Is Guidance Alone Enough? Systematic Review Protocol on Physical Activity Counseling in Hypertension

Apenas orientar é suficiente? Protocolo de revisão sobre aconselhamento em atividade física na hipertensão

¿Solo orientar es suficiente? Protocolo de revisión sobre el asesoramiento en actividad física en la hipertensión

Thaís Alves Paiva Melo[1], Paulo Roberto Viana Gentil[2]

How to cite: Melo TAP, Gentil PRV. Is Guidance Alone Enough? Systematic Review Protocol on Physical Activity Counseling in Hypertension. REVISA. 2026; 15(1): 146-60. Doi: https://doi.org/10.36239/revisa.v15.n1.p146a160

[1] Universidade Federal de Goiás (UFG), Programa de Pós-Graduação em Ciências da Saúde. Goiânia, Goiás, Brasil.
https://orcid.org/0000-0002-3772-1632

[2] Universidade Federal de Goiás (UFG), Faculdade de Educação Física e Dança. Goiânia, Goiás, Brasil.
https://orcid.org/0000-0003-2459-4977

Received: 17/10/2025
Accepted: 27/12/2025

RESUMO

Objetivo: Apresentar protocolo de revisão sistemática que pretende identificar e analisar os impactos da orientação em atividade física em pacientes hipertensos. **Métodos:** Protocolo de revisão sistemática elaborado com base no Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020. A estratégia de busca seguiu o acrônimo PICOS, incluindo apenas ensaios clínicos randomizados com adultos hipertensos. A busca e a avaliação dos estudos serão realizadas por dois pesquisadores independentes, nas bases de dados PubMed, Embase, PsycInfo, CINAHL e LILACS, sem restrição de idioma ou data. O risco de viés será avaliado pela ferramenta Risk of Bias 2.0 (RoB 2.0) e a qualidade da evidência será graduada pelo sistema GRADE. As informações dos estudos selecionados e incluídos nesta revisão sistemática serão registradas em um formulário desenvolvido pelos pesquisadores, e os resultados serão apresentados por meio de mapas, quadros, tabelas ou figuras, visando responder à pergunta de pesquisa e aos objetivos estabelecidos neste estudo. Caso haja homogeneidade metodológica e estatística entre os estudos incluídos, será conduzida uma meta-análise.
Descritores: Hipertensão arterial; Aconselhamento; Atividade Física.

ABSTRACT

Objective: To present a systematic review protocol aimed at identifying and analyzing the impacts of physical-activity counseling in patients with hypertension. **Methods:** This protocol was developed in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020. The search strategy followed the PICOS framework and included only randomized clinical trials involving adults with hypertension. Study search and selection will be conducted independently by two reviewers in the PubMed, Embase, PsycInfo, CINAHL, and LILACS databases, with no restrictions on language or publication date. Risk of bias will be assessed using the Risk of Bias 2.0 (RoB 2.0) tool, and the certainty of evidence will be rated using the GRADE approach. Data from the included studies will be extracted into a form developed by the authors, and the findings will be presented in maps, charts, tables, or figures, aiming to answer the research question and meet the objectives of this study. If adequate methodological and statistical homogeneity is identified among the included studies, a meta-analysis will be performed.
Descriptores: Hypertension; Counseling; Physical Activity.

RESUMEN

Objetivo: Presentar un protocolo de revisión sistemática destinado a identificar y analizar los impactos del asesoramiento en actividad física en pacientes con hipertensión. **Métodos:** Este protocolo fue elaborado conforme a las directrices del Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020. La estrategia de búsqueda siguió el acrónimo PICOS e incluyó únicamente ensayos clínicos aleatorizados con adultos hipertensos. La búsqueda y evaluación de los estudios serán realizadas de forma independiente por dos investigadores en las bases de datos PubMed, Embase, PsycInfo, CINAHL y LILACS, sin restricción de idioma o fecha. El riesgo de sesgo se evaluará mediante la herramienta Risk of Bias 2.0 (RoB 2.0) y la calidad de la evidencia será graduada mediante el sistema GRADE. La información de los estudios seleccionados e incluidos será registrada en un formulario desarrollado por los autores, y los resultados se presentarán en mapas, cuadros, tablas o figuras, con el fin de responder a la pregunta de investigación y a los objetivos establecidos. En caso de existir homogeneidad metodológica y estadística entre los estudios incluídos , se realizará un metaanálisis.
Descriptores: Hipertensión; Asesoramiento; Actividad Física.

REVIEW PROTOCOL

Introduction

Regular physical activity, combined with sustainable modifications in dietary habits, plays a fundamental role in both the primary prevention and secondary management of major non-communicable chronic diseases—including cardiovascular diseases, arterial hypertension, type 2 diabetes mellitus, and certain types of cancer, such as breast and colon cancer[1]. Increased levels of physical activity, together with reduced sodium intake, alcohol consumption, and body mass, constitute a set of widely recognized and effective recommendations for lowering blood pressure levels [2].

A behavioral shift from physical inactivity to an active lifestyle could reduce more than five million deaths annually; however, determining the prevalence of physical inactivity remains complex due to the diversity of instruments used for assessment. In addition, results vary according to the domain considered—whether physical activity is assessed exclusively during leisure time or also includes occupational, transportation, and household activities [3].

Over the past three decades, the number of individuals living with hypertension has nearly doubled, reaching the alarming milestone of 1.3 billion people worldwide in 2019[4]. In Brazil, direct costs attributable to arterial hypertension were estimated at approximately 2.29 billion Brazilian reais in 2018, encompassing expenditures of the Unified Health System related to hospitalizations, outpatient procedures, and medications [5].

