

Pharmacotherapeutic follow-up in geriatric hypertensive patients in the State of Campeche [Mexico]

Seguimiento farmacoterapéutico en pacientes hipertensas geriátricas del Estado de Campeche [México]

Mex-Álvarez, Rafael Manuel de Jesús *^a, Guillen-Morales, María Magali^b, Chan-Martínez, Roger Enrique^c and Montero-Xiu, Tania Noeli^d

^a ROR Universidad Autónoma de Campeche • H-4911-2018 • ID 0000-0003-1154-0566,

^b ROR Universidad Autónoma de Campeche • MSX-1975-2025 • ID 0000-0003-3958-0420 • 827954

^c ROR Universidad Autónoma de Campeche • MVX-3266-2025 • ID 0009-0007-6563-9023 • 2109020

^d ROR Universidad Autónoma de Campeche • ID 0009-0002-9551-9157

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* ✉ rafammex@uacam.mx

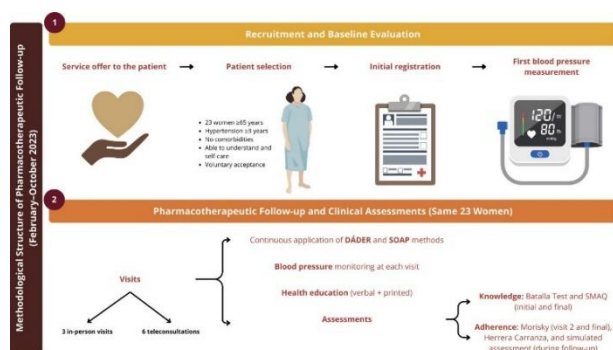


Abstract

The work consisted of a quasi-experimental, longitudinal study carried out on 23 adult patients with a diagnosis of arterial hypertension of three years or more of evolution, who voluntarily agreed to participate, through 9 home consultations [three in person and 6 teleconsultations] in a period of nine months, using the SOAP and DÁDER method that evaluates pharmacotherapeutic follow-up. Standardized instruments were used to evaluate the patient's level of knowledge about their disease and pharmacotherapy and adherence to treatment; Monitoring of arterial hypertension values was carried out with a digital baumanometer and was monitored using a record sheet. It was found that the intervention carried out had a positive effect on the patients' level of knowledge about their disease and their pharmacotherapy. For the degree of adherence, in the ninth visit 64% patients were considered adherent. Regarding blood pressure values, in the adherent patients, it started with an average of 150/85 mmHg, decreasing to 117/77 mmHg on the ninth home visit.

Resumen

El trabajo consistió en un estudio es cuasi-experimental, longitudinal realizado en 23 pacientes adultas con diagnóstico de hipertensión arterial que voluntariamente aceptaron participar, mediante 9 consultas domiciliarias [tres presenciales y 6 teleconsultas] en un período de nueve meses, utilizando el método SOAP y DÁDER. Se emplearon instrumentos estandarizados para evaluar el nivel de conocimiento del paciente sobre su enfermedad y farmacoterapia, y adherencia al tratamiento; la monitorización de los valores de hipertensión arterial se realizó con un baumanómetro digital. Se encontró que la intervención realizada tuvo un efecto positivo para el nivel de conocimiento de los pacientes sobre su enfermedad y su farmacoterapia. Para el grado de adherencia, en la novena visita el 64% de los pacientes se consideraron como adherente. Respecto a los valores de presión arterial, en las pacientes adherentes, se inició con una media de 150/85 mmHg, descendiendo a 117/77 mmHg a la novena visita domiciliaria.



Therapeutic adherence, Negative results to medication, Community pharmacy

Adherencia terapéutica, Resultados negativos a la medicación, Farmacia comunitaria

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Introduction

Blood pressure is defined as the pressure exerted by blood on the walls inside the arteries; high blood pressure is when a person has a reading equal to or greater than 140/90 mmHg on repeated occasions or for a prolonged period of time; In older adults, high blood pressure [HBP] is a growing public health problem because it is the main cause of outpatient consultations and the most common chronic disease in geriatric patients, which can lead to acute myocardial infarctions, strokes, renal failure, atrial fibrillation, and diabetes mellitus.

High blood pressure does not usually cause symptoms, and its aetiology depends on various risk factors such as unhealthy eating, physical inactivity, and metabolic factors such as obesity and diabetes [Campos-Nonato *et al.*, 2019; García-Castañeda, *et al.*, 2016; Osorio-Bedoya & Amariles, 2018].

