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INTEGRATIVE REVIEW ARTICLE

ADHERENCE TO ARTERIAL HYPERTENSION TREATMENT IN THE PRIMARY HEALTH CARE CONTEXT: AN INTEGRATIVE REVIEW

ADESÃO AO TRATAMENTO DA HIPERTENSÃO ARTERIAL NO CONTEXTO DA ATENÇÃO PRIMÁRIA À SAÚDE: REVISÃO INTEGRATIVA

ADHESIÓN AL TRATAMIENTO DE LA HIPERTENSIÓN ARTERIAL EN EL CONTEXTO DE LA ATENCIÓN PRIMARIA DE SALUD: REVISIÓN INTEGRADORA

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ABSTRACT

Objective: to analyze the knowledge produced on adherence to arterial hypertension treatment in the primary health care context. **Method:** an integrative literature review was undertaken, using the electronic databases LILACS, MEDLINE and EMBASE, with a view to answering the guiding question <<What evidence exists in the literature about the adherence to arterial hypertension treatment in the primary health care context? >> **Results:** 32 articles were selected, mainly studies produced in the United States, published in 2012, randomized clinical trials, and mainly studies aimed at analyzing the impact of health education actions on adherence. **Conclusion:** a gap needs to be completed regarding the need for research on arterial hypertension treatment adherence among primary health care patients, showing health education as an important tool in treatment adherence. **Descriptors:** Primary Health Care, Hypertension, Patient Compliance, Public Health, Health Centers.

RESUMO

Objetivo: analisar o conhecimento produzido acerca da adesão ao tratamento da hipertensão arterial no contexto da atenção primária à saúde. **Método:** trata-se de uma revisão integrativa da literatura, utilizando-se as bases de dados eletrônicas LILACS, MEDLINE e EMBASE, com finalidade de responder a questão norteadora <<Quais as evidências na literatura acerca da adesão ao tratamento da hipertensão arterial, tendo em vista o contexto da atenção primária à saúde? >> **Resultados:** 32 artigos foram selecionados, com a predominância de trabalhos produzidos nos Estados Unidos, publicados no ano de 2012, ensaios clínicos randomizados, e, principalmente, pesquisas cujo objetivo era analisar o impacto das ações de educação em saúde com relação à adesão. **Conclusão:** há uma lacuna a ser preenchida quanto à necessidade de investigações sobre a adesão aos tratamentos da hipertensão arterial do paciente na atenção primária, que mostram a educação em saúde como ferramenta importante na adesão ao tratamento. **Descritores:** Atenção Primária à Saúde, Hipertensão, Cooperação do Paciente, Saúde Pública, Centros de Saúde.

RESUMEN

Objetivo: analizar el conocimiento producido respecto a la adhesión al tratamiento de la hipertensión arterial en el contexto de la atención primaria de salud. **Método:** se trata de una revisión integradora de la literatura, utilizándose las bases de datos electrónicas LILACS, MEDLINE y EMBASE, con objeto de responder a la pregunta orientadora <<¿Cuáles las evidencias en la literatura acerca de la adhesión al tratamiento de la hipertensión arterial en el contexto de la atención primaria de salud?>> **Resultados:** 32 artículos fueron seleccionados, con predominancia de trabajos producidos en Estados Unidos, publicados en 2012, ensayos clínicos aleatorizados, y principalmente investigaciones con objeto de analizar el impacto de las acciones de educación en salud respecto a la adhesión. **Conclusión:** hay un vacío a ser cubierto respecto a la necesidad de investigaciones sobre la adhesión a los tratamiento de la hipertensión arterial del paciente en la atención primaria, que muestran la educación en salud como herramienta importante en la adhesión al tratamiento. **Descriptores:** Atención Primaria de Salud, Hipertensión, Cooperación del Paciente, Salud Pública, Centros de Salud.

