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Influence of Socioeconomic Factors on the Development of Systemic Arterial Hypertension (SAH) and Type 2 Diabetes Mellitus (DM2): An Integrative Review

Influência de fatores socioeconômicos no desenvolvimento de Hipertensão Arterial Sistêmica (HAS) e Diabetes Mellitus tipo 2 (DM2): uma revisão integrativa

Influencia de los factores socioeconómicos en el desarrollo de la Hipertensión Arterial Sistémica (HAS) y la Diabetes Mellitus tipo 2 (DM2): una revisión integradora

Rafael José Castro Vieira – Faculdade Ages – Bacharelado em Nutrição
Prof. Msc. Juliana Malinovski– Faculdade Ages - Orientadora
Káren Arielle Carvalho Barreto – Faculdade Ages, Co-orientadora

Abstract:
Introduction: Chronic Noncommunicable Diseases (NCDs), such as Systemic Arterial Hypertension (SAH) and Type 2 Diabetes Mellitus (DM2), are specifically serious global public health problems, whose prevalence and clinical phases are strongly influenced by the Social Determinants of Health (DSS). Income disparities and low education limit access to nutritious foods, generating dependence on ultra-processed foods and a predisposition to risky behaviors. Objective: To analyze the impact of socioeconomic factors and social determinants of health on the development and control of Systemic Arterial Hypertension (SAH) and Type 2 Diabetes Mellitus (DM2) in adults, within the scope of Primary Health Care. Methodology: This is an integrative review of the literature. Based on the search for primary studies (2022–2026) in the PubMed (U.S National Library) and SciELO (Scientific Electronic Library Online) databases. A search strategy was used in English combining the terms socioeconomic, social determinants of health, DM2 and systemic arterial hypertension via AND and OR operators. Six articles in Portuguese, English and Spanish that adhere to the context of Primary Health Care were included, excluding secondary productions, gray literature and duplicates, after sequential screening by title, abstract and reading in full. Results and Discussions: The studies evaluated, anchored in the Social Determinants of Health, demonstrate a negative correlation between socioeconomic level and the incidence of hypertension and DM2. Evidence indicates that individuals with low income and less education are more likely to develop hypertension (OR = 1.35), less control of the pathology (OR = 0.73) and a 27% higher risk of mortality from all causes in cases of DM2. The discussion highlights disparities in access to services, with assistance often concentrated in favored classes, in addition to the impact of comorbidities linked to aging and obesity. The scarcity of longitudinal investigations with rural populations and the impact of income on the chronic evolution of these diseases is highlighted as the main gap in the current literature. Conclusion: This integrative review demonstrates that socioeconomic inequalities and a low level of education accelerate the early development of Systemic Arterial Hypertension (SAH) and Type 2 Diabetes Mellitus (DM2), even in areas covered by primary care. Social vulnerability limits access to healthy habits and self-care, increasing risk factors such as a sedentary lifestyle, poor diet and smoking. In view of this, the urgency of multidisciplinary action in Primary Health Care stands out to identify risk groups, expand access to services and promote preventive actions, aiming at early diagnosis, therapeutic optimization and improving the quality of life of this population.

Keywords:
Socioeconomic Factors; Social Determinants of Health; Hypertension; Type 2 Diabetes Mellitus; Primary Health Care.