Lifestyle modifications represent an effective therapeutic approach, capable of promoting significant reductions in blood pressure, enabling decreased use of pharmacological treatments, and contributing to reductions in body weight, waist circumference, and low-density lipoprotein cholesterol (LDL-C) levels, in addition to improving cognitive function[6-8]. In this context, primary health care professionals are encouraged to develop and implement clinical and public health strategies that promote and sustain the integration of pharmacological and non-pharmacological interventions, with the aim of optimizing blood pressure control and preventing cardiovascular complications[9].

Insufficient adherence to treatment constitutes one of the main barriers to effective hypertension management. Scientific evidence demonstrates that well-structured and properly implemented educational strategies can play a decisive role in improving this scenario, promoting therapeutic continuity and better blood pressure control[10]. Health counseling also stands out as a relevant tool for strengthening self-care. Evidence indicates that the magnitude of benefits derived from these interventions is proportional to the frequency of individuals' participation in counseling sessions, being more pronounced among those who attend a greater number of meetings[8]. Interventions based on guidance to increase physical activity, using a simple prescription strategy grounded in step counting—provided by health professionals and incorporated into routine clinical practice—have resulted in an average increase of approximately 20% in daily step counts, along with significant improvements in glycated hemoglobin (HbA1c) levels and insulin sensitivity[11].

Given the substantial economic and social burden associated with hypertension, it is essential to systematize the available evidence regarding the effectiveness of interventions based exclusively on physical activity guidance. Such synthesis will enable the identification of methodological gaps, support

the formulation of public policies, and provide technical-scientific support to health professionals in selecting the most effective strategies to promote sustainable behavioral changes aimed at blood pressure control. Therefore, the objective of this study was to develop a protocol for conducting a systematic review to analyze scientific evidence on interventions based exclusively on physical activity guidance or counseling in changing inactive behavior among hypertensive patients.

Methods

Systematic reviews constitute a scientific method for evidence synthesis that enables the critical and organized compilation and analysis of existing knowledge on a given topic. This type of study allows for the answering of questions that individual studies cannot fully elucidate, the identification of gaps in primary research, and the evaluation or proposition of explanatory theories regarding the mechanisms through which phenomena occur[12].

The Risk of Bias Tool version 2 (RoB 2), developed by the Cochrane Collaboration, is used to assess the risk of bias in randomized controlled trials (RCTs) included in systematic reviews, replacing the former assessment of "study quality." Its primary objective is to identify potential systematic deviations that may distort the true effect of an intervention, recognizing that such biases may arise at different stages of a trial. Structured into five domains, RoB 2 evaluates critical methodological aspects that influence the internal validity of results and is applied to each specific outcome through six standardized steps—from outcome definition to the overall judgment. The findings are subsequently integrated into the synthesis of the review, enabling, for example, stratification of meta-analyses according to risk of bias levels and ensuring transparency, rigor, and reliability in conclusions regarding intervention effects[13]. However, although RoB 2 assesses internal validity—that is, the trustworthiness of each trial's results—and classifies risk of bias by domain and overall judgment (low risk, some concerns, or high risk), the use of a complementary tool remains important.

The GRADE (Grading of Recommendations Assessment, Development and Evaluation) system is a standardized framework used to assess the quality or certainty of evidence for each outcome in a systematic review. It integrates the results of all included studies, considering multiple factors that influence confidence in the conclusions, such as risk of bias (informed by RoB 2), inconsistency, indirectness, imprecision, and publication bias. Based on this assessment, the evidence is classified into four levels—high, moderate, low, or very low—indicating the degree of confidence in the reported results. Its primary relevance lies in translating methodological quality and consistency of findings into a clear measure of scientific certainty, guiding clinical decision-making and the formulation of evidence-based recommendations. Thus, the use of GRADE renders evidence analysis more comprehensive, rigorous, and robust, strengthening the reliability of the conclusions drawn[14].

In this study, the Methodological Guidelines of the Brazilian Ministry of Health for the Development of Systematic Reviews and Meta-Analyses of Randomized Controlled Trials[15], were adopted. These guidelines are based on international references such as The Cochrane Handbook for Systematic

Reviews of Interventions, the Joanna Briggs Institute (JBI) Manual, the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA), and the Methodological Expectations of Cochrane Intervention Reviews (MECIR). Their use is essential to ensure that all stages—from formulation of the research question to synthesis of results—are conducted in a standardized, transparent, and methodologically rigorous manner. Moreover, adherence to these guidelines contributes to improving the quality and scientific credibility of systematic reviews conducted in the national context, strengthening the evidence base that informs clinical practice and public health policies.

The strategy adopted to conduct the present study was based on the PICOS framework. The protocol for this systematic review was prospectively registered in the PROSPERO Database of Systematic Reviews (CRD420251150687). The literature search was conducted in five databases (PubMed, LILACS, PsycINFO, Embase, and CINAHL), from their inception through September 23, 2025.

The PICOS description used in this review is presented in Table 1, aiming to answer the following research question: Are interventions based on physical activity guidance sufficient to promote adherence or increase the amount of physical activity among hypertensive patients?

