

## Prevalence and Correlates of HIV-Associated Dementia in HIV Outpatients in Ho Chi Minh City, Vietnam

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## Introduction

- › High prevalence of HIV-Associated Dementia (HAD) consistently reported worldwide
- › Up to 36.5% identified by psychiatrist diagnosis <sup>[1]</sup>
- › Up to 85.0% identified by screening scales <sup>[2]</sup>
- › HAD still occurs even since advanced anti-retroviral therapy introduced and affects approximately 40% of people living with HIV/AIDS (PLHIV) <sup>[3]</sup>
- › HAD has become an increasing burden (personal, social, economic and medical) and is a risk factor for death due to lower capacity for self care, poorer regimen adherence & lower quality of life
- › Early screening, identification and intervention bring better neurocognitive performance and improve survival rate for PLHIV

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## Introduction

- › HIV in Vietnam (2013) <sup>[4]</sup>
  - › All 63 provinces, 98% districts, 77% communes reported HIV
  - › About 216 254 people living with HIV/AIDS (PLHIV), 0.25% of the population
  - › HIV infection rate is stable but high
- › Ho Chi Minh city
  - › The biggest city, hot spot of HIV epidemic with 25 000 PLHIV at 30 outpatient clinics (OPC)
- › PLHIV live longer and HIV/AIDS is considered a chronic disease

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## Introduction

- › In Vietnam, HAD has not been routinely screened for at HIV/AIDS OPC
- › Lack of awareness about HAD among PLHIV and doctors
- › Limited number of psychiatrist at HIV/AIDS OPC
- › Lower priority in health policy and planning
- › Complex nature of HAD identification requires brain scanning, lumbar puncture
- › No official link between HIV/AIDS OPC and national mental health program

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## Introduction

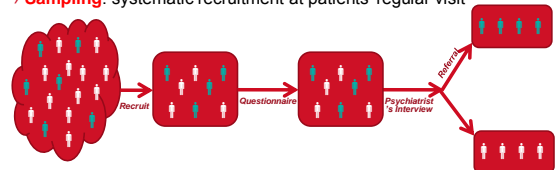
- › Alternative, less costly approaches exist
- › Validated HAD screening scale could be used at HIV/AIDS OPC
- › Training of staff at HIV/AIDS OPC
- › Identify potential risk factors for HAD among PLHIV so can screen these at risk sub-population
- › This research is from a bigger research project that **1)** estimates prevalences of mental health disorders (depression, anxiety, alcohol use disorder, drug use disorder including HAD) **2)** validates screening scales for different mental health disorders **3)** identify correlates of these mental health disorders **4)** evaluate effectiveness of mental health referral through a 3-month follow up among PLHIV in Ho Chi Minh City, Vietnam

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## Methods

- › **Design:** cross-sectional study over a 4-week period at 2 OPCs
- › **Sample size:** 400 PLHIV
- › **Sampling:** systematic recruitment at patients' regular visit



- › **Measures**
  - Questionnaire (self-report and interview-based)
  - Independent psychiatrist interview
  - Extract information from clinical records

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## Methods

### › Measures

- Self-report questionnaire
- Centre for Epidemiologic Studies – Depression scale (CES-D)
  - 20 items, depression if total score  $\geq 16$
- Phan Vietnamese Psychiatric Scale – Anxiety Scale (PVPS-AS)
  - 13 items, anxiety if mean score  $\geq 1.60$
- World Health Organization Alcohol Use Disorder Identification Test (WHO-AUDIT)
  - 10 items, alcohol use disorder if total score  $\geq 8$
- Drug Abuse Screen Test (DAST)
  - 13 items, drug use disorder if total score  $\geq 3$

## Methods

### › Measures

- Interview-based questionnaire
- International HIV Dementia Scale (IHDS)
  - 3 items
- Motor speed (timed finger-tapping)
- Psychomotor speed (timed alternating sequence test)
- Memory recall (recall of four items)
- HAD if total score  $\leq 10$

## Methods

### › Analysis

- Frequency and percentage
- Mean and standard deviation
- Univariate logistic regression
- Multivariate logistic regression
- Followed all procedures recommended by Hosmer, Lemeshow and Sturdivant (2013)

