

Cognitive Dysfunction Among HIV+ and HIV- Individuals with Psychosis in Uganda

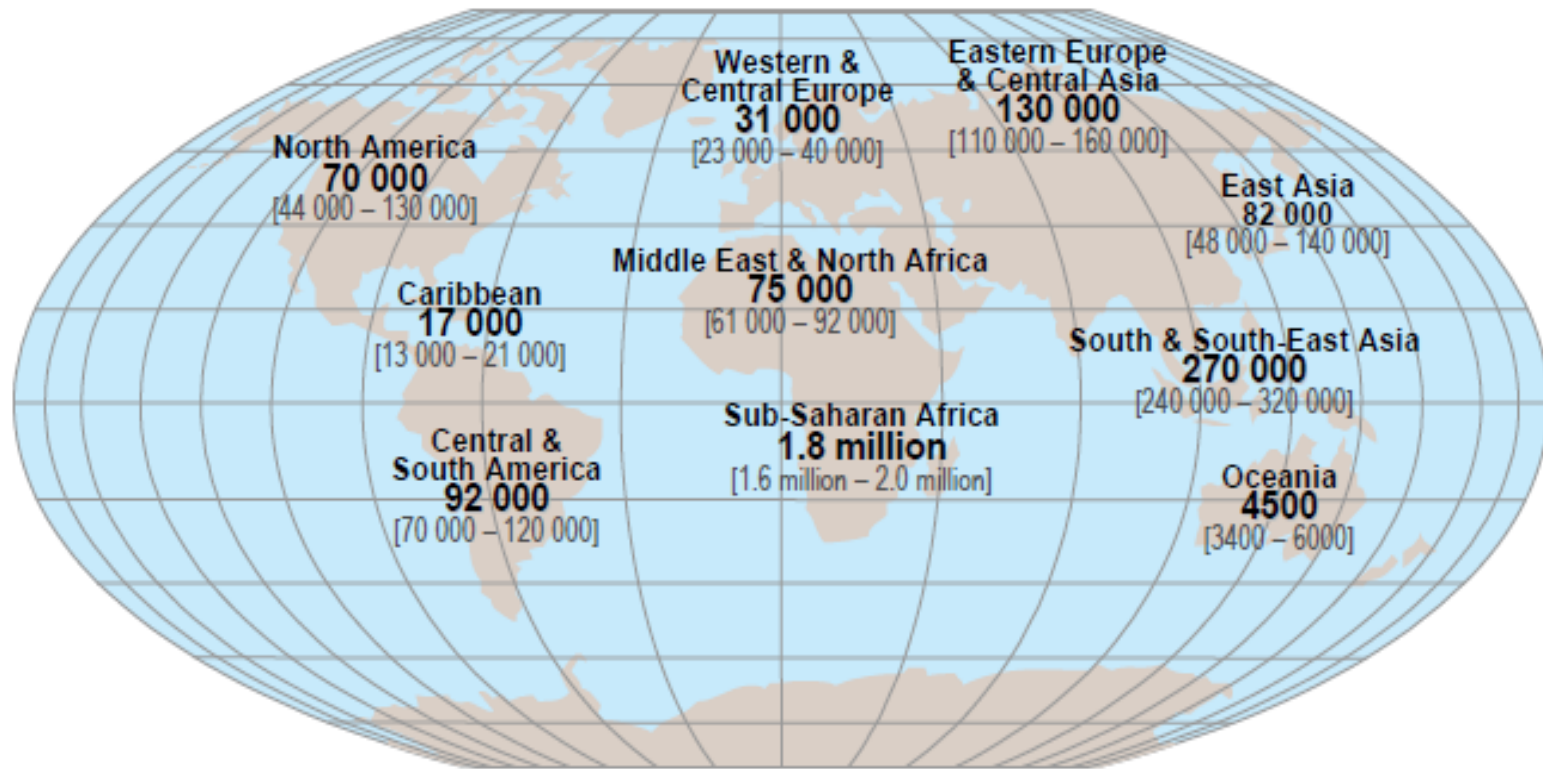
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What is psychosis?



Estimated number of adults and children newly infected with HIV | 2009



Total: 2.6 million [2.3 million – 2.8 million]



Introduction

- Mental and neurological disorders have an intertwined relationship with HIV, yet are often overlooked when AIDS interventions are planned and implemented.

Problem statement

- HIV prevalence 5% men 7.5% women
- ~ 1 million Persons Living with HIV/AIDS
- Newly infected individuals ~ 120,000



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HIV/Aids- When to start treatment

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By ~~Elvis Basudde~~ [Elvis Basudde](#)

ANTIRETROVIRAL therapy/treatment (ART) has proved to slow down the progression of AIDS, and reduces HIV-related illnesses. Clinical trials have demonstrated that the benefits of antiretroviral treatment outweigh the risks.