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Resumo:
Introdução: As Doenças Crônicas Não Transmissíveis (DCNT), como a Hipertensão Arterial Sistêmica (HAS) e o Diabetes Mellitus tipo 2 (DM2), constituem graves problemas de saúde pública global, cuja prevalência e desfechos clínicos são fortemente influenciados pelos Determinantes Sociais da Saúde (DSS). Disparidades de renda e baixa escolaridade limitam o acesso a alimentos nutritivos, gerando dependência de ultraprocessados e predisposição a comportamentos de risco. Objetivo: Analisar o impacto dos fatores socioeconômicos e dos determinantes sociais da saúde no desenvolvimento e controle da Hipertensão Arterial Sistêmica (HAS) e do Diabetes Mellitus tipo 2 (DM2) em adultos, no âmbito da Atenção Primária à Saúde. Metodologia: Trata-se de uma revisão integrativa da literatura. Fundamentado na busca de estudos primários (2022–2026) nas bases de dados PubMed (U.S National Library) e SciELO (Scientific Eletronic Library Online). Empregou-se estratégia de busca em inglês combinando os termos socioeconomic, social determinants of health, DM2 e systemic arterial hypertension via operadores AND e OR. Incluíram-se seis artigos em português, inglês e espanhol aderentes ao contexto da Atenção Primária à Saúde, excluindo-se produções secundárias, literatura cinzenta e duplicatas, após triagem sequencial por título, resumo e leitura na íntegra. Resultados e Discussões: Os estudos avaliados, ancorados nos Determinantes Sociais da Saúde, demonstram uma correlação negativa entre o nível socioeconômico e a incidência de HAS e DM2. Evidências indicam que indivíduos de baixa renda e menor escolaridade possuem maior probabilidade de desenvolver hipertensão (OR = 1,35), menor controle da patologia (OR = 0,73) e um risco 27% superior de mortalidade por todas as causas em casos de DM2. A discussão aponta disparidades no acesso aos serviços, com assistência frequentemente concentrada em classes favorecidas, além do impacto de comorbidades ligadas ao envelhecimento e à obesidade. Aponta-se a escassez de investigações longitudinais com populações rurais e sobre o impacto da renda na evolução crônica dessas doenças como a principal lacuna da literatura atual. Conclusão: Esta revisão integrativa demonstra que as desigualdades socioeconômicas e o baixo nível de escolaridade aceleram o desenvolvimento precoce da Hipertensão Arterial Sistêmica (HAS) e do Diabetes Mellitus tipo 2 (DM2), mesmo em áreas cobertas pela atenção primária. A vulnerabilidade social limita o acesso a hábitos saudáveis e ao autocuidado, potencializando fatores de risco como sedentarismo, má alimentação e tabagismo. Diante disso, destaca-se a urgência da atuação multiprofissional na Atenção Primária à Saúde para identificar grupos de risco, ampliar o acesso aos serviços e promover ações preventivas, visando o diagnóstico precoce, a otimização terapêutica e a melhoria da qualidade de vida dessa população.

Palavras-chave:
Fatores Socioeconômicos; Determinantes Sociais da Saúde; Hipertensão; Diabetes Mellitus Tipo 2; Atenção Primária à Saúde.

Resumen:
Introducción: Las Enfermedades Crónicas No Transmisibles (ECNT), como la Hipertensión Arterial Sistémica (HAS) y la Diabetes Mellitus tipo 2 (DM2), constituyen graves problemas de salud pública mundial, cuya prevalencia y resultados clínicos están fuertemente influenciados por los Determinantes Sociales de la Salud (DSS). Las desigualdades de ingresos y el bajo nivel educativo limitan el acceso a alimentos nutritivos, generando dependencia de alimentos ultraprocesados y predisposición a conductas de riesgo. Objetivo: Analizar el impacto de los factores socioeconómicos y de los determinantes sociales de la salud en el desarrollo y control de la Hipertensión Arterial Sistémica (HAS) y la Diabetes Mellitus tipo 2 (DM2) en adultos, en el ámbito de la Atención Primaria de Salud. Metodología: Se trata de una

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revisión integradora de la literatura. Basada en la búsqueda de estudios primarios (2022–2026) en las bases de datos PubMed (U.S National Library) y SciELO (Scientific Electronic Library Online). Se utilizó una estrategia de búsqueda en inglés combinando los términos socioeconomic, social determinants of health, DM2 y systemic arterial hypertension mediante los operadores AND y OR. Se incluyeron seis artículos en portugués, inglés y español relacionados con el contexto de la Atención Primaria de Salud, excluyéndose producciones secundarias, literatura gris y duplicados tras el cribado secuencial por título, resumen y lectura completa. Resultados y discusión: Los estudios evaluados, basados en los Determinantes Sociales de la Salud, demuestran una correlación negativa entre el nivel socioeconómico y la incidencia de HAS y DM2. Las evidencias indican que las personas con bajos ingresos y menor nivel educativo tienen mayor probabilidad de desarrollar hipertensión (OR = 1,35), menor control de la enfermedad (OR = 0,73) y un riesgo 27 % mayor de mortalidad por todas las causas en casos de DM2. La discusión señala desigualdades en el acceso a los servicios, con atención frecuentemente concentrada en clases favorecidas, además del impacto de las comorbilidades relacionadas con el envejecimiento y la obesidad. Se destaca la escasez de investigaciones longitudinales con poblaciones rurales y sobre el impacto de los ingresos en la evolución crónica de estas enfermedades como la principal laguna de la literatura actual. Conclusión: Esta revisión integradora demuestra que las desigualdades socioeconómicas y el bajo nivel educativo aceleran el desarrollo precoz de la Hipertensión Arterial Sistémica (HAS) y la Diabetes Mellitus tipo 2 (DM2), incluso en áreas cubiertas por la atención primaria. La vulnerabilidad social limita el acceso a hábitos saludables y al autocuidado, potenciando factores de riesgo como el sedentarismo, la mala alimentación y el tabaquismo. Ante ello, se destaca la urgencia de la actuación multiprofesional en la Atención Primaria de Salud para identificar grupos de riesgo, ampliar el acceso a los servicios y promover acciones preventivas, con el objetivo de lograr el diagnóstico precoz, la optimización terapéutica y la mejora de la calidad de vida de esta población.

