

# BELIEFS ABOUT MEDICATION QUESTIONNAIRE: results from its application to a Portuguese cohort of HIV-1 infected adults

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## Background

HIV infection treatment requires high adherence levels in order to attain virologic suppression. Several social cognition theories have been developed to explain adherence to medication. Horne *et al* have developed the Beliefs about Medicine Questionnaire (BMQ), with questions scored in a 5-point Likert scale, divided in two dimensions - Necessity and Concerns [1]. In previous studies on HIV-1 patients, self-reported adherence was positively correlated with BMQ necessity subscale and negatively correlated with concerns [2].

## Objectives

This study aims to:

1. Characterize necessity and concerns beliefs about combination antiretroviral therapy (cART)
2. Describe factors associated with the scores obtained.

## Methods

HIV-1 subjects followed at Infectious Diseases Outpatient Clinic (Hospital de Santa Maria - HSM), on cART

Systematic inclusion of eligible subjects

Invitation and Informed consent

Questionnaires applied to patients and physicians

### Exclusion criteria

1. Having started antiretroviral treatment at other hospital than HSM clinic
2. Having started antiretroviral treatment when aged <18 years-old
3. Having participated in clinical trials
4. Not having capacity to consent their participation
5. Depending on other person/institution to access / take medication.

Figure 1. Sampling and eligibility evaluation

Information on patients characteristics, adverse effects, capacity on continue the treatment (self-efficacy), disease perception, social support, depression, anxiety and stress were collected, as well as information of the AACTG (AIDS Adult Clinical Trial Group) score used to measure adherence to treatment [3].

### BMQ questionnaire

- **Necessities subscale** – 8 questions, total score ranging from 8 to 40
- **Concerns subscale** – 11 questions, total score ranging from 11 to 55

Figure 2. BMQ questionnaire

Pearson's correlation, Mann-Whitney and Kruskal-Wallis tests ( $\alpha=0.05$ ) were used to study association between subscales and selected variables.

### References:

1. Horne R *et al*. The beliefs about medicines questionnaire: the development and evaluation of a new method for assessing the cognitive representation of medication. *Psychol Health* 1999, 14:1–24.
2. Gonzalez JS, *et al*. Physical Symptoms, Beliefs About Medications, Negative Mood, and Long-Term HIV Medication Adherence. *Ann Behav Med* 2007, 34(1):46–55.
3. Chesney MA, *et al*. Self-reported adherence to antiretroviral medications among participants in HIV clinical trials: the AACTG Adherence Instruments. *AIDS Care—Psychological and Socio-Medical Aspects of AIDS/HIV*. 2000;12:255–266.

### Acknowledgements:

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## Results

From 306 subjects who had a medical appointment during the enrolment period, 203 (66.3%) were eligible. The participants were 48.2±10.0 years-old (mean±sd), 76.4% man. Main mode of infection acquisition was by an heterosexual intercourse (42.3%), followed by men having sex with men (23.6%) and injectable drugs users (14.8%). Considering the scale used, 56.3% of the patients were classified as being adherent.