Table 1. Description of the PICOS strategy

P	Individuals (aged ≥ 18 years) diagnosed with arterial hypertension.
I	Interventions based exclusively on guidance/counseling for physical activity practice, including verbal prescriptions, written counseling, educational sessions, and individual or group guidance delivered by health professionals.
C	Groups that did not receive guidance or received other types of interventions (e.g., usual care, clinical follow-up without physical activity guidance). Studies involving supervised exercise practice were excluded.
O	Primary: Adherence to physical activity and/or increase in the amount of physical activity performed. Secondary: Comparison of the effects of different guidance modalities on physical activity adherence; identification of instruments and methods used to measure physical activity in included studies; analysis of the influence of intervention duration and intensity on adherence and physical activity outcomes; investigation of effects on secondary variables such as blood pressure, body weight, body mass index (BMI), and/or other lifestyle-related markers.
S	Randomized controlled trials (RCTs), published in peer-reviewed journals, with no restrictions on language or publication date.

All studies published up to August 2025 were considered eligible, with no restrictions regarding publication language. To ensure methodological robustness, only randomized controlled trials (RCTs), recognized as the most appropriate study design for addressing intervention-related research questions by providing more reliable estimates of causal effects and representing the

highest level of primary evidence in the hierarchy of Evidence-Based Medicine, were included [14].

As a fundamental criterion, studies were required to specifically analyze patients diagnosed with arterial hypertension. Both studies including exclusively hypertensive individuals and those encompassing other clinical conditions (such as diabetes mellitus or cardiovascular diseases) were accepted, provided that results related to hypertensive participants were reported separately. Accordingly, only RCTs comparing groups of hypertensive individuals who received physical activity guidance/counseling with groups of hypertensive individuals who did not receive guidance or who were subjected to other structured interventions were considered eligible.

To meet the inclusion criteria, studies were required to explicitly report: (a) sample characteristics confirming the diagnosis of arterial hypertension among the analyzed participants; (b) the type and modality of the intervention based on physical activity guidance/counseling; (c) the comparator group (no guidance or alternative intervention); and (d) outcomes related to adherence to or increases in physical activity practice. In this manner, priority was given to studies capable of directly addressing whether guidance alone is sufficient to promote lifestyle changes and physical activity behavior among individuals with hypertension. All retrieved data will be described and presented in the PRISMA flow diagram.

The search strategy was developed based on controlled descriptors (database-specific vocabularies, such as Medical Subject Headings [MeSH] in PubMed, Emtree in Embase, Health Sciences Descriptors [DeCS] in LILACS, the APA Thesaurus of Psychological Index Terms in PsycINFO, and CINAHL Headings in CINAHL) and free-text terms, including synonyms and orthographic variations.

Descriptor combinations exclusively employed the Boolean operators AND and OR, with the aim of increasing sensitivity and reducing search specificity. Truncation features were not used. The main concepts included were "arterial hypertension," "guidance/counseling," and "physical activity," which were applied in combination across all consulted databases. The specific search strategies used for each database are presented in Table 2. The strategy adopted in this study was grounded in technical criteria, resulting in a sensitive and comprehensive search approach. Accordingly, the inclusion of the largest possible number of database-specific terms, as well as relevant synonyms and terminological variations within each platform, was prioritized to minimize the loss of eligible studies due to heterogeneity in indexing across databases and variability in intervention descriptions. Despite being more extensive, this search strategy aligns with the central objective of the systematic review to comprehensively capture all relevant evidence, ensuring sensitivity without compromising precision.

The intervention will include exclusively guidance or counseling strategies aimed at physical activity practice, encompassing verbal prescriptions, written counseling, educational sessions, and individual or group guidance delivered by health professionals. Interventions involving direct supervision of physical exercise practice will be excluded. The comparator group will comprise participants who did not receive guidance or who were subjected to other types

of interventions, such as usual care or clinical follow-up without physical activity counseling.

Table 2. Search strategies across databases. Goiânia, GO, Brazil, 2025.

Database	Search Strategies	Retrieved Articles
Embase	('hypertension'/exp OR 'acute hypertension' OR 'arterial hypertension' OR 'blood pressure, high' OR 'cardiovascular hypertension' OR 'controlled hypertension' OR 'endocrine hypertension' OR 'high blood pressure' OR 'high renin hypertension' OR 'htn (hypertension)' OR 'hypertensive disease' OR 'hypertensive effect' OR 'hypertensive reaction' OR 'hypertensive response' OR 'neurogenic hypertension' OR 'preexistent hypertension' OR 'salt high blood pressure' OR 'salt hypertension' OR 'secondary hypertension' OR 'systemic hypertension' OR 'hypertension') AND ('counseling'/exp OR 'counselling' OR 'mentoring'/exp OR 'mentorship' OR 'patient compliance'/exp OR 'adherence to therapy' OR 'adherence to treatment' OR 'compliance to therapy' OR 'compliance to treatment' OR 'patient adherence' OR 'patients adherence' OR 'therapy adherence' OR 'therapy compliance' OR 'treatment adherence' OR 'treatment adherence and compliance' OR 'treatment compliance' OR 'patient compliance' OR 'health education'/exp OR 'health fairs' OR 'health science education' OR 'health sciences education') AND ('exercise'/exp OR 'biometric exercise' OR 'effort' OR 'exercise capacity' OR 'exercise performance' OR 'exercise training' OR 'exertion' OR 'fitness training' OR 'fitness workout' OR 'human physical conditioning' OR 'physical effort' OR 'physical exercise' OR 'physical exertion' OR 'physical work-out' OR 'physical workout' OR 'exercise' OR 'endurance training'/exp OR 'endurance exercise' OR 'endurance exercise training' OR 'endurance workout' OR 'endurance-type exercise' OR 'endurance-type training' OR 'endurance training' OR 'resistance training'/exp OR 'resistance exercise' OR 'resistance exercise training' OR 'resistance-type exercise' OR 'resistance-type training' OR 'strength training' OR 'strength-type exercise' OR 'strength-type training' OR 'resistance training' OR 'circuit training'/exp OR 'circuit-based exercise' OR 'circuit-based training' OR 'circuit-type exercise' OR 'circuit-type training' OR 'circuit training' OR 'high intensity exercise'/exp OR 'high intensity physical activity' OR 'high intensity training' OR 'high intensity work-out' OR 'high intensity workout' OR 'high intensity exercise' OR 'gymnastics'/exp OR 'gym class' OR 'gym exercise' OR 'gymnastic exercise' OR 'gymnastics' OR 'sedentary lifestyle'/exp OR 'sedentary behavior' OR 'sedentary behaviour' OR 'sedentary life style' OR 'sedentary lifestyle' OR 'physical inactivity'/exp OR 'physical inactivity') AND [embase]/lim AND 'randomized controlled trial'/de)	606
PubMed	(("Hypertension"[MeSH Terms] OR "High Blood Pressure"[Text Word] OR "High Blood Pressures"[Text Word]) AND ("Counseling"[MeSH Terms] OR "Mentoring"[MeSH Terms] OR "Coaching"[Text Word] OR "Training"[Text Word] OR "Treatment Adherence and Compliance"[MeSH Terms] OR "Therapeutic Adherence"[Text Word] OR "Therapeutic Adherence and Compliance"[Text Word] OR "Treatment Adherence"[Text Word] OR "Patient Compliance"[MeSH	424