ARVs are well tested medicines, traditionally administered, based on a patient's CD4 cell count. The number of CD4 cells reflects the body's defence system.

- ART can improve mental health
- High burden of mental health problems in patients with HIV
- Limited access to ART
- 200,000 (39%) of those in need are on treatment

Rationale

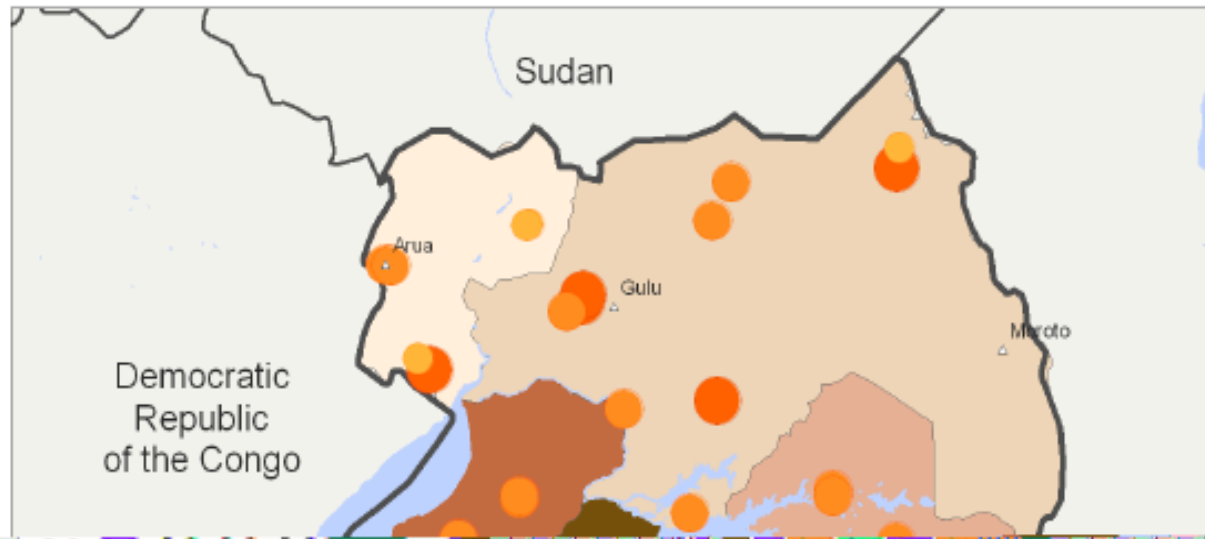
Prevalence among HIV positive individuals

- Cognitive impairment 7.3 – 37% (Sacktor 2002)
- Depression 14 -20% (Sing 2008)
- Psychosis 1.4- 15% (Dolder 2004)

Objectives

- To compare the cognitive deficits among psychotic HIV positive and psychotic HIV negative individuals .

Study setting



**HIV sentinel surveillance
in pregnant women,
2004–2008**

HIV prevalence (%)

● 0–0.9

● 1–4.9

● 5–9.9

Neuropsychological Test Battery

Test

Domain Assessed

International HIV Dementia Scale (IHDS)

Verbal memory, motor, and psychomotor speed

Finger tapping

Motor speed

Timed Gait

Motor Skills



Grooved Pegboard – Dominant and Non Dominant Hand

Motor Skills

WHO/UCLA Auditory Verbal Learning Test (AVLT)

