



THE ROLE OF ATTENTION ON ANTIRETROVIRAL THERAPY ADHERENCE

11th Symposium on Neuropsychiatry and HIV

Faculty Disclosure

<input type="checkbox"/>	No, nothing to disclose
<input checked="" type="checkbox"/>	Yes, please specify:

<i>Company Name</i>	<i>Honoraria/ Expenses</i>	<i>Consulting/ Advisory Board</i>	<i>Funded Research</i>	<i>Royalties/ Patent</i>	<i>Stock Options</i>	<i>Ownership/ Equity Position</i>	<i>Employee</i>	<i>Other (please specify)</i>
Lundbeck	X							
Esteve	X							
Janssen	X		X					
Otsuka	X							

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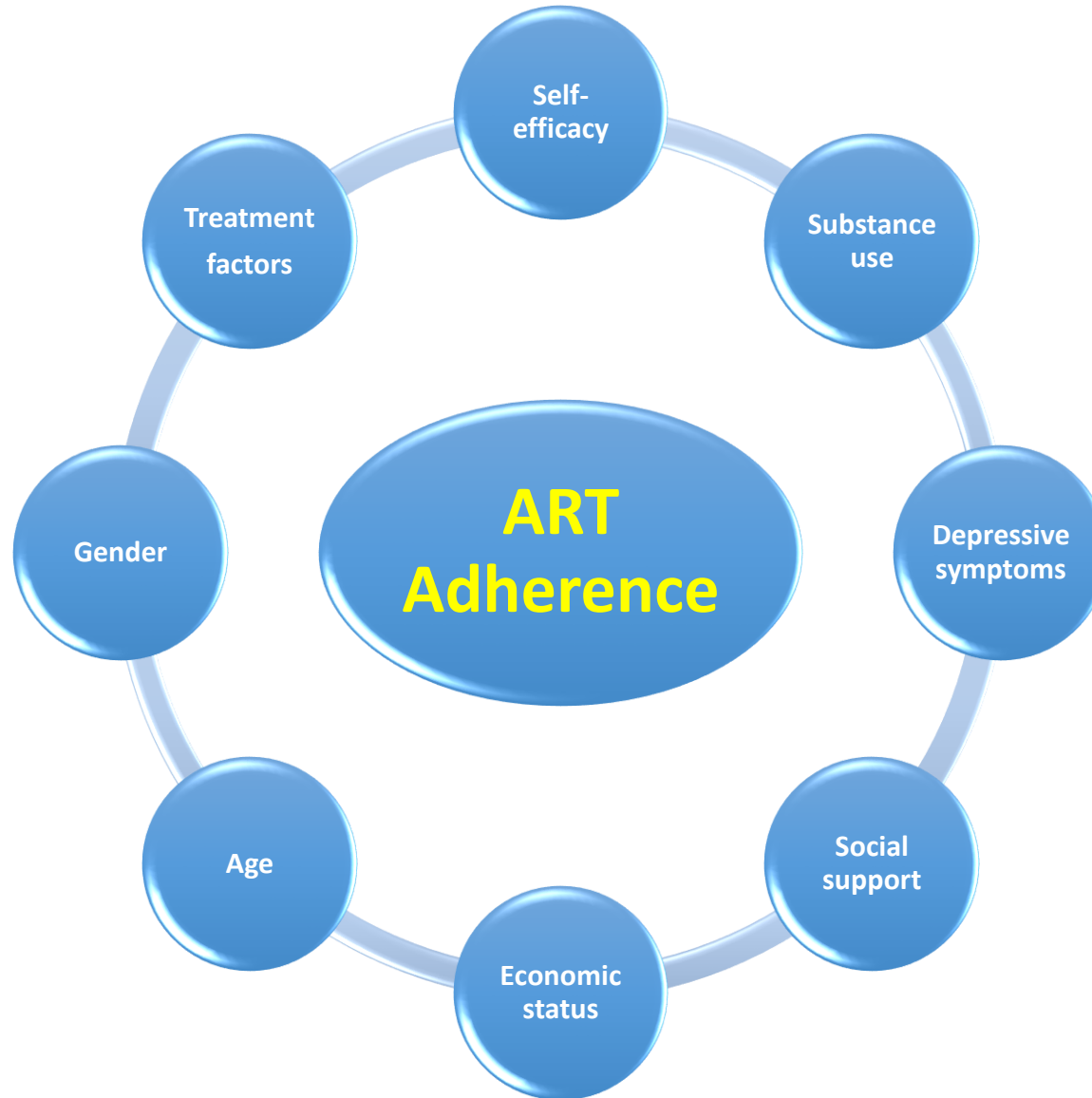
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HIV
neuro
psychiatry

INTRODUCTION



Predictors and correlates of adherence to combination antiretroviral therapy (ART) for chronic HIV infection: a meta-analysis, Langebeek et al., 2014.

