Farmácia e suas Interfaces com Vários Saberes

2

Débora Luana Ribeiro Pessoa
(Organizadora)

Atena Editora
Ano 2021

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Ciências Biológicas e da Saúde

Farmácia e suas interfaces com vários saberes 2

Bibliotecária: Janaina Ramos
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Revisão: Os Autores
Organizadora: Débora Luana Ribeiro Pessoa

Dados Internacionais de Catalogação na Publicação (CIP)

F233 Farmácia e suas interfaces com vários saberes 2 / Organizadora Débora Luana Ribeiro Pessoa. – Ponta Grossa - PR: Atena, 2021.

Formato: PDF
Requisitos de sistema: Adobe Acrobat Reader
Modo de acesso: World Wide Web
Inclui bibliografia
ISBN 978-65-5983-181-4
DOI 10.22533/at.ed.814211206

1. Farmácia. I. Pessoa, Débora Luana Ribeiro (Organizadora). II. Título.

CDD 615

Elaborado por Bibliotecária Janaina Ramos – CRB-8/9166

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APRESENTAÇÃO

A coleção “Farmácia e suas Interfaces com Vários Saberes” é uma obra organizada em dois volumes que tem como foco principal a apresentação de trabalhos científicos diversos que compõe seus 36 capítulos, relacionados às Ciências Farmacêuticas e Ciências da Saúde. A obra abordará de forma interdisciplinar trabalhos originais, relatos de caso ou de experiência e revisões com temáticas nas diversas áreas de atuação do profissional Farmacêutico nos diferentes níveis de atenção à saúde.

O objetivo central foi apresentar de forma sistematizada e objetivo estudos desenvolvidos em diversas instituições de ensino e pesquisa do país. Em todos esses trabalhos a linha condutora foi o aspecto relacionado à atenção e assistência farmacêutica, farmacologia, saúde pública, controle de qualidade, produtos naturais e fitoterápicos, práticas integrativas e complementares, entre outras áreas. Estudos com este perfil podem nortear novas pesquisas na grande área das Ciências Farmacêuticas.

Temas diversos e interessantes são, deste modo, discutidos aqui com a proposta de fundamentar o conhecimento de acadêmicos, mestres e todos aqueles que de alguma forma se interessam pela Farmácia, pois apresenta material que apresenta estratégias, abordagens e experiências com dados de regiões específicas do país, o que é muito relevante, assim como abordar temas atuais e de interesse direto da sociedade.

Deste modo a obra “Farmácia e suas Interfaces com Vários Saberes” apresenta resultados obtidos pelos pesquisadores que, de forma qualificada desenvolveram seus trabalhos que aqui serão apresentados de maneira concisa e didática. Sabemos o quão importante é a divulgação científica, por isso evidenciamos também a estrutura da Atena Editora capaz de oferecer uma plataforma consolidada e confiável para estes pesquisadores exporem e divulguem seus resultados. Boa leitura!

Débora Luana Ribeiro Pessoa

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CAPÍTULO 15

IMPACT OF PHARMACEUTICAL HOMECARE IN PATIENTS WITH NON-CONTROLLED HYPERTENSION

Data de aceite: 01/06/2021
Data de submissão: 31/03/2021

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ABSTRACT: Introduction: By 2014, the Ministry of Health shifted the pharmaceutical practice in the country with the publication of instructions for the practice of Pharmaceutical Care. **Objective:** Evaluate the impact of the clinical method of pharmaceutical care in the homes of patients with non-controlled systemic arterial hypertension. **Methods:** We conducted an observational prospective cohort study from 2015 to July 2016. The observed patients were organized into two groups. The exposed group received the usual