Palabras clave:
Factores Socioeconómicos; Determinantes Sociales de la Salud; Hipertensión; Diabetes Mellitus Tipo 2; Atención Primaria de Salud.

INTRODUCTION

Non-communicable chronic diseases (NCDs), such as systemic arterial hypertension (SAH) and type 2 diabetes mellitus (DM2), currently represent one of the main challenges for public health in Brazil and worldwide (Malta *et al* ., 2021).

Systemic arterial hypertension is a multifactorial clinical condition characterized by sustained elevation of blood pressure levels (Barroso *et al.* , 2021). Considered one of the main metabolic risk factors, hypertension contributes significantly to morbidity and mortality from cardiovascular diseases and to all causes of death (Barroso *et al* ., 2021).

According to the International Diabetes Federation (2025), type 2 diabetes is the most common type of diabetes, accounting for more than 90% of all diabetes cases worldwide. Diabetes Mellitus consists of a group of metabolic disorders characterized by persistent

hyperglycemia, resulting from defects in the secretion, action, or both of the mechanisms related to insulin (Brazilian Diabetes Society, 2024).

In Brazil, the wide cultural, territorial, demographic, and socioeconomic diversity can contribute to disparities in the influence of factors associated with the development of Non-Communicable Chronic Diseases (NCDs) (Malta *et al.* , 2021). The prevalence of these conditions showed a progressive increase with age in both sexes, while lower levels of education were associated with higher frequencies of occurrence (Malta *et al* ., 2021).

Furthermore, socioeconomic factors exert a significant influence on health outcomes, especially regarding access to adequate food (Buss; Pellegrini Filho, 2007). Low-income families often have limited access to fresh and nutritious foods, becoming more dependent on ultra-processed foods, which are generally more economically accessible and rich in sodium, sugars, and fats—factors associated with the development of chronic non-communicable diseases (Monteiro *et al.,* 2019). This dietary pattern contributes to important metabolic alterations, such as increased blood pressure and blood glucose (Malta *et al* ., 2021). In addition, financial stress resulting from economic difficulties can directly exacerbate inflammatory and metabolic processes, favoring both the development and progression of diabetes mellitus and hypertension (Luo , T. *et al* ., 2024).

According to the World Health Organization (WHO), the Social Determinants of Health (SDH), when related to NCDs, are associated with the conditions in which people are born, grow, live, work, and age (WHO, 2008). In adulthood, these determinants refer to living and working conditions most directly related to people's daily lives, such as employment, working conditions, housing, transportation, and psychosocial factors (Buss; Pellegrini Filho, 2007). The increasing prevalence of NCDs is associated with insufficient preventive measures and late diagnosis of these diseases, frequently identified in later stages of adult life, a context influenced by the social determinants of health (BRAZIL, 2021).

According to data from the World Health Organization (2022), NCDs are responsible for approximately 70% of deaths worldwide, with cardiovascular diseases, diabetes, chronic respiratory diseases, and cancer being the main groups involved . In the Brazilian context, these diseases represent a high mortality burden, significantly impacting the Unified Health System (SUS) and the country's economy (BRASIL, 2021).

