FACTORS ASSOCIATED WITH ADHERENCE OF HIV+ PATIENTS TO ANTIRETROVIRAL THERAPY

FATORES ASSOCIADOS À ADESÃO DOS PACIENTES HIV+ À TERAPIA ANTIRRETROVIRAL

LOS FACTORES ASOCIADOS CON LA ADHERENCIA DE LOS PACIENTES VIH+ A LA TERAPIA ANTIRRETROVIRAL

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ABSTRACT

Objective: To analyze the factors associated with adherence of HIV+ patients to antiretroviral treatment according to scientific evidence. Method: It is an integrative review study, carried out in the databases LILACS, MEDLINE and BDENF, through the descriptors: adherence to medication, antiretrovirals and HIV, in November 2016. Results: 156 publications were identified, nine of which were selected and analyzed in the study. The time between the diagnosis of HIV and the manifestation of AIDS, the manifestation of adverse drug reactions, age, schooling, use of illicit drugs, depression and the imminent expectation of death are important factors that interfere in patients' adherence to antiretroviral therapy. Conclusion: It is essential to promote and strengthen the more active participation of patients in the dynamics of treatment. The health professional must understand and consider the patients' difficulties and, together with them, create alternatives for coping with and overcoming the limiting factors. Descriptors: Medication Adherence; Anti-Retroviral Agents; HIV; Public Health; Nursing.

RESUMO

Objetivo: Analisar os fatores associados à adesão dos pacientes HIV+ ao tratamento antirretroviral segundo as evidências científicas. Método: Trata-se de um estudo de revisão integrativa, realizado nas bases de dados LILACS, MEDLINE E BDENF, através dos descritores: adesão à medicação, antirretrovirais e HIV, em novembro de 2016. Resultados: Foram identificadas 156 publicações, sendo nove selecionadas e analisadas no estudo. O tempo entre o diagnóstico de HIV e a manifestação da Aids, a manifestação de reações adversas aos medicamentos, a idade, a escolaridade, o uso de drogas ilícitas, a depressão e a expectativa de morte iminente são fatores importantes que interferem na adesão dos pacientes à terapia antirretroviral. Conclusão: É primordial promover e fortalecer a participação mais ativa dos pacientes na dinâmica do tratamento. O profissional de saúde deve compreender e considerar as dificuldades dos pacientes e juntamente com eles criar alternativas de enfrentamento e superação dos fatores limitadores. Descritores: Adesão à medicação; Antirretrovirais; HIV; Saúde Pública; Enfermagem.

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RESUMEN

Objetivo: Analizar los factores asociados con la adherencia de los pacientes con VIH al tratamiento antirretroviral de acuerdo con la evidencia científica. Método: Se trata de un estudio de revisión integradora, llevado a cabo en las bases de datos LILACS, MEDLINE y BDENF a través de los descriptores: adherencia a la medicación, medicamentos antirretrovirales y el VIH en noviembre de 2016. Resultados: Se identificaron 156 publicaciones, siendo nueve seleccionadas y analizadas en el estudio. El tiempo entre el diagnóstico del VIH y la manifestación del SIDA, la manifestación de reacciones adversas a los medicamentos, la edad, la educación, el uso de drogas ilícitas, la depresión y la expectativa de una muerte inminente, son factores importantes que afectan a la adherencia del paciente a la terapia antirretroviral. Conclusion: Es esencial para promover y fortalecer la participación más activa de los pacientes en la dinámica del tratamiento. El profesional de la salud debe comprender y tener en cuenta las dificultades de los pacientes y con ellos crear alternativos de lidiar y superar los factores limitantes.

Descriptores: Cumplimiento de la Medicación; Antirretrovirales; VIH; Salud Pública; Enfermería.

INTRODUCTION

The acquired immunodeficiency syndrome (AIDS) is considered a worldwide epidemic that hit big magnitude, becoming a problem of international public health. In Brazil, it was annually recorded, in the last five years, an average of 40,600 cases of AIDS. Since the beginning of the epidemic in Brazil (1980) until June 2015, 798 366 AIDS cases were registered in the country.

However, the detection rate in Brazil has shown stabilization in recent ten years, with an average of 20.5 cases for every 100 thousand inhabitants and, when analyzing the standardized mortality rate, there has been a fall in the last ten years for Brazil.

With the antiretroviral therapy (HAART), there was a significant increase in lifetime and, consequently of the expectancy of improving the quality of life related the health.