For a correct diagnosis of high blood pressure, at least three blood pressure measurements must be taken in an appropriate manner and on different days; blood pressure must also be assessed after three minutes of standing to rule out orthostatic hypotension, which is more common in older adults.

These same parameters apply to both older and younger adults. In older adults, optimal blood pressure is considered to be less than 120/80 mmHg and normal blood pressure is considered to be 120-130/80-85 mmHg. Blood pressure should be assessed annually in patients over 75 years of age. Grade I is determined with values of 140-159/90-99 mmHg and must be confirmed within two months, grade II with measurements of 160-179/100-109 mmHg with confirmation within one month, and grade III with values greater than 180/110 mmHg, which must be confirmed within one week [Campos-Nonato *et al.*, 2019; García-Castañeda, *et al.*, 2016; Osorio-Bedoya & Amariles, 2018].

In elderly hypertensive patients, systolic blood pressure [SBP] and pulse pressure [PP, which is the difference between SBP and DBP] are more important markers of vascular risk than diastolic blood pressure; isolated systolic hypertension [SBP >140 mmHg, with DBP ≤ 90 mmHg] is common in elderly women; its clinical significance is related to the occurrence of strokes and renal impairment that is two to four times higher than in the normal population.

In the control of high blood pressure, timely diagnosis, knowledge of the disease, access to antihypertensive drugs, and quality health services are considered essential. In Mexico, it is estimated that only 40% of patients with hypertension are diagnosed, and the prevalence of this disease in socioeconomically vulnerable populations is high, while the proportion of patients receiving treatment and control is low [García-Castañeda, *et al.*, 2016; Osorio-Bedoya & Amariles, 2018; García-Falcón, *et al.*, 2018].

Education and risk prevention for hypertension are the most relevant, universal, and least costly health measures.

Therefore, adequate control and monitoring of blood pressure should be a priority for health institutions due to its impact on personal, economic, and health issues. Consequently, educational actions associated with this disease are the pillars of action in its approach and precede pharmacotherapeutic management [García-Falcón, *et al.*, 2018; Miño, *et al.*, 2021]. In this regard, the importance of pharmaceutical care lies in improving the patient's quality of life through pharmacotherapeutic monitoring, which leads to successful treatment by optimising medication management, preventing and detecting problems related to the use of medicines, and supporting health education for a better understanding of the pathology by the patient and promoting adherence to pharmacotherapy [García-Falcón, *et al.*, 2018; Miño, *et al.*, 2021; Velasco, 2008; Vargas & Pachucho, 2024]. Therefore, the objective of this study is to determine the impact of implementing outpatient pharmacotherapeutic follow-up in geriatric and hypertensive female patients in the state of Campeche [Mexico].

Methodology

This study had a quantitative approach and was based on a quasi-experimental, longitudinal design. To this end, a therapeutic monitoring and pharmacovigilance model was established, with a population of 23 patients selected through non-probabilistic convenience sampling. The inclusion criteria were: adult female patients over 65 years of age diagnosed with arterial hypertension [for more than 3 years] without other comorbidities who voluntarily agreed to participate by signing an informed consent form.

Hypertensive patients with difficulty understanding, communicating, and self-managing their health were excluded.

Pharmacotherapeutic follow-up was carried out through nine home visits [three in person and six teleconsultations] over nine months [from February to October 2023], using the SOAP and DÁDER methods to evaluate pharmacotherapeutic follow-up [Amariles et al., 2012; Arroyo & Castro, 2017; Marques et al., 2013]. Standardised instruments were used to assess the patient's level of knowledge about their disease [Batalla test, with simple questions to check the patient's knowledge about their disease] and their pharmacotherapy [SMAQ questionnaire, Medication Adherence Questionnaire]. their adherence to treatment was determined by the Morisky-Green-Levine test, an indirect measurement method based on a voluntary interview consisting of a four-question questionnaire on treatment adherence, considering the person who answers 'NO' to all four questions as adherent and 'non-adherent' if they answer 'YES' to at least one of the questions.

This test was administered during the second and final visit; the Herrera Carranza test [designed to improve the monitoring of therapeutic compliance in the community pharmacy setting] and the fake check test [the patient is asked for a urine sample to calculate the amount of medication consumed]; blood pressure values were monitored using a digital sphygmomanometer and recorded on a log sheet [Pagès-Puigdemont & Valverde-Merino, 2018; Esquivel & Díaz, 2019; Jiménez, 2014; Conte et al., 2020; Pinillos-Pozo et al., 2022].