According to data from a survey conducted by the Brazilian Diabetes Society (SBD) (2025), there are currently more than 13 million people living with the disease in Brazil, representing 6.9% of the national population. Approximately 90% of diabetic patients in Brazil have type 2 diabetes. The best way to prevent it is by practicing regular physical activity,

maintaining a healthy diet, and avoiding the consumption of alcohol, tobacco, and other drugs (SBD, 2025).

According to data from the Surveillance of Risk and Protective Factors for Chronic Diseases by Telephone Survey (Vigitel) 2023, Systemic Arterial Hypertension (SAH) affects approximately 27.9% of the adult population in Brazilian capitals and the Federal District. The prevalence of medical diagnosis is higher among women (29.3%) than among men (26.4%), with a higher frequency observed with advancing age and a lower frequency among individuals with higher levels of education (BRASIL, 2024).

According to the Ministry of Development and Social Assistance, Family and Fight against Hunger, through the Brazilian Food Insecurity Scale (EBIA), Food Insecurity (FI) manifests itself through concern, fear, and uncertainty regarding access to quality food in sufficient quantity for a healthy and balanced life (BRAZIL, 2024). Deprivation and difficulty in accessing healthy foods among people in situations of food insecurity are associated with lower consumption of fruits and vegetables, as well as increased consumption of low-cost, high-energy-density foods, especially processed and ultra-processed products (FAO *et al.,* 2024). This factor contributes to the development of health problems such as NCDs (BRAZIL, 2021).

The social and socioeconomic determinants of NCDs are of great importance to public health (Buss; Pellegrini Filho, 2007). Professionals face daily disparities in income, education, and lack of information among people affected by these diseases (National Health Survey, 2019). A study by The Lancet Diabetes & Endocrinology found that 59% of adults aged 30 and older with diabetes and systemic hypertension did not receive adequate treatment in 2022 (The Lancet, 2024). This necessitates greater support from public health, particularly in primary care, including health promotion from screening by measuring blood pressure and glucose levels to continuous care, monitoring each patient over time, and referring them to specialists when necessary within a health network (Mendes, 2012).

In this context, the present work aims to analyze, through an integrative literature review, the influence of socioeconomic factors on the development of Systemic Arterial Hypertension (SAH) and type 2 Diabetes Mellitus (DM2) in adults.

METHODOLOGY

This study is characterized as an integrative literature review, descriptive and exploratory in nature, with the purpose of answering the following guiding question : " What is

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the impact of socioeconomic factors on the occurrence of Systemic Arterial Hypertension (SAH) and type 2 Diabetes Mellitus (DM2) in adults?"

Literature database. Analysis and Retrieval System Online (PubMed) and Scientific The descriptors were combined using the Boolean operators “AND” and “OR”, as described below: “ socioeconomic ” ; “Social determinants of health ” ; “DM2”; “ systemic arterial hypertension ” . The terms in English were used for this research.

Primary studies published between 2022 and 2026, available in Portuguese, English, or Spanish, that addressed the influence of socioeconomic factors in adults with Systemic Arterial Hypertension (SAH) and type 2 Diabetes Mellitus (DM2), particularly in the context of Primary Health Care (PHC), were included. Exclusion criteria were: duplicate studies, monographs, literature reviews, editorials, opinion pieces, dissertations, and event abstracts that did not show a relationship between socioeconomic influence and the development of Systemic Arterial Hypertension (SAH) and type 2 Diabetes Mellitus (DM2).

Data collection was carried out in sequential stages. Initially, studies were searched in the selected databases using previously defined descriptors. Next, titles and abstracts were read to select articles that met the inclusion criteria. After this screening, the full texts were read, allowing for the identification of key findings related to the development of Systemic Arterial Hypertension (SAH) and type 2 Diabetes Mellitus (DM2) in adults within the context of primary health care (PHC), considering their socioeconomic conditions, epidemiological aspects, and risk factors.

Figure 1 - Flowchart of the selection of articles chosen for the current research.

