

**SOCIAL DETERMINANTS OF HEALTH AND MOTOR PROFILE OF ADOLESCENTS: SCOPING REVIEW PROTOCOL****DETERMINANTES SOCIALES DE LA SALUD Y PERFIL MOTOR DE ADOLESCENTES: PROTOCOLO DE REVISIÓN DE ALCANCE****DETERMINANTES SOCIAIS DA SAÚDE E PERFIL MOTOR DE ADOLESCENTES: PROTOCOLO DE REVISÃO DE ESCOPO**<sup>1</sup>Júlia de Miranda Bezerra<sup>2</sup>Stephanie Vanessa Penafort Martins Cavalcante<sup>3</sup>Tatiana do Socorro dos Santos Calandrini<sup>4</sup>Raquel Dias Botelho Borborema<sup>5</sup>Demilto Yamaguchi da Pureza<sup>6</sup>Valdecyr Herdy Alves

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**ABSTRACT**

Objective: to map the Social Determinants of Health that influence the motor profile of adolescents. Method: scoping review, following the methodology of the Joanna Briggs Institute (JBI) and the checklist of the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR). The review question is: what are the Social Determinants of Health that influence the motor development of adolescents in primary health care? The search will be conducted in the Virtual Health Library, Embase, Pubmed, Scielo, Scopus and Web of Science databases. After the search, the studies will be grouped in the Rayyan software and duplicates will be removed. The selected requests will be evaluated, following the inclusion criteria, by two independent reviewers. The aim is to expand knowledge about the social determinants of health and the motor profile of adolescents, assisting in health policies for this population, considering the social conditions to which they are exposed.

**Keywords:** Adolescent; Social Determinants of Health; Primary Health Care.

**RESUMEN**

Objetivo: mapear los Determinantes Sociales de Salud que influyen en el perfil motor de los adolescentes. Método: revisión de alcance, siguiendo la metodología del Joanna Briggs Institute (JBI) y la lista de verificación Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR). La pregunta de revisión es: ¿cuáles son los Determinantes Sociales de Salud que influyen en el desarrollo motor de los adolescentes en atención primaria de salud? La búsqueda se realizará en las bases de datos de la Biblioteca Virtual en Salud, Embase, Pubmed, Scielo, Scopus y Web of Science. Luego de la búsqueda, los estudios se agruparán en el software Rayyan y se eliminarán los duplicados. Las solicitudes seleccionadas serán evaluadas, siguiendo los criterios de inclusión, por dos revisores independientes. El objetivo es ampliar el conocimiento sobre los determinantes sociales de la salud y el perfil motor de los adolescentes, ayudando en las políticas de salud para este público, considerando las condiciones sociales a las que están expuestos.

**Palabras clave:** Adolescente; Determinantes Sociales de la Salud; Atención Primaria de Salud.

**RESUMO**

Objetivo: mapear os Determinantes Sociais da Saúde que influenciam no perfil motor de adolescentes. Método: revisão de escopo, atendendo à metodologia do Joanna Briggs Institute (JBI) e checklist do Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR). Tem como pergunta de revisão: quais os Determinantes Sociais da Saúde que influenciam o desenvolvimento motor dos adolescentes na atenção primária à saúde? A busca será realizada nas bases de dados Biblioteca Virtual em Saúde, Embase, Pubmed, Scielo, Scopus e Web of Science. Após a busca, os estudos serão agrupados no software Rayyan e as duplicatas serão removidas. As solicitações selecionadas serão avaliadas, seguindo os critérios de inclusão, por dois revisores independentes. Espera-se ampliar o conhecimento sobre os determinantes sociais da saúde e o perfil motor de adolescentes, auxiliando em políticas de saúde para esse público, considerando os condicionantes sociais aos quais estão sendo expostos.

**Palavras-chave:** Adolescente; Determinantes Sociais da Saúde; Atenção Primária à Saúde.

## INTRODUCTION

Social Determinants of Health (SDH) are fundamental factors that shape individuals' living conditions, encompassing crucial aspects such as access to essential services, including leisure, education, and healthcare. These determinants can affect social reality by influencing the ways people live, work, and develop, generating positive or negative impacts. Dahlgren and Whitehead <sup>(1)</sup> proposed a model to illustrate in detail the individual and collective factors that can affect population health through a concentric layer diagram. This model highlights several layers, including individual factors, personal lifestyle, social and community networks, living and working conditions, as well as general socioeconomic, cultural, and environmental conditions <sup>(2)</sup>.