Verbal Memory

Color Trails

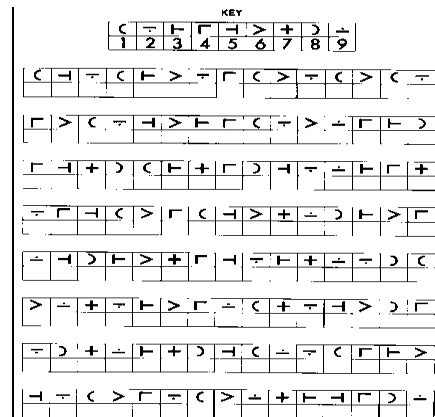
Psychomotor Speed

Symbol Digit Modalities Test

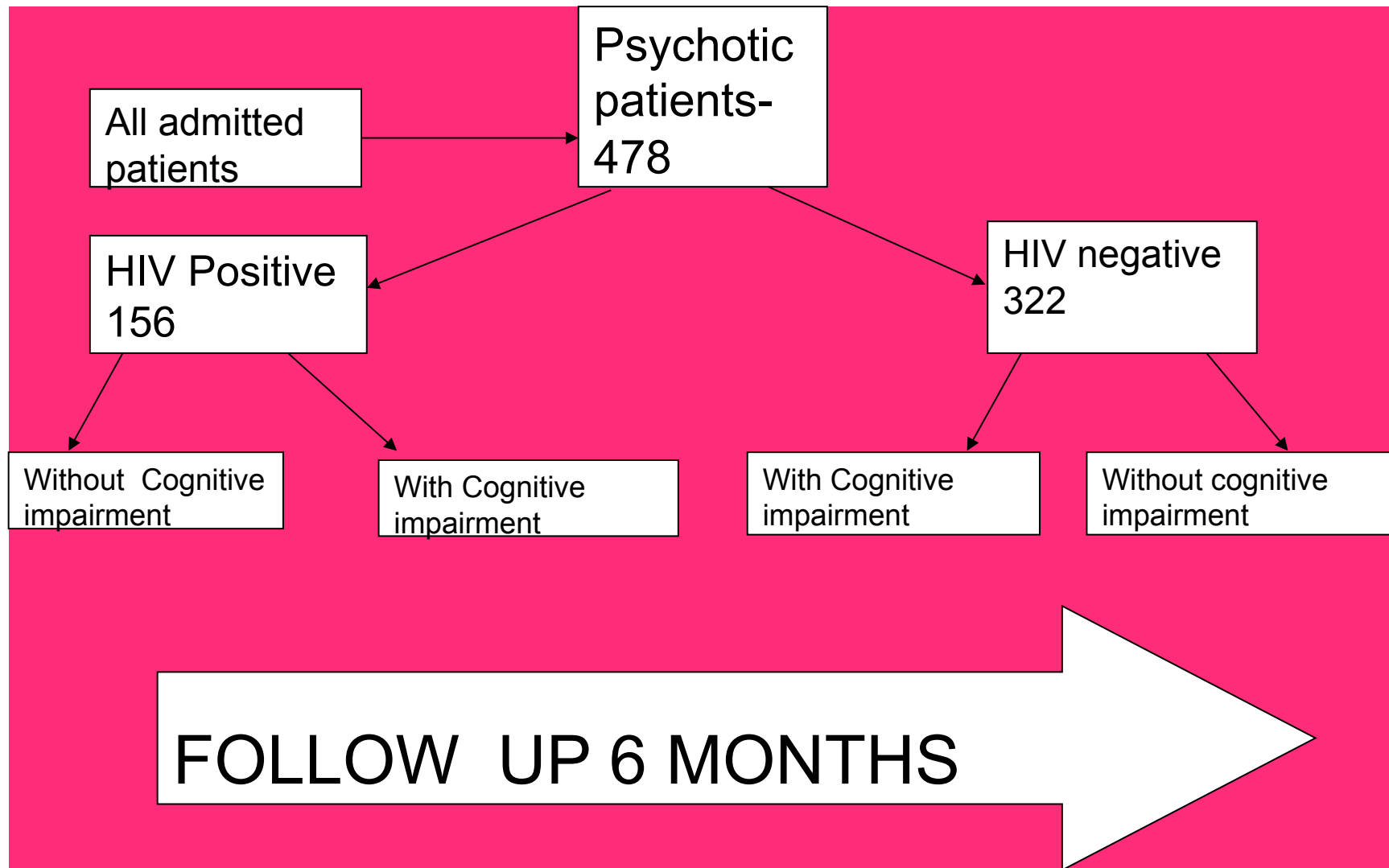
Psychomotor Speed

Digit Span

Attention



Patient Flow chart

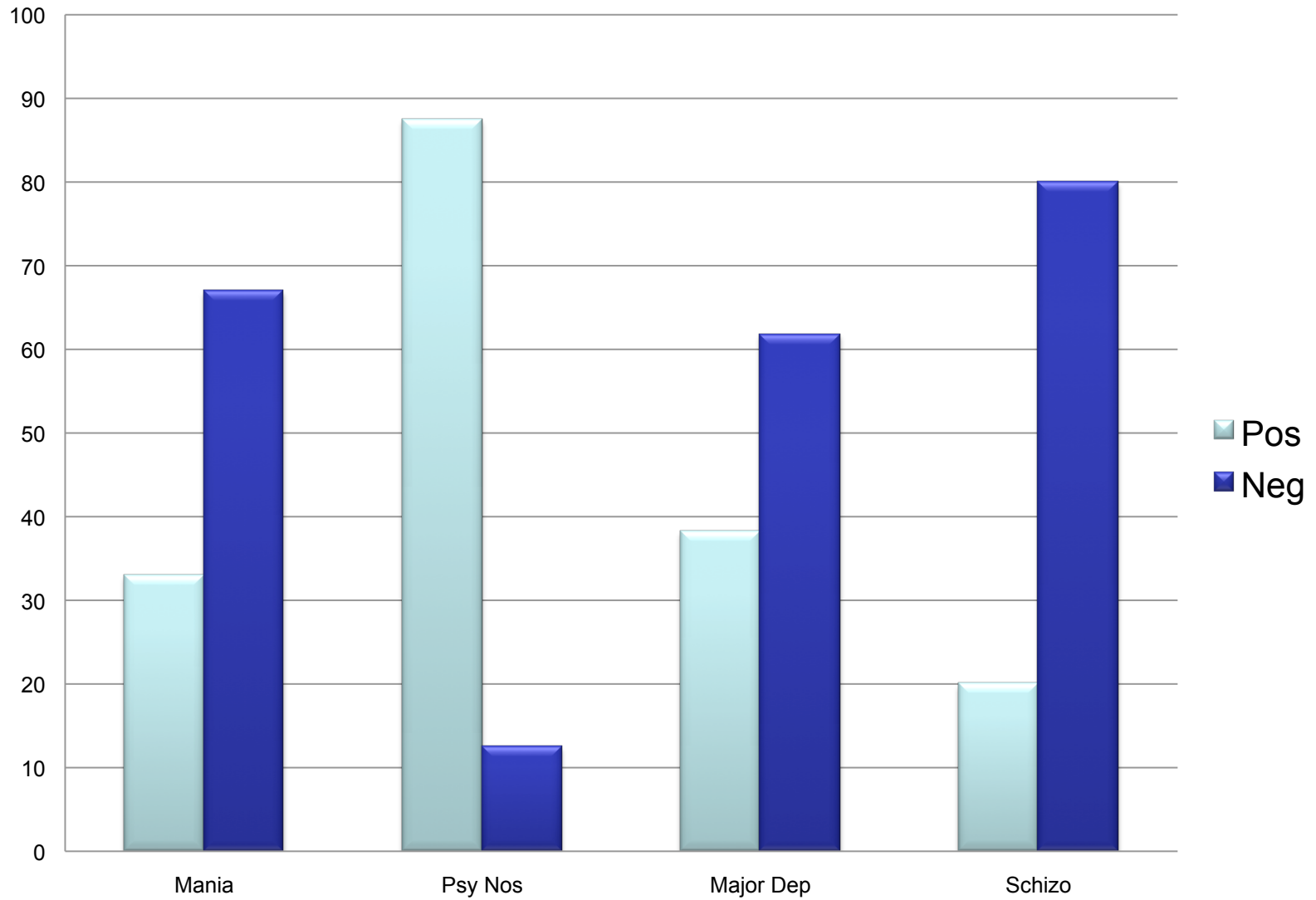