The work was carried out in two stages; initially, the service was offered, registration was carried out, patients were selected and informed consent was signed; this first stage was carried out in the first month of the study and the first blood pressure measurement was obtained [Pagès-Puigdemont & Valverde-Merino, 2018; Esquivel & Díaz, 2019; Jiménez, 2014; Conte et al., 2020; Pinillos-Pozo et al., 2022]. In the second stage, the DÁDER method was applied, adapted for pharmacotherapeutic follow-up, and included the second home visit, during which written educational information was provided in the form of personalised, didactic printed material on their pharmacological treatments.

Verbal health education was carried out individually, focusing on resolving doubts and addressing concerns [Pagès-Puigdemont & Valverde-Merino, 2018; Esquivel & Díaz, 2019; Jiménez, 2014; Conte et al., 2020; Pinillos-Pozo et al., 2022]. Descriptive statistics were used to manage the data obtained during the study, using Excel® for data processing. Numerical variables are expressed as means \pm standard deviation. The ethical considerations taken into account in this research include the principles of the Declaration of Helsinki and international ethical guidelines related to health research in humans to ensure data confidentiality.

Results

Twenty-three female patients with an average age of 72 years and a range between 66 and 81 years participated in this study. According to the tests to measure the patients' adherence to their pharmacological treatment, it was observed during the second home visit that only four patients were adherent, while during the ninth visit, nine patients were considered adherent. Based on this classification of patients, it was found that the intervention had a positive effect on both types of patients, both in terms of their level of knowledge about their disease [scores obtained by all patients: pre-test 5.0, post-test 8.9] and their pharmacotherapy [pre-test 4.7, post-test 7.8], as shown in Figure 1. although it can be seen that patients considered adherent to treatment show greater knowledge of both their disease and their pharmacological treatment compared to the group of non-adherent patients, as they had significantly higher scores in both post-tests.

Box 1

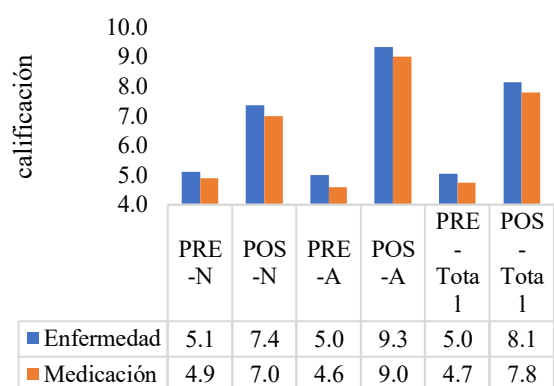


Figure 1

Scores obtained in the questionnaires on knowledge about their disease [hypertension] and their medication in the pre-test [PRE] and post-test [POS] evaluations administered to patients [N: non-adherent, A: adherent].

With regard to the blood pressure values recorded for patients during the intervention [Figure 2], positive results were observed over time, as there was a progressive decrease in the recorded blood pressure values; non-adherent patients started with an average of 149/84 mmHg and adherent patients with an average of 150/85 mmHg; In non-adherent patients, the decrease in pressure was slower, with an average value of 142/79 and 136/79 mmHg obtained at the fourth and fifth visits, respectively, and finally an average of 123/78 mmHg was recorded.

In the case of patients who adhered to pharmacological treatment at the fourth visit, measurements averaged 129/79 mmHg, and at the end of the pharmaceutical intervention, records showed an average value of 117/77 mmHg. This is due to the positive effects obtained from adherence to pharmacotherapy and the health education provided to patients.

Box 2

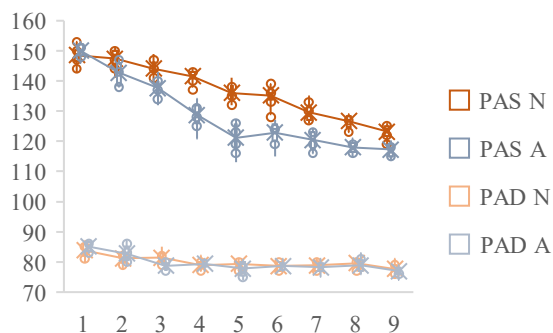


Figure 2

Systolic [SBP] and diastolic [DBP] blood pressure values during pharmacotherapeutic follow-up in hypertensive patients [N: non-adherent, A: adherent].