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INTRODUCTION

The World Health Organization (WHO) established principles to guide primary care in health services, among which the following are highlighted: recovery of ethical values, of human dignity, health promotion and protection, social participation, self-management of health by the patient, sustainable funding based on quality, among others.¹

The primary health care (PHC) concept disseminated by WHO is that of essential health care based on technological advances and practical methods, based on scientific evidence, socially acceptable, universally accessible to individuals, family and community, and at a cost the community and the country can maintain, in each stage of their development, promoting the self-confidence and self-determination of PHC users. It is part of the country's health system as the population's primary level of contact with the national health system, taking health as closely as possible to the place where the people live, work, and constitutes the first element of a continuous health care process.²

The diverse interpretations on the range and scope of primary health care, its conceptual complexity and the evolution of its implementation led to the use of different terms to name PHC. This fact is found in the Brazilian and international literature.³

In a recent text, WHO presents relevant aspects of primary health care since the Alma-Ata Declaration until the current context, highlighting the role of research in PHC to guarantee the quantity and quality of health services.⁴

Arterial hypertension is a disease that is easy to diagnose and its control can be effective, using prescribed pharmacological and non-pharmacological treatments. Despite the advances in the pharmacological treatment of arterial hypertension and the increased access of hypertensive patients to health services, the non-adherence to treatment remains a great challenge for PHC, as well as the control of the associated risk factors.⁵⁻⁷

Considering Systemic Arterial Hypertension (SAH) as one of the foci of primary care actions, the professionals need to base their actions on existing guidelines and consensuses on the disease. A Brazilian study showed that the number of professionals who follow the SAH guidelines is small, but that those who do use them correctly permit the prevention, adoption of healthier lifestyles as strategies to

avoid the emergence of hypertension, as well as its early detection, and to minimize damage, problems, risks and expenses.⁸

Arterial hypertension treatment adherence is defined as compliance with the medical prescription, whether involving medication or not, with a view to achieving the expected results of the prescribed treatment.⁹

Various factors intervene in the adherence process to arterial hypertension treatment: the patient, the disease, the treatment, the relation professional-patient, cultural factors and factors related to the institutions and health systems. Thus, to achieve desirable levels of arterial hypertension treatment adherence, multiple actions are needed that take into account the factors described above.¹⁰

Evidence exists in the literature that indicates that, the higher the adherence levels, the lesser the complications causes, a fact that modifies the morbidity and mortality profile of the disease and justifies the efforts to obtain the best adherence to the proposed treatment.¹⁰⁻¹¹

It is important for the professionals to develop research to know the reality they act in and outline successful intervention strategies, with a view to their reproduction for a larger number of hypertensive patients, as the number of articles on the adherence of hypertensive patients in primary health care is still scarce.¹²⁻¹⁴

In addition, the orientation of public programs and policies for care delivery to hypertensive patients is highlighted, through an information network, characterizing the target population and permitting actions to this group of patients.¹²

In view of the above, the objective in this study was to analyze the knowledge regarding the adherence to arterial hypertension treatment in the context of primary health care.

METHOD

An integrative literature review was undertaken, characterized as a review that can be focused on the method, the theory or the results of different studies in which the research designs vary.¹⁵

The development of this review involved six steps, which were: selection of the guiding questions; establishment of inclusion and exclusion criteria and search in the literature; definition of the information to be extracted and categorization of the studies: assessment of the studies included in the integrative review; interpretation of the results and,

finally, presentation of the review with synthesis of the knowledge produced.¹⁶⁻¹⁷

The guiding question used was: What evidence exists in the literature about the adherence to arterial hypertension treatment, in view of the primary health care context?

The articles were selected from the electronic database LILACS (Literatura Latino-Americana e do Caribe em Ciências da Saúde), National Library of Medicine (MEDLINE) and Biomedical Database (EMBASE).

Controlled descriptors were used from DeCS (*Hipertensão; Atenção Primária à Saúde; Cooperação do paciente*), Emtree and MeSH (Hypertension; Primary Health Care; Patient compliance), as well as non-controlled descriptors (adherence, adesão e atenção básica) to obtain as many articles as possible to answer the guiding question.

The following inclusion criteria were established: articles published in English, Portuguese and Spanish; published between 2008 and 2012; in which the participants were hypertensive patients over 18 years of age. The exclusion criteria were: articles that included patients with other diseases and hypertensive diseases other than systemic arterial hypertension (pulmonary hypertension; ocular hypertension; pre-eclampsia etc.).