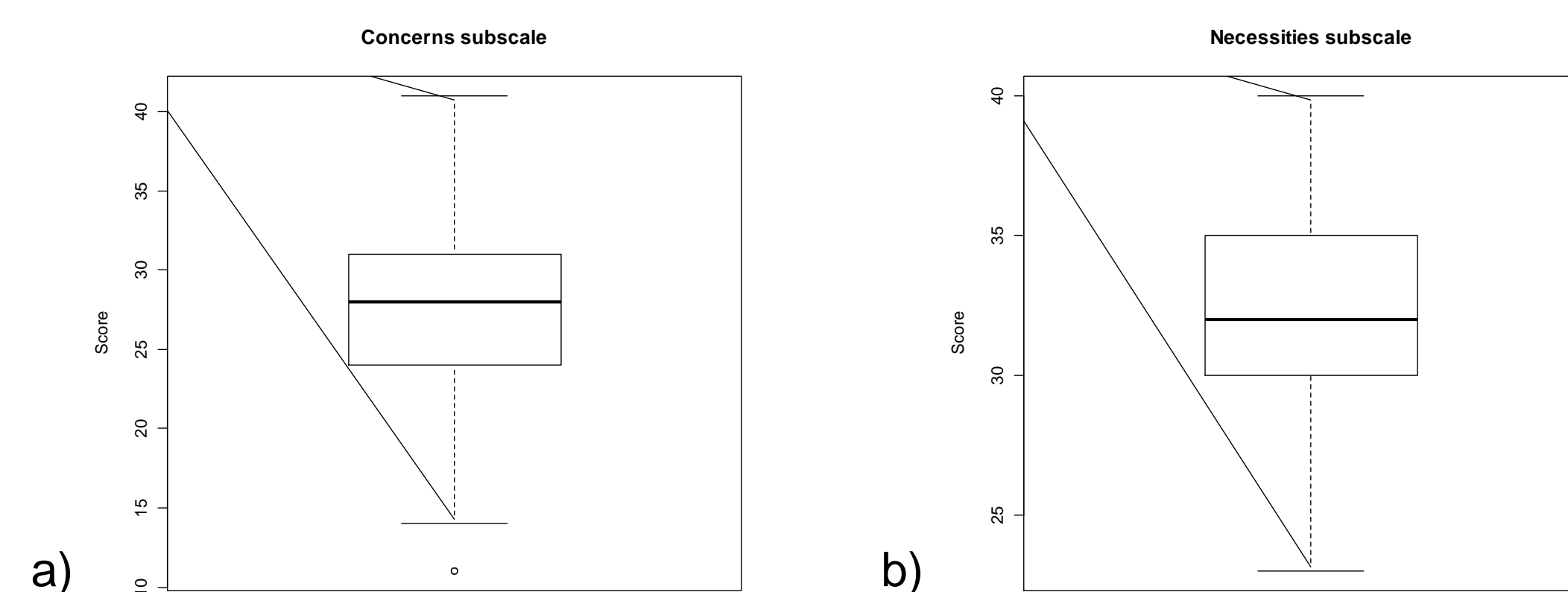


Figure 3. BMQ subscales : a) Concerns subscale, b) Necessities subscale

None of the variables studied was significantly associated to necessities subscale. Self-efficacy ( $p$ -value<0.001), intake difficulty ( $p=0.045$ ) and adherence ( $p=0.005$ ) were associated to concerns subscale. Figure 4 presents boxplots of these variables by concerns subscale.

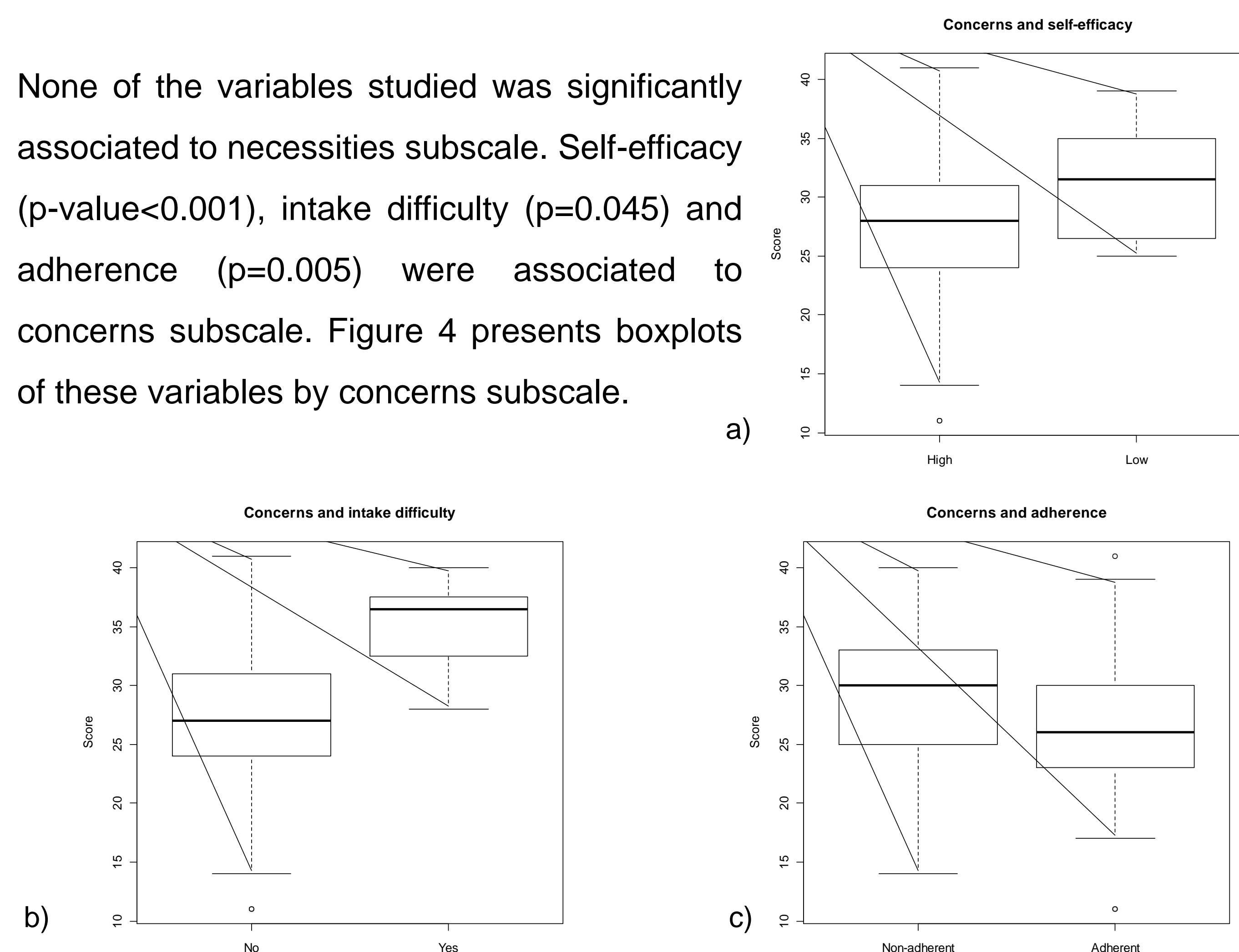


Figure 4. Concerns subscale and associated variables: a) Self-efficacy, b) Intake difficulty, c) Adherence

## Discussion and Conclusions

- In this cross-sectional study, participants seem to have an high perception of cART necessity (range from 23 to 40). No associations were found between this subscale and adherence or other related variables.
- On the other hand, participants scored lower values on the concerns subscale (range from 11 to 41). Higher scores on this subscale were associated with:
  - Intake difficulty,
  - Less confidence in being able to maintain treatment (self-efficacy), and
  - Lower levels of adherence.
- Patient concerns about cART should be evaluated, in order to adequate regimens to individuals characteristics and improve adherence.