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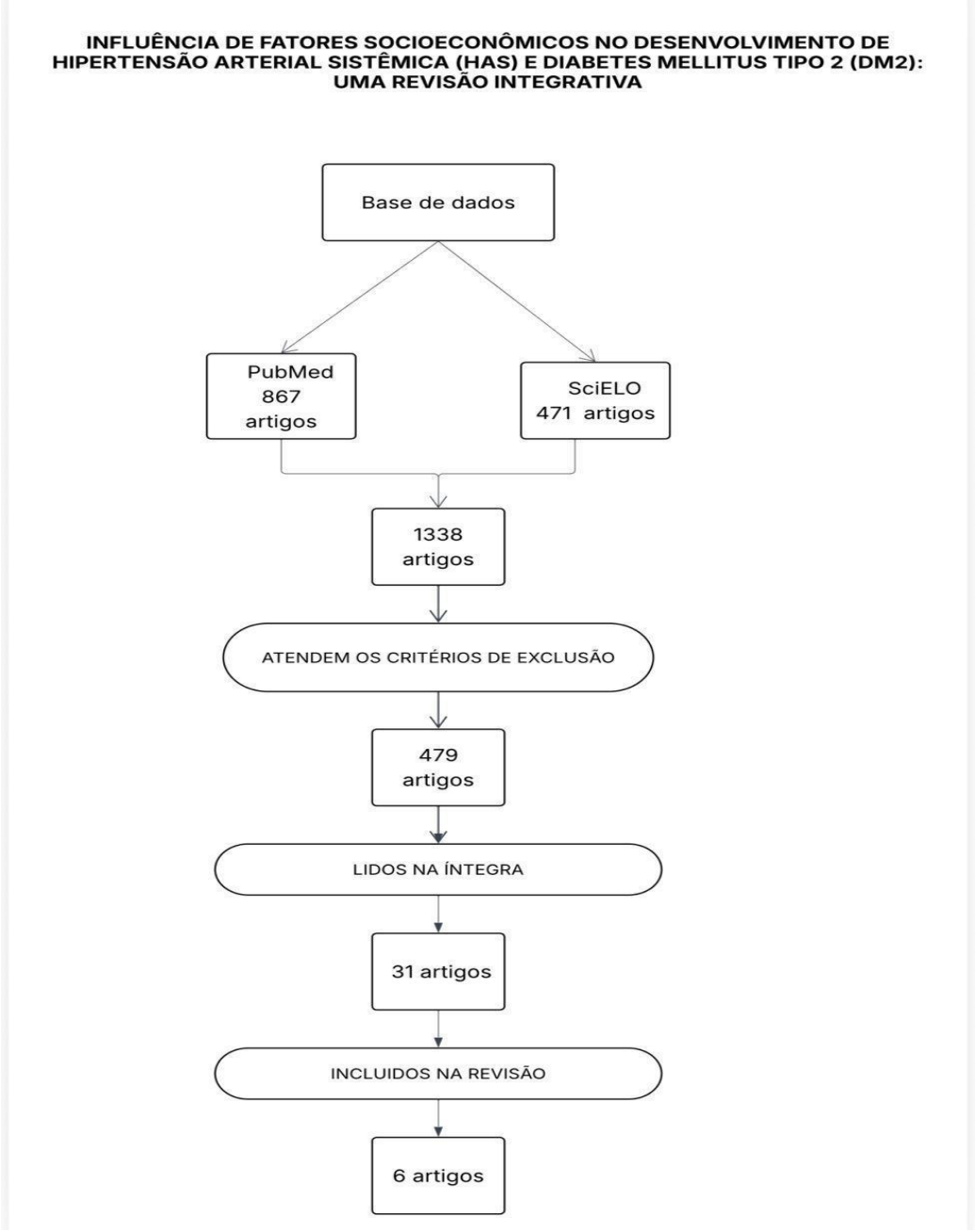

Source: developed by the authors, 2026.

Table 1, described below, compiles the most significant results from each scientific article selected in the research, as well as authors, study type, year of publication, study location, sample, objectives, methodology, and results. The 6 articles are primary studies published in national and international journals, conducted in China, Ghana, the United Kingdom, Brazil, and Iran. Of the selected articles, two were published in Portuguese **,** three in English, and one in Spanish, containing the diverse realities and socioeconomic differences that directly influence the development of Systemic Arterial Hypertension (SAH) and type 2 Diabetes Mellitus (DM2).

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Table 1. Summary of articles analyzed for review.