In an initial analysis, 427 studies were obtained. The abstract were read and

classified according to the inclusion and exclusion criteria, removing 60 repeated articles. Thus, 32 articles were selected that were subject to exhaustive and in-depth reading. To collect the data, the instrument adapted from Ursi (2005) was used, which permitted classifying the articles in terms of author(s), country of research, year, journal, type and objective.¹⁸

Next, the results of the articles were classified according to their evidence levels as level I (evidence from systematic review, meta-analysis or guidelines of all controlled randomized clinical trials), II (evidence from one or more well-designed controlled randomized clinical trials), III (evidence from controlled studies without randomization), IV (Evidence from well-designed case-control or cohort studies), V (Evidence from a systematic review of qualitative and descriptive studies), VI (Evidence from a signal descriptive or qualitative study) until level VII (Evidence from expert opinions and/or reports from expert committees).¹⁹

RESULTS AND DISCUSSION

Concerning the database of origin, out of 32 articles, two came from EMBASE, four from LILACS and 26 from MEDLINE. Next, the classification of the articles according to their characteristics and evidence level is shown (Figure 1).

Studies	Country of research/data collection	Year	Journal	Study design	Evidence level
EMBASE					
20	USA	2012	Journal of General Internal Medicine	Qualitative	VI
21	USA	2009	Pharmacoepidemiology and Drug Safety	Descriptive	VI
LILACS					
22	Brazil	2012	Revista de Saúde Pública	Descriptive	VI
7	Brazil	2012	Revista de Nutrição	Qualitative-quantitative	VI
23	Brazil	2011	Physis: revista de saúde coletiva	Qualitative	VI
24	Brazil	2010	Cadernos de Saúde Pública	Descriptive	VI
MEDLINE					
25	Brazil	2012	Journal of the American Pharmacists Association	Non-randomized clinical trial	III
26	USA	2012	Patient Education and Counseling	Descriptive	VI
27	Brazil	2012	Arquivos Brasileiros de Cardiologia	Descriptive	VI
28	USA	2012	Annals of Family Medicine	Randomized clinical trial	II
29	USA	2012	The Journal of Clinical Hypertension	Randomized clinical trial	II
30	Spain	2012	Medicina Clinica	Descriptive	VI
31	USA	2012	Journal of the American Board of Family Medicine	Qualitative	VI
32	United Kingdom	2012	British Journal of Health Psychology	Descriptive	VI
33	Brazil	2011	Biomed Central Public Health	Randomized clinical trial	II
34	Germany	2011	Patient Education and Counseling	Qualitative	VI
12	Brazil	2011	Ciência & Saúde Coletiva	Descriptive	VI
35	Spain	2011	Gaceta Sanitária	Randomized clinical trial	II
36	Turkey	2011	Journal of Clinical Nursing	Randomized clinical trial	II
37	USA	2011	Journal of Behavior Medicine	Cohort	IV
38	USA	2010	The Journal of Clinical Hypertension	Randomized clinical trial	II
39	Brazil	2010	Ciência & Saúde Coletiva	Qualitative	VI
40	USA	2010	Pharmacotherapy	Randomized clinical trial	II
41	USA	2009	Annals of Internal Medicine	Randomized clinical trial	II
42	USA	2009	Hypertension	Descriptive	VI
43	USA	2009	Journal of General Internal Medicine	Descriptive	VI
44	Spain	2009	Atención Primaria	Randomized clinical trial	II
45	Pakistan	2009	Annals of Internal Medicine	Randomized clinical trial	II
46	Germany	2009	Journal of Evaluation in Clinical Practice	Descriptive	VI
47	USA	2009	American Heart Journal	Randomized clinical trial	II
48	USA	2008	American Journal of Hypertension	Randomized clinical trial	II
49	USA	2008	Patient Education and Counseling	Randomized clinical trial	II

Figure 1. Characterization of studies according to place of data collection, year of publication, journal, design and evidence level.

Despite the large number of studies found in the initial search (427), after refinements, the number drops drastically to only 32 articles, demonstrating an important gap in this context, and showing that PHC is a very

rich field for research development on adherence to arterial hypertension treatment.

