UNIVERSIDADE FEDERAL DA BAHIA
FACULDADE DE MEDICINA DA BAHIA

PROGRAMA DE PÓS-GRADUAÇÃO
EM MEDICINA E SAÚDE

INDIRA ENITH RODRIGUEZ PRIETO

ANÁLISE DO IMPACTO DA TERAPIA ANTIRRETROVIRAL NA FUNCIONALIDADE, INCAPACIDADE E QUALIDADE DE VIDA RELACIONADA À SAÚDE DE PACIENTES COM HIV

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Dissertação ou Tese apresentada ao Programa de Pós-Graduação em Medicina e Saúde da Faculdade de Medicina da Bahia da Universidade Federal da Bahia, como requisito parcial para a obtenção do título de Mestre em Medicina e Saúde.

Orientador: Prof. Dr. Mansueto Gomes Neto
Co-Orientador: Prof. Dr. Carlos Brites

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Dissertação de autoria de Indira Enith Rodriguez Prieto intitulada ANÁLISE DO IMPACTO DA TERAPIA ANTIRRETROVIRAL NA FUNCIONALIDADE, INCAPACIDADE E QUALIDADE DE VIDA RELACIONADA À SAÚDE DE PACIENTES COM HIV, apresentada à Universidade Federal da Bahia, como requisito parcial para a obtenção do título de Mestre em Medicina e Saúde.

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DEDICATÓRIA

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1. RESUMO

Poucos estudos fazem referência ao impacto da terapia antirretroviral na funcionalidade e incapacidade de pacientes infectados pelo HIV. Desta forma, o objetivo desta dissertação foi identificar os estudos que avaliaram a qualidade de vida de pacientes com HIV e avaliar o impacto da terapia antirretroviral na funcionalidade, incapacidade e qualidade de vida relacionada à saúde de pacientes com HIV. Na primeira fase do projeto foi realizada uma revisão sistemática na qual se identificam os principais instrumentos e domínios de avaliação da qualidade de vida relacionada à saúde de pacientes com HIV. Na segunda fase foi realizado um estudo longitudinal com avaliação de pacientes virgens de terapia antirretroviral e reavaliação após seis meses de utilização da terapia antirretroviral. Para o estudo longitudinal foram incluídos pacientes com diagnóstico de HIV, maiores de 18 anos e virgens de tratamento medicamentoso de antirretrovirais, atendidos no serviço ambulatorial de Imunologia do Instituto Magalhães Neto e no Centro Estadual Especializado em Diagnóstico, Assistência e Pesquisa – CEDAP na cidade de Salvador, Bahia. A avaliação da funcionalidade foi realizada através da mensuração da função pulmonar com a espirometria, a mensuração da força muscular através da dinamometria de preensão palmar e a capacidade aeróbica, através da aplicação do teste de caminhada de seis minutos. A incapacidade foi avaliada através do questionário WHODAS 2.0 da Organização Mundial de Saúde. A qualidade de vida relacionada à saúde foi avaliada utilizando o questionário SF-36. No total foram avaliados 40 pacientes com uma média de idade de 35,5 ± 10,4 anos. Nos pacientes virgens de terapia antirretroviral foi identificada uma redução da funcionalidade e da qualidade de vida relacionada à saúde. O uso da terapia antirretroviral por seis meses foi associado com um incremento significativo da funcionalidade, a redução do nível de incapacidade e o aumento da qualidade de vida relacionada com a saúde

2. INTRODUÇÃO

O vírus da imunodeficiência humana (HIV) infecta células do sistema imunológico. A infecção provoca uma deterioração progressiva do sistema imunológico, levando ao que se chama “deficiência imune". Considera-se que o sistema imunológico é falho quando não pode mais cumprir o seu papel de combate às infecções e doenças [1]. A síndrome da imunodeficiência adquirida (AIDS, do inglês *acquired immunodeficiency syndrome*) é causada pelo vírus da imunodeficiência humana (HIV, do inglês *human immunodeficiency virus*). O HIV é um retrovírus com genoma RNA pertencente ao grupo dos retrovírus citopáticos não oncogênicos, que causa imunossupressão profunda e consequente quadro de infecções oportunistas, neoplasmas secundários e distúrbios neurológicos [2].

O número de pessoas vivendo com HIV tem aumentado nos últimos dez anos. Foi informado pela Organização Mundial de Saúde que, em 2015, 36,7 milhões (34 milhões - 39,8 milhões) de pessoas viviam com AIDS. Em junho de 2016, 18,2 milhões [16,1 milhões-19,0 milhões] de pessoas que vivem com AIDS tinham acesso à terapia antirretroviral altamente ativa (HAART). De dois milhões de pessoas que viveram com AIDS na América Latina, 50% (um milhão) são pessoas maiores de 15 anos e têm acesso ao HAART [3]. O Brasil tem uma média anual de 41,1 centenas de casos de AIDS nos últimos cinco anos. Entre 2007 e 2015 foram notificados 136.945 casos de infecção pelo HIV. Em 2016 a maior quantidade de casos de infeção pero HIV (2.381 casos) foi notificada na faixa de 20-24 anos [4].

De acordo com Reis et al., apesar da elevada taxa de mortalidade no país, um fato que merece destaque é a queda da mortalidade por AIDS no Brasil a partir de 1996 e a desaceleração de sua tendência de crescimento nos últimos três anos. [5] Essa redução reforça a necessidade de aumento do acesso ao diagnóstico precoce e à assistência e melhoria da qualidade da atenção de quem vive com HIV/AIDS, para um controle ainda mais efetivo da epidemia.

Desde 1996 a terapia antirretroviral deu um salto de qualidade com a inclusão dos inibidores da protease, iniciando o advento da terapia antirretroviral de alta

atividade, conhecida como HAART (‘highly ative antiretroviral therapy’). Esse avanço permitiu a redução da morbidade, da mortalidade e afecções oportunistas em cerca de dois terços. Contudo essa terapia vem sendo associada com quadros de depressão, fadiga, náusea e ansiedade [6,7], além do desenvolvimento de lipodistrofia e dislipidemia que aumentam os riscos cardiovasculares [8,9,10].

Outro fator relevante que deve ser considerado em relação ao aumento da sobrevida é a cronificação, pelas incapacidades geradas e a redução da qualidade de vida dos sobreviventes. Pacientes vivendo com HIV/AIDS apresentam uma variedade de alterações funcionais que comprometem a estrutura e função corporal, a execução de atividade ou tarefas e a participação desses indivíduos na sociedade.

A perda de massa muscular associada a prejuízos de função, a resistência insulínica e outras complicações do HIV podem ser mudanças que inicialmente não sejam percebidas. Desordens neuromusculares são comuns em pacientes com HIV, podendo acontecer a presença de polineuropatia simétrica distal ou a síndrome da fraqueza neuromuscular associada ao HIV· [11,12,13]. Esse fenômeno diminui a força e resistência musculares e induz ao declínio do nível de atividade física pelos portadores de HIV [14,15].