Discussion

Patients suffering from high blood pressure are generally on multiple medications, and their pharmacological treatments last for long periods of time, which increases the likelihood of non-adherence to their pharmacotherapy and negative results from the medication.

Therefore, pharmacotherapeutic follow-up is a service provided by pharmacists that has a positive impact on patients' health because it ensures appropriate, safe, and effective pharmacotherapy for patients and is a good strategy for preventing or resolving negative outcomes of medication and controlling blood pressure.

This service is offered and provided by community pharmacies for outpatients [Martínez & Martínez, 2012; Rincon, Goncalves & Andrade, 2012; Robles & Macias, 2015]. High blood pressure is a risk factor for cardiovascular morbidity and mortality, particularly in geriatric patients, because ageing is inevitable and brings with it two undesirable events: physiological deterioration and disease. Therefore, the prevalence of hypertension increases with age, as it is a chronic disease that requires adequate compliance with pharmacotherapy in order to optimally control blood pressure and thus reduce the risk of complications [Velasco, 2008; Robles & Macias, 2015].

Pharmacotherapeutic follow-up allows the pharmacist to become part of the multidisciplinary team and contribute professionally to improving the quality of life of hypertensive patients by optimising medication management, the prevention and detection of problems related to the use of medicines and, above all, through the implementation of health education programmes that allow patients and their carers to better understand their condition and gain greater knowledge of their medication, leading to greater adherence to treatment [Velasco, 2008; Robles & Macias, 2015].

Older adults are the age group with the highest prevalence of chronic diseases such as high blood pressure. This means an increase in medication in geriatric patients, leading to a higher risk of problems related to their pharmacological treatment. In general, various studies report that female patients predominate in the participating older adult populations [Osorio-Bedoya & Amariles, 2018; Robles & Macias, 2015].

There are several reasons why patients do not adhere to their medication prescriptions, including their level of education, the number of medications prescribed and, particularly in geriatric patients, forgetfulness as a result of the memory loss that accompanies ageing.

Therefore, strategies should be sought to help patients remember and organise their medication administration [Osorio-Bedoya & Amariles, 2018; Elias, Garcia & Gerrero, 2020].

Pharmacotherapeutic follow-up helps to improve blood pressure control; however, for blood pressure values to improve substantially, there must be a change in the patient's behaviour, starting with the implementation of a health education programme so that the patient knows, understands and applies the knowledge about their disease and their medication [Formentin-Zayas et al., 2021; Franco & Cardona-Arango, 2017; Moscoso & Suárez, 2023]. The patients who learned best were those who were considered adherent because health education reciprocally influences therapeutic adherence; consequently, greater adherence to treatment resulted in better blood pressure control, as demonstrated by the decrease in the values obtained in the different measurements throughout the research. Empirically, changes in their behaviour, attitude and lifestyle towards healthier habits could also be observed, such as the start of physical activity, participation in recreational activities and control of their diet, all of which contribute to improving the patients' health status [Formentin-Zayas et al., 2021; Franco & Cardona-Arango, 2017; Cano-Montoya et al., 2016].

In the present study, we interacted with doctors, nurses, and gerontologists to offer better healthcare services. In the future, other professionals such as nutritionists, physiotherapists, psychologists, and social workers may be included in the programme, as it is the patients and their life context that determine therapeutic adherence and the adoption of hygienic and health measures. Therefore, individualised agreements must be reached with patients to establish the most appropriate treatment and measures to be taken in their particular condition [Franco & Cardona-Arango, 2017; Cano-Montoya et al., 2016; Schmidt Rio-Valle et al., 2006; Quintero et al., 2021].

The experience gained during this research can be expanded and is likely to be replicated in other community pharmacies interested in implementing a pharmacotherapeutic follow-up service that is useful to the healthcare team in adopting a programme of identification and personalised intervention for hypertensive patients with low treatment adherence [Elias, Garcia & Gerrero, 2020; Zapattini, & Ortiz, 2021].

Conclusions

Patients who showed adherence to treatment with antihypertensive drugs had better control of their blood pressure and showed greater knowledge about their disease and the medication prescribed to them. These patients had better acceptance of the treatment and health education actions implemented during this research, and were particularly receptive to the therapeutic advice offered by the pharmacist.

Declarations

Conflict of interest

The authors declare that they have no conflict of interest. They have no known competing financial interests or personal relationships that could have appeared to influence the article reported in this article.

