widely between studies according to methods used, patient population tested and sample size.

Objective

- The primary objective of the CRANlum study was to describe and compare the prevalence of a positive screening for neurocognitive impairment and depression/anxiety between HIV-1 infected patients on Highly Active Antiretroviral Therapy (HAART) and HAART-naïve patients in Western Europe and Canada⁶.
- Here we present data on a positive screen for depression / anxiety in the UK cohort.

Methods

- Patients recruited into the study completed the Hospital Anxiety and Depression Scale [4] (HADS) questionnaire to screen for anxiety (HADS-A) and depression (HADS-D).
- HADS consists of 14 items (7 HADS-A, 7 HADS-D) with 4 options, each scored between 0–3.
- A score of ≥8 in HADS-A or HADS-D was considered to be a positive screen for anxiety or depression respectively[5].

Study population

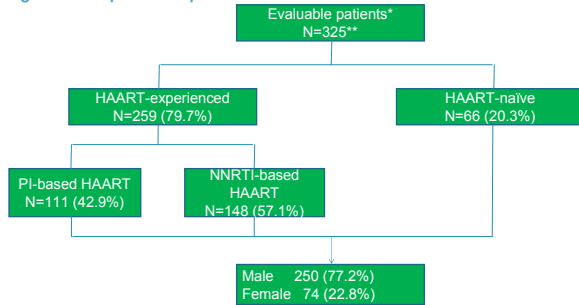
Main inclusion criteria:

- HIV-1 infected patients aged ≥18 years, attending a routine medical follow-up visit.
- For patients on HAART; stable boosted PI (bPI) or NNRTI based regimen for at least 9 months.

Main exclusion criteria:

- For ARV-naïve patients, no use of antiretrovirals (ARVs) during the previous 6 months or >4 weeks in their lifetime.
- Current/active CNS opportunistic infections or CNS malignancies.
- Previous stroke or transient ischaemic attacks, or neuromuscular disease that could affect the patient's ability to complete the screening tests.
- Illegal substance use or alcohol abuse in the previous 3 months.

Figure 1: UK patient disposition



* 322 patients completed both the HADS-A and HADS-D sections of the HADS questionnaire.

** Gender missing for one patient.

Results

Table 1: Demographics and disease characteristics

	All patients (n=325)	HAART-naïve (n=66)	HAART-experienced (n=259)	p-value
Age – mean (years)	43.72	36.24	45.64	<0.0001
Males (%)	77.2	83.3%	75.6%	0.0007
Race (%)				0.5852
- Caucasian	71.6	77.3	70.2	
- Black	22.2	15.2	24.0	
- Oriental/Asian	2.2	3.0	1.9	
- Other	4.0	4.5	3.9	
Unemployed (%)	33.5	13.8	38.5	0.0015
Marital status – single (%)	46.8	40.9	48.3	0.0137
Any children (%)	32.3	15.2	36.7	0.0026
Secondary school or higher education (%)	96.9	97.0	96.9	0.6704
Risk factors for acquiring HIV (%)				0.0520
- Homosexual	63.3	77.3	59.6	
- Heterosexual	32.3	19.7	35.6	
- Other	4.4	3.0	4.8	
Duration of HIV infection – mean (months)	105	41	122	<0.0001
Last recorded viral load – median (c/mL)	40.0	18,492.0	40.0	<0.0001
Last recorded CD4 count – mean (cells/μL)	570.11	595.45	563.58	0.3724
CD4 count nadir – mean (cells/μL)	269.90	485.32	214.56	<0.0001
AIDS diagnosis (%)	16.7	1.5	20.6	0.0002
Alcohol use (%)				0.1540
- None	22.8	13.6	25.1	
- Intermittent (≤2 times per week)	53.5	63.6	51.0	
- Regular (3-6 times per week)	17.2	19.7	16.6	
- Daily	4.6	1.5	5.4	
- Ex-drinker (none in last 3 months)	1.8	1.5	1.9	
Previous CNS infection (%)	4.9	0	6.2	0.0380
Utilised psychiatry/psychology services in last 12 months (%)	13.9	13.6	14.0	0.9470

Acknowledgements

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Results (continued)

Figure 2: Patients with a positive screen for anxiety and/or depression (cut-off ≥8)