Quando os sistemas energéticos não conseguem fornecer energia suficiente para o metabolismo os indivíduos apresentam insuficiência aeróbica, gerando intolerância à atividade física, podendo resultar em limitação funcional e incapacidade. Estudos demonstram que a capacidade aeróbica, mensurada pelo consumo de oxigênio máximo (VO2max), está diminuída tanto em adolescentes quanto em adultos vivendo com HIV [16,17,18].

Fatores complicadores, como fraqueza muscular, distúrbios de consumo de oxigênio e neuromusculares, associados com a fadiga, interferem diretamente na capacidade aeróbica e desempenho funcional, limitando a capacidade das pessoas em realizarem suas atividades de vida diária (AVDs) e atividades de vida instrumentais (AVIs), atividades estas que definem a independência dos indivíduos e impacta no nível de saúde física e mental.

A qualidade de vida relacionada à saúde é um conceito referido às percepções do indivíduo sobre o impacto da doença e do tratamento nos aspectos físicos, psicológicos e sociais. A qualidade de vida relacionada com a saúde especifica a percepção do indivíduo sobre a sua saúde física e mental, que pode ser afetada por uma condição de saúde. [19]

Todos os aspectos antes mencionados, junto com as estatísticas que acompanham a infecção pelo vírus de HIV, permitem identificar uma necessidade na descrição e análise das condições de saúde e da qualidade de vida desta população. Neste sentido, é importante definir possíveis riscos e estabelecer procedimentos que, baseados na promoção da saúde, melhorem o nível de saúde e procurem o bem-estar do paciente, além de melhorar a relação custo-efetividade do acompanhamento desta enfermidade pelo sistema de saúde.

A participação do fisioterapeuta como profissional da área da saúde, expert em movimento e funcionalidade, na equipe que acompanha os pacientes que iniciam a terapia antirretroviral é fundamental, já que pode intervir na prevenção de doenças secundárias ou associadas ao HIV. Desta maneira, o objetivo do tratamento fisioterapêutico para pacientes portadores do vírus HIV se baseia na minimização dos efeitos deletérios e das complicações decorrentes da evolução da doença, assim como a promoção da saúde, a adaptação das limitações para o desempenho das atividades da vida diária de forma independente maximizando o bem-estar e a qualidade de vida desta população [21,22].

Com o intuito de aprofundar nas necessidades referentes à qualidade de vida e participação social dos pacientes que consomem antirretrovirais e as consequências na sua funcionalidade, com a finalidade de contribuir na melhoria da atenção médica, esta pesquisa teve como objetivo identificar se a terapia antirretroviral é eficaz na funcionalidade, incapacidade e qualidade de vida relacionada à saúde de pacientes com HIV.

3. OBJETIVOS

OBJETIVO GERAL

Identificar se a terapia antirretroviral é eficaz na funcionalidade, incapacidade e qualidade de vida relacionada à saúde de pacientes com HIV.

OBJETIVOS ESPECÍFICOS

1. Avaliar a funcionalidade, incapacidade e qualidade de vida relacionada à saúde em pacientes com HIV virgens de tratamento.
2. Identificar os principais instrumentos e domínios de avaliação da qualidade de vida relacionada à saúde de pacientes com HIV.

4. RESULTADOS

4.1 Artigo n °1

Evaluating health related quality of life in HIV patients: a systematic review.

CLINICS

Artigo á submeter

ABSTRACT

Purpose. To evaluate the impact of HIV disease on the Health-Related Quality of Life, focusing on assessment tools, the domains more used for this evaluation and identification of gaps in the literature. *Methods*. A systematic review was performed by two independent reviewers. The sources used in this review were PubMed Central Ovid MED- LINE (1950 to October 2016), CINAHL (Cumulative Index to Nursing and Allied Health, 1982 to October 2016), EMBASE (1980 to October 2016), and PEDRO for original research articles. *Results*. Was found 225 articles and included 20 The WHOQOL-BREF was the more used questionnaire to evaluate the impact of HIV on the Health Related Quality of Life. Patients had a low QoL on baseline, this score increase over time and with use of antiretroviral therapy. The physiological health and independence level were the domains with less lower scores. *Conclusion*. Choosing a specific QoL test to evaluated HIV patients may be related with data collect strategies. Patients had a low QoL in the beginning of antiretroviral treatment, this score increase over time (at 6 moths follow-up) and remain high at 12 month.

INTRODUCTION

Health Related Quality of Life (QoL) has become an important outcome variable to evaluate the changes in physical, mental health and social relationships of HIV-infected patients. It has been used as a predictor of other clinical outcomes, including adherence to treatment. [1] Identifying the factors driving quality of life and mental health is an important step that can impact patient´s outcomes Some studies suggest that the 'acceptance' of HIV diagnosis may facilitate processing the emotional and HIV-related information. [2,3]

There are several tools currently used to evaluate QoL in HIV-infected people. The available data suggest that it is important to define the best instrument to evaluate QoL in a specific population, In addition, it is important to include such kind of evaluation as a regular way to measure effectiveness of health interventions in the management of these patients. [4,5] This systematic review aimed to evaluate the impact of HIV disease on the Health Related Quality of Life. In this review, we, focused on assessment tools, the principal domains used for this evaluation, and in the identification of gaps in the HRQoL literature .

METHODS

We performed a computer-based search, querying PubMed Central Ovid MED- LINE (1950 to October 2016), CINAHL (Cumulative Index to Nursing and Allied Health, 1982 to October 2016), EMBASE (1980 to October 2016), and PEDRO for original research articles. The Medical Subject Headings (MeSH) were used as search terms when available. The keywords used were: HIV infections, AIDS, HIV/AIDS, antiretroviral therapy, quality of life, health-related quality of life, life expectancy and

health status. These keywords were combined with a variety of MeSH terms to delimit study relevance.

We included studies on HIV-1-infected adults (18 years and older), under stable antiretroviral therapy (ART) who underwent HRQoL evaluation. It was excluded interventional studies or those that used psicometrical quality test of QoL. The inclusion criteria for the articles were: articles that included the selected keywords/MeSH on title, and articles that provided in the abstract a relevant information about keywords. The third criteria were articles that had specific outcomes about quality of life in HIV infected patients that were evaluated by standard tests and domains. The articles selection was performed by two researchers, and articles were included in the review only when both of them agreed the selection criteria were fulfilled (Table 1).

For the content analyses we extracted information about which tests were used for evaluation of quality of life, the domains and outcomes evaluated, number of patients, year of publication, country of search and type of study.

RESULTS

The search strategy identified 225 articles, 138 was excluded , and 20 papers met entry criterion according to reviewers. (Figure 1). From the 20 selected studies included in our review, all of them were in English. Most (14) of the studies had a cross-sectional design), followed by cohort studies (four studies) and clinical trials (two studies). All cohort studies had a 3 and 6 month follow up.

The number of participants per study ranged from 63 to 4685 patients. The average age was 40,09 years (32,7 to 47,5 years) and the average disease duration (presented in 13 studies) was 6,75 years (1 to 13,9 years).