Understanding the influence of SDH on adolescent development is of paramount importance, considering the intense physical and mental changes these individuals experience. The period of adolescence, which encompasses individuals between the ages of 10 and 19, is characterized by significant transformations, thus requiring specific care for healthy and adequate development <sup>(3)</sup>.

When SDHs are favorable, adolescents are equipped for healthy growth, mental well-being, and self-esteem. However, when these determinants are not adequately met, adolescents' vulnerability increases, which can result in physical and mental health problems, such as anxiety, depression, and malnutrition,

and greater vulnerability, restricting their opportunities for a healthy life <sup>(4)</sup>.

Motor dexterity, which involves the ability to perform coordinated and effective movements, is a fundamental aspect of the healthy development of adolescents, mainly due to the intense physical changes that occur during puberty and is directly related to the individual's involvement in an active lifestyle. It serves as an indicator of an individual's physical, cognitive, and social capabilities and, in the case of adolescents, contributes significantly to the development of self-esteem, socialization, and autonomy. To stimulate the development of this skill, physical activity plays an essential role and should be encouraged and incorporated into adolescents' routines, with the aim of promoting the improvement of motor skills and overcoming physical and environmental limitations <sup>(5,6)</sup>.

The relationship between SDH and motor skills is substantially influenced by the adolescent's context and available family support. In a supportive environment, access to appropriate spaces for physical activity and extracurricular opportunities, such as sports and artistic activities, can be facilitated, although this often depends on financial investment. Furthermore, family support and a quality education, especially through physical education classes, are crucial determinants for the continuation of these activities. Conversely, in contexts of social vulnerability, children and adolescents face greater difficulties in accessing these opportunities, which can hinder their motor development <sup>(4)</sup>.

Understanding this dynamic favors the development of strategies aimed at minimizing social disparities, encouraging the practice of diverse and high-quality motor activities, especially among adolescents in vulnerable situations. These strategies can contribute to reducing social inequities and promoting social inclusion through equitable access to physical activities that promote the comprehensive well-being of adolescents.

Considering the relevance of the topic and the existing gap in knowledge about the impact of SDH on the motor profile of adolescents, a preliminary search of the Cochrane Database of Systematic Reviews, JBI Evidence Synthesis, and Open Science Framework (OSF) databases revealed a scarcity of specific studies on the topic. Therefore, the aim is to map the Social Determinants of Health that influence the motor profile of adolescents.

## **METHODS**

The protocol was developed based on the recommendations of the Joanna Briggs Institute (JBI) and the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) checklist, adopting the following phases: identify the guiding question, identify significant research, distinguish the research, extract information, and summarize the results<sup>(7)</sup>. The scoping review protocol was registered with the OSF under DOI 10.17605/OSF.IO/NSD6X.

## **Review Question**

To develop the review question, the acronym proposed by participants, concept, and context (PCC) was used to establish research eligibility criteria. Participants: adolescents; Concept: Social Determinants of Health that influence motor profile; and Context: Primary health care. Thus, the review question was formulated: What are the Social Determinants of Health that influence the motor development of adolescents in primary health care?

## **Inclusion Criteria**

### **Participants**

Studies involving adolescents aged 10 to 19 years, as recommended by the WHO, will be included. Studies involving adolescents and young adults will be excluded.

### **Concept**

The Social Determinants of Health will be analyzed as a concept, focusing on biological aspects, socioeconomic conditions, family, school, and community environments, and access to public policies. Studies that do not directly address these determinants, or that address only biological aspects of the motor profile or involve a specific disease, will be excluded.

### **Context**

This scoping review will consider studies

on various cultural factors, geographic location, and specific racial or gender interests worldwide. Studies involving secondary and tertiary care will be excluded.

Types of Sources

This study will analyze experimental and observational research, as well as systematic reviews, texts, and opinion articles that meet the objective and review question of this review protocol. There will be no limitations regarding publication date or language.