INTRODUCTION

- ✓ **Cognitive impaired individuals exhibit a significantly greater risk of poorer adherence compared with cognitive intact adults** (*Thaler et al., 2015*).
- ✓ **Neurocognitive impairment conferred a 2.5 times greater risk of poor adherence** (*Hinkin et al., 2004*).
- ✓ **Deficits in executive function, memory and attention were associated with poor medication adherence** (*Hinkin et al., 2002*).
- ✓ **Poor weekend adherence performed significantly worse on the global impairment index and the attention domain** (*Levine et al., 2005*).

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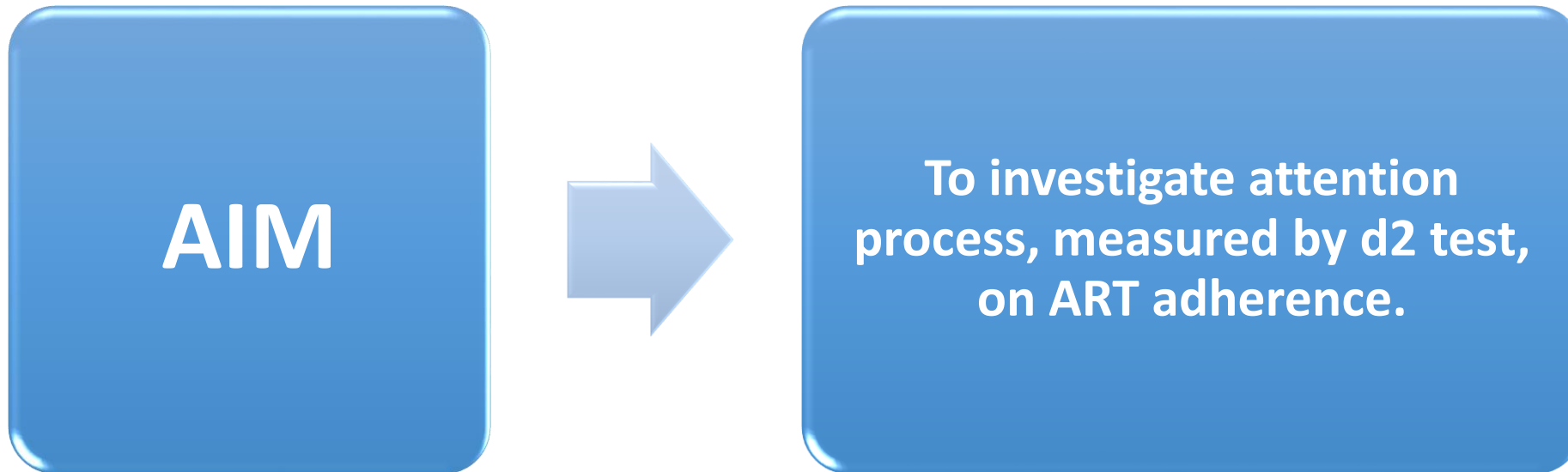
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OBJECTIVE