Evidence of the included studies indicates that patients on ART had better QoL score in comparison with HIV patients without ART treatment, likewise intervention to inform about rights and health care on the beginning of treatment can improve the QoL. Some studies conclude that the type of ART treatment doesn't influence the QoL. The sociodemographic variables associated to the QoL were gender, employment, socioeconomic status and educational level. Depression is a strong predictor to have less QoL and high risk of adherence at ART treatment. The women have less QoL than men. The Table 2 summarizes the main characteristics and results of studies included in this review.

The World Health Organization Quality of Life - Abbreviated version (WHOQOL-BREF) was the most frequently applied HIV-specific HRQoL questionnaire (it was used in 8 studies). The Medical Outcomes Study HIV Health Survey Questionnaire (MOS-HIV) was used in 6 studies, followed by the Short Form- 36 (SF-36) that was used in 2 studies and thus it was the most common generic HRQoL questionnaire. Other generic questionnaires applied were the Short Form- 12 Health Survey Version 2 (SF-12v2) (used in 2 studies), the visual analog rating scale of health-related quality of life, the World Health Organization Quality of Life (WHQOQOL), the HIV/AIDS Targeted Quality of Life, and the EuroQoL 5D 3L, which were applied once each (1).

Regarding the domains of most used questionnaires, SF36 and SF12 [26,27] have the same domains but in different formats (long and short format, respectively). The same is seen for WHOQoL-HIV and

WHOQOL-HIV BREF [28,29. Unlike all questionnaires used, the Euro QoL EQ-5D-3L [30] included domains that analyze the anxiety/depression and health distress. Finaly the HAT-QoL [31] focused in the disclosure, health and financial worries analyses. All the questionnaires include an analysis of physical health, role physical or physical functioning in relation with mobility. Finally the MOS HIV is the only QoL questionnaire that included a dimension that analyze the health transition. [32].

DISCUSSION

The available studies suggested that the QoL of HIV-infected patients is low, following a diagnosis of HIV infection, but increases over time (at 6 moth's follow-up) and remain higher than baseline at 12 month. The negative impact of a recent HIV diagnosis on QoL is more expressive in mental health, but not on physical function/physical health scores. Males had higher scores compared with females, across all domains. In addition, patients on ARV use had better scores of QoL domains than untreated patients.

The WHOQOL-BREF was the most used questionnaire to evaluate the impact of HIV on the Health Related Quality of Life. The physiological health and independence level were the domains with lower scores in all studies. These findings coincide with results of previous studies [23,22,20] that detected the physiological area in Health Related Quality of Life of patients with HIV as the more affected domain. The only questionnaires that compare domains of specific and nonspecific test for patients with HIV, are MOS-HIV, SF36 and SF12. They have in common domains that evaluate mental health, physical role, and social functioning. These domains of QoL are specific for HIV patients, and an

evaluate mental and physical functioning, level of independence, environmental health and concerns.

The choice of a specific QoL questionnaire to evaluate HIV patients may be related with data collection strategies. For instance it is important to consider the decision about self-administered questionnaires, because the complexity of some questions can induce to equivocal responses. [13]. Likewise, if one have a special focus or interest on patient concerns HAT QoL test would be the preferred choice, while if the interest is on Physical and Mental Health, the most appropriate tests would be MOS-HIV on functioning and WHOQOL-HIV BREF or the extended version WHOQoL-HIV on.

Some limitations of this study it's the lack of information in QoL for European countries, specifically in German and France and for countries of Central America. In addition, the small number of papers using each instrument, limits the reach of our conclusions. However, this work provides information on the most used tools for evaluation of QoL in HIV patients, and may help us to understand the characteristics of each one, as well as, how to choose the best instrument for use in that specific population.

In the present study, we found that the WHOQOL-BREF was the more used questionnaire to evaluate the impact of HIV on the Health Related Quality of Life. The physiological health and independence level were the domains with lower scores in the included studies. We could see that the choice of a specific test to measure QoL in HIV patients may be related to the selected data collection strategy, and that HIV diagnosis seems to impact the mental domain of QoL, but there is a progressive recovery of QoL over time, specially among patients receiving ARV

treatment. Identifying other factors associated with a better QoL in such patients may be an important task to optimize the benefits of ARV treatment.

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TABLES AND FIGURES

Table1. PICO for the study

Participants	HIV infected adults
Intervention	Antiretroviral therapy
Comparisons	Different groups with ART, Different methodological research
Outcomes	Specific outcomes about QoL in HIV infected patients that make an evaluation through test and domains
Study Design	cross sectional, longitudinal, case-control,