- **Study design:** Longitudinal
- **Analysis:** χ^2 tests, logistic regression

Results

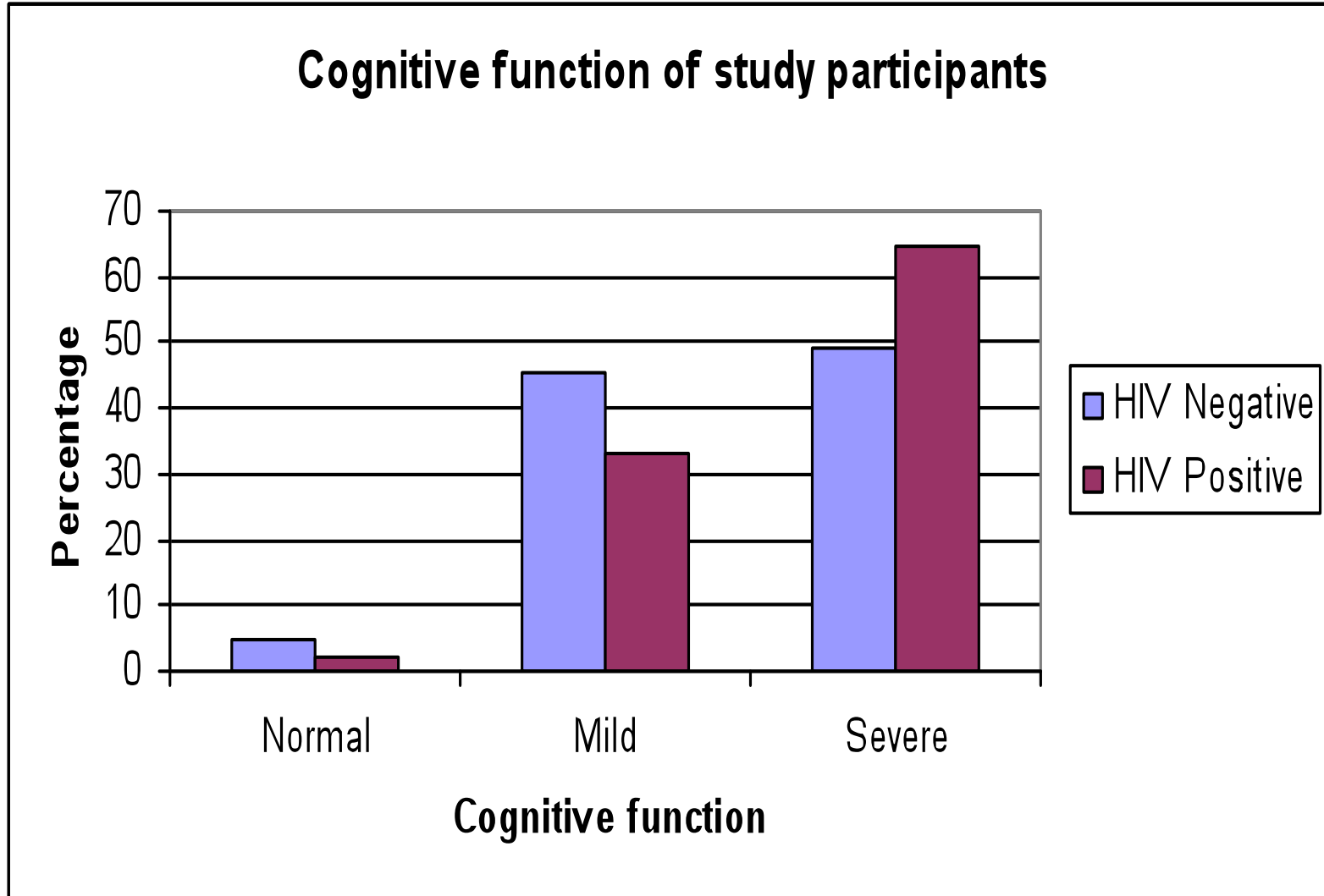
- Age: HIV Positive 33years Vs HIV negative 29 years ($p < 0.001$)
- HIV positive females 71.2% Males 21.8 ($p < 0.001$)
- HIV ↑ : irritability, impaired content of thought guilt feelings and disorientation

Disorders among study participants by HIV status



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Cognitive function of study participants