The theme attracts interest for research in different countries and, based on the results found, public health actions can be better guided or reconsidered.

Another relevant aspect is that the large majority of the studies, i.e. 8 (25%), with the highest evidence level found, level I, are aimed at assessing the health education actions involving the hypertensive population and its relation with treatment adherence. In view of the results, it constitutes a tool that promotes adherence to pharmacological as well as non-pharmacological treatment.

Most studies were developed in the United States 15 (46.87%), followed by Brazil with 9 (28.13%), Spain 3 (9.37%), Germany 2 (6.25%) and the United Kingdom, Pakistan and Turkey with one article each.

Perhaps the large number of North American studies can reflect the epidemiology of the disease in that country, considering that hypertension affects about 65 million Americans, and that approximately half of these individuals have pressure levels inferior to 140/90 mmHg.⁵⁰ Studies appoint that, in the United States, blood pressure control is even lower, reaching only 27.5% of the hypertensive population.⁵¹

In Brazil, the number of hypertensive patients is always underestimated, considering that many of them do not know their diagnosis. In addition, despite the considerable number of hypertension prevalence studies, comparison is not possible due to the different criteria and methods used to collect the data.⁵² The large number of Brazilian studies developed can derive from the increase and strengthening of the country's primary care network, as about 75% of health care to the population takes place in the public health care network.⁵³

As regards the year of publication, the articles are more concentrated in 2012 with 11 (37.38%), 2011 with 7 (21.88%), 2009 with 8 (25%), 2010 with 4 (12.5%) and 2008 with 2 (6.25%) articles.

Among the 32 articles published in Brazilian journals, five (15.63%) are published in public

health journals while, among the international journals, there is a distribution between cardiology with one (3.13%), pharmacology with three (9.37%), clinical care with six (18.75%), patient behaviors and education with five (15.63%) and specific hypertension journals with four (12.5%).

The journals with the largest number of publications were: Patient Education and Counseling with three (9.37%) publications, Journal of General Internal Medicine, Ciência & Saúde Coletiva, Annals of Internal Medicine and The Journal of Clinical Hypertension with two (6.25%) publications each. The remainder published only one (3.13%) article.

The following research designs were found: 13 (40.62%) randomized clinical trials, 11 (35.48%) were descriptive, five (15.63%) were qualitative studies, one (3.13%) was a non-randomized clinical trial, one (3.13%) qualitative-quantitative and one (3.13%) cohort study.

Concerning the strength of the evidence, 17 (53.12%) articles were classified as evidence level VI, 13 (40.62%) as evidence level II, one (3.13%) as evidence level III and one (3.13%) article as evidence level IV.

The articles revealed that the studies were developed in a wide range of primary care contexts, including: primary health care units, social and family medicine centers, family health program units and other primary care centers. In addition, the articles were grouped according to the study objectives. Figure 2 presents the distribution of the articles with regard to five categories of objectives that were identified.

Objectives	Studies	n	%
Assess/analyze the impact of health/behavioral education actions on adherence	7, 23, 25, 35, 36, 37, 40, 41, 44, 45, 47, 49	12	37.5
Assess the hypertension treatment adherence of a certain group of individuals and associated factors	12, 21, 24, 27, 30, 42	6	18.75
Assess the relation between health professional/patient in the adherence to pharmacological and non-pharmacological treatment	26, 28, 29, 31, 38, 43	6	18.75
Understand comprehensions, culture, behaviors with regard to treatment adherence	20, 32, 33, 34, 39	5	15.63
Analyze instruments that assess or promote the adherence to hypertension treatment	22, 46, 48	3	9.37
Total		32	100

Figure 2. Distribution of articles according to research objectives.

Health education to promote the patient's adherence to pharmacological and non-pharmacological treatment was the focus in

12 (37.5%) studies analyzed. A range of educative actions are performed to assess the adherence after the interventions. In

addition, the professionals who developed these actions come from different classes: physicians, nurses, nutritionists and pharmacists.

All studies on educative actions present positive results with regard to the adherence and blood pressure control, demonstrating that these were important tools/strategies to enhance the treatment adherence.