Figure 1. Flow diagram selection of studies for inclusion in the systemat

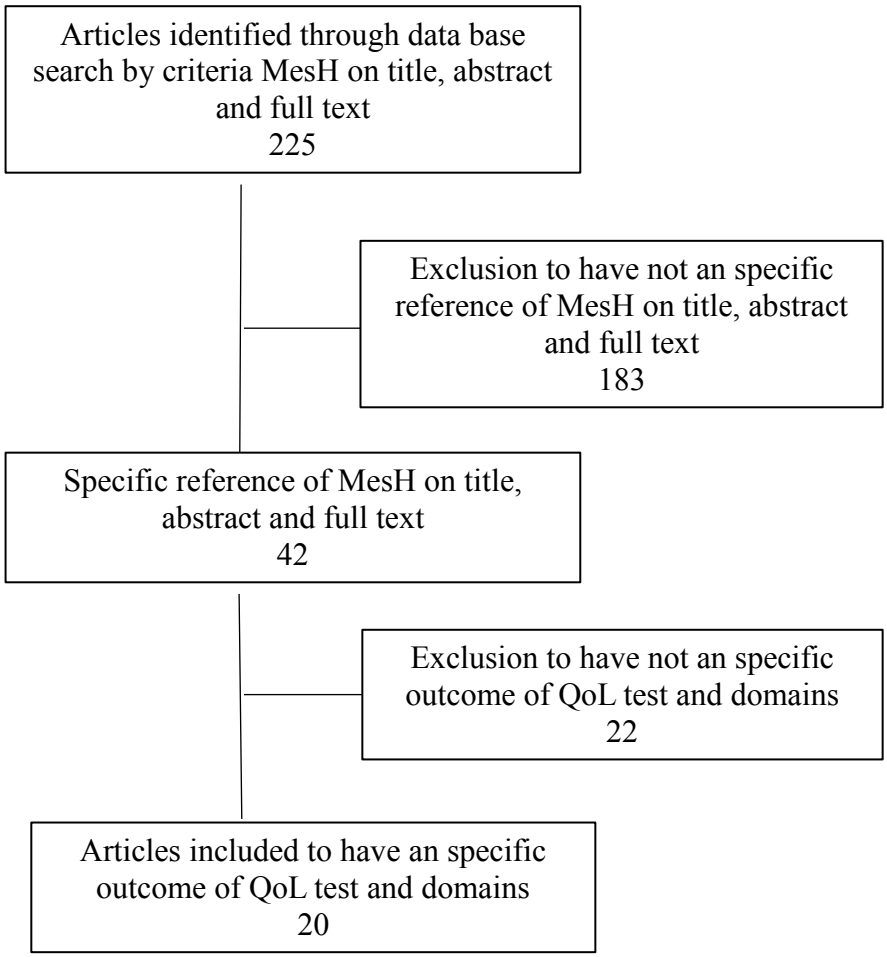

Table 2. Characteristics of the outcomes and results of teste and domains of QoL

Study	**Type of Study**	**Sample /Age / Sex/ Disease duration/CD4 T cell counts**	**Test and Domains**	**Outcomes about Quality of life**
Newville et al., 2014. United States. [6]	Controlled trial	295 HIV-infected adults / 47.5 years/ 68% male; 13.9 years of HIV; 492.4 cells/mm3	MOS-HIV*. Domains: general health perceptions, physical functioning, role functioning, pain, social functioning, mental and health transition.	The low quality of life scores was for role functioning, and the best was for health distress.
Bengtson et al., 2015. United States [7]	Controlled trial	115 HIV infected adults /44 years/ Male 69.3%/ 11.6 years of HIV / 616 cells/mm3	SF-12V2**. Domains: general health, physical functioning, bodily pain, physical role limitation, emotional role limitation, mental health, vitality and social functioning. Two principal domains: the Physical Health Component Summary (PCS) and the Mental Health Component Summary (MCS).	The overall physical QoL had worst score than Mental QoL the difference was an average of 4.01 points higher.

Costa et al., 2016. Portugal [8]	Cross-sectional	152 HIV infected adults/ 41,78 years/ Male 71,7%/ 9,34 years of HIV diagnosis / >500 cells/mm3	SF-36***. Domains: Physical Functioning, Role Physical, Bodily Pain , General Health, Vitality, Social Functioning, Role Emotional and Mental Health. Two components: the physical component and the mental component.	The low score was on general heath and mental health (above 50) and the best score were for Physical Functioning and bodly pain.
Karkashadze et al., 2016. EE UU [9]	Cross-sectional	201 HIV infected adults / 40.3 years/ Male 72.1%/ 2.9 years of HIV diagnosis/ 358.5 cells/mm3	WHOQOL HIV-BREF****. Domains: physical health (4 items), psychological well-being (5 items), social relationship (4 items), environmental health (8 items), level of independence (4 items), and spiritual health (4 items). There are two items that examine general quality of life.	The best mean was observed for social relationship and spirituality domain and worst mean domain was observed for level of Independence domain.
Yang e al., 2016. Cambodian [10]	Cross-sectional	150 HIV infected adults / 40 years; Female 51.3% / 10 years of HIV / ≥350 cells/mm3	WHOQOL HIV-BREF	Best global score of quality of life had found in female, less than 40 years old, secondary as a level of education, recent WHO clinical stage Stage I or II and have non self-perception of depression or unhappiness. A lower level of QoL had no relation with time of HIV diagnosis.

Mafirakureva et al,.2016. Zimbabwe [11]	Cross-sectional	257 HIV infected adults / 39.7 years / Female 72.0% /average disease duration undescribe; 343 cells/mm3	HAT-QoL*****. Dimensions: overall function, disclosure worries, health worries, financial wories, life satisfaction, and EQ-5D-3L****** dimensions: mobility, self-care, usual activities, pain/discomfort and anxiety/depression. The second part was a visual analogue scale (VAS) ranging from 0 to 100, from which participants were asked to estimate their QoL score	On HAT-QoL the lowes scores were observed for financial worries and sexual function. The high scores were observed for HIV Mastery and medication worries. The EQ-5D Index and the visual analogue scale (VAS) had high mean than the majority HAT-QoL domain scores.
Gomes et al.,2015. Brazil [12]	Cross-sectional	63 HIV infected adults / 43.1 years / Male 53,96% / 5 years of HIV / 539.7 cells/mm3	SF-36	The domains of SF-36 that had lower values were pain, vitality, general health and mental health.
Khakha et al., 2015. India [13]	Cross-sectional	200 HIV infected adults / 39,8 years; Male 76%/ 5 years of HIV / Average CD4 T cell counts undescribe	WHOQOL HIV-BREF	The lowest QOL was seen in social relations. The more impact domains of QoL including physical and emotional well-being, social support systems, and life roles.

Yathiraj et al., 2015. India [14]	Cross sectional	356 HIV infected adults / 45 years / Male 62.9% / Average disease duration undescribe/ 400,5 cells/mm3	WHOQOL) HIV-BREF	Physical domain of QOL showed the best score and social relationship domain showed the lowest score.
Verolet et al., 2015. Switzerland [15]	Cross sectional	194 HIV infected adults / 50 years /male 54,6% / 17 years of HIV diagnosis / 569 cells/mm3	EQ-5D-3L	In this study the QoL score don´t exceed the mean normalized. Women were more likely to score lower on quality of life than men
Mekuriaabc et al., 2015. Etopía [16]	Cross-sectional	664 HIV infected adults / 37.6 years/ female 63,6%/ 2,75 years of HIV diagnosis / 150 cells/µL	WHOQOL HIV-BREF	The worse domain score was social domain e psychological domain. The high score was for spiritual domain and physical domain.

Lifson et al., 2015. Regions of the world were grouped into six categories: Africa, Asia, Europe and Israel, North America, Australia, and South America and Mexico. [17]	Cross sectional	4685 HIV infected adults / 36.8 years / Female 945/ 12 months of HIV diagnosis /651 cells/μL	SF-12V2 and VAS*******	For the SF12, the lowest score was vitality/energy domain, high score was for Physical functioning domain. In this study Physical Health Component Summary (PCS) and Mental Health Component Summary (MCS) had a low score, MCS didn´t exceed the mean normalized score. VAS current state of health had a high score.
Tesfay et al., 2015. Ethiopia [18]	Cross sectional	494 HIV infected adults / 37,6 years/ Females 50,6%, / Average disease duration undescribe/ 150 cells/mm3	WHOQOL HIV-BREF	Perceived health related quality of life was highest in the domain spiritual/religious/personal belief and the lowest social relationships domain
Li et al., 2015. China [19]	Cross-sectional	114 HIV infected adults / 39 years / Male 71.1% / 28 months of HIV diagnosis / 142 cells/mm3	MOS-HIV********	The mean of QoL in this study was 62.94.

Feng et al., 2015. Taiwan [20]	Cross sectional	200 HIV infected adults / 32.7 years/ Male 96% / Average disease duration undescribe/ 256,106 cells/L	WHOQOL HIV -BREF	The domain with less score was psychological, the high score was Physical domain.
Klug Passos et al., 2015. Brazil [21]	Cross-sectional	625 HIV infected adults / 42 years / Female /13 months of HIV diagnosis / 350	WHOQOL HIV-BREF	In this study the independence level and environmental domain had the worst score. The best score for female was social relationship domain and for male was Spirituality/Religiousness/Personal beliefs domain.
Mutabazi-Mwesigire et al, 2015. Uganda [22]	Prospective cohort study.	1159 HIV infected adults / 33.6 years / 71% Famale/ Average disease duration undescribe; / 417.5 cells/µl	MOS-HIV	Global Person Generated Index Score had best score than Mental and Physical Health Score all over the time. Mental Health Score had better scores at baseline and at 6 month follow up.
Ezeamama et al., 2016. Uganda [23]	Prospective Cohort Study	366 HIV infected adults / 30 to 39 years/ Female 69.2%, / Average disease duration undescribe/ 148.9 cells/mL	MOS-HIV.	The subjectively rated health declined patients with stigmatizing events, depression and anxiety. The greatest improvement of QoL occurred between baseline and 6 months.