Articles	Author, year publication to the , study location	Design, type of study and N	Study objectives	Methodology	Key findings
1	Quin Z. 2022 China	Study transversal N=60.283 participants	socioeconomic status (SES) and the prevalence and control rate of hypertension in Nanjing, China.	The investigation includes a questionnaire, body measurements, and laboratory analyses. The on-site data collection phase involves face-to-face interviews and anthropometric measurements, along with the administration of a questionnaire by trained interviewers. The standard questionnaire is based on the questionnaire from the Chinese Adult Chronic Disease and Nutrition Surveillance System. (CACDNS), conducted every three years in China, contains information on basic personal data (age, sex, marital status, education level, occupation, family income, etc.), prevalence of behavioral risk factors (smoking, alcohol consumption, diet, physical activity), family history of hypertension, etc.	The level socioeconomic It played an important role in the prevalence and control of hypertension in adults in Nanjing, China. Strategies for preventing and controlling hypertension should focus especially on people belonging to certain socioeconomic groups. more vulnerable.
2	Ogungbe *et al.* 2022 Ghana	Cross-sectional study analytical N=465 participants	Examine the association between determinants Social health issues, hypertension, and diabetes among African immigrants.	Logistic regression was used to examine the relationship between education, employment, income, social support, health insurance, and self-diagnoses of hypertension and diabetes.	Among African immigrants, those who Those who were unemployed were more likely to self-diagnose diabetes than those who were employed. Furthermore, people with health insurance were more likely to...

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					Self-diagnosis of hypertension. Further studies are needed to better understand the influence of social determinants of health on hypertension and diabetes, aiming at the development of health policies and interventions to improve cardiovascular health. African immigrants
3	Luo *et al.* 2024 China	Cohort study N = 9,280 participants	To investigate the correlation between socio-economic status (SES) and the incidence of hypertension. in adults aged 18 and over in the southwest of China.	A questionnaire was administered to collect information on demographics, lifestyle habits, and family income. A physical examination recorded height, weight, and blood pressure. Biochemical tests measured cholesterol levels. The chi -square test was used to assess statistical differences between the variables. categorical correlations were used, while the Cox proportional hazards regression model was applied to assess the association between socioeconomic status (SES) and the incidence of hypertension.	Adults in the highest household income group presented The risk of hypertension is significantly lower compared to those in the lowest income group. The results indicate a negative correlation between socioeconomic level and the incidence of hypertension in adults in southwest China, suggesting that individuals with higher socioeconomic status are less likely to develop hypertension.

4	Silva *et al.* 2022 Brazil	Retrospective longitudinal study N=453 participants	Analyze the differences among the proportions of chronic non-communicable diseases (DCNT), in two moments, in a cohort of elderly people starting from	Random household recruitment was conducted by clusters (census tracts), followed by cognitive screening using the MMSE (with cutoff scores corrected for education level) to enable self-report responses. Questionnaires were administered in public locations to collect sociodemographic and clinical data. (blood pressure),	Education is an important determinant of health and disease conditions, especially in old age. Brazilian elderly with low levels of education showed a higher prevalence of hypertension and diabetes mellitus, which indicates poor living conditions and
			sociodemographic determinants icos .	Anthropometric measurements, frailty, and prevalence of NCDs were assessed. During the follow-up (2016-2017), active searches and location of baseline participants were conducted through up to three attempts to visit their registered addresses.	Poor health behaviors, which have a significant impact on the health of the elderly. Organic changes secondary to the process of... Aging leads to greater vulnerability of the elderly to the development of NCDs (non-communicable diseases), which implies the need for a better understanding of the social determinants of health.

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5	Darvishi *et al.* 2024 Iran	Observational study N=13.321 participants	socioeconomic inequalities associated with type 2 diabetes in Iran.	Socioeconomic inequalities were assessed using variables such as glycated hemoglobin (HbA1c), fasting glucose (FG), and the triple target (HbA1c, blood pressure, and LDL-C), employing concentration indices (CI) and multivariate logistic regression analysis. Individual socioeconomic status (SES) was determined by calculating an asset index using principal component analysis (PCA) based on individual characteristics.	Patients with higher socioeconomic status showed better glycemic control (HbA1c and fasting glucose) and greater achievement of the triple target (HbA1c, blood pressure, and LDL- c) Inequalities were more evident among women, certain age groups, and residents of urban areas, demonstrating the influence of socioeconomic factors on the management of type 2 diabetes.
6	Luo *et al* 2025 Kingdom United	Cohort study N = 23,246 participants	To investigate the associations between educational attainment and the risks of all-cause mortality, traditional complications, and non-traditional complications in a large population. prospective cohort of	Educational level was categorized as higher education, secondary education, or less than secondary education. Primary outcomes included all-cause mortality, traditional complications (e.g., cardiovascular disease, chronic kidney disease, diabetic retinopathy), and non-traditional complications (e.g., cancer, cognitive impairment, liver disease, infections, and affective disorders).	Lower levels of education are associated with higher risks of all-cause mortality and of traditional and non-traditional complications. traditional related to diabetes. These findings reinforce the need for targeted interventions to address
			patients with type 2 diabetes .		disparities educational programs on diabetes management and improving health knowledge among vulnerable populations

