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ARTICILE :ADHERENCE TO ANTIHYPERTENSIVE THERAPY AND ITS DETERMINANTS: A SYSTEMATIC REVIEW

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INTRODUCTION :

* Cardiovascular diseases are considered a global public health problem and remain the leading cause of death and incapacity worldwide :

-32% of all global deaths

- the number one treatable cause of mortality

- third disease with most preventable deaths

* Arterial hypertension is emerging as the most important risk factor for several complications such as ischemic heart disease, stroke, chronic kidney disease and dementia

* The diagnosis of hypertension is established based on the following parameters:

SBP ≥140 mmHg and/or DBP ≥90 mmHg

* 2 tools to control blood pressure = pharmacological and non pharmacological

MATERIAL AND METHODS:

* Source :

- relevant articles published between January 1, 2017, and December 31, 2021, was performed on electronic databases such as Medline (via PubMed), Web of Science, Scientific Electronic Library Online(SciELO), and other national/regional databases

- The research question was elaborated using the PICOS model

* Inclusion Criteria :

1) type of study: any study design conducted in English, French, Spanish or Portuguese, preferring those with a higher level of evidence

2) type of population: adult patients aged 18 years or over, of any gender or ethnicity, with a diagnosis of primary hypertension, as well as participants with other comorbidities

3) type of intervention: adherence to both pharmacological and nonpharmacological treatment using direct or indirect measures of adherence

4) type of comparator: patient's adherence against the non-adherence

5) type of outcome: primary outcome: the adherence to the antihypertensive therapy measured using the different tools available; secondar outcomes: the reduction and/or control of the systolic/diastolic blood pressure and patient-reported information on quality of life or symptoms.

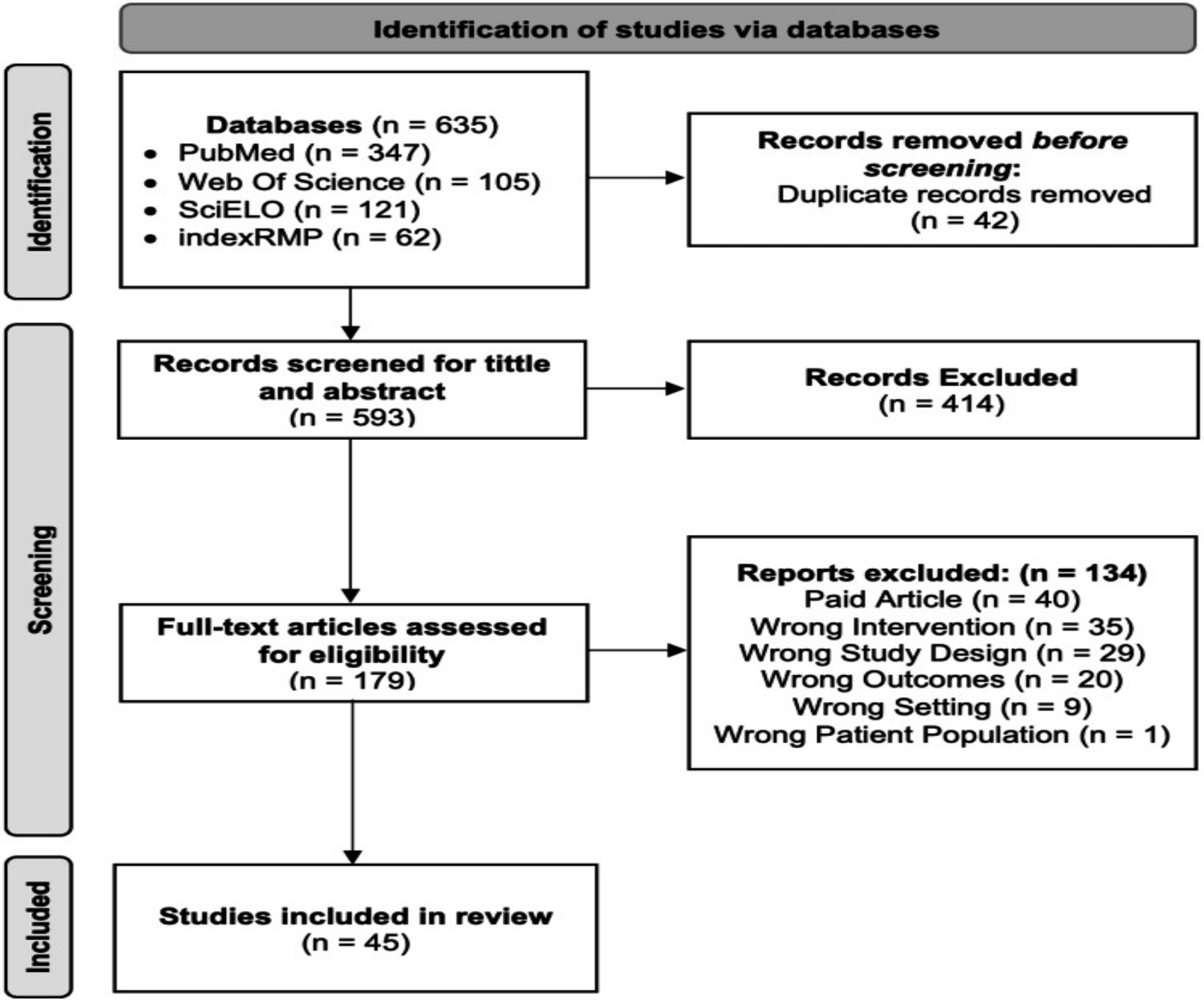
* Eclusion criteria :