Mwesigire et al., 2015. Uganda [24]	Prospective Cohort Study	1159 HIV infected adults/ 30 years / Female 71%/ Average disease duration undescribe / 396 cells/µL.	MOS-HIV and GPGI*********. For GPSCI areas of their life they feel are most important to their overall QoL.	The QoL domains who increase over the time was Physical Health, Role Function, Social Function and Health Distress and the domains that a decrease mean over time was on Pain, Mental Health, Vitality Quality of life Health Transition domains.
Mwesigire et al, 2015. Uganda [25]	Prospective Cohort Study	640 HIV infected adults/ 33,2 years / Famale 65,62%/ Average disease duration undescribe/ 175 cells/µL	MOS-HIV and GPGI	Physical health summary and mental health summary increase at six months as same as GPGI. The mean of Mental Health Summary increase of 1.04 MHS at the three-month visit compared with the baseline visit GPGI had high scores tan MOS-HIV.

*Medical Outcomes Study HIV Health Survey (MOS-HIV).

** Short-Form 12-Item Version 2 Health Survey (SF-12V2)

***Medical Outcomes Study 36-Item Short-Form HealthSurvey (SF36)

****World Health Organization quality of life (WHOQOL) HIV-BREF

*****HIV/AIDS-Targeted Quality of Life (HAT-QoL)

4.2 Artigo n°2

Functioning profile, disability and health-related quality of life in Antiretroviral - Naive HIV-infected patients.

AIDS Research

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Keyword:	HIV, HIV clinical outcomes research, antiretroviral therapy
Manuscript Keywords (Search Terms):	Antiretroviral therapy, HIV infection, Quality of life, Disability

FUNCTIONING PROFILE, DISABILITY AND HEALTH-RELATED QUALITY OF LIFE IN ANTIRETROVIRAL-NAIVE HIV-INFECTED PATIENTS.

Short title: Functioning and quality of life in HIV

Artigo Submetido para revista AIDS RESEARCH AND HUMANS RETROVIRUSES

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Key-words: Antiretroviral therapy, HIV infection, quality of life, Disability.

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ABSTRACT

There is a need of understanding functioning and disabilities experienced by antiretroviral-naive HIV-infected patients. This study investigates the functioning profile, disability and health-related quality of life of antiretroviral-naive HIV-infected patients. The patients were evaluated for functional profile (pulmonary function, muscle strength and aerobic capacity) and disability (activity limitations and participation restrictions). Health-related quality of life was assessed by using Short Form-36 (SF-36). A total of 61 patients with mean age of 35.5 ± 10.4 years was evaluated. The values of pulmonary function, muscle strength and aerobic capacity were significantly lower than expected values. Thirty-eight percent of participants did not score on the disability scale at all. The most impacted disability domains were participation, getting along with others, cognition and life activities. Functioning and health-related quality of life were reduced. Untreated HIV infection impairs the functioning and health-related quality of life.

Disabilities, activity limitations and participation restrictions, have effects on the functioning and health-related quality of life of HIV-infected patients.[1] HIV infection causes complex changes on the body and can be expected to have a marked impact on the functioning of individuals in everyday life. Individuals living with HIV can experience difficulty in all three categories of disability (impairments, activity limitations, and participation restrictions).[2]

The few existing studies suggest that disability is a potential risk for HIV-infected patients.[3] Measuring functioning profile, disability and health-related quality of life in such patients is important for understanding health status. Disability is a predictor for adverse health-related outcomes.[4] Identifying the functioning profile and disabilities of the HIV-infected patients may ensure that health care professionals, provide appropriate intervention. However, few studies have described functioning and health-related quality of life of antiretroviral-naive HIV-infected patients. Moreover, as far as we know, there is no published studies on disability among HIV-infected patients, in South America. Our objective was to determine the functioning profile, disability and health-related quality of life prior to initiation of antiretroviral therapy in HIV-infected patients.

This cross-sectional study was conducted from February to October 2016. Antiretroviral-naive patients, of both sexes and with 18 years and older who seeked care in two AIDS reference centers were consecutively invited to enter the protocol following the signature of an informed consent. Pregnat women and patients with active opportunistic infections were excluded. Laboratory measurements consisted of: HIV-1 RNA plasma viral load and CD4/CD8 cells count. We measured weight, height, and body mass index.

Functional profile was measured through the evaluation of pulmonary function, muscle strength and functional capacity. Pulmonary function was assessed using a digital spirometer. The device recorded forced vital capacity, and forced expiratory volume in one

second. Handgrip strength was measured using a dynamometer, according to a standardised protocol of American Society of Hand Therapists. The functional capacity was evaluated by six minute walk test (6MWT). The 6MWT was performed according to American Thoracic Society guidelines in a 30-meters-long straight corridor. The values of the walk distance were compared with the predicted values in accordance with a reference equation for the walk distance (6MWDm = 622.461 - (1.846 x Age years) + (61.503 x Gender (males = 1; females = 0)).[5]

The World Health Organization Disability Assessment Schedule II (WHODAS II) 36-item questionnaire was used to assess the activity limitations and participation restrictions. This tool assesses disability in the six domains: Cognition - (6 items); mobility (5 items); self-care (4 items); getting along with others (5 items); activities at home, work, and/or school (8 items); and participation in society (8 items). The summary score ranges from 0 to 100 (where 0 indicates no disability and 100 indicates full disability).[3] We considered participants scoring 0 or 1 on the WHODAS as not experiencing activity limitations. All participants who scored more than 2 on the WHODAS, which is at least two mild/moderate or one severe/extreme limitation were considered as experiencing activity limitations.[3] Assessment of quality of life was performed by applying the 36-Item Short Form Health Survey (SF-36).

We performed statistical tests Shapiro-Wilk to evaluate normality for all variables. Student's t test or Mann-Whitney test were used. All *P* values were 2-tailed, and statistical significance was set at 0.05.

Sixty-one evaluated patients had mean age of 35.5 ± 10.4 years, BMI of 23.6 ± 4.2 $kg.m^2$, CD4 count of 409.0 ± 376.2 $cel.mm^{-3}$ and CD8 count of 1303.9 ± 932.2. The majority (70.5%) was male. The average of forced vital capacity, forced expiratory volume in one second, Handgrip Strength and 6-min walk distance was significantly lower ($P<0.01$) than

expected values according to the characteristics of the patients. Table 1 displays measured and expected values for gender.

When analyzing the activity limitation and participation by WHODAS we found that activity limitations were experienced by a large number of patients. Only 37.7% of participants did not score on the WHODAS scale at all. The most impacted WHODAS domains were participation, getting along with others, cognition and life activities. Of the 61 patients evaluated, 57.4% of patients had activity limitations for cognition domain, 44.3% had activity limitations for mobility, 27.9% for self-care, 63.9% for getting along with others and 45.9% had activity limitations for life activities domain. Fifty-nine percent of patients experienced participation restrictions.