	Terms] OR "Client Adherence"[Text Word] OR "Client Compliance"[Text Word] OR "Non Adherent Patient"[Text Word] OR "Non-Adherent Patients"[Text Word] OR "Patient Adherence"[Text Word] OR "Patient Cooperation"[Text Word] OR "patient non adherence"[Text Word] OR "patient non compliance"[Text Word] OR "patient non adherence"[Text Word] OR "patient non compliance"[Text Word] OR "Patient Nonadherence"[Text Word] OR "Patient Noncompliance"[All Fields] OR "Therapeutic Compliance"[Text Word] OR "Therapeutic Compliances"[Text Word] OR "Treatment Compliance"[Text Word] OR "Treatment Compliances"[Text Word] OR "Health Education"[MeSH Terms] OR "Community Health Education"[Text Word]) AND ("Exercise"[MeSH Terms] OR "Acute Exercise"[Text Word] OR "Acute Exercises"[Text Word] OR "Aerobic Exercise"[Text Word] OR "Aerobic Exercises"[Text Word] OR "Exercise Training"[Text Word] OR "Exercise Trainings"[Text Word] OR "Exercises"[Text Word] OR "Isometric Exercises"[Text Word] OR "Physical Activitys"[Text Word] OR "Physical Exercises"[Text Word] OR "Endurance Training"[MeSH Terms] OR "Resistance Training"[MeSH Terms] OR "Strength Training"[Text Word] OR "weight bearing exercise program"[Text Word] OR "weight bearing strengthening program"[Text Word] OR "weight lifting exercise program"[Text Word] OR "weight bearing exercise program"[Text Word] OR "Weight-Bearing Exercise Programs"[Text Word] OR "weight bearing strengthening program"[Text Word] OR "Weight-Bearing Strengthening Programs"[Text Word] OR "weight lifting exercise program"[Text Word] OR "Weight-Lifting Exercise Programs"[Text Word] OR "circuit based exercise"[MeSH Terms] OR "circuit based exercise"[Text Word] OR "Circuit Training"[Text Word] OR "Circuit-Based Exercises"[Text Word] OR "circuit based exercise"[Text Word] OR "high intensity interval training"[MeSH Terms] OR "High-Intensity Intermittent Exercise"[Text Word] OR "High-Intensity Intermittent Exercises"[Text Word] OR "high intensity interval training"[Text Word] OR "High-Intensity Intermittent Exercise"[Text Word] OR "High-Intensity Intermittent Exercises"[Text Word] OR "High-Intensity Interval Trainings"[Text Word] OR "Sprint Interval Training"[Text Word] OR "Sprint Interval Trainings"[Text Word] OR "Gymnastics"[MeSH Terms] OR "Calisthenics"[Text Word] OR "Fitness Centers"[MeSH Terms] OR "Fitness Center"[Text Word] OR "Gym"[Text Word] OR "Gymnasium"[Text Word] OR "Gymnasiums"[Text Word] OR "Gyms"[Text Word] OR "Health Club"[Text Word] OR "Health Clubs"[Text Word] OR "Health Spa"[Text Word] OR "Health Spas"[Text Word] OR "Wellness Center"[Text Word] OR "Wellness Centers"[Text Word] OR "Lack of Physical Activity"[Text Word] OR "Physical Inactivity"[Text Word] OR "Sedentary Behaviors"[Text Word] OR "Sedentary Lifestyle"[Text Word] OR "Sedentary Time"[Text Word] OR "Sedentary Times"[Text Word])) AND (randomizedcontrolledtrial[Filter])	
LILACS	((hipertensão) OR (hipertensão arterial) OR (hipertensão arterial sistêmica) OR (pressão arterial alta) OR (pressão sanguínea alta) OR (hipertensión) OR (presión sanguínea alta) OR (hypertension) OR (high blood pressure) OR (high blood pressures)) AND ((aconselhamento) OR (conselho) OR (consejo) OR (counseling) OR (tutoria) OR (capacitação) OR	198