treatment from the health facility and monthly home pharmacy consultations, according to the clinical method of pharmaceutical care. The unexposed group received only the usual treatment from the health facility. It was evaluated drug treatment adherence, patients' difficulties regarding pharmacotherapy and blood pressure control. **Results:** 57 patients were organized into two groups (Unexposed Group = 27; Exposed Group = 30). In both groups, non-adherent patients were 66.7% (38) at the first evaluation. At the end of the study, non-adherent patients in the unexposed group were 59.7% while in the exposed group they were 36.7%. In the unexposed group, the mean blood pressure at the beginning of the study was 139.6/88.8 mmHg and at the end 133.3/85.9 mmHg. In the exposed group, blood pressure at the beginning of the study was 141.3/85.3 mmHg and at the end 130.6/81.3 mmHg with statistically significant difference. Conclusion: The results showed that patients in the exposed group improved their blood pressure control in addition to treatment adherence.
KEYWORDS: Medical adherence, Public Health, Pharmaceutical care.

IMPACTO DO CUIDADO FARMACÊUTICO EM PACIENTES COM HIPERTENSÃO NÃO CONTROLADA

RESUMO: Introdução: Em 2014, o Ministério da Saúde modificou a prática farmacêutica no país com a publicação das instruções para a prática do Cuidado Farmacêutico. **Objetivo:** Avaliar o impacto do método clínico da assistência farmacêutica domiciliar em pacientes com hipertensão arterial sistêmica não controlada. **Métodos:** Foi realizado estudo de coorte prospectivo observacional de 2015 a julho de 2016. Os pacientes foram organizados em dois grupos. O grupo exposto recebeu o tratamento usual na unidade de saúde e consultas farmacêuticas mensais domiciliar, de acordo com o método clínico da atenção farmacêutica. O grupo não exposto recebeu apenas o tratamento usual da unidade de saúde. Foram avaliados a adesão ao tratamento medicamentoso, as dificuldades dos pacientes em relação à farmacoterapia e ao controle da pressão arterial. **Resultados:** 57 pacientes foram organizados em dois grupos (Grupo Não Exposto = 27; Grupo Exposto = 30). Em ambos os grupos, 66,7% dos pacientes eram não aderentes no início do estudo. No final do estudo, os pacientes não aderentes no grupo não exposto eram 59,7%, enquanto no grupo exposto eram 36,7%. No grupo não exposto, a pressão arterial média no início do estudo era 139,6 / 88,8 mmHg e ao final 133,3 / 85,9 mmHg. No grupo exposto, a pressão arterial no início do estudo era de 141,3 / 85,3 mmHg e ao final de 130,6 / 81,3 mmHg com diferença estatisticamente significativa. **Conclusão:** Os resultados mostraram que os pacientes do grupo exposto melhoraram o controle da pressão arterial, além da adesão ao tratamento.
PALAVRAS-CHAVE: Adesão ao tratamento, Saúde Pública, Atenção farmacêutica**.**

1 I INTRODUCTION

The role of the pharmacist is changing as the profession shifts its focus from drugs to patients. The professional has the opportunity to integrate into the larger health team and promote benefits in the patient's drug treatment (HEPLER; STRAND, 1990; MOHAMMED; MOLES; CHEN, 2016). In 2014, the Brazilian Ministry of Health launched three Notebooks on Pharmaceutical Care to promote the clinical method and encouraged such practices in

municipalities (BRASIL, 2014a, b, c).

Pharmaceutical consultations, during which pharmaceutical care is provided - as well as most healthcare - are commonly performed in professional offices. However, home visits allow for a better evaluation of the patient and can potentially result in interventions that are individually adapted to the specifics of the patient's life (SALTER, 2015).

Noncommunicable chronic diseases currently represent the primary public health problems (WORLD HEALTH ORGANIZATION, 2014). Systemic arterial hypertension, a multifactorial clinical condition characterized by high and sustained blood pressure, is the most prevalent risk factor in deaths from noncommunicable chronic diseases, making it one of the most important risk factors for morbidity and mortality worldwide (GBD 2015 RISK FACTORS COLLABORATORS, 2016).