The most impacted health-related quality of life domains were Emotional Role, Social Functioning, Mental health and physical role functioning. Our results demonstrate that both, functioning and health-related quality of life were reduced in HIV-infected patients prior to initiation of antiretroviral therapy. HIV infection affected the three categories of disability (impairments, activity limitations and participation restrictions). The values of pulmonary function, muscle strength and aerobic capacity were significantly lower than expected values. The impairments reported were consistent with the literature.

Schulz et al[6], described the impairment of respiratory muscle function in patients with HIV and Kunisaki et al[7] described the prevalence of chronic obstructive pulmonary disease in a cohort of persons living with HIV, and concluded that in young persons living with HIV and naïve to antiretroviral therapy, the overall chronic obstructive pulmonary disease prevalence was 6.8%. Ousler et al. reported that patients infected with HIV had a progressive skeletal muscle dysfunction and exercise intolerance.[8] Recently we reported a reduction in funcional capacity in HIV-infected patients receiving antiretroviral therapy.[9]

HIV- infected patients also report difficulty to perform their daily activities on a regular basis. We found that activity limitations were experienced by a large number of HIV-infected patients. Participation restrictions were reported by 59% of patients. Banks et al,[1] recently published a systematic review and conclude that HIV was linked to disabilities, affecting a range of body structures and functions. In addition, 73% of studies using an HIV-comparator found significantly lower levels of functioning in HIV-infected patients. Hanass-Hancock et al, conducted a study to investigate the experiences of disability in patients living with HIV in South Africa. Most participants described activity limitations in the domains of mobility, self-care, or domestic life.[2] The same author also described the existence of disability and related impairments, activity limitations and participation restrictions in HIV-infected patients.[3] The most impacted functioning domains in this study were participation and getting along with others, while the most impacted quality of life domains were emotional role, and social functioning. Estrada et al, assessed the health-related quality of life in a cohort of patients with diagnosis of HIV infection initiating antiretroviral therapy and reported that the most affected dimension at the beginning of antiretroviral therapy was Relationships.[10]

The complexity of managing chronic HIV requires a better understanding of disability, the integration of rehabilitation into HIV care, but also innovative strategies in prevention and identification of disability.

There are a number of limitations to our data. The lack of a control group with healthy individuals, makes impossible a more accurate comparison. However, we use reference values and national equations already established by the literature. The small sample size limits a generalization the results. Despite this, we included patients of two main reference centers in Bahia. Antiretroviral-naive HIV-infected patients presented impairments, activity limitations and participation restrictions, suggesting that HIV infection reduces functioning and health-related quality of life.

Conflict of interest: None

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TABLES

Table 1: Functioning profile of 61 Antiretroviral-Naive HIV-infected patients from February to October 2016. Salvador de Bahia, Brazil

	Measured values	Expected values
All		
Forced vital capacity	3.5 ± 1.1	4.5 ± 0.9*
Forced expiratory volume in one second	2.8± 0.9	3.7 ± 0.8*
Handgrip Strenght (Kg)	33.8 ± 11.4	40.4 ± 8.1*
6MWT (m)	399.1 ± 110.8	603.4 ± 35.3*
Male		
Forced vital capacity	3.8 ± 0.9	4.8 ± 0.7*
Forced expiratory volume in one second	3.0± 0.8	4.0 ± 0.6*
Handgrip Strenght (Kg)	38.3 ± 8.4	44.9 ± 1.7*
6MWT (m)	417.3 ± 117.4	620.2 ± 17.9*
Female		
Forced vital capacity	2.7 ± 0.9	3.3 ± 0.5*
Forced expiratory volume in one second	2.1± 0.9	2.8 ± 0.4*
Handgrip Strenght (Kg)	20.1 ± 6.2	26.7 ± 1.4*
6MWT (m)	343.2 ± 62.7	551.6 ± 22.2*

*p <0,05

4.3 Artigo n° 3

Impact of highly active antiretroviral therapy on functioning, disability and health-related quality of HIV-infected patients

Short title: antiretroviral therapy, functioning and quality of life

Brazilian Journal of Infectious Diseases

Artigo a Submeter

ABSTRACT

There is a need of understanding functioning and disabilities experienced by HIV-infected patients. Few studies are available regarding the impact of highly active antiretroviral therapy on functioning, disability and health-related quality of life of HIV-infected patients. The aim of this study was to compare the functioning and health-related quality of life before and after antiretroviral therapy of HIV-infected patients. A longitudinal study was conducted in Salvador, Brazil. HIV-infected patients were eligible for the present study if they were antiretroviral-naïve, aged ≥18 years. The patients were evaluated for functioning (pulmonary function, muscle strength, and aerobic capacity) and disability (activity limitations and participation restrictions). Health-related quality of life was assessed by using Short Form-36 (SF-36). A total of 39 patients with mean age of 35.5 ± 10.4 years were evaluated at six months.The use of highly active antiretroviral therapy was associated with a significant increase in functioning, physical and mental aspects of the health-related quality of life over a 6-month period.

Keywords: Antiretroviral therapy, HIV infection, quality of life, Disability.

Over the past three decades, the lifespan of HIV-infected patients has been greatly extended due to the development of antiretroviral therapy [1]. Apart from the substantial benefits that result from the use of antiretroviral therapy, research has recently focused how the HIV, especially given its increased chronicity, affects the functioning. [1,2] Musculoskeletal and orthopedic complications have emerged as potential results of the disease itself and/or the antiretroviral therapy treatment regimen. [3]

As life expectancy of HIV-infected patients continues to increase, their health-related quality of life is now also becoming an important issue to improve the quality of HIV patient care. [4] In addition, the evaluation of the functioning, disability and health-related quality of life of the HIV-infected patients may influence health care professionals, to ensure that they provide appropriate intervention. [5] However, few longitudinal studies, and even less recruiting HIV infection, have been conducted in Brazil. The objective of this study was to compare the functioning, disability and health-related quality of life before and after antiretroviral therapy of HIV-infected patients.

We conducted a longitudinal study. Patients were eligible for the present study if they were antiretroviral-naïve, aged ≥18 years and if they gave their informed consent to participate in the present study. Exclusion criteria included pregnancy and active opportunistic infections. From February 2016 to October 2016, the patients were evaluated in two AIDS reference centers for care of HIV-infected patients (Diagnostic Center, for assistance and research in HIV - CEDAP and

Professor Edgard Santos University Hospital - HUPES), in Salvador, Bahia. The project was approved by the Institutional Ethics Research Committee.

Background information comprised selected demographic and socioeconomic characteristics, clinical history and health-related characteristics. It was used the laboratory measurements data for HIV-1 RNA plasma viral load and CD4/CD8 cells count. It was measured weight, height, body mass index (BMI).