	(coaching) OR (cursos de treinamento) OR (monitoria) OR (treinamento) OR (tutoría) OR (asesoramiento) OR (capacitación) OR (entrenamiento) OR (mentoring) OR (coaching) OR (training) OR (cooperação e adesão ao tratamento) OR (aderência ao tratamento) OR (adesão ao tratamento) OR (adesão do tratamento) OR (adesão e concordância com o tratamento) OR (adesão e conformidade com o tratamento) OR (adesão e cooperação com o tratamento) OR (adesão e cumprimento do tratamento) OR (adesão e cumprimento terapêutico) OR (adesão terapêutica) OR (adesão terapêutica e concordância) OR (adesão terapêutica e cumprimento) OR (concordância e adesão ao tratamento) OR (conformidade e adesão ao tratamento) OR (cooperação e adesão terapêutica) OR (cumprimento e adesão ao tratamento) OR (observância e adesão ao tratamento) OR (submissão ao tratamento) OR (cumplimiento y adherencia al tratamiento) OR (adherencia al tratamiento) OR (adherencia terapéutica) OR (adherencia terapéutica y cumplimiento) OR (adherencia y cumplimiento del tratamiento) OR (adherencia y cumplimiento terapéutico) OR (adhesión al tratamiento) OR (sometimiento al tratamiento) OR (treatment adherence AND compliance) OR (therapeutic adherence) OR (therapeutic adherence AND compliance) OR (treatment adherence) OR (cooperação do paciente) OR (adesão do cliente) OR (adesão do paciente) OR (conformidade com o tratamento) OR (conformidade do cliente) OR (conformidade terapêutica) OR (cooperação com o tratamento) OR (cooperação consciente com o tratamento) OR (descumprimento do paciente) OR (falta de aderência do paciente) OR (falta de adesão do paciente) OR (falta de conformidade do paciente) OR (falta de cooperação do paciente) OR (inconformidade do paciente) OR (incumprimento do paciente) OR (inobservância do paciente) OR (não aderência do paciente) OR (não adesão do paciente) OR (não conformidade do paciente) OR (não cooperação do paciente) OR (não submissão do paciente) OR (observância ao tratamento) OR (observância do paciente) OR (observância do tratamento) OR (paciente não aderente) OR (cooperación del paciente) OR (adherencia del cliente) OR (adhesión del paciente) OR (cumplimiento del cliente) OR (cumplimiento del tratamiento) OR (cumplimiento terapéutico) OR (falta de cooperación del paciente) OR (observancia del paciente) OR (paciente no adherente) OR (patient compliance) OR (client adherence) OR (client compliance) OR (client compliances) OR (non adherent patient) OR (non-adherent patients) OR (patient adherence) OR (patient cooperation) OR (patient non adherence) OR (patient non compliance) OR (patient non-adherence) OR (patient non-compliance) OR (patient nonadherence) OR (patient noncompliance) OR (therapeutic compliance) OR (therapeutic compliances) OR (treatment compliance) OR (treatment compliances) OR (educação em saúde) OR (educar para a saúde) OR (educação para a saúde) OR (educação para a saúde comunitária) OR (educação sanitária) OR (educación en salud) OR (educación para la salud) OR (educación para la salud comunitaria) OR (educación sanitaria) OR (health education) OR (community health education)) AND ((exercício físico) OR (atividade física) OR (atividades físicas) OR (exercício) OR (exercício aeróbico) OR (exercício agudo) OR (exercício isométrico) OR (práticas corporais) OR (treinamento físico) OR (ejercicio físico) OR	

	(actividad física) OR (ejercicio) OR (ejercicio aeróbico) OR (ejercicio agudo) OR (ejercicio isométrico) OR (entrenamiento físico) OR (prácticas corporales) OR (exercise) OR (acute exercise) OR (acute exercises) OR (aerobic exercise) OR (aerobic exercises) OR (exercise training) OR (exercise trainings) OR (exercises) OR (isometric exercise) OR (isometric exercises) OR (physical activities) OR (physical activitys) OR (physical exercises) OR (physical exercises) OR (treino aeróbico) OR (treinamento de endurance) OR (treinamento de estâmina) OR (treinamento de resistência) OR (treino de corrida) OR (treino de endurance) OR (treino de estâmina) OR (treino de resistência) OR (treino de resistência física) OR (entrenamiento aeróbico) OR (entrenamiento de resistencia) OR (endurance training) OR (treinamento resistido) OR (musculação) OR (programa de fortalecimento por carga de peso) OR (programa de fortalecimento por levantamento de peso) OR (programa de musculação por carga de peso) OR (programa de musculação por levantamento de peso) OR (treinamento com pesos) OR (treinamento de força) OR (treino de força) OR (entrenamiento de fuerza) OR (musculación) OR (programa de fortalecimiento levantando peso) OR (programa de fortalecimiento soportando peso) OR (resistance training) OR (strength training) OR (weight bearing exercise program) OR (weight bearing strengthening program) OR (weight lifting exercise program) OR (weight lifting strengthening program) OR (weight-bearing exercise program) OR (weight-bearing exercise programs) OR (weight-bearing strengthening program) OR (weight-bearing strengthening programs) OR (weight-lifting exercise program) OR (weight-lifting exercise programs) OR (weight-lifting strengthening program) OR (weight-lifting strengthening programs) OR (exercícios em circuitos) OR (exercícios baseados em circuitos) OR (treinamento em circuitos) OR (ejercicio en circuitos) OR (ejercicio basado en circuito) OR (circuit-based exercise) OR (circuit based exercise) OR (circuit training) OR (circuit-based exercises) OR (circuit-based exercise) OR (treinamento intervalado de alta intensidade) OR (exercício intermitente de alta intensidade) OR (treinamento intervalado de arranque) OR (entrenamiento de intervalos de alta intensidad) OR (ejercicio intermitente de alta intensidad) OR (entrenamiento a intervalos de alta intensidad) OR (entrenamiento a intervalos de velocidad) OR (entrenamiento por intervalos de alta intensidad) OR (entrenamiento por intervalos de sprint) OR (high-intensity interval training) OR (high-intensity intermittent exercise) OR (high-intensity intermittent exercises) OR (high intensity interval training) OR (high-intensity intermittent exercise) OR (high-intensity intermittent exercises) OR (high-intensity interval trainings) OR (sprint interval training) OR (sprint interval trainings) OR (ginástica) OR (calistenia) OR (gimnasia) OR (gymnastics) OR (calisthenics) OR (fitness centers) OR (fitness center) OR (gym) OR (gymnasium) OR (gymnasiums) OR (gyms) OR (health club) OR (health clubs) OR (health spa) OR (health spas) OR (outdoor academy) OR (wellness center) OR (wellness centers) OR (comportamento sedentário) OR (comportamentos sedentários) OR (estilo de vida sedentário) OR (estilos de vida sedentários) OR (falta de atividade física) OR (inatividade física) OR (sedentarismo) OR (tempo de sedentarismo) OR (conducta sedentaria) OR (conductas sedentarias) OR (estilo de vida sedentario) OR (estilos de vida sedentarios) OR (falta de	