An important aspect to be considered in health care to people living with HIV is the adhesion of patient to drug treatment. In addition to its essential role in achieving a positive outcome, such as improvement of immune status, decrease in viral load and consequent reducing of mortality rate by AIDS, adhesion depicts how these persons live and relate their daily lives with the disease and treatment.

Adhesion refers to how much the behavior of a person corresponds to the recommendations agreed with the health professional, by taking medicines, following diets and/or changing lifestyle. It is mostly a process influenced simultaneously by multiple factors, requiring a multidisciplinary and continuous approach, especially in chronic diseases.
Adherence to treatment is fundamental in improving the quality of life and decrease of the indexes of mortality; but it is now one of the biggest challenges in the care of people living with HIV/AIDS, since it demands some changes from its users, such as behavioral, diet, the use of several medications for a lifetime, besides the need, on the part of the services, of new arrangements and offers of specific activities in adherence.

As a guideline of the STD Department, AIDS and Viral Hepatitis, adhesion is a transversal theme permeating all health actions, and should be performed by all health professionals of the health services. It is also a collaborative process that facilitates the acceptance and integration of certain therapeutic regime in daily life of people in treatment, assuming their participation in decisions on it.

Thus, to understand how adhesion problems may occur, and be overcome, it is necessary to know the factors influencing this practice. It is in this context that the present study presents an integrative review, with the objective to analyze the factors associated with the adhesion of the patients HIV + to the antiretroviral treatment, according to scientific evidences, to better guide the health teams and possibly optimize this adherence.

METHOD

This is an integrative review, which consisted of six steps: selection of the question for the review; selection of the researches that made up the sample of the review; definition of the characteristics of the primary researches that comprised the sample; analysis of the findings of the articles included in the review; interpretation of the results and report of the review, providing a critical analysis of the findings.

The study was designed from the PICO strategy, wherein P = patients HIV + in antiretroviral treatment; I = adherence to drug therapy; C = not applicable; O = factors that interfere in the adherence to antiretroviral therapy; and it was guided by the following question: What are factors that interfere with the adherence to antiretroviral therapy for HIV-positive patients?

The search took place in November 2016 in the databases: Latin American and Caribbean Literature on the Health Sciences (LILACS) (Literatura Latino-Americana e do Caribe em Ciências da Saúde), International Literature on Health and Sciences (MEDLINE) (Literatura Internacional em Ciências da Saúde) and Nursing database (BDENF). The following descriptors were used: adherence to treatment, antiretroviral and HIV, in
Portuguese and Spanish, with the requisite crossings. Publications outlined by scientific articles were included, available in full, during the period from 2012 to 2016. Exclusion criteria were: researches related to children, adolescents and pregnant women.

In the selection of publications, a careful reading of the titles were conducted, followed by the abstracts, in order to confirm if they answered the guiding question of the research. Subsequently, it was carried out the reading of the article in full to confirm if they were meeting the inclusion criteria established.

After the screening and the definition of the articles that would be analyzed, an instrument elaborated by the authors themselves were completed: title, author(s), objectives, databases, journal, year of publication, method and main results.

RESULTS

After providing a crossing of the descriptors using the filters: Portuguese and Spanish idioms and 2012 and 2016 years, it was initially identified 156 publications. After reading the titles and abstracts, 53 publications were selected. Then, after full reading, some articles were excluded because they did not answer the guiding question of the study or due to repetition on databases, resulting in nine articles, which were analyzed (Figure 1).

Figure 1: Flowchart representative of the selection of the articles included in the integrative review. Rio de Janeiro – RJ, 2016.
It was observed the highest number of publications in 2013 (n=4). In 2014 and 2015, there were two publications in each year and in 2012, only one. Concerning the type of the study, seven (77.8%) publications were identified, which used the quantitative approach and two (22.2%) the qualitative one. In the quantitative approach, it was observed that of the seven articles analyzed, the majority (n=5, 71.4%) is a descriptive, cross-sectional study. Analyzing the database, eight (88.9%) were in LILACS, four (44.4%) in BDENF and one (11.1%) in MEDLINE. Four (44.4%) were in two databases (Chart 1).