Functioning was measured through the evaluation of pulmonary function, muscle strength, and functional capacity. Pulmonary function was assessed using a digital spirometer with the forced vital capacity (FVC) and forced expiratory volume in one second (FEV1) measure. It Was used a disposable mouthpiece and nose clip and was used a verbal command to made a maximal inspiration after a moderate sustained expiration to recorded the lung volume and capacity. The procedure was performed three times and the result of the best test was used [6]. Handgrip strength was measured using a dynamometer. The dominant hand was positioned at with elbow flexed to 90^0, the participant was asked to squeeze the device as hard as possible for 3 seconds, the measurement was repeated two times in intervals of 30 seconds, according to the protocol of American Society of Hand Therapists. [7] The six-minute walk test was performed in a 30-m-long straight corridor, with line-marks every meter. Patients were assessed for heart rate, peripheral oxygen saturation, blood pressure, and by the Borg Scale at rest, and at the second, fourth, and sixth minutes of the test. [8].

The World Health Organization Disability Assessment Schedule II (WHODAS II) 36-item questionnaire was used to assess the activity limitations and participation restrictions. This tool assesses disability in the six domains of day-to-day functioning: Cognition - understanding and communicating (6 items); mobility (5 items); self-care

(4 items); getting along with others (5 items); life activities (8 items); and participation in society (8 items). [9] The scoring converted the summary score into a metric ranging from 0 to 100 (where 0 indicates no disability and 100 indicates full disability). [10]

Assessment of quality of life was performed by applying the SF-36 Health Survey (Medical Outcomes Study 36-Item Short-Form Health Survey). This 36-item questionnaire evaluates the quality of life in eight domains, including Physical Functioning (PF), Role Limitation Due To Physical Health (RP), Bodily Pain (BP), General Health Perceptions (GH), Vitality (VT), Social Functioning (SF), Role Limitations Due To Emotional Problems (RE) and Mental Health (MH). The eight scales were aggregated into Physical Component Summary (PCS) and Mental Component Summary (MCS) scores. The eight scales scoring was performed using the QualityMetric Health OutcomesTM Scoring Software 4.0 to obtain the 0 to 100 algorithms and respective norm-based scores. [11]

Data of continuous variables were analyzed by using measures of central tendency and dispersion, and expressed as mean and standard deviation. Categorical or dichotomous variables were analyzed by using measures of frequency. We performed statistical tests Shapiro-Wilk to evaluate normality for all variables. Student's t test or Mann-Whitney test were used to compare before and after antiretroviral therapy. Chi-square test was used to compare proportions. All *P* values were 2-tailed, and statistical significance was set at .05. All calculations were performed with Statistical Package for Social Sciences - SPSS version 20.0.

A total of 40 patients with mean age of 36.4 ± 10.4 years, BMI of 23.9 ± 4.5 kg.m2, CD4 count of 329.8 ± 196.4 cel.mm-3 and CD8 count of 1124.2 ± 717.9 were evaluated at six-month period. The majority of them were men 79.5%.

There was no significant difference of the FVC between baseline and 6-month period. At 6 months FEV1 increased by a median of 0.3 lts/sec from baseline (p=0.002). At 6 months, Tiffeneau index (relation between FEV1 / FVC) increased by a mean of 6.4 from baseline (p=0.026).

In the handgrip strength, the patients have a mean of 37.8 Kg at baseline and 40.3 Kg at 6 months. At the 6 months evaluation, the handgrip strength was significantly greater than at baseline. There was no significant difference of the 6 min walk distance between the baseline and 6 months (p>0.05).(Table1)

Overall, health-related quality of life improved significantly in the 6-month evaluation compared to baseline evaluation. At 6 month evaluation, patients had higher SF-36 score in five domains, including PF (p=0,006), RP (p= 0,011), GH (p=0,14), VT (p=0,020) and MH (p=0,007), PCS (p=0,017) and MCS (p=0,044) had statistical differences compared to baseline evaluation.

Comparing groups by sex, the women's group had systematically higher scores by mean at 6 months of ARV therapy, but there was no statistical significance. Men´s group had significant improvement on PF (p= 0,018), RP (p= 0,013), GH (p= 0, 14), VT (p= 0,035) and MH (0,033) domains of quality of life. The quality of life in the men´s group at six months of ART treatment improved on PCS (p=0,003) and MCS (0,050) when compared to the woman´s group. (Table 2)

About the incapacity measured by WHODAS was identify a significant change between the baseline (19.8±18.7) and (11. 7±14.9) at 6 months (p=0.001). At 6-month evaluation, patients had lower WHODAS score in five domains, including

cognition (p=0.004), mobility (p=0.01), self-care (p=0.015), getting along with others (p=0.004), and mental health (p=0.009) compared to baseline evaluation. (Table 1)

According to the result, early highly active antiretroviral therapy commencement was associated with a greater increase in functioning and health-related quality of life scores over 6 months. Antiretroviral therapy may improve patient-reported disability.

This study is relevant because is the first one to investigate the impact of highly active antiretroviral therapy on functioning, disability and health-related quality of life in Brazil. Antiretroviral therapy has the potential to change HIV from a terminal disease to a chronic, albeit very serious, illness. Although HIV-infected patients have increased life spans they are at increased risk of developing disabilities. [12]

In a cohort study Hanass-Hancock et al, investigated the disability and its associations with health, adherence, and livelihood indicators in two cohorts of patients who had been on antiretroviral therapy for six months or longer. They concluded that disability is potentially experienced by a large portion of people on antiretroviral therapy in southern Africa which impacts health and antiretroviral therapy adherence negatively. [10]

Quality of life is an important antiretroviral treatment outcome being used also as an important indicator of the efficacy of antiretroviral therapy. Although antiretroviral therapy results in clinical improvement, the ultimate goal of treatment is full physical functioning and general well-being, with a focus on the quality of life rather than clinical outcomes. [13]

Consistent with previous research, our findings showed that antiretroviral treatment was associated with an increase of quality of life. [14,15] Jin et al, published a systematic review that included cohort studies of the quality of life of

people living with HIV/AIDS after combination antiretroviral therapy. Eight cohort studies were included. Of these, seven studies reported quality of life had improved after initiation of antiretroviral therapy in HIV-infected patients, especially at the beginning of the treatment. [15]

The 6 month follow-up for chronic illness may be rather short; a longer follow-up time is recommended. This was not a randomized study, and viral load testing could have enriched this study as a more accurate measure of disease burden. This study showed low cases of adverse events, although we did not examine the relationship between adverse events and QoL. Results from a qualitative sub-study of this population revealed minimal interference with QoL related to side effects.

To our knowledge this is the first study to make a follow-up in treatment-naive ARV, focusing analyses in functioning and to compare this parameter with QoL and disability. It is possible to establish, due to a 6 month follow-up of 40 patients, that ARV treatment improved the functioning, capacity and related quality of life scores.