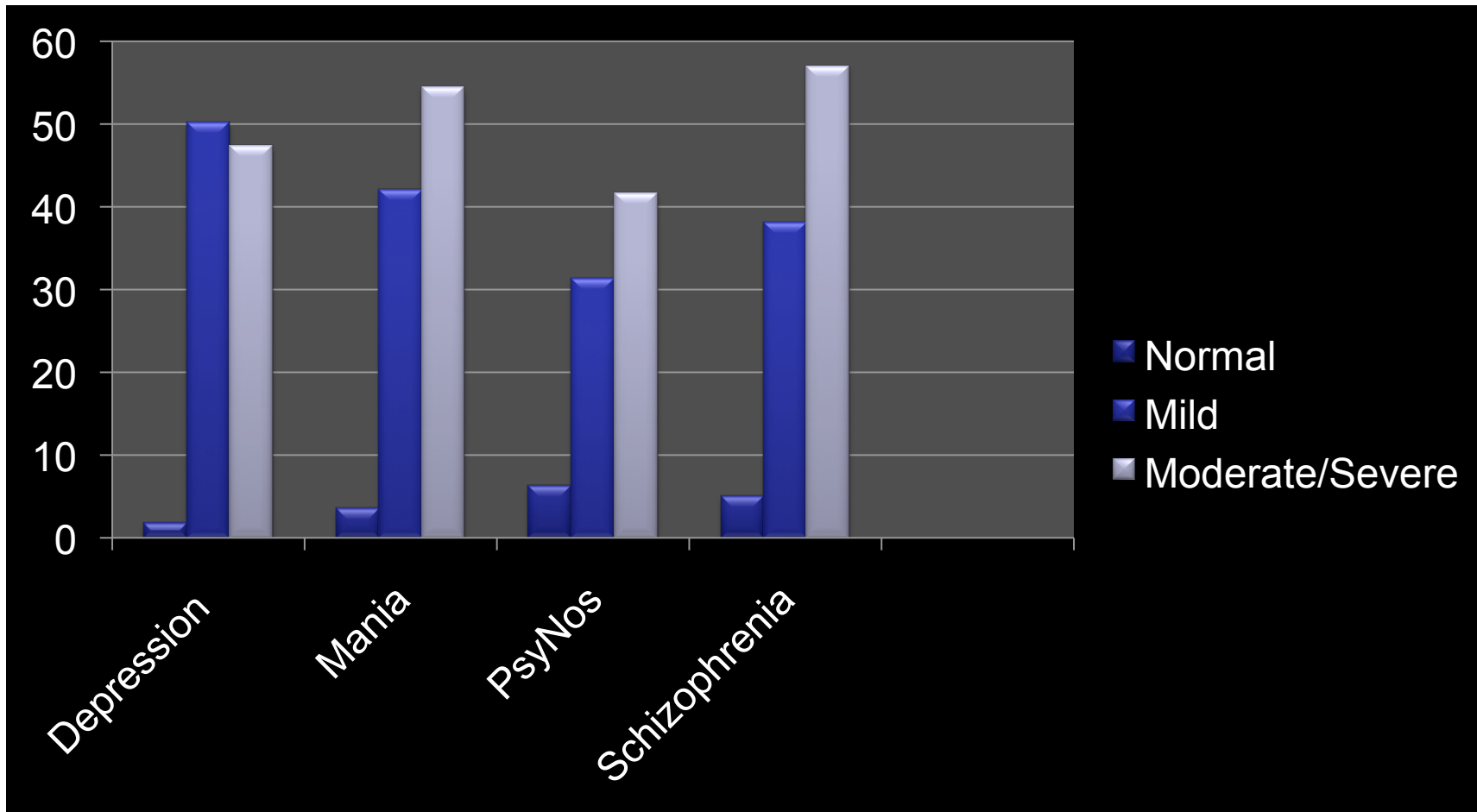


OR 2.62 95%CI 1.69-4.06 p-value = 0.004

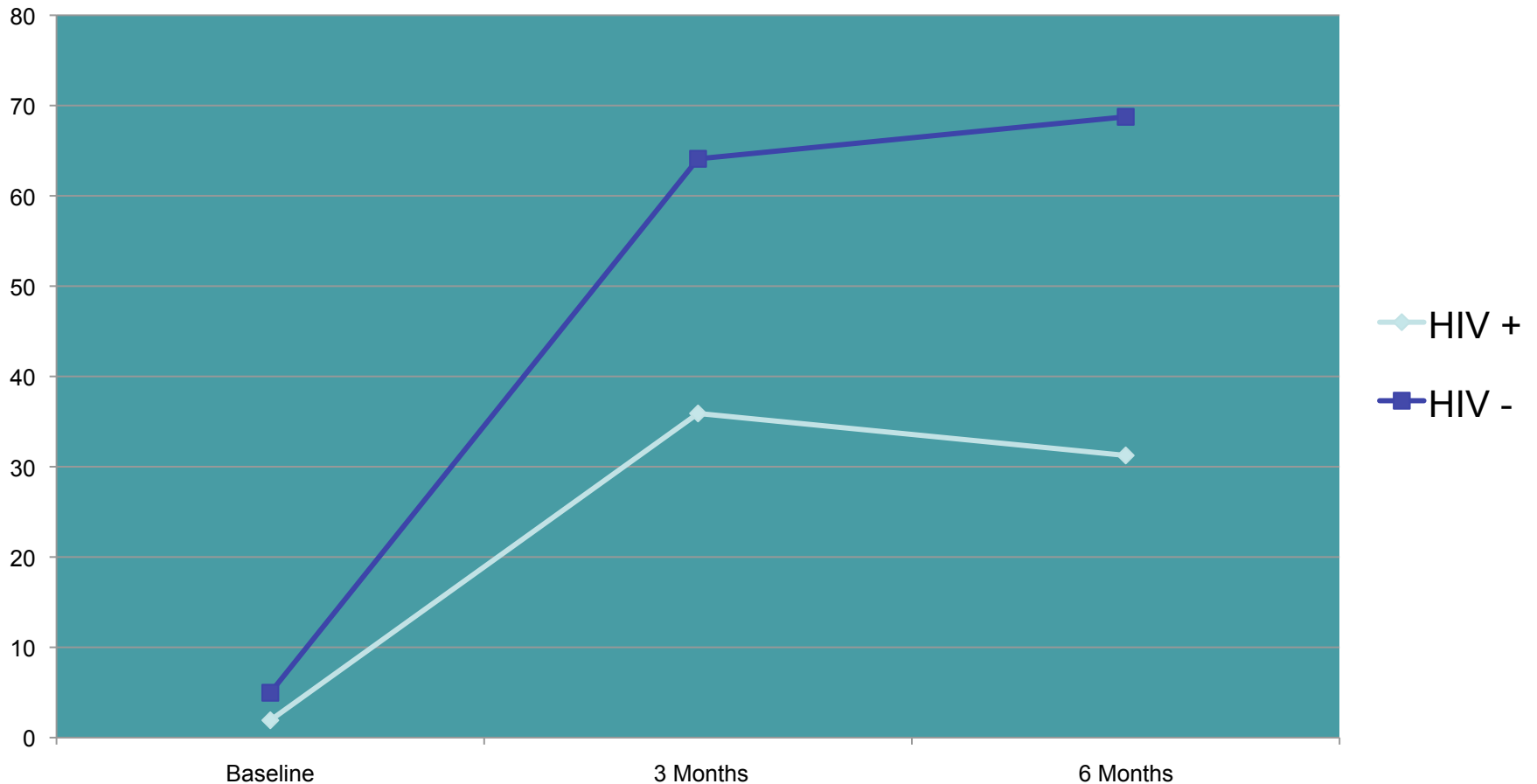
Mild: SD 1 on 2 or more tests

Severe: SD 2 on 2 or more tests

Cognitive impairment at baseline for the types of psychoses



Normal Cognitive function within HIV + and HIV - participants



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p value < 0.001