Chart 1: Distribution of publications according to the author, year of publication, objectives of the study, method, database and journal. Rio de Janeiro - RJ, 2016.
<table>
<thead>
<tr>
<th>Author(s), Year</th>
<th>Title</th>
<th>Methodology</th>
<th>Database</th>
<th>Journal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silva, e colaboradores, 2015</td>
<td>Investigate factors associated to non-adherence to HAART in the first six months of treatment of patients with HIV/AIDS.</td>
<td>Quantitative, analytical, Cross-sectional.</td>
<td>LILACS</td>
<td>Cadernos de Saúde Pública</td>
</tr>
<tr>
<td>Silva e colaboradores, 2014</td>
<td>Analyze and list factors and techniques of monitoring related to the adherence to antiretroviral treatment.</td>
<td>Qualitative, integrative review of literature.</td>
<td>LILACS</td>
<td>Research journal: Cuidado é Fundamental Online</td>
</tr>
<tr>
<td>Fiuza e colaboradores, 2013</td>
<td>Evaluate the adherence to antiretroviral therapy (HAART), identifying possibilities of interventions based on the attention model to chronicle conditions.</td>
<td>Quantitative, descriptive, Cross-sectional.</td>
<td>LILACS</td>
<td>Escola Anna Nery Revista de Enfermagem</td>
</tr>
<tr>
<td>Hernández-Gómez e colaboradores, 2013</td>
<td>Determine the adherence to antiretroviral therapy in patients with HIV/AIDS</td>
<td>Quantitative, descriptive, Cross-sectional.</td>
<td>BEDENF</td>
<td>Revista de Enfermería del Instituto Mexicano del Seguro Social</td>
</tr>
<tr>
<td>Padoin e colaboradores, 2013</td>
<td>Determine the adherence to antiretroviral therapy of adults with the Human Immunodeficiency Virus/Acquired immunodeficiency syndrome seen in a university hospital in the south of Brazil.</td>
<td>Quantitative, descriptive, Cross-sectional.</td>
<td>LILACS</td>
<td>Cogitare Enfermagem</td>
</tr>
<tr>
<td>Santo e colaboradores, 2013</td>
<td>Analyze the expressions of spirituality of people with the Human Immunodeficiency Virus/Acquired immunodeficiency syndrome (HIV/AIDS) in the process of adherence to antiretroviral therapy, from its social representations about the therapy itself.</td>
<td>Qualitative, descriptive.</td>
<td>LILACS</td>
<td>Revista Enfermagem UERJ</td>
</tr>
<tr>
<td>Felix e colaborador, 2012</td>
<td>Characterize the sociodemographic and clinical profile, behavior in health, beliefs and attitudes about the disease and the treatment of women with HIV/AIDS seen in an outpatient service in a university hospital in the inner of São Paulo, as well</td>
<td>Quantitative, descriptive, Cross-sectional.</td>
<td>LILACS</td>
<td>Revista da Escola de Enfermagem da USP</td>
</tr>
</tbody>
</table>
is identify factors interfering with the adherence to antiretroviral therapy.

Fonte: A própria pesquisas (2016)

According to the objectives of the publications analyzed, seven\textsuperscript{3,8,9,11-13,15} (77.8\%) of them had as a focus to specifically study the level of adherence to antiretroviral therapy and identify the factors interfering in its adherence, while one\textsuperscript{10} (11.1\%) publication evaluated the influence of the association between the mental disorders and the family support in the adherence to treatment, and another one\textsuperscript{14} (11.1\%) tried to analyze the expressions of spirituality of people in the process of adherence to therapy from their social representations (Chart 2).

Chart 2: Distribution of publications according to the main findings. Rio de Janeiro - RJ, 2016.