## Results

### › Participants' characteristics

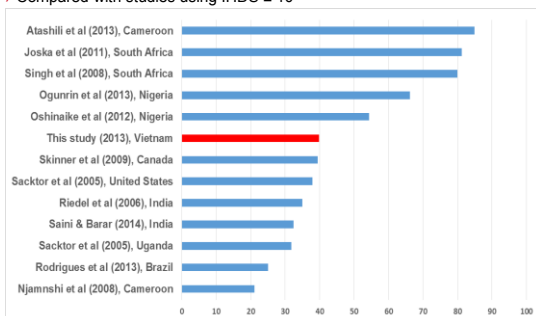
- Mean age:  $34.8 \pm 6.8$ , range: 20 – 67 years old
- 65% male
- Self-report source of HIV infection
  - Sexual transmission: 56%
  - Injecting drug use: 29.6%
  - No answer or others sources: 14.4%

### › HAD

- 159 PLHIV has IHDS score  $\leq 10$
- **39.8%**, 95% CI 35.0% – 44.5%

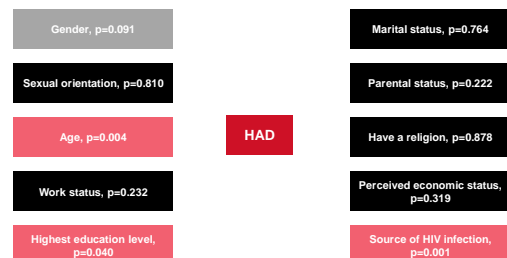
## Results

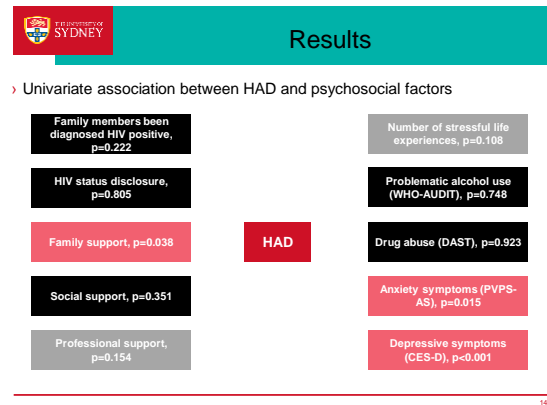
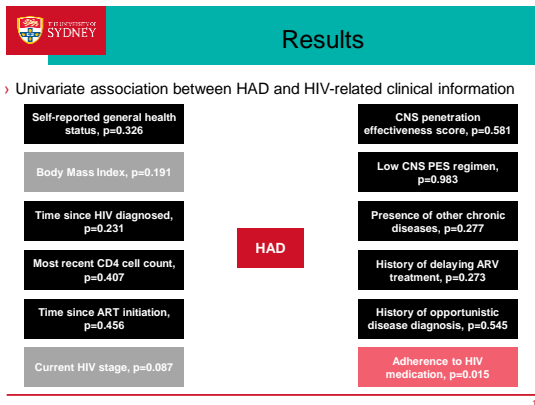
### › Compared with studies using IHDS $\leq 10$



## Results

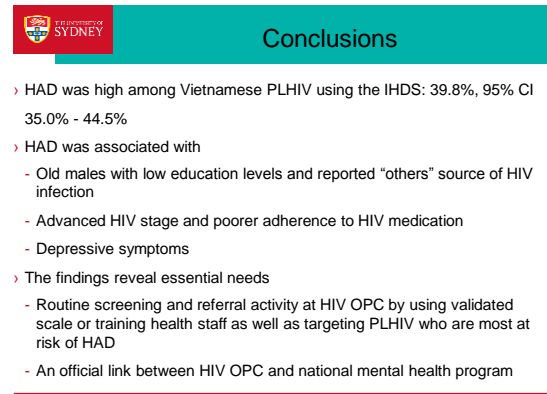
### › Univariate association between HAD and socio-demographic





› Multivariate logistic regression for HAD

Factors	Odds Ratio	95% CI	p
Gender (Female)	1.77	1.06 – 2.96	0.029
Age (yrs)	1.05	1.02 – 1.09	0.003
<b>Education</b>			
≤ Primary school	Ref	-	-
Secondary school	0.83	0.49 – 1.40	0.484
≥ High school	0.55	0.30 – 0.99	0.046
<b>Source of HIV infection</b>			
Sexual transmission	Ref	-	-
Injected drug use	1.53	0.89 – 2.64	0.126
Others	3.57	1.82 – 7.01	<0.001
<b>HIV stage</b>			
1	Ref	-	-
2	3.14	0.81 – 12.08	0.097
3	3.60	1.16 – 11.19	0.027
4	2.76	0.38 – 19.87	0.314
<b>Adherence to HIV medication</b>			
Good	Ref	-	-
Average	3.57	1.17 – 10.89	0.025
Poor	1.19	0.36 – 3.93	0.772
<b>Depressive symptoms (Yes)</b>	3.23	2.05 – 5.11	<0.001



**References**

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