In 2014, the World Health Organization estimated that 22% of the global population suffers from hypertension. In developed countries such as Canada and the United States, the prevalence was lower at 17%. In developing countries such as Brazil and India, 23% of the population had hypertension (LIM *et al.*, 2012; PICON *et al.*, 2012; SOCIEDADE BRASILEIRA DE CARDIOLOGIA; SOCIEDADE BRASILEIRA DE HIPERTENSÃO; SOCIEDADE BRASILEIRA DE NEFROLOGIA, 2010; WORLD HEALTH ORGANIZATION, 2014).

Controlling blood pressure in primary care units is a challenge for healthcare professionals. Studies have shown that failing to adhere to a proposed pharmacotherapy is associated with decrease or absence of therapeutic results, a low quality of life, and an increase in the total cost of treatment (SIMPSON *et al.*, 2016; SOKOL *et al.*, 2005). Nonadherence to pharmacological treatment is observed in approximately 50% of patients undergoing chronic treatment, including antihypertensive treatment, and is considered a major problem in pharmacotherapy (LOWRY *et al.*, 2005; SABATE, 2003).

Considering the high prevalence of blood pressure and low rates of control, primarily due to a lack of adherence to drug treatment, as well as the growth of home healthcare, it was conducted an observational prospective cohort study to evaluate the impact of the clinical method of pharmaceutical care in the homes of patients with non-controlled systemic arterial hypertension.

2 | METHODS

An observational prospective cohort study was conducted from December 2015 to July 2016 at participants' homes. The patients were selected at a basic health unit (BHU) in the western region of Campo Grande, Mato Grosso do Sul, Brazil. The subjects were informed about the study and those who consent were included in the study.

It was included patients who met the following criteria: 18 years old or older; participation in at least 75% of the meetings of HIPERDIA (Registration and Monitoring

System of Hypertensive and Diabetic Program) in the 3 months prior to the start of the study; an average blood pressure at the last 3 HIPERDIA meetings of ≥ 130/80 mmHg (diabetic and hypertensive) or ≥ 140/90 mmHg (hypertensive only); receiving medicines to treat hypertension in BHU; and diagnoses of hypertension and diabetes following the VI Brazilian Guidelines on Hypertension (SOCIEDADE BRASILEIRA DE CARDIOLOGIA; SOCIEDADE BRASILEIRA DE HIPERTENSÃO; SOCIEDADE BRASILEIRA DE NEFROLOGIA, 2010). HIPERDIA meetings are held monthly, where blood pressure is measured as well as glucose for diabetic patients; patients are instructed on the appropriate foods for their health condition, the need for the correct use of medications and the benefits of physical activity.

Chronic renal patients, patients with a history of stroke, and those who had treatment changes within 4 weeks prior to the first meeting were excluded from the study as a way to control possible biases.

This research was done without patient involvement. Patients were not invited to comment on the study design and were not consulted to develop patient relevant outcomes or interpret the results. Patients were not invited to contribute to the writing or editing of this document for readability or accuracy.

The observed patients were organized into two groups and it was carried out at random according to the HIPERDIA list. The first step was to compile a list from records of HIPERDIA meetings. The patients on the list were then sequentially allocated to the exposed and unexposed groups. The exposed group (EG) received the usual treatment from the health facility and monthly home pharmacy consultations, according to the clinical method of pharmaceutical care. The unexposed group (UG) received only the usual treatment from the health facility.

The UG patients had contact with the researcher at their houses in December 2015 and July 2016. On both occasions, a structured questionnaire was administered, consisting of questions that are related to socioeconomic issues and adherence to pharmacotherapy using a standardized form from Notebook 2 of Pharmaceutical Care in Primary Care (BRASIL, 2014b). In addition, both UG and EG continued to receive the usual treatment from the health facility: medical appointments every three months, monthly meetings with nurses in the HIPERDIA program, and drug dispensing by a pharmacist.