<table>
<thead>
<tr>
<th>Authors/year</th>
<th>Conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moraes e colaboradores, 2015\textsuperscript{8}</td>
<td>Knowledge about HAART seems to influence adherence to treatment.</td>
</tr>
<tr>
<td>Silva, e colaboradores, 2015\textsuperscript{9}</td>
<td>The major predictors of non-adherence were: the time between the diagnosis of HIV and AIDS manifestation, the manifestation of adverse reactions to medications, age, education and illicit drug use. As a protective factor for adherence, hospitalization before starting HAART.</td>
</tr>
<tr>
<td>Camargo e colaboradores, 2014\textsuperscript{10}</td>
<td>The perception of family support showed the variable with the most significant correlations, indicating this as a facilitator factor of adherence to treatment and attenuator in terms of mental health in the context of HIV/AIDS.</td>
</tr>
<tr>
<td>Silva e colaboradores, 2014\textsuperscript{11}</td>
<td>The manifestation of adverse reactions to HAART was one of the main predictors of non-adherence. A high unemployment, or lack of fixed income (43%) and low level of education of individuals was found, which may be related to a failure in adherence.</td>
</tr>
<tr>
<td>Fiuza e colaboradores, 2013\textsuperscript{3}</td>
<td>Data from this study show that patients have not adhered to medication sometime in the treatment for feeling better (13.5%) or worse (18.7%) after taking the medication. Another factor mentioned was the state of sadness or feeling of being depressed (18.1%).</td>
</tr>
<tr>
<td>Hernández-Gómez e colaboradores, 2013\textsuperscript{12}</td>
<td>The results of this study indicate a high adherence to antiretroviral treatment and positive behaviors in adherence to treatment, but it is still important to consider that the side effects bother them very much and are very bother and are the reason for the non-adherence in half of the study population. Having used a convenience sampling is a limitation to generalize the results, but it is an important data for designing prevention and education strategies for self-care, to prevent non-adherence factors in patients with HIV/AIDS.</td>
</tr>
<tr>
<td>Padoin e</td>
<td>44.0% of adults were classified as non-adherent; of these, 17.6% stopped taking any dose of HAART for some reason; 29.3% of adults who used alcohol or drugs stopped taking</td>
</tr>
</tbody>
</table>
DISCUSSION

Several studies have tried to identify aspects of the disease, the treatment, person, team and health services that may be related to difficulties in joining the antiretroviral therapy.

Among the articles analyzed, their results show some conditions associated with insufficient adherence of people living HIV/AIDS, highlighting: the time between HIV diagnosis and the onset of AIDS, manifestation of adverse reactions to medications, age, education, illicit drug use, depression and expectation of imminent death.

The late beginning of drug therapy, associated in the study as a factor that interferes with the adherence to treatment, reveals that there are still barriers to access to diagnosis and AIDS treatment in appropriate time. The scenario found contrasts with the proposed by the Ministry of Health, which is of easy access to diagnosis, care and treatment of HIV/AIDS and deserves further investigation, being necessary efforts to identify obstacles that face patients, delaying their arrival to health services.

One identified a negative attitude present in the social representation of antiretroviral therapy expressed in difficulty imposed by adverse events of antiretroviral drugs, which makes aversive the treatment itself, making its abandonment seem like an easier and more relieving alternative.

In addition to vomiting, diarrhea, headache and drowsiness, which are the most common reactions, there are also the body changes, such as lipodystrophy, which make difficult the process of
adherence and interfere mainly in self-esteem of people living with HIV/AIDS.\textsuperscript{16}

Lipodystrophy expresses a imaging scale of the representation of the antiretroviral therapy, brings a new stigma about the disease, because it favors the discovery of the condition of seropositivity by others and impact the self-image and sexuality, which may influence the quality of the adherence and take to abandon of the treatment. It was also observed that to take the medication implies to perceive or feel yourself sick, which leads to two problems: the first is that the patient only seeks help when sick, and the second is that, after feeling well or "healed", he/she abandons the treatment again.\textsuperscript{16}

The findings regarding the association between lower education and unsatisfactory adherence allow inferring that people with few years of education have less access to information about the disease and treatment, causing insufficient understanding about the role of antiretroviral drugs and the potential loss of non-adherence. Moreover, education is commonly associated with income levels, being an indirect indicator of the socio-economic situation. In short, people who are HIV +, with lower level of education, may be experiencing worse living conditions and presence of other stressors, besides those related to seropositivity, with a negative impact on self-care and adherence to treatment.\textsuperscript{17}

An important factor verified of the reasons for not adhering to drug therapy is the lack of will to live and meaning to life, as well as lack of self-love and the fear of not surviving. These representational elements result, mainly of imagery dimension of death present in the social representation of AIDS. This association implies a negative attitude before the disease, as the people with HIV/AIDS consider death as inevitable, not finding any meaning in drug adherence.\textsuperscript{16}

Understanding these aspects hindering adherence is the first step for its management and overcoming. It is important to point out that in everyday practice of health care the difficulties of adherence should be identified and understood in each case. This is because the experience of difficulties and facilities for adherence differs from one person to another. It is in the process of listening that the specific individual contexts may be embraced by the team, favoring the proper and problem-solving approach.\textsuperscript{4}

As seen from the results of the studies, knowledge about antiretroviral therapy seems to influence adherence to treatment. In this sense, it is fundamental that the user has knowledge and
understands the disease that affects him/her and therapy goals proposed, what favors his/her motivation and willingness to follow it.