Recent studies on the theme also conform that the planned use of health education, with a systematic method, promotes treatment adherence and health promotion, as well as self-care actions. In addition, the use of technologies, such as the new medication counting devices and even educative tools (tables, recorded consultations) are used to enhance the doctor/patient relationship or assess the treatment adherence more precisely.⁵⁴⁻⁵⁸

Assessing the adherence of a group and its associated factors, as well as the objective of assessing the relation between health professional and patient, showed six (18.75%) articles each.

Despite this context, a Brazilian review of epidemiological studies on hypertension should be highlighted, undertaken in 2006, whose results indicate the following hypertension-related factors: male sex, age, overweight, family history of SAH, African-American ethnic origin, low education level, alcohol abuse and low income.⁵⁹

Knowledge is needed on the hypertensive population one works with, identifying the adherence to the pharmacological and non-pharmacological treatments and knowing the factors associated with the non-adherence as well. Concerning the characteristics of the least adherent patients, the most important associations the articles presented with regard to adherence were: less adherent patients are African-American and possess less knowledge on the disease;²¹ consume more salt;²⁷ are dyslipidemic and indicate a high alcohol consumption;³⁰ received previous treatment, lack of knowledge on physical exercise and absence of family antecedents;¹² with a higher mean age and shorter treatment time²⁴ and who do not use an intensified treatment.⁴²

The six articles on the relationship health professional/patient describe various factors that contribute for this to happen effectively or not, which are: the relationship of trust between patient and physician enhances the adoption of healthy life habits;²⁶ the larger the number of visits by trained health professionals, the lower the blood pressure levels found;²⁸ communication is an important

point for the successful adherence to treatment and the presence of trainers helps to understand the barriers that may emerge in the physician/patient relationship;³¹ set times and encourage the patient to question themselves about their doubts improve care management for hypertensive patients as non-adherent patients feel more uncomfortable to ask questions to the physicians, report greater stress during medical appointments and express more depressive symptoms;³⁸ a study appointed that African-Americans obtained the least positive view on the medical appointments and did not mention good communication experiences during the medical appointments when compared to other ethnic origins;⁴³ the clinical inertia can significantly influence the hypertension control aspects, to the extent that the patients may not present better blood pressure levels.²⁹

The relationship health professional/patient is a crucial part to enable the patients to adhere to the treatment. The role of the multiprofessional team is highlighted, which consists of different professionals who work with the hypertensive patients and promote interventions aimed at changes in the patient's life habits, as well as adherence to the prescribed treatment.⁵³ Another relevant aspect is that the continuing education of health professionals should be constant so as to always deliver better care to the patient.⁶⁰⁻⁶¹

Five studies on the patient's understanding of their treatment accurately reported on the hypertensive patients' perception. In that sense, the conception of health and arterial hypertension are linked to each individual's personal experiences, beliefs, ideas, values, thoughts and feelings and directly affect the way of coping with the disease and the treatment.⁶²

In the other three publications, the appropriateness of treatment adherence assessment questionnaires was verified: Brief Medication Questionnaire (BMQ) and the Morisky-Green Test (MGT);²² MGT and Medication Adherence Report Scale (MARS-5)⁴⁶ and the Motivational Interviewing Tool (MINT)⁴⁸. The results indicate that the MGT did not perform as wanted in any of the studies. The same was true for MARS-5. The BMQ and MINT were used as indicated.

Although distinct instruments can be used to measure or promote the adherence to hypertension treatment, no instruments exist that address all of the dimensions needed and whose results can be compared. Therefore, research is needed to elaborate and validate

questionnaires focused on hypertensive patients, with a view to improving the quality of life and the demand for health services in this population.⁶³

Conclusions

The review demonstrates that a gap remains in terms of the need for research on the adherence to primary care patients' adherence to arterial hypertension treatments, and also regarding the prevalence of the disease and the reasons for non-adherence to the proposed treatments.

The publications analyzed indicate health education as a tool that cooperates to enhance the adherence to the actions developed by the different professionals involved in care for hypertensive patients.

In addition, the professional/patient relation needs to be based on a relationship of trust that allows the patients to clearly understand the proposed pharmacological and non-pharmacological treatment, taking into account the patient's understanding of hypertension and the treatment.

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