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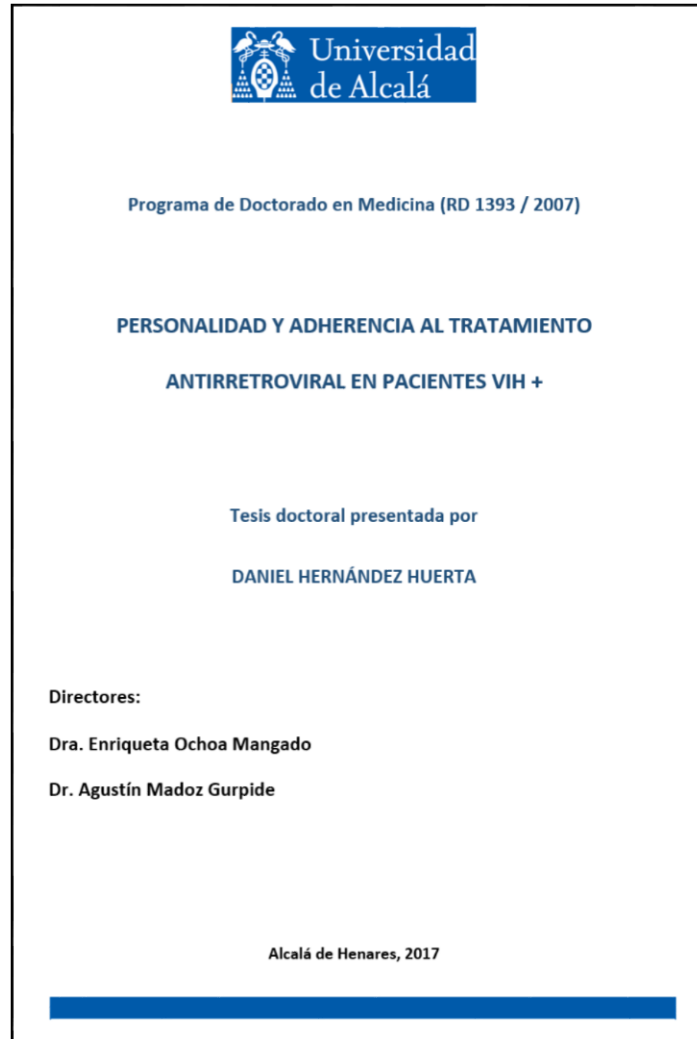
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METHODS



- ✓ **Design:** cross-sectional case-control study
- ✓ **N = 125 patients HIV +**
 - Controls: 79 (> 95% adherence)
 - Cases: 46 (\leq 90% adherence)
- ✓ **Adherence:**
 - Hospital pharmacy refill data
 - SMAQ Questionnaire

METHODS

***Ad hoc* questionnaire**

- Sociodemographic factors
- Clinical parameters of HIV
- Substance use
- Psychiatric history

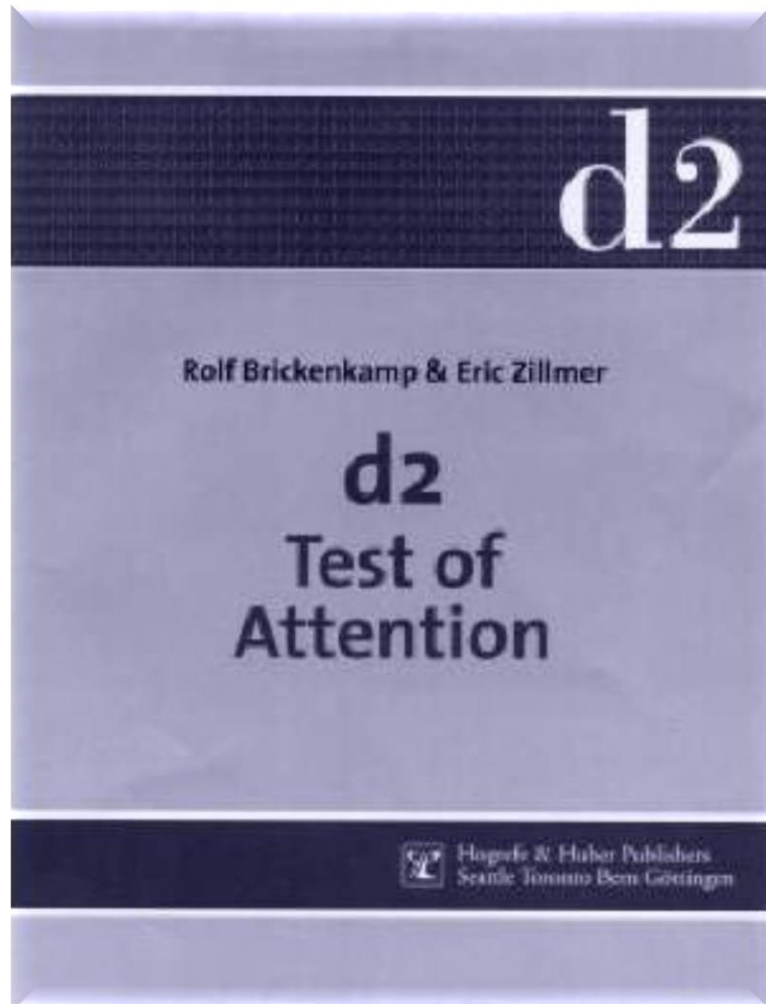
MINI International Neuropsychiatry Interview