EG patients also had their first contact with a researcher in December 2015, when the structured questionnaire was applied. At that time, they were asked to agree to participate in subsequent monthly pharmaceutical appointments. All EG patients participated in six pharmaceutical appointments following the first meeting, between January and July 2016, and in the last consultation, the structured questionnaire was again administered. Consultations were held at the participants' houses at varying times, depending on availability.

Pharmaceutical appointments followed the methodology described by the Pharmaceutical Care notebook on Primary Care (BRASIL, 2014a). The notebook describes the pharmacist's attitude in welcoming the patient - emphasizing respect and consideration -

as well as the way the consultation should be conducted and how to share therapeutic goals with the patient and focus on clinical improvement. It also provides the forms practitioners can use to list pharmacotherapeutic problems that need to be addressed.

The pharmacy consultations carried out at the patient house addressed the importance of drug treatment, solving memory problems (e.g., visual reminders), storing and organizing drugs (one location for each drug, use of boxes with dividers), as well as guidance on correct use of medicines. In addition, the consequences of persistent non-controlled blood pressure were clarified to the patient, focusing on the importance of adherence to pharmacotherapy in obtaining satisfactory results.

The exposure variables were home visits related to pharmaceutical care and the outcomes studied were adherence to antihypertensive drug treatment, difficulties related to pharmacotherapy used and blood pressure values between the groups analyzed.

Information on age, sex, problems related to drug therapy, with whom the patient resided, education, income, and occupation were collected. Income was expressed as minimum wages and education at educational levels.

The patients were asked about the diagnosis of other chronic diseases, physical activity and its frequency, and the frequency of alcohol and tobacco use. Patients were also asked to describe their perceived health as “excellent,” “very good,” “good,” or “reasonable/poor.”

The weight of the patients was accessed by the HIPERDIA program records. To calculate the body mass index (BMI), the participant’s weight in kilograms was divided by height in meters squared. Results between 18.5 and 24.9 were considered normal, results between 25.0 and 29.9 indicated an overweight status, and results greater than or equal to 30.0 were considered indicative of obesity (WORLD HEALTH ORGANIZATION, 1995).

Regarding the perception of quality of life, patients were asked to describe their quality of life at the end of the study (after the intervention) compared with 6 months before the day of the meeting. Responses were categorized for statistical purposes as “much better now,” “a little better,” “similar,” “a little worse,” or “much worse.”

The blood pressure considered at the meetings was the average of two measurements taken approximately 2 min apart. A calibrated analog sphygmomanometer (Solidor) was used to take the measurements, following the protocol described by the VI Brazilian Guidelines on Hypertension (SOCIEDADE BRASILEIRA DE CARDIOLOGIA; SOCIEDADE BRASILEIRA DE HIPERTENSÃO; SOCIEDADE BRASILEIRA DE NEFROLOGIA, 2010).

Adherence was assessed by two indirect methods, as described by OBRELI-NETO and colleagues (OBRELI-NETO *et al.*, 2011). The first applied the Morisky–Green test translated into Portuguese (BEN; NEUMANN; MENGUE, 2012). The second involved counting the medicines dispensed in the health unit by the computerized system at the health unit (OBRELI-NETO *et al.*, 2011). Patients were considered adherent when they withdrew at least 80% of the drugs prescribed to treat blood pressure in the 3-month interval

between medical appointments.

Patients who did not answer any of the algorithm questions as previously stated and/or took less than 80% of the estimated drugs for the period were considered non-adherent. Patient compliance was accessed before the intervention period and after the intervention period.

Student's t-test was used for values with a parametric distribution of independent samples. The Mann–Whitney test was used for values with a nonparametric distribution of independent samples, and the Wilcoxon test was applied to values with a nonparametric distribution of related samples. Fisher's exact test was applied for frequency analysis.