Source: developed by the authors, 2026

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RESULTS AND DISCUSSION

The research considered presented a variety of approaches, including analytical cross-sectional studies, descriptive studies, and cohort studies that directly relate conflicts, causes, and the influence of socioeconomic factors on the development of systemic arterial hypertension and type 2 diabetes mellitus, caused by the level of education, socioeconomic conditions, access to information, and territory.

Overall, research and studies indicate a general agreement among authors on the importance of primary knowledge, information, and training for healthcare professionals, starting from primary healthcare, for low-income populations who lack access to schooling and health education, as a means of preventing and transmitting knowledge about systemic arterial hypertension and type 2 diabetes mellitus.

Based on the studies analyzed regarding the influence of socioeconomic factors on the development of Systemic Arterial Hypertension (SAH) and type 2 Diabetes Mellitus (DM2) in adults, it is observed that the research focus has been directed towards the Social Determinants of Health (SDH), which consider social, political, and economic factors that contribute to health disparities among patients and populations.

The cross-sectional study by Quin Z. *et al.* (2022), which was a community-based survey using multi-stage random sampling with 60,283 adults, observed a high prevalence of individuals with primary education (49.6%), unemployed or retired (49.5%), or with low annual family income (44.9%) in each socioeconomic group, respectively. The low-income group had a higher probability of hypertension (OR = 1.35) and a lower probability of controlled hypertension (OR = 0.73). Socioeconomic level played an important role in the prevalence and control of hypertension in adults in Nanjing, China. The study also highlights that hypertension prevention and control strategies should focus especially on people belonging to lower and more vulnerable socioeconomic groups.

In the cross-sectional study conducted by Ogungbe *et al.* (2022), with a total of 465 African immigrant participants, observed that those who were unemployed were more likely to self-diagnose diabetes than those who were employed. Furthermore, people with health insurance were more likely to self-diagnose hypertension. Among African immigrants, those who were unemployed were more likely to self-diagnose diabetes than those who were employed. Further studies are needed to better understand the influence of social determinants of health on hypertension and diabetes, aiming at the development of health policies and interventions to improve the cardiovascular health of African immigrants.

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In the cohort study conducted by Luo *et al.* (2025), it was found that educational attainment is a critical determinant of health outcomes. Lower educational attainment levels have been associated with higher mortality and an increased risk of chronic diseases in the general population, but their specific impacts on traditional and non-traditional complications of type 2 diabetes remain uncertain. The study included a total of 23,246 participants with type 2 diabetes mellitus. During follow-up, 5,196 deaths were recorded. Compared to participants with completed higher education, those with less than a completed high school education had a 27% higher risk of all-cause mortality (Hazard Ratio – RR). It is stated that lower educational attainment levels are associated with higher risks of all-cause mortality and traditional and non-traditional diabetes-related complications. These findings reinforce the need for targeted interventions to address educational disparities in diabetes management and improve health literacy among vulnerable populations.

In the retrospective longitudinal study by Silva *et al.* (2022), data from the FIBRA Study were used, referring to the baseline (2008-2009) and follow-up.

(2016-2017). The results presented the proportions of self-reported NCDs in community-dwelling older adults at two distinct time points, considering the variables sex, age, and education level. The central point of the study was the impact of low education level on the increased prevalence of both systemic arterial hypertension and diabetes mellitus.

In this context, the authors demonstrate that the management of these diseases goes beyond individual choices, being strongly influenced by the Social Determinants of Health (SDH). Although the natural aging process promotes organic changes that increase vulnerability to the development of NCDs, education also stands out as an important determinant of health and disease conditions, especially in old age.