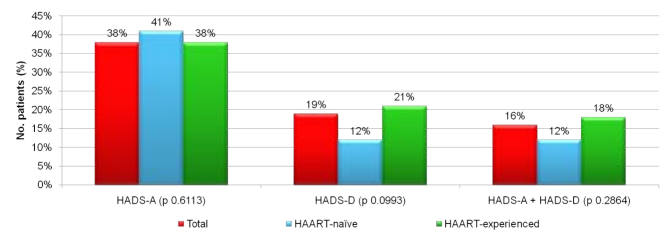
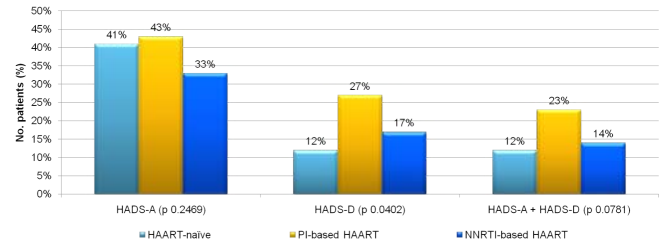


Figure 3: Patients with a positive screen for anxiety and/or depression (cut-off ≥8) stratified by current ARV use



111 patients received PI-based HAART and 148 received NNRTI-based HAART, of these 68.5% and 77.0% respectively had no previous psychiatric diagnosis.

Table 2: Multivariate Analysis: HADS-A score

Association between demographics and HADS-A score			
Variable	Category	Effect	
Intercept	Estimator=0.03	N=206;	p=0,0010
Gender	Male vs Female	0,3959 (0,1910; 0,8208)	p=0,0127
Living	With partner vs Alone	2,4940 (1,2776; 4,8686)	p=0,0029
Years of formal education	Years	1,1159 (1,0236; 1,2166)	p=0,0128
Association between disease & medical characteristics and HADS-A			
Variable	Category	Effect	
Intercept	Estimator=-0.44	N=322; p=<0,0001	
Smoking	Smoker vs Never smoked	0,4310 (0,2439; 0,7617)	p=0,0151
Previously psychiatric diagnosis	No vs Yes	3,7437 (2,1708; 6,4561)	p=<0,0001

Variables included in the Multivariate logistic regression model between demographics and HADS-A were: Age, Gender, Ethnicity, Marital Status, Living, Educational Level, Years of Formal Education and Current Occupation.

Variables included in the Multivariate logistic regression model between disease & medical characteristics and HADS-A were: Risk Factor for Acquiring HIV, Smoking, Previous Psychiatric Diagnosis, Utilization of Psychiatrist/Psychologist Services in Last 12 Months, HAART Adherence of the Patient Over the Previous 7 Days, HAART Adherence of the Patient Over the Past Month.

Table 3: Multivariate Analysis: HADS-D score

Association between demographics and HADS-D score			
Variable	Category	Effect	
Intercept	Estimator=1.14	N=208; p=0,0290	
Years of formal education	Years	1,1204 (1,0117; 1,2407)	p=0,0290
Association between disease & medical characteristics and HADS-D			
Variable	Category	Effect	
Intercept	Estimator=0.74	N=322; p=<0,0001	
Previously psychiatric diagnosis	No vs Yes	3,3105 (1,8329; 5,9794)	p=<0,0001
Documented drug resistance	No vs Yes	2,2184 (1,0736; 4,5839)	p=0,0314

Variables included in the Multivariate logistic regression model between demographics and HADS-D were: Age, Living, Educational Level, Years of Formal Education, Current Occupation and Number of Jobs in Last 12 Months.

Variables included in the Multivariate logistic regression model between disease & medical characteristics and HADS-D were: Risk Factor for Acquiring HIV, Time From HIV Diagnosis, Diagnosed of AIDS, Previous Lowest CD4+ Count, Smoking, Alcohol Use, Previous Psychiatric Diagnosis, Utilization of Psychiatrist/Psychologist Services in Last 12 Months, Previous Central Nervous System Infection, Documented Drug Resistance.

Conclusions

- In the UK sample of this large epidemiologic study, the prevalence of a positive screen for depression in HIV-infected patients (19.3%) was nearly double what has previously been reported in the general population in the UK (approximately 9.7%)³. These results support a strategy of regular screening for and clinical management of anxiety and depression for HIV-infected patients in the UK.
- These results are similar to the those describing the broader European population of the same study, where 15.7% of patients had a positive screen for depression⁶.
- Female gender, living alone, each additional year of formal education, smoking and a previous psychiatric diagnosis were associated with a higher probability of having a positive screen for anxiety.
- Each additional year of formal education, previous psychiatric diagnosis and documented drug resistance were associated with an increased probability of having a positive screen for depression.

Limitations

- CRANlum was a cross-sectional, epidemiology study without prospective follow-up data. As such interpretation of the predictive associations between risk factors and outcomes remain difficult and do not demonstrate causality.
- The study utilised a screening tool, and not structured or semi-structured diagnostic interviews for the diagnosis of depression and anxiety disorders. The use of interviews would offer superior reliability and validity, increasing the quality of the study.

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