Discussion and Conclusions

- Cognitive impairment in psychosis was worsened by HIV infection
- Strategies for improved management of neuropsychological complications of HIV need to be put in place for holistic patient care.

Acknowledgments

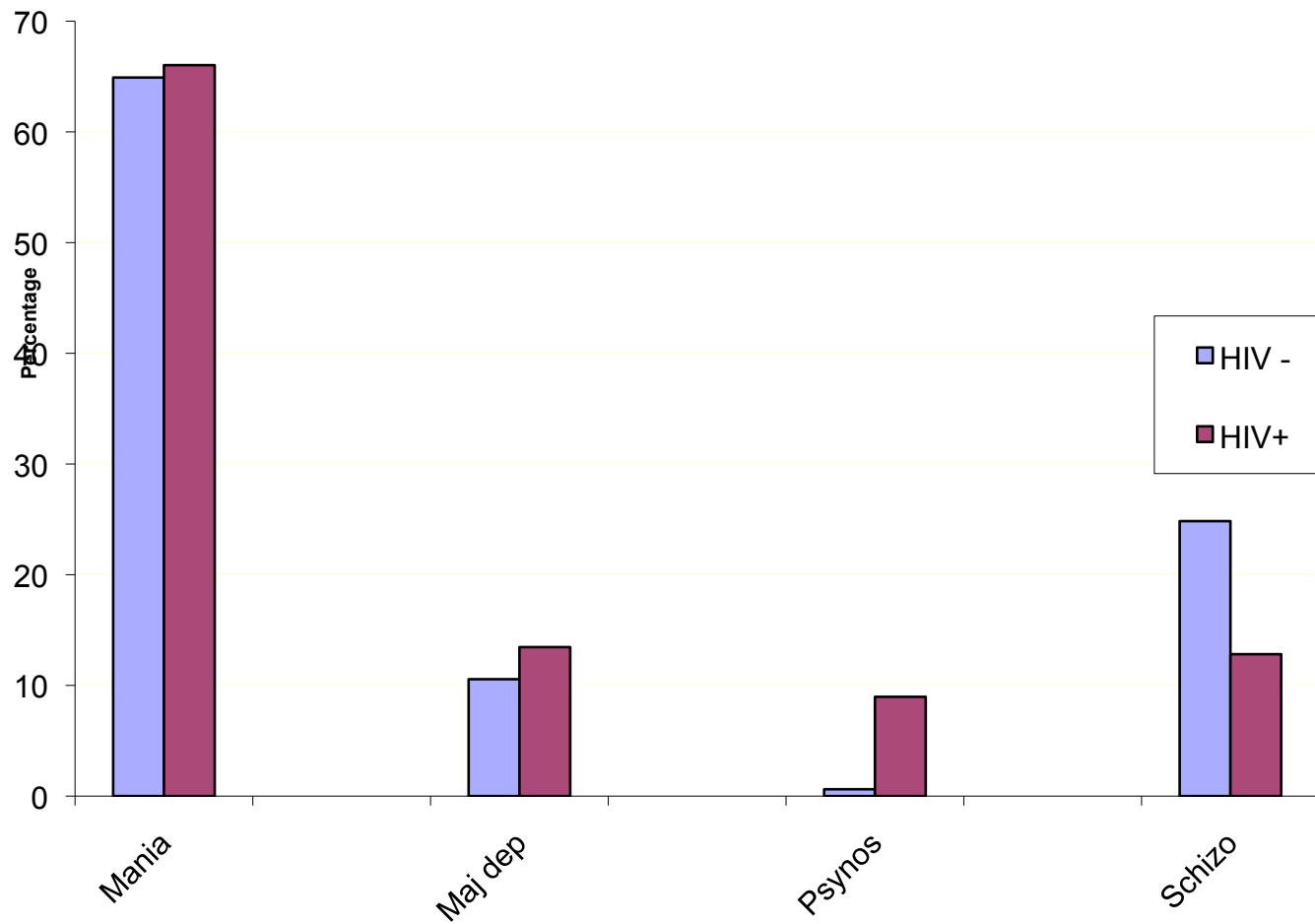
- Supervisors
- Swedish International Development Agency
- Study teams in Mulago and Butabika Hospitals
- Study participants