The findings showed that elderly Brazilians with low levels of education had a higher prevalence of hypertension and diabetes mellitus, which may reflect less favorable living conditions and deficient health behaviors, with a significant impact on the health of this population. Furthermore, this result may be related to greater difficulty in recognizing health needs, adhering to treatments, and understanding care guidelines, as well as limitations in functional literacy, difficulties in accessing health services, and lower quality medical care.

The observational study by Darvishi et al. (2024), conducted in Iran with 13,321 participants, found a significant association between socioeconomic inequalities and the prevalence of Type 2 Diabetes Mellitus (DM2). The study aimed to analyze the relationship between socioeconomic status (SES) and the occurrence of the disease, identifying that individuals with lower SES had a higher prevalence of DM2.

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When analyzing the epidemiological profile of the population, the authors observed that factors such as low income and low education levels act as significant barriers in individuals' daily lives, limiting physical and economic access to healthy foods and suitable environments for regular physical activity. These factors directly contribute to the adoption of habits that are less favorable to the prevention and control of the disease.

Thus, the results show that, although clinical and nutritional guidelines for the management of type 2 diabetes recommend lifestyle changes, adherence to an adequate diet and continuous glycemic control is strongly influenced by socioeconomic conditions. Therefore, the study demonstrates that structural inequalities can restrict individuals' ability to follow therapeutic recommendations, often overriding the individual choices of patients.

According to the cohort study conducted by Luo et al. (2024), carried out in southwest China with 9,280 participants, the relationship between socioeconomic status (SES) and the incidence of hypertension was investigated. The results showed an inverse correlation between these variables, demonstrating that individuals belonging to lower socioeconomic status groups had a higher incidence of the disease.

These findings reinforce the influence of socioeconomic determinants on the development of hypertension, suggesting that factors related to income, living conditions, and access to health services may play a significant role in the occurrence and control of the disease. Thus, the study highlights that the incidence of hypertension does not depend exclusively on biological or behavioral factors, but also on the socioeconomic conditions to which individuals are exposed throughout their lives.

The gaps identified in the texts indicate a scarcity and need for further studies analyzing socioeconomic factors, access to health services and nutrition. This also includes studies evaluating rural populations where information and access to basic health services are not as readily available, and long-term research determining the impact of income on the progression of the chronic diseases identified, aiming to reduce social inequalities in health.

CONCLUSION

This integrative review revealed that socioeconomic factors exert a significant influence on the development and worsening of Systemic Arterial Hypertension (SAH) and type 2 Diabetes Mellitus (DM2). Among the main findings observed recurrently in the analyzed studies, low education, low income, food insecurity, and difficulties in accessing health services

stand out as factors directly associated with increased vulnerability to these Non-Communicable Chronic Diseases (NCDs).

The combined analysis of the articles allowed us to identify that social inequalities impact not only the occurrence of these conditions, but also access to early diagnosis, adherence to treatment, and self-care practices. Individuals in situations of greater socioeconomic vulnerability have greater difficulties maintaining healthy habits, including adequate nutrition and regular physical activity, which contributes to an increase in risk factors associated with hypertension and type 2 diabetes.

In the context of public health, the results reinforce the need for strategies that go beyond a purely biomedical approach, encompassing actions aimed at reducing social inequalities and promoting health equity. In this context, Primary Health Care plays a fundamental role in the early identification of vulnerable groups and in the implementation of preventive and educational actions.

Considering the relevance of the nutritionist's role in the prevention and management of these diseases, especially through food and nutrition education, promotion of healthy habits, and individualized follow-up, some studies identified a limitation: although they addressed aspects related to diet and lifestyle, there was limited discussion about the specific role of this professional, representing a significant gap in the scientific literature.

Among the limitations identified in the analyzed studies, the following stand out: the predominance of observational designs, the concentration of research in specific geographic regions, and methodological differences between the studies—factors that can influence the comparison of results and their generalization to other populations.

Finally, this review contributes to broadening the understanding of the relationship between socioeconomic determinants and the development of hypertension and type 2 diabetes, highlighting the need for public policies that promote better living conditions, access to health, and food security. Furthermore, the findings can support future research focused on investigating intersectoral strategies for the prevention of chronic non-communicable diseases, as well as strengthening the role of nutrition in promoting health and reducing social inequalities.

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