The effect of exposure on the variables was verified by comparing the findings of the first meeting with those of the last. The following variables were recorded: adherence to pharmacotherapy by the two indirect methods described above, self-perceived health, self-perceived quality of life, and desired blood pressure (< 130/80 mmHg for diabetics and hypertensive patients or < 140/90 mmHg for hypertensive patients). A P value ≤ 0.05 was considered statistically significant.

The study was approved by the Institutional Review Board of the Federal University of Mato Grosso do Sul under No. 1,300,229, issued in October 2015, and by the Municipal Secretariat of Public Health of Campo Grande, MS.

The study was conducted according to the principles embodied in the Declaration of Helsinki and all participants signed the informed consent form.

3 I RESULTS

Among the 148 patients participating in HIPERDIA, 61 met the inclusion criteria. Of these, 57 completed the study, 27 patients of UG and 30 of EG. The studied population consisted predominantly of elderly (69.67 ± 9.52 years old) individuals, with education histories up to elementary school (68.3%) and incomes between one and three minimum wages (68.4%). The mean blood pressure recorded was 140/87 mmHg, and approximately half (47.4%) of the population had diabetes and dyslipidemia. In addition, the majority (61.4%) of individuals were not physically active, 38.6% were obese, and 57.9% had a positive perception about their health.

No statistically significant differences were observed between the UG and EG groups in the variables studied (Table 1).

Variable	Unexposed group (n = 27)	Exposed group (n = 30)	P
Female gender (n,%)	19 (70.4)	22 (73.3)	1.000
Age, mean ± SD [95% CI] (years)	70.4 ± 10.2 [66.3:65.7]	69.0 ± 8.9 [65.7:72.3]	0.582
Elementary school incomplete (n,%)	22 (81.5)	18 (60.0)	0.091
Lives with family members (n,%)	23 (85.2)	24 (80.0)	0.734
Income from one to three minimum wages (n,%)	20 (74.1)	20 (66.7)	0.571
Medication[a], mean ± SD [95% CI]	8.2 ± 3.0 [7.1:9.4]	8.4 ± 2.6 [7.3:9.5]	0.789
Diabetes diagnosis (n,%)	10 (37.0)	16 (53.3)	0.289
Dyslipidemia diagnosis (n,%)	12 (44.4)	15 (50.0)	0.792
Obesity (n,%)	12 (21.0)	10 (18,0)	0.426
Smokers (n,%)	2 (7.4)	1 (3.3)	0.599
Alcohol drinkers (n,%)	7 (25.9)	4 (13.3)	0.318
Non-practitioners of physical activity (n,%)	15 (55.6)	20 (66.7)	0.426
Positive self-rated health (n,%) b	16 (59.3)	17 (56.7)	1.000
Initial SBP, mean ± SD [95% CI] (mmHg)	139.6 ± 8.1 [136.4:142.8]	141.3 ± 7.3 [138.6:144.1]	0.440
Initial DBP, mean ± SD [95% CI] (mmHg)	88.9 ± 7.5 [85.9:91.8]	85.3 ± 7.8 [82.4:88.2]	0.117

Fisher's exact test, Student's t-test, and Mann–Whitney tests were used when appropriate. A P value ≤ 0.05 was considered statistically significant. SD, standard deviation; CI, confidence intervals; SBP, systolic blood pressure; DBP, diastolic blood pressure; BMI, body mass index.

[a] Number of medications present in the last prescription.

[b] Patients who considered their health "excellent" or "excellent/very good."

Table 1 - Comparison between epidemiological and sociodemographic variables of the unexposed and exposed groups. Campo Grande - MS, Brazil, January 2017.

The consultations had a mean interval of 33.3 ± 5.3 days (mean ± standard deviation), ranging from 28 to 40 days, and lasted between 20 and 90 min. In general, the first consultations were longer, an average of 57.5 min; however, with treatment progress and consequent reduction of identified problems, the consultation duration was reduced, with the average duration of the last consultations being 34.3 min.