Contribution of the authors

Specify the contribution of each researcher to each of the points developed in this research.

Abbreviations

HTA	High blood pressure	
PAD	Diastolic pressure	
PAS	Systolic pressure	
PP	Pulse pressure	
SMAQ	Medication Questionnaire	Adherence

References

Antecedentes

1. Campos-Nonato, I., Hernández-Barrera, L., Flores-Coria, A., Gómez-Álvarez, E., & Barquera, S. [2019]. *Prevalencia, diagnóstico y control de hipertensión arterial en adultos mexicanos en condición de vulnerabilidad. Resultados de la Ensanut 100k. Salud Pública De México*, 61[6, nov-dic], 888-897.
2. García-Castañeda, Nini J., Cardona-Arango, Doris, Segura-Cardona, Ángela M., & Garzón-Duque, María O. [2016]. *Factores asociados a la hipertensión arterial en el adulto mayor según la subregión*. *Revista Colombiana de Cardiología*, 23[6], 528-534. Epub March 20, 2016.

3. Osorio-Bedoya, E., J. & Amariles, P. [2018]. [Hipertensión arterial en pacientes de edad avanzada: una revisión estructurada](#). *Revista Colombiana de Cardiología*, 25[3], 209-221.
4. García-Falcón, Dorgerys, Lores-Delgado, Danneris, Dupotey-Varela, Niurka M., & Espino-Leyva, Diana L. [2018]. [Atención Farmacéutica en adultos mayores hipertensos. Una experiencia en la atención primaria de salud en Cuba](#). *Ars Pharmaceutica* [Internet], 59[2], 91-98.
5. Miño, Luis Marcelo, Torales, Judith María, García, Laura Beatriz, & Centurión, Osmar Antonio. [2021]. [Manejo terapéutico farmacológico actual en la hipertensión arterial sistémica del adulto](#). *Revista Virtual de la Sociedad Paraguaya de Medicina Interna*, 8[1], 142-155. Epub March 00, 2021.
6. Velasco Valda, G. S. [2008]. [Seguimiento farmacoterapéutico ambulatorio en pacientes hipertensos de la Caja de Salud de Caminos y RA-Oruro](#). *Biofarbo*, 16, 72.
7. Vargas Lozada, Alicia Nathaly, & Pachucho Flores, Ana Pamela. [2024]. [Creación y validación de un instrumento para el control de tratamiento antihipertensivo](#). *Revista InveCom*, 4[2], e040240. Epub 18 de junio de 2024. Básicas
8. Amariles, P., Sabater-Hernández, D., García-Jiménez, E., Rodríguez-Chamorro, M. Á., Prats-Más, R., Marín-Magán, F., Galán-Ceballos, J. A., Jiménez-Martín, J., & Faus, M. J. [2012]. [Effectiveness of Dader Method for pharmaceutical care on control of blood pressure and total cholesterol in outpatients with cardiovascular disease or cardiovascular risk: EMDADER-CV randomized controlled trial](#). *Journal of managed care pharmacy : JMCP*, 18[4], 311–323.
9. Arroyo Monterroza, D. A., & Castro Bolivar, J. F. [2017]. [Pharmaceutical care practice in patients with chronic kidney disease. Seguimiento farmacoterapéutico en pacientes con insuficiencia renal crónica](#). *Farmacia hospitalaria : organo oficial de expresion científica de la Sociedad Espanola de Farmacia Hospitalaria*, 41[2], 137–149.
10. Marques, L. A., Galduróz, J. C., Fernandes, M. R., Oliveira, C. C., Beijo, L. A., & Noto, A. R. [2013]. [Assessment of the effectiveness of pharmacotherapy follow-up in patients treated for depression](#). *Journal of managed care pharmacy : JMCP*, 19[3], 218–227.
11. Pagès-Puigdemont, Neus, & Valverde-Merino, M. Isabel. [2018]. [Métodos para medir la adherencia terapéutica](#). *Ars Pharmaceutica* [Internet], 59[3], 163-172. 2020.
12. Esquivel Garzón, Natalia, & Díaz Heredia, Luz Patricia. [2019]. [Validez y confiabilidad del cuestionario adherencia al tratamiento en pacientes con hipertensión arterial](#). *Investigación y Educación en Enfermería*, 37[3], e09.
13. Jiménez Herrera, Luis. [2014]. [Adherencia terapéutica y oportunidades de mejora del estado salud-enfermedad](#). *Revista Costarricense de Salud Pública*, 23[1], 68-74.
14. Conte, E, Morales, Y, Niño, C, Zamorano, C, Benavides, M, Donato, M, Llorach, C, Gómez, B, & Toro, J. [2020]. [La adherencia a los medicamentos en pacientes hipertensos y en muestra de la población general](#). *Revista de la OFIL*, 30[4], 313-323. Epub 25 de mayo de 2021.