	actividad física) OR (inactividad física) OR (tiempo sedentario) OR (sedentary behaviore) OR (lack of physical activity) OR (physical inactivity) OR (sedentary behaviors) OR (sedentary lifestyle) OR (sedentary time) OR (sedentary times)) db:("LILACS") AND type_of_study:("clinical_trials") AND instance:"lilacsplus" AND instance:"lilacsplus"	
PsycInfo	Any Field: Hypertension OR Any Field: High Blood Pressure OR Any Field: High Blood Pressures AND Any Field: Counseling OR Any Field: Mentoring OR Any Field: Coaching OR Any Field: Training OR Any Field: Treatment Adherence AND Any Field: Compliance OR Any Field: Therapeutic Adherence OR Any Field: Therapeutic Adherence AND Any Field: Compliance OR Any Field: Treatment Adherence OR Any Field: Patient Compliance OR Any Field: Client Adherence OR Any Field: Client Compliance OR Any Field: Client Compliances OR Any Field: Non Adherent Patient OR Any Field: Non-Adherent Patients OR Any Field: Patient Adherence OR Any Field: Patient Cooperation OR Any Field: Patient Non Adherence OR Any Field: Patient Non Compliance OR Any Field: Patient Non-Adherence OR Any Field: Patient Non-Compliance OR Any Field: Patient Nonadherence OR Any Field: Patient Noncompliance OR Any Field: Therapeutic Compliance OR Any Field: Therapeutic Compliances OR Any Field: Treatment Compliance OR Any Field: Treatment Compliances OR Any Field: Health Education OR Any Field: Community Health Education AND Any Field: Exercise OR Any Field: Acute Exercise OR Any Field: Acute Exercises OR Any Field: Aerobic Exercise OR Any Field: Aerobic Exercises OR Any Field: Exercise Training OR Any Field: Exercise Trainings OR Any Field: Exercises OR Any Field: Isometric Exercise OR Any Field: Isometric Exercises OR Any Field: Physical Activities OR Any Field: Physical Activitys OR Any Field: Physical Exercises OR Any Field: Physical Exercisess OR Any Field: Endurance Training OR Any Field: Resistance Training OR Any Field: Strength Training OR Any Field: Weight Bearing Exercise Program OR Any Field: Weight Bearing Strengthening Program OR Any Field: Weight Lifting Exercise Program OR Any Field: Weight Lifting Strengthening Program OR Any Field: Weight-Bearing Exercise Program OR Any Field: Weight-Bearing Exercise Programs OR Any Field: Weight-Bearing Strengthening Program OR Any Field: Weight-Bearing Strengthening Programs OR Any Field: Weight-Lifting Exercise Program OR Any Field: Weight-Lifting Exercise Programs OR Any Field: Weight-Lifting Strengthening Program OR Any Field: Weight-Lifting Strengthening Programs OR Any Field: Circuit-Based Exercise OR Any Field: Circuit Based Exercise OR Any Field: Circuit Training OR Any Field: Circuit-Based Exercises OR Any Field: Circuit-Based Exercise OR Any Field: High-Intensity Interval Training OR Any Field: High-Intensity Intermittent Exercise OR Any Field: High-Intensity Intermittent Exercises OR Any Field: High Intensity Interval Training OR Any Field: High-Intensity Intermittent Exercise OR Any Field: High-Intensity Intermittent Exercises OR Any Field: High-Intensity Interval Trainings OR Any Field: Sprint Interval Training OR Any Field: Sprint Interval Trainings OR Any Field: Gymnastics OR Any Field: Calisthenics OR Any Field: Fitness Centers OR Any Field: Fitness Center OR Any Field: Gym OR Any Field: Gymnasium OR Any Field: Gymnasiums OR Any Field: Gyms OR Any	94