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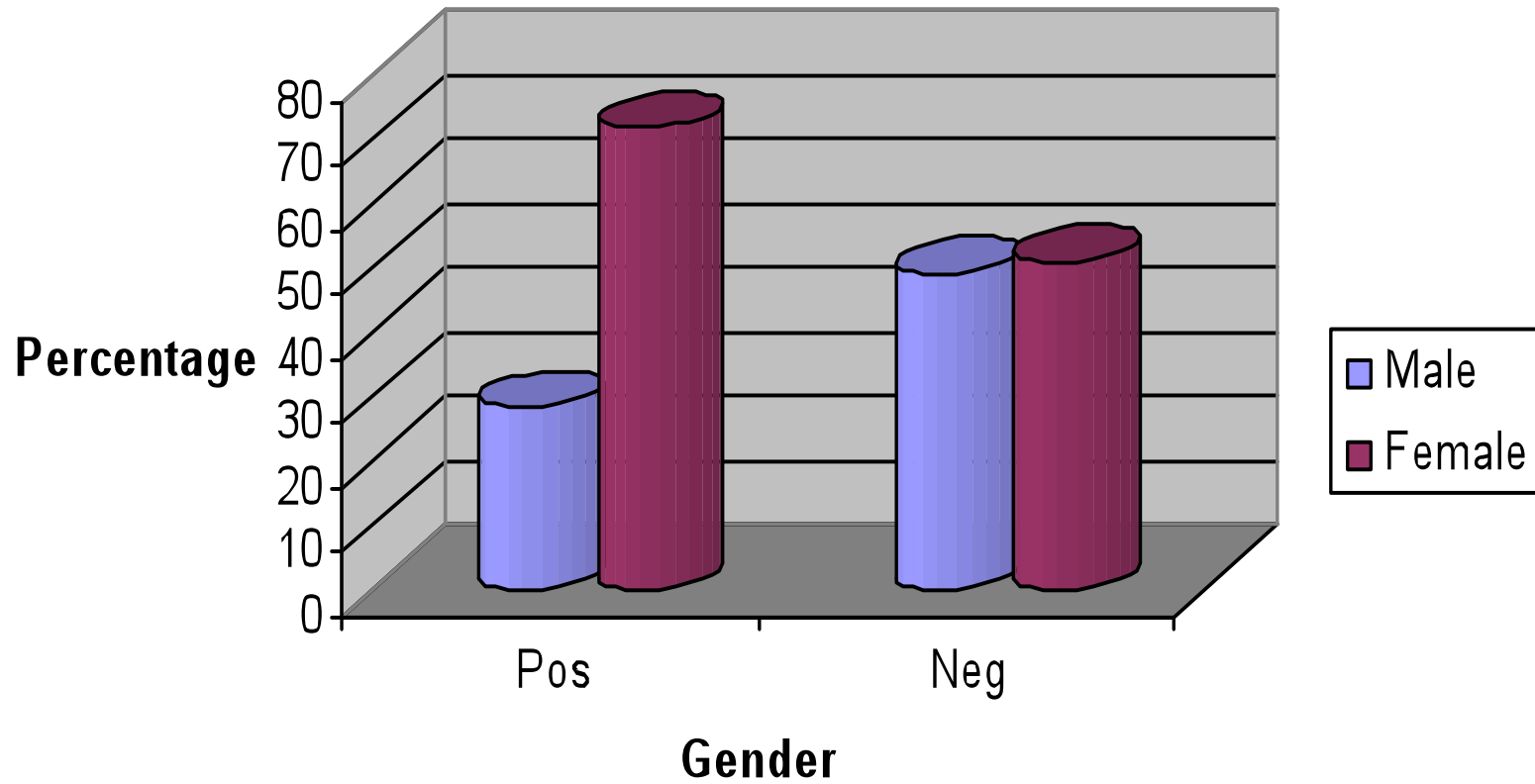
Table 3

Type of Psychosis by HIV status



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HIV status by Gender



71.2 % females $p > 0.05$