The main problems related to drug therapy reported by the study participants were reading difficulty (n = 19; 33.3%), difficulty organizing drugs (n = 19; 33.3%), and difficulty opening packaging (n = 4; 7.0%). Both groups answered this question, and the reported

difficulties supported the elaboration of the care plan for the EG.

In EG, a statistically significant difference was observed in treatment adherence between the moments before and after the exposure, by the two indirect methods employed. For UG, no statistically significant difference was observed between the initial and final moments of the study (Table 2).

Treatment adherence	Unexposed Group (n = 27)		P value	Exposed group (n = 30)		*P*
	Start n (%)	Final n (%)		Start n (%)	Final n (%)	
Morisky–Green test						
Non-adherent	18 (66.7)	16 (59.3)	0.779	20 (66.7)	11 (36.7)	**0.038***
Adherent	9 (33.3)	11 (40.7)		10 (33.3)	19 (63,3)	
Computerized dispensing history						
Non-adherent	16 (59.3)	15 (55.6)	1.000	19 (56.7)	9 (40.0)	**0.019***
Adherent	11 (40.7)	12 (44.4)		11 (43.3)	21 (60.0)	

Fisher's exact test. * P value ≤ 0.05 was considered significant.

Table 2 - Adherence to treatment evaluated by two indirect methods, by group and by moment of study. Campo Grande - MS, Brazil, January 2017

In UG, a statistically significant difference was observed in the systolic blood pressure of hypertensive and nondiabetic patients between the initial and final moments of the study. In EG, a statistically significant difference was observed in the systolic blood pressure of hypertensive and diabetic patients between the initial and final moments of the study. In addition, a statistically significant difference in systolic and diastolic blood pressure of hypertensive and nondiabetic patients was also observed between the beginning and end of the study (Table 3).

No statistically significant difference in blood pressure, self-reported health perception, and quality of life at the time after intervention was observed between the two study groups (Table 4).

	Blood pressure, mean ± SD (mmHg)					
	Unexposed group (n = 27)		P value	Exposed group (n = 30)		P
	Start	Final		Start	Final	
Hypertensive and diabetic patients						
SBP	132.73 ± 4.67	129.09 ± 5.39	0.250	140.0 ± 8.17	130.0 ± 9.66	**0.014***
DBP	88.18 ± 4.04	85.45 ± 5.22	0.250	83.75 ± 9.57	80.62 ± 2.50	0.300
Hypertensive and nondiabetic patients						
SBP	144.38 ± 6.30	136.25 ± 8.06	0.008 *	142.86 ± 6.11	131.43 ± 6.63	**0.001***
DBP	89.38 ± 9.29	86.25 ± 5.0	0.278	87.14 ± 4.69	82.14 ± 4.26	**0.039***

Wilcoxon test. * P value ≤ 0.05 was considered significant.

Table 3 - Blood pressure measurements, by group and by study time. Campo Grande -MS, Brazil. January 2017.

Variable	Unexposed group (n = 27) n (%)	Exposed group (n = 30) n (%)	P
BP desired[a]	7 (25.9)	15 (50.0)	0.102
Positive perception about health, n (%)[b]	20 (74.1)	24 (80.0)	0.754
Positive perception about quality of life, n (%)[c]	4 (14.1)	11 (36.7)	0.077

[a] Blood pressure (BP) < 140/90 mmHg for hypertensive patients or < 130/80 mmHg for diabetic and hypertensive patients.

[b] Patients who treated their health as “excellent,” “great,” or “very good.”

[c] Patients who treated their previous 6-month quality of life “much better now” or “a little better.”

Table 4 - Measurements of blood pressure, self-perception of health, and quality of life, by group, at the moment after the intervention. Campo Grande-MS, Brazil. January 2017.

