

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

Fernandes M^{1,2} (mccf@fm.ul.pt), Leite A¹, Caldeira L³, Valadas E³, Simões R¹, Freitas J¹, Pereira ME¹, Silva F¹, Nicola PJ¹, Martins AP², Maria V¹

1. Institute of Preventive Medicine, Faculty of Medicine, University of Lisbon. 2. Faculty of Pharmacy, University of Lisbon.

3. Infectious Diseases Outpatient Clinic, Hospital de Santa Maria, Lisbon, Portugal.

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:

To the Infectious Diseases Outpatient Clinic team from HSM. ATAR-VIH received an unrestricted grant from MSD Foundation (Portugal), with no role in presented data.

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.

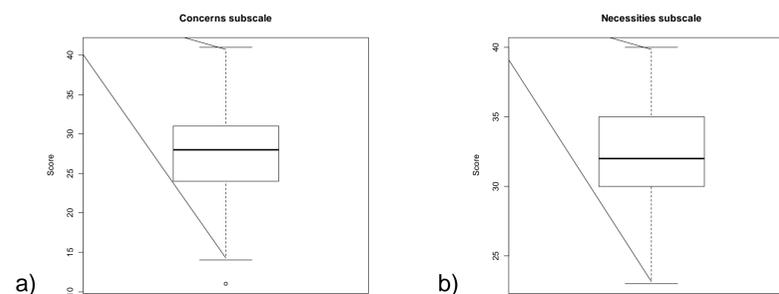


Figure 3. BMQ subscales : a) Concerns subscale, b) Necessities subscale

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.

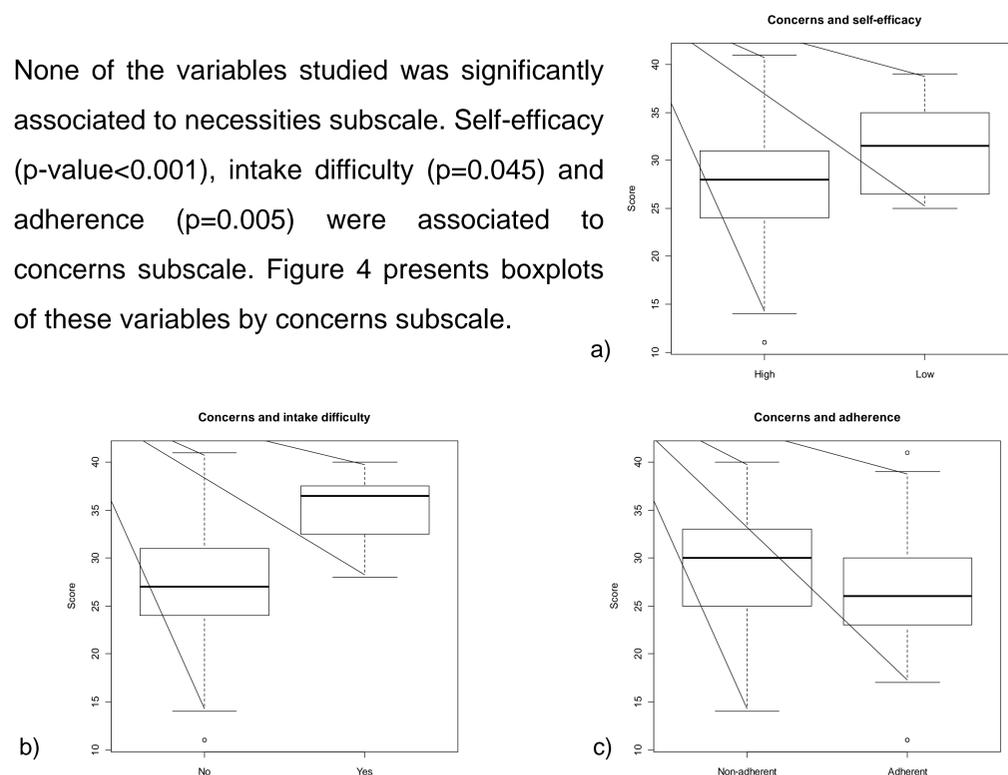


Figure 4. Concerns subscale and associated variables: a) Self-efficacy, b) Intake difficulty, c) Adherence

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.