1) studies in languages other than the ones in the inclusion criteria, duplicate articles from different databases, and articles whose titles and/or abstracts did not meet the inclusion criteria. Articles that required payment for access were analyzed on a case-by-case basis and excluded if they were not deemed exceptionally relevant to this study. Review articles were excluded, to avoid a high risk of duplicating the results;

2) studies involving patients under 18 years of age, patients with secondary hypertension (e.g., pre-eclampsia, hyperaldosteronism), and pregnant or breast-feeding women;

3) studies involving other interventions besides pharmacological and non-pharmacological treatments

-The literature search on the reported databases elicited 635 articles. After removing 42 duplicates, 593 articles qualified for a title and abstract screening, and according to the inclusion criteria, 179 underwent full-text review. A detailed assessment of the 179 full-text articles resulted in the elimination of an additional 134. Finally, 45 articles that fully met the eligibility were included in this review


Identification of studies via databases
Identification
Databases (n = 635)
PubMed (n = 347)
Web Of Science (n = 105)
SciELO (n = 121)
indexRMP (n = 62)
Records removed before screening:
Duplicate records removed
(n = 42)
Screening
Records screened for tittle and abstract
(n = 593)
Records Excluded
(n = 414)
Full-text articles assessed for eligibility
(n = 179)
Reports excluded: (n = 134)
Paid Article (n = 40)
Wrong Intervention (n = 35)
Wrong Study Design (n = 29)
Wrong Outcomes (n = 20)
Wrong Setting (n = 9)
Wrong Patient Population (n = 1)
Included
Studies included in review
(n = 45)

SOME RESULTS :

COMMUNICATION AND ADHERENCE :

- Higher adherence was observed among black patients with a high level of communication with their clinicians and with higher levels of involvement in shared decision-making

- A better patient-provider relationship, where clinicians always explained things clearly and always listened to their patients while showing concern, led to patients being more likely to be adherent

TECHNOLOGIE AND ADHERENCE:

- Both eHealth and mHealth technological solutions have shown positive effects in enhancing adherence. The SMASH app proved to increase MA and lower SBP and DBP at each subsequent evaluation during a nine month period, managing information from medication trays and BP monitors connected to the app, and sending alerts to patients to remind them to take their medicines and monitor BP