	Field: Health Club OR Any Field: Health Clubs OR Any Field: Health Spa OR Any Field: Health Spas OR Any Field: Outdoor Academy OR Any Field: Wellness Center OR Any Field: Wellness Centers OR Any Field: Sedentary Behaviore OR Any Field: Lack of Physical Activity OR Any Field: Physical Inactivity OR Any Field: Sedentary Behaviors OR Any Field: Sedentary Lifestyle OR Any Field: Sedentary Time OR Any Field: Sedentary Times OR Any Field: Lack of Physical Activity AND Methodology: Clinical Trial	
CINAHL	(MH "Hypertension" OR "Blood Pressure, High" OR " High Blood Pressure") AND (MH "Counseling" OR "Counselling" OR "Guidance" OR "Re-evaluation Counseling" OR MH "Mentorship" OR "Mentoring" OR "Mentors" OR MH "Guideline Adherence" OR "Guideline Compliance" OR "Policy Compliance" OR "Protocol Compliance" OR MH "Patient Compliance" OR "Compliance, Patient" OR "Patient Cooperation" OR "Patient Non-Compliance" OR "Patients: Compliance" OR "Regimen Adherence" OR MR "Health Education" OR "Community Health Education" OR "Education, Health") AND (MH "Exercise" OR "Exercises" OR "Exercising" OR "Physical Exercise" OR "Physical Exercises" OR MH "Resistance Training" OR "Exercise Program, Weight-Lifting" OR "Exercise Programs, Weight-Lifting" OR "Exercise, Weight-Lifting" OR "Exercises, Weight-Lifting" OR "Strength Training, Resistance" OR "Strengthening Program, Weight-Lifting" OR "Strengthening Programs, Weight-Lifting" OR "Weight-Bearing Exercise" OR "Weight-Bearing Exercise Program" OR "Weight-Bearing Exercise Programs" OR "Weight-Bearing Exercises" OR "Weight-Lifting Exercise" OR "Weight-Lifting Exercise Program" OR "Weight-Lifting Exercise Programs" OR "Weight-Lifting Strengthening Program" OR "Weight-Lifting Strengthening Programs" OR MH "Isotonic Exercises" OR "Exercises, Isotonic" OR "Isotonic Exercise" OR MH "Isometric Exercises" OR "Exercise, Isometric" OR "Exercises, Isometric" OR "Isometric Exercise" OR MH "Aerobic Exercises" OR "Aerobic Exercise" OR "Exercise, Aerobic" OR "Exercises, Aerobic" OR "Low Impact Aerobic Exercises" OR "Step Aerobics" OR MH "High-Intensity Interval Training" OR "High-Intensity Intermittent Exercise" OR "Sprint Interval Training" OR MH "Callisthenics" OR "Calisthenics" OR MH "Sedentary Behavior" OR "Behavior, Sedentary" OR "Life Style, Sedentary" OR "Lifestyle, Sedentary" OR "Lifestyles, Sedentary" OR "Sedentary Life Style" OR "Sedentary Lifestyle" OR "Sedentary Lifestyles")	27

The primary outcome will be adherence to physical activity practice and/or an increase in the amount of physical activity performed by participants. These outcomes will be expressed using different indicators, such as follow-up rate, self-reported regular practice, frequency records, total physical activity time (minutes per week), weekly frequency, or physical activity level measured by validated instruments, including questionnaires, accelerometers, or pedometers. Secondary outcomes will include clinical and lifestyle-related variables associated with hypertension control, such as reductions in blood

pressure levels, improvements in cardiovascular risk markers, anthropometric changes (body weight and body mass index), and quality of life.

The titles and abstracts of all identified studies will be independently assessed by two reviewers to determine trial eligibility. References will be managed using Zotero software, which will support organization and control throughout the screening process. Initially, a preliminary screening based on titles and abstracts will be conducted, from which studies meeting the predefined inclusion criteria will be selected. Subsequently, the full texts of potentially eligible studies will be retrieved and subjected to detailed analysis to confirm inclusion in the review. The entire process of study identification, selection, eligibility, and inclusion will be rigorously documented and presented in a flow diagram developed in accordance with the PRISMA 2020 recommendations.

The following data will be extracted from the selected studies: author, year of publication, study design, sample characteristics (number of participants, mean age, and sex distribution), intervention description, assessed outcomes, methodological characteristics, instruments used to measure physical activity, follow-up duration, and attrition rates. Data extraction will be supported by an artificial intelligence tool used exclusively to automate the completion of a data extraction form previously developed by the researchers.

The artificial intelligence tool will not define variables or extraction criteria; its function will be limited to the automated retrieval of information from full texts and insertion into predefined fields. All extracted material will subsequently be manually reviewed and validated by the responsible researchers to ensure data consistency and reliability. Data will be extracted using a standardized extraction spreadsheet specifically designed to ensure uniformity and reproducibility of the collected information. Duplicate records will be identified and excluded.

The risk of bias of the included studies will be assessed using the Risk of Bias 2.0 (RoB 2.0) tool. This tool allows a structured assessment across five main domains: bias arising from the randomization process, bias due to deviations from intended interventions, bias due to missing outcome data, bias in outcome measurement, and bias in the selection of reported results. Each domain will be classified as low risk, some concerns, or high risk of bias, according to the standardized criteria outlined in the Cochrane Handbook for Systematic Reviews of Interventions (version 6.3).

Effect measures will be defined according to the type and nature of the assessed outcomes. For continuous outcomes, such as amount of physical activity (e.g., minutes per week, MET-min/week, steps per day, or total score on validated instruments), results will be expressed as mean difference (MD) between groups, accompanied by a 95% confidence interval (95% CI).

When different measurement instruments are used to assess the same variable (e.g., IPAQ, 7-Day PAR, or accelerometers), results will be standardized and presented as standardized mean difference (SMD) to allow comparison across studies with heterogeneous methodologies.