SopORTE

15. Pinillos-Pozo, Viky del Pilar, García-Rodríguez, Marcos Daniel, Ochoa-Arias, Sheyly del Pilar, Pesantes-Sangay, Sandra Jessenia, & Lora-Loza, Miryam. [2022]. [Seguimiento farmacoterapéutico ambulatorio en pacientes hipertensos de un centro de Salud del Perú](#). *Estudio cuasi-experimental*. *Revista Facultad Ciencias de la Salud Universidad del Cauca*, 24 [1], 19-26.
16. Martínez, S. R., Elías, I., & Martínez, F. [2012]. [Seguimiento farmacoterapéutico en pacientes hipertensos tratados farmacológicamente en una farmacia comunitaria de Granada](#). *Farm Com*, 4[Supl 1], 60.
17. Rincon, A., Goncalves, E., & Andrade, B. [2012]. [Atención farmacéutica comunitaria y su impacto en la percepción sobre el profesional farmacéutico en 03 Parroquias del municipio Libertador del estado Mérida](#). *Revista del Instituto Nacional de Higiene Rafael Rangel*, 43[2], 20-26.

18. Robles, N. R., & Macias, J. F. [2015]. [Hypertension in the elderly. Cardiovascular & hematological agents in medicinal chemistry](#), 12[3], 136–145.
19. Elías Díaz, I., García Fariñas, A. & Gerrero Valera, J.. [2020]. [Eficiencia del seguimiento farmacoterapéutico en adultos mayores polimedicados, en una farmacia especial de área, 2018](#). Revista Habanera de Ciencias Médicas, 19[4].
- Discusión**
20. Formentin-Zayas, Mayelin, Carbajales-León, Emma Bárbara, Medina-Fuentes, Guillermo, Formentin-Zayas, Dalgis Mercedes, & Formentin-Zayas, Mailene. [2021]. [Adherencia terapéutica en pacientes hipertensos de un consultorio médico perteneciente al Policlínico Universitario “Joaquín de Agüero y Agüero”](#). Revista Información Científica, 100[4].
21. Franco Sierra, Andrea, & Cardona-Arango, Doris. [2017]. [Calidad de vida de pacientes con enfermedad cardiovascular en un programa de seguimiento Farmacoterapéutico](#). Revista Médica de Risaralda, 23[1], 30-33.
22. Moscoso, M. A. C., & Suárez, A. E. Z. [2023]. [Hipertensión arterial, un reto farmacológico](#). Vive Revista de Salud, 6[16], 251-263.
23. Cano-Montoya, Johnattan, Ramírez-Campillo, Rodrigo, Martínez, Cristian, Sade-Calles, Farid, Salas-Parada, Andrés, & Álvarez, Cristian. [2016]. [Interacción entre farmacoterapia hipotensiva y terapia con ejercicio físico requiere regulación farmacológica en pacientes hipertensos](#). Revista médica de Chile, 144[2], 152-161.
24. Schmidt Rio-Valle, J., Cruz Quintana, F., Villaverde Gutiérrez, C., Prados Peña, D., García Caro, MP., Muñoz Vinuesa, A. & Pappous, A. [2006]. [Adherencia terapéutica en hipertensos: Estudio cualitativo](#). Index de Enfermería, 15[54], 25-29.
25. Quintero, Liens Hernández, Fernández, Diana Amelia Crespo, Cruz, Liliet Trujillo, Hernández Quintero, Liliana María, & Pérez, Marcia Azcuy. [2021]. [Adherencia terapéutica en pacientes con hipertensión arterial](#). Revista Finlay, 11[3], 279-286.
26. Zapattini, Diego Hernán, & Ortiz, Ignacio. [2021]. [Adherencia terapéutica en pacientes hipertensos del consultorio de Clínica Médica del Hospital de Clínicas](#). Anales de la Facultad de Ciencias Médicas [Asunción], 54[2], 89-96. Epub August 00, 2021.