4 I DISCUSSION AND CONCLUSION

The most relevant findings from this study involve improvement in adherence and blood pressure of EG participants after receiving home pharmaceutical care. The predominantly elderly age, low income, and low education are all considered risk factors for the development of hypertension, a subject addressed in other Brazilian studies. In addition, most of the study population was female, as it is usual for them to practice healthcare (ISER *et al*., 2011; MALTA; MOURA; DE MORAIS NETO, 2011; SCHMIDT *et al*., 2009). Aging and elevation of blood pressure are believed to be associated with physiological changes, such as degeneration of smooth muscle and connective tissue in blood vessels. However, children and adolescents are increasingly presenting chronic noncommunicable

diseases such as obesity, diabetes, and hypertension, all of which were once associated primarily with advanced age, indicating a need for changes in lifestyle (FALKNER, 2010; GALOBARDES; SMITH; LYNCH, 2006).

The difficulties reported by the patients helped to establish the care plan (EG), aiming at promoting treatment adherence. Pharmaceutical care cannot address a patient's reading difficulty, but it can help prevent misuse of drugs through guided dispensing and directed storage of drugs and reduce errors related to drug therapy (STUURMAN-BIEZE *et al.*, 2014).

Difficulty organizing medications was among the most cited problems related to therapy identified in this study. Drug storage and organization are of paramount importance in avoiding reduced drug effectiveness and in facilitating patient understanding of treatments (CONSTANTINO *et al.*, 2020). The simple act of routinely storing drugs in an appropriate place can help make patients feel as active participants in the management of their therapy, which in turn improves adherence rates. The guidance of a pharmacist on the organization of medicines can also increase patient compliance with treatment and, consequently, lower blood pressure.

As well as difficulties with organization, remembering to use a drug was frequently reported by the study population as a challenge. Strategies previously described were used as visual and audible reminders to remind about correct times for drug administration (SIMONI *et al.*, 2003). Carrying out such activities in patient homes improved the effectiveness of such strategies.

The clinical method of pharmaceutical care seeks to identify and solve problems related to drug therapy (CORRER; OTUKI, 2013). This study aimed to identify and propose solving problems related to adherence to pharmacotherapy. The two indirect methodologies used to assess adherence indicated an improvement in the behavior of EG patients regarding their commitment to adherence to pharmacotherapy.

It is important to consider the limitations of the methods used in this study to assess treatment adherence. While indirect methods provide speed and ease of application, they tend to overestimate patient compliance (BRAWLEY; CULOS-REED, 2000). The use of a structured questionnaire can induce patients to respond favorably to questions regarding drug use and information about drug withdrawals in the system and does not ensure their proper use. The use of two indirect methods to assess treatment adherence in this study aimed to minimize possible bias. In addition, patients were selected in only one BHU, which may limit the generalization of the findings to larger populations.

Another way to evaluate positive health perceptions, even when the individual does not have good health indicators, involves positivity in facing the problems. It is also important to keep in mind that patients received the pharmacist in their houses, which may lead to a need to show receptivity and present a positive look at their own health.

Most patients, in both UG and EG, were declared to be in good health and enjoying

an acceptable quality of life, with no statistically significant differences between the groups. The perception of quality of life was multifactorial, involving the physical, psychological, and social relations and the environment, and was not restricted to treatment (ANDRADE *et al.*, 2014; WORLD HEATH ORGANIZATION, 1995). This indicates that there must be a multidisciplinary and holistic approach to clinical improvement of the patient; although the patient was not isolated, he presents together with improved quality of life (GEURTS *et al.*, 2015).

This study demonstrated that pharmaceutical care, when applied in the homes of patients with non-controlled systemic arterial hypertension, can improve adherence to drug treatment which significantly affects blood pressure levels, reducing the risk of cardiovascular complications.

FUNDING

This work was supported in part by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior – Brasil (CAPES) – Finance Code 001 and Universidade Federal de Mato Grosso do Sul (UFMS).

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