- Structured diagnostic interview for DSM-IV and ICD-10 psychiatric disorders

Attention domain

- d2 Test

METHODS



- ✓ A cancellation test involving simultaneous presentation of visually similar stimuli.
- ✓ Useful measure of attention process.
- ✓ To cancel out all
 - ✓ target characters (a “d” with a total of two dashes placed above and or below),
 - ✓ which are interspersed with non-target characters (a “d” with more or less than two dashes, and “p” characters with any number of dashes),
 - ✓ in 14 successive timed trials.

Bates ME, Lemay EP. The d2 Test of attention: construct validity and extensions in scoring techniques. *J Int Neuropsychol Soc.* 2004;10(3):392–400.

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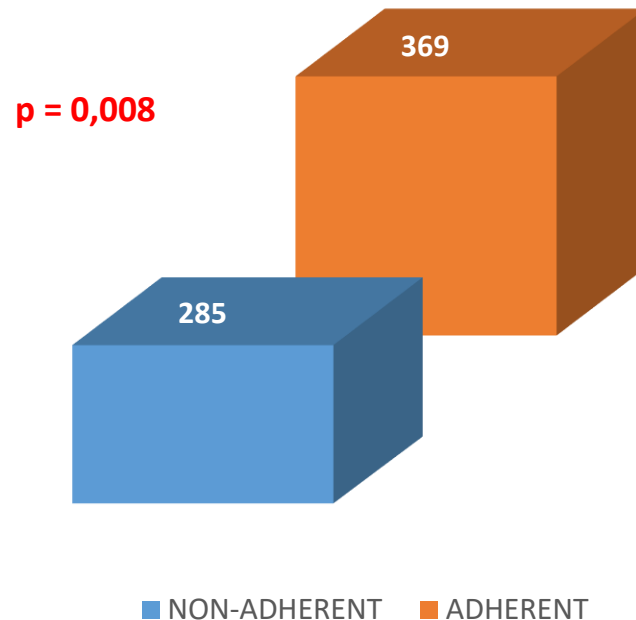
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COMPARATIVE ANALYSIS

d2 TEST FINAL SCORE



Adherent patients had significantly higher scores in d2 Test final score

LOGISTIC REGRESSION MODEL

Variables included in the analysis:

Sociodemographic variables

- ✓ Age
- ✓ Gender
- ✓ Economic status
- ✓ Educational level

ART variables

- ✓ Number of ART pills
- ✓ Treatment supervision

Clinical variables

- ✓ Risk of sharing syringes
- ✓ HCV coinfection
- ✓ Substance use (alcohol, cannabis, cocaine, heroin)
- ✓ Use of methadone

Attention variable

- ✓ d2 test final score

LOGISTIC REGRESSION MODEL

	B	Error standard	Wald	gl	Sig.	Exp(B)	95% C.I. EXP(B)	
							Inf.	Sup.
Age	-,095	,045	4,531	1	,033	,909	,833	,992
Gender	-1,799	,723	6,202	1	,013	,165	,040	,682
Number of ART pills	,325	,197	2,734	1	,098	1,385	,941	2,036
Economic status	1,605	,658	5,941	1	,015	4,976	1,369	18,084
HCV coinfection	1,261	,675	3,494	1	,062	3,528	,941	13,233
Alcohol substance abuse	1,302	,620	4,413	1	,036	3,678	1,091	12,399
Use of methadone	1,546	,844	3,355	1	,067	4,693	,897	24,535
d2 test final score	-,006	,003	4,481	1	,034	,994	,989	1,000

Higher D2 test final score (p=0.034) was a protective factor (OR=0.994; CI95%: 0.989–1.000)

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CONCLUSIONS

- ✓ Neurocognitive impairment is a factor associated with adherence to ART.
- ✓ One of the cognitive domains implicated on adherence could be attention.
- ✓ Attention, measured by higher scores in d2 test, predicts adherence to ART...
- ✓ ... however, its impact in our model is marginal...
- ✓ ... being necessary to take into account stronger predictors as sociodemographic and alcohol use factors.



**Thank you
for your attention**

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