For categorical outcomes, such as adherence to physical activity practice (e.g., proportion of participants maintaining active behavior at the end of follow-up), relative measures will be calculated and expressed as risk ratio (RR)

or odds ratio (OR), with corresponding 95% CIs, according to how the original data are reported.

When included studies do not provide direct effect measures, these will be calculated from raw data (mean, standard deviation, number of participants per group), using formulas recommended by the Cochrane Handbook for Systematic Reviews of Interventions (version 6.3).

All effect measures will be extracted or converted such that positive values indicate benefit of the physical activity counseling-based intervention compared with the control group.

Conclusion

This systematic review protocol establishes a rigorous and transparent methodological framework to investigate whether interventions based exclusively on physical activity guidance or counseling are sufficient to promote adherence and increased practice among adults with hypertension. Grounded in highly credible national and international guidelines—such as PRISMA 2020 and GRADE—this study ensures the standardization and reproducibility required for robust evidence synthesis. The adoption of recognized tools, including RoB 2.0 and GRADE, will enable accurate assessment of risk of bias and evidence quality, ensuring consistent and scientifically sound interpretations. The findings of this review are expected to help elucidate the true impact of physical activity counseling strategies on behavior and adherence among individuals with hypertension, thereby informing clinical decision-making, public health policies, and health promotion programs aimed at hypertension control and improved population quality of life.

Acknowledgment

This study was funded by the authors themselves

References

1. Eakin EG, Reeves MM, Lawler SP, et al. The Logan Healthy Living Program: a cluster randomized trial of a telephone-delivered physical activity and dietary behavior intervention for primary care patients with type 2 diabetes or hypertension from a socially disadvantaged community--rationale, design and recruitment. Contemp Clin Trials. 2008;29(3):439-454. doi:10.1016/j.cct.2007.10.005

2. Appel LJ, Champagne CM, Harsha DW, et al. Effects of comprehensive lifestyle modification on blood pressure control: main results of the PREMIER clinical trial. JAMA. 2003;289(16):2083-2093. doi:10.1001/jama.289.16.2083

3. Lee IM, Shiroma EJ, Lobelo F, et al. Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. Lancet. 2012;380(9838):219-229. doi:10.1016/S0140-6736(12)61031-9

4. World health statistics 2023: monitoring health for the SDGs, Sustainable Development
Goals. Geneva: World Health Organization; 2023. Licence: CC BY-NC-SA 3.0 IGO.

5. Nilson EAF, Andrade RCS, Brito DA, Oliveira ML. Costs attributable to obesity, hypertension, and diabetes in the Unified Health System, Brazil, 2018. Rev Panam Salud Publica. 2020.

6. Burke V, Beilin LJ, Cutt HE, Mansour J, Wilson A, Mori TA. Effects of a lifestyle programme on ambulatory blood pressure and drug dosage in treated hypertensive patients: a randomized controlled trial. J Hypertens. 2005;23(6):1241-1249. doi:10.1097/01.hjh.0000170388.61579.4f

7. Burke V, Mansour J, Mori TA, Beilin LJ, Cutt HE, Wilson A. Changes in cognitive measures associated with a lifestyle program for treated hypertensives: a randomized controlled trial (ADAPT). Health Educ Res. 2008;23(2):202-217. doi:10.1093/her/cym017

8. Dudum R, Juraschek SP, Appel LJ. Dose-dependent effects of lifestyle interventions on blood lipid levels: Results from the PREMIER trial. Patient Educ Couns. 2019;102(10):1882-1891. doi:10.1016/j.pec.2019.05.005

9. Ayodapo A, Olukokun T. Lifestyle counselling and behavioural change: role among adult hypertensives in a rural tertiary institution. S Afr Fam Pract. 2019;61(3):91–96. doi:10.1080/20786190.2019.1569453

10. Aghakhani N, Parizad N, Soltani B, Khademvatan K, Rahimi Z. The effect of the blended education program on treatment concordance of patients with hypertension: A single-blind randomized, controlled trial. J Vasc Nurs. 2019;37(4):250-256. doi:10.1016/j.jvn.2019.08.001

11. Dasgupta K, Rosenberg E, Joseph L, et al. Physician step prescription and monitoring to improve ARTERial health (SMARTER): A randomized controlled trial in patients with type 2 diabetes and hypertension. Diabetes Obes Metab. 2017;19(5):695-704. doi:10.1111/dom.12874

12. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. Rev Panam Salud Publica. 2022;46:e112. doi:10.26633/RPSP.2022.112.

13.Sterne JAC, Savović J, Page MJ, et al. RoB 2: a revised tool for assessing risk of bias in randomised trials. BMJ. 2019;366:l4898. Published 2019 Aug 28. doi:10.1136/bmj.l4898

14.Murad MH, Asi N, Alsawas M, Alahdab F. New evidence pyramid. Evid Based Med. 2016;21(4):125-127. doi:10.1136/ebmed-2016-110401

15.Brazil. Ministry of Health. Secretariat of Science, Technology, Innovation and Strategic Health Inputs. Department of Management and Incorporation of Health Technologies. Methodological guidelines: development of systematic reviews and meta-analyses of randomized controlled trials [electronic resource]. Brasília: Ministry of Health; 2021.

Autor correspondente:
Thaís Alves Paiva Melo
Universidade Federal de Goiás. 5ª Avenida, s/n. ZIP 74605-050. - Setor Leste Universitário. Goiânia, Goiás, Brazil.
thaisalvespaivamelo@discente.ufg.br