- using mobile phone text messaging containing educative information (about diet, medication schedule, and statements regarding the importance of medication intake) seemed to improve adherence, although the decreased BP values were not statistically significant

- Application of telemedicine tools in a literacy-sensitive and motivational coaching program, with monthly telephone encounters with rural patients, improved medication adherence over time and demonstrated effective drops in systolic and diastolic BP

- One quasi- experimental study used an electronic medication organizer equipped with an alarm clock to help adults organize and remind the daily intake of their medicines (especially for those not familiar with modern technology such as mobile phone apps) and gave healthcare professionals access to patient's reported adherence by the device. In this study, the authors observed a significant change in adherence patterns (from less to moderate adherence) and a drop in the mean SBP and DBP of 18.5 mmHg and 4.3 mmHg respectively

MENTAL HEALTH AND ADHERENCE

-Some condition-related factors are important modifiers of adherence, with non-adherence being higher among those with newly diagnosed depression, with depression symptoms, the necessity of psychopharmacological treatment, or being affected by three or more vital events (defined as adverse circumstances that occur at any stage of the patient's life and can induce discomfort and anxiety, like the death of close family members, interpersonal conflicts, and suffering from physical illnesses)

- Medication adherence worsens with mild cognitive impairment, even in patients without dementia . It is also lower for those with a high probability of being frail and who experienced serious fall injuries following the initiation of antihypertensive medication

MEDICATIONAL CLASS AND ADHERENCE :

-Several therapy-related factors affect adherence, the most notable being the drug class consumed, with patients who initiated angiotensin receptor blockers (ARBs) , calcium channel blockers (CCB) , or angiotensin-converting-enzyme inhibitors (ACE-I) monotherapy more likely to be adherent, whereas those who initiated beta blockers (BB), thiazides diuretics , or loop diuretics tended to show low adherence.

- ACE-I showed a high association with adherence, but when compared to the use of ARBs, patients under ACE-I medication had lower adherence

EDUCATION AND ADHERENCE :

- Health literacy played an important role in three studies presenting with low risk of bias. A statistically significant association between low adherence and health literacy levels was found, with the main domains associated being communication and decision-making skills, independently of sociodemographic characteristics. Medication literacy is positively related to adherence to therapy and involves three main domains: knowledge, attitude, and behaviors (but no association was found with skill literacy) though the correlations were weak . Another study demonstrated that patient's knowledge of hypertension was associated with better adherence to both non-pharmacological (regular physical activity, weight reduction diet, and dietary salt restriction) as well as pharmacological treatment, lower and better controlled SBP and DBP, and fewer hospitalizations when compared to those with low literacy levels

CONCLUSION:

- Adherence to both pharmacological and non-pharmacological therapy plays an important role in the control of BP in patients with hypertension, and ensuring it represents a key challenge in public health. The barriers to adherence are multiple, complex, and often interconnected between socioeconomic, patient, therapy, condition, and healthcare system levels. Hence, healthcare teams should endeavor to study patients' nonadherence motives, using the most suitable tools to devise adherence interventions and tailor them to individual patient needs. Based on our findings, poor adherence is linked to factors such as an unsatisfactory patient-practitioner relationship and communication, a history of depression or occurrence of vital events, cognitive impairment, low health literacy and self-efficacy, presence of frailty and/or disabilities, or a history of previous hospitalization. Moreover, the antihypertensive agent chosen, with its possible side effects, and changes in medication appearance might also influence treatment satisfaction and, ultimately, explain low adherence patterns.


Thank You
Mercé
ありがとう
Köszönöm
Dankjewel
Grazie
Misaotra
Mahalo
Takk
Terima Kasih
Danke
Matondo
Tak
Kiitos
Dankie
Hvala
Faleminderit
Merci
Gracias
شكرا
Xièxie
Спасибо
Rahmat
Sagolun
Efharisto
Obrigado
Toda