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TABLES

Table 1. Comparative analise functioning, disability, and quality of life of 40 patients baseline vs 6-moths before start ARV. Salvador, Bahia, Brazil

Functioning, Disability, and Quality of life n=40	**Baseline (mean ± SD)**	**6 months (mean ± SD)**
Functioning		
FVC (lts / sec)	3.6 ± 0.9	3.7 ± 0.8
FEV1 (lts / sec)	2.8 ± 0.9	3.1 ± 1.0*
TIFFEAU (FEV1 / FVC)	78.6 ± 13.7	85 ± 17.4*
Handgrip Strength (Kg)	37.8 ± 11.3	40.3 ± 10.5*
6WMT (m)	407.5 ± 116.6	421.1 ± 84.5
SF-36 Domains		
Physical Functioning (PF)	46,33 ± 12,78	52,10 ± 9,98*
Role Physical (RP)	43,86 ± 13,18	49,34 ± 11,03*
Bodily Pain (BP)	52,15 ± 12,34	54,92 ± 11,34
General Health (GH)	46,74 ± 11,14	50,39 ± 10,06*
Vitality (VT)	50,88 ± 12,60	55,79 ± 10,8*
Social Functioning (SF)	43,29 ± 13,68	46,14± 11,09
Role Emotional (RE)	39,80 ± 13,70	43,49 ± 13,70
Mental Health (MH)	42,77 ± 15,12	48,00 ± 12,00*
Physical Component Summary (PCS)	50,21 ± 13,00	54,21 ± 9,69*
Mental Component Summary (MCS)	41,68 ± 13,80	45,64 ± 12,05*
Incapacidade WHODAS 2.0 Domains		
Cognition	21.0 ± 25.1	12.1 ± 20.6*
Mobility	15.9 ± 24.4	9.8 ± 18.9*
Self-care	9.9 ± 17.7	3.5 ± 9.1*
Life Activities	18.4 ± 23.0	9.5 ± 19.3*
Getting Along	25.5 ± 21.6	13.5 ± 20.4*
Participation	27.8 ± 22.0	22.0 ± 17.2
WHODAS 2.0 total	19.8 ± 18.7	11.7 ± 14.9*

*p<0.05 Baseline versus 6-months statistical significance

Table 2. Comparative analise of quality of life ased no SF 36 domains of 40 patients baseline vs 6 moths before start ARV. Salvador de Bahia, Brazil

Domains SF-36 n=39	**Woman n=8 mean ± DP**		**P Value**	**Man n=31 mean ± SD**		**P Value**
	Baseline mean ± SD	6 month ARV mean ± SD		Baseline mean ± SD	6 month ARV mean ± SD	
Physical Functioning (PF)	37,21 ± 15,81	41,41 ± 17,93	0,117	49,86 ± 10,77	54,78 ± 3,9	0,018*
Role Physical (RP)	37,67 ± 12,50	40,32 ± 14,01	0,549	45,41 ± 13,07	51,59 ± 9,08	0,013*
Bodily Pain (BP)	43,69 ± 18,65	46,42 ± 18,41	0,544	54,26 ± 9,48	57,04 ± 7,8	0,116
General Health (GH)	43,92 ± 12,14	46,55 ± 8,90	0,532	47,45 ± 10,96	51,35 ± 10,23	0,014*
Vitality (VT)	43,72 ± 14,90	47,27 ± 14,41	0,374	52,67 ± 11,54	57,92 ± 8,83	0,035*
Social Functioning (SF)	38,81 ± 15,60	39,49 ± 17,82	0,836	44,41 ± 13,19	47,80 ± 8,3	0,148
Role Emotional (RE)	38,22 ± 15,86	42,17 ± 14,62	0,476	40, 19 ± 13,36	43,81 ±13,20	0,169
Mental Health (MH)	36,52 ± 19,29	29,93 ± 15,82	0,597	44,33 ± 13,82	50,01 ± 10,18	0,003*
Physical Component Summary (PCS)	41,87 ± 14,53	44,69 ± 13,86	0,264	52,30 ± 11,94	56,59 ± 6,7	0,033*
Mental Component Summary (MCS)	39,03 ± 15,50	41,81 ± 14,02	0,587	42,34 ± 13,60	46,59 ± 11,56	0,050*

5. CONCLUSÃO

A revisão de literatura possibilitou concluir que o teste usado com maior frequência para a avaliação da qualidade de vida relacionada com a saúde é o WHOQOL-BREF, e a metodologia mais usada para a análise da qualidade de vida relacionada com a saúde são os estudos cross-seccional ou transversais. No início da terapia antirretroviral os pacientes apresentam diminuição da qualidade de vida e logo após três meses de tratamento apresentam um incremento que se mantém depois do sexto mês de tratamento medicamentoso.

Com os resultados da avaliação transversal pode ser concluído que antes de iniciar a terapia antirretroviral os pacientes têm os valores da função pulmonar, força muscular e capacidade aeróbica significativamente baixos. Dos 61 pacientes avaliados 95% experimentaram restrições na participação, assim os domínios mais impactados foram participação, capacidade para ficar só com outras pessoas, cognição e atividades da vida. Na qualidade de vida os domínios mais impactados foram aspectos emocionais, aspectos sociais, saúde mental e capacidade funcional.

Os resultados do acompanhamento dos pacientes envolvidos neste estudo, ao final de seis meses, depois de iniciarem a terapia antirretroviral, evidenciam melhores índices de funcionalidade, incapacidade, qualidade de vida relacionada à saúde de pacientes com HIV, quando comparados aos do início do tratamento antirretroviral.

6. CONSIDERAÇÕES FINAIS

No o nosso conhecimento esta pesquisa é a primeira que envolve três aspectos de avaliação da funcionalidade (força, capacidade respiratória e função pulmonar) numa única avaliação. Também, nossa pesquisa é a primeira que inclui avaliação de deficiência com o questionário Whodas 2.0 em pacientes com HIV. A nosso ver, este tipo de avaliação permite identificar metas de promoção da saúde no paciente e a prevenção de enfermidades crônicas que piorem seu estado de saúde e coloquem em risco seu bem-estar. Assim, esta pesquisa contribui na identificação dos aportes que um fisioterapeuta pode fazer, desde sua área de conhecimento, na equipe de atenção e intervenção do paciente com HIV que inicia a terapia antirretroviral.

Dentro das limitações do estudo se encontra o tempo de amostragem, já que o mesmo foi de dez meses. É frequente encontrar nos acompanhamentos de pacientes com HIV um tempo de amostragem de doze a dezoito meses, com intervalos de avaliações de três em três meses. A nossa pesquisa teve uma avaliação aos seis meses, e recomenda-se um intervalo de avaliação menor para garantir o número da amostra. Recomendamos o desenho de projetos de pesquisa longitudinais que permitam fazer comparações entre estados e países.

7. PERSPECTIVAS DE ESTUDOS

É ideal que em revisões sistemáticas futuras consigam ser incluída uma análise sobre os estudos de validação de testes de qualidade de vida em diferentes países e línguas do mundo. É fundamental realizar análises comparativas que aprofundem os níveis de sensibilidade dos testes de qualidade de vida e a comparação entre países.

Recomendamos um estudo longitudinal com uma grande amostra de pacientes que iniciem a terapia antirretroviral com o intuito de confirmar a melhoria contínua da qualidade de vida que ocorre quando o tratamento é iniciado com contagens relativamente elevadas de CD4, bem como identificar a proporção de pacientes que não respondem à terapia, as possíveis causas e o processo para mudar para outro regime de tratamento.

Esperamos fazer uma ampliação da amostra desta pesquisa e conseguir orçamento para iniciar uma fase do mesmo no Estado do Chocó, um dos estados com maior registro de HIV na Colômbia, com o intuito de fazer um processo comparativo entre os resultados destas populações.

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