Concerning the therapeutic regimens, studies show the need to invest in simplified prescriptions, dosages easy to be remembered and the side effects to be the minimum possible. Before starting antiretroviral medication, supportive treatment to alcohol and/or illegal drugs users is suggested.⁶

Health services are seen as strategic spaces for information and implementation of interventions in the field of adherence, among which it is included availability of information on the importance of adherence and adequacy of treatment to life routine of the patient, in addition to clinical care facing the toxicity of the treatment and management of chemical dependence.

Health professionals, articulated in multidisciplinary teams, should keep in mind that to achieve an effectiveness treatment, one should try to establish an alliance with the patient. In this co-responsibility process, there is also a family and social network that directly or indirectly will contribute for the success or possible failure in the treatment.

Adherence, many times, is considered a phenomenon which is limited to the patient; however, there are several factors that affect it, including those concerning the health team, the professionals and the place where the person has his/her treatment. The patient’s embrace enables the establishment of a bond with the professionals, the staff and the health service.

Welcoming means to grasp, understand and meet the demands of the user, giving them the required attention to the implementation of actions directed to its resolubility. Thus, welcoming is the process of the user inclusion in the health service and in the medical and psychosocial care network, as the expectations and needs - perceived or not - of the patient.⁴

The studies point to the need for constant monitoring of patients, not only from the point of clinical and laboratory view, but also facing the possibility of occurrence of non-adherence and its risk factors. The focus of interventions should consider the possible psychosocial barriers and not only the factors related to the patient or treatment. The initial phase of the clinical monitoring by HIV is critical and, to create a bond with the patient, it is necessary to consider an individual
monitoring, social support and efforts of guidance on AIDS.\textsuperscript{6}

It is clear in this context that the patient cannot and should not be the single agent in the adherence process, as there is a social network, such as family, friends and professionals who influence the decision to take or not the medication. Thus, it is emphasized the need of the embracement of the individual with HIV/AIDS by the health team, as well as the development of a joint action between the multidisciplinary team and the person cared, paying particular attention to adverse effects and seeking to promote strategies in order to improve adherence.\textsuperscript{16}

It should be noted that the results found are relevant and reflect the scientific production found on databases chosen, in the period from 2012 to 2016. However, there may be limitations in the study regarding the use of exact Boolean descriptors, without considering addition of synonyms, what can restrict the search for primary studies in the bases used. Although the use of relevant databases, other bases can be added as the production in Nursing and Health, in order to expand the scope of capturing primary studies. Also, it is necessary to analyze the level of evidence of the studies produced on the subject of interest in this review. Thus, it is suggested further studies involving this issue.

**CONCLUSION**

From this study, it was observed that there are several factors that interfere with the adherence of the patient with HIV+ to the antiretroviral therapy. They are: knowledge on HAART, time between HIV diagnosis and AIDS manifestation, manifestation of adverse reactions to medications, age, education, illicit drug use, hospitalization before and after HAART onset, perception of family support, sadness or depression, feeling better or worse when using HAART and occurrence of opportunistic disease.

It is fundamental to promote and strengthen a more active participation of the patients in the treatment dynamic, since motivation to adherence to prescribed therapy is influenced by the value the patient attributes to the therapeutic regimen and its level of confidence to follow it.

One should mention the need for the professional to understand and consider the difficulties of the patients, and together with them, create alternatives to cope and overcome the limiting factors and the strategies of action of the health professionals should have as objective to sensitize these patients about the
importance of their total adherence to therapy.

With this in mind, the results of this review make possible an approach of the knowledge related to the issue, what can contribute to the performance of the health team and, in particular, the nursing team, whose professional are dedicated to the care and orientation, being able to do it in a more effective way. It is suggested further researches in this field, given its relevance and by the limitations of this review.

It is noteworthy that the nursing can be a powerful facilitating of this process, listening the patient, identifying the factors that have interfered with the adherence and, from this, develop a plan of action together with him/her. In addition to the individual assistance, educational groups can be conducted, approaching the treatment and its side effects, the importance of adherence to the improvement of immune status and the prevention of opportunistic diseases, allowing exposure of fears, doubts and exchanges of experiences among the participants.

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