Search Strategy

The search strategies described in Table 1 will be used, utilizing the descriptors from the Health Science Descriptors (DeCS) and Medical Subject Headings (MeSH) and alternative terms in Portuguese, English, and Spanish, combined with the Boolean operators AND, OR, and NOT, according to the review question. An initial search was conducted on December 17, 2024, in the Virtual Health Library, Embase, Pubmed, Scielo, Scopus, and Web of Science databases to identify the presence and likely quantity of available materials that met the study's inclusion criteria. At that time, 796 studies were found.

Table 1 - Preliminary search strategy in databases.

| DATABAS<br>E | Search Strategy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Results<br>obtained |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| BVS          | (Adolescência OR Jovem OR Jovens OR Juventude OR Adolescenc* OR "Adolescents, Female" OR "Adolescents, Male" OR "Female Adolescent" OR "Male Adolescent" OR Teen* OR Youth* OR Joven OR Jóvenes OR Juventud OR Jeunes* OR "Adolescent de 13 à 18 ans" OR "Adolescents de sexe masculin" OR "Adolescents mâles") AND ("Determinantes Sociais da Saúde" OR "Determinante de Saúde" OR "Determinantes Comerciais de Saúde" OR "Determinantes Estruturais da Saúde" OR "Determinantes Estruturais de Saúde" OR "Determinantes Sociais de Saúde" OR "Social Determinants of Health" OR "Commercial Determinants of Health" OR "Socio-Economic Determinants of Health" OR "Structural Determinants of Health" OR "Determinantes Sociales de la Salud" OR "Determinante de Salud" OR "Determinantes Comerciales de la Salud" OR "Determinantes Estructurales de la Salud" OR "Déterminants sociaux de la santé" OR "Déterminant social de la santé") AND ("Atenção Primária à Saúde" OR "Atendimento Básico" OR "Atendimento Primário" OR "Atendimento Primário de Saúde" OR "Atenção Básica" OR "Atenção Básica à Saúde" OR "Atenção Básica de Saúde" OR "Atenção Primária" OR "Atenção Primária de Saúde" OR "Atenção Primária em Saúde" OR "Cuidado de Saúde Primário" OR "Cuidado Primário de Saúde" OR "Cuidados de Saúde Primários" OR "Cuidados Primários" OR "Cuidados Primários à Saúde" OR "Cuidados Primários de Saúde" OR "Primeiro Nível de Assistência" OR "Primeiro Nível de Atendimento" OR "Primeiro Nível de Atenção" OR "Primeiro Nível de Atenção à Saúde" OR | 313                 |



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|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
|               | "Primeiro Nível de Cuidado" OR "Primeiro Nível de Cuidados" OR "Primary Health Care" OR "Care, Primary" OR "Care, Primary Health" OR "Health Care, Primary" OR "Healthcare, Primary" OR "Primary Care" OR "Primary Healthcare" OR "Atención Primaria de Salud" OR "Asistencia Primaria" OR "Asistencia Primaria de Salud" OR "Asistencia Sanitaria de Primer Nivel" OR "Atención Básica" OR "Atención Primaria" OR "Atención Sanitaria de Primer Nivel" OR "Primer Nivel de Asistencia Sanitaria" OR "Primer Nivel de Atención" OR "Primer Nivel de Atención de Salud" OR "Primer Nivel de Atención Sanitaria" OR "Primer Nivel de la Asistencia Sanitaria" OR "Soins de santé primaires" OR "Soins de santé primaire")                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |    |
| <b>EMBASE</b> | (adolescen*:ti,ab,kw OR teen*:ti,ab,kw OR youth*:ti,ab,kw OR 'adolescents, female':ti,ab,kw OR 'adolescents, male':ti,ab,kw OR 'female adolescent':ti,ab,kw OR 'male adolescent':ti,ab,kw) AND ('social determinants of health':ti,ab,kw OR 'commercial determinants of health':ti,ab,kw OR 'socio-economic determinants of health':ti,ab,kw OR 'structural determinants of health':ti,ab,kw) AND ('primary health care':ti,ab,kw OR 'care, primary':ti,ab,kw OR 'care, primary health':ti,ab,kw OR 'health care, primary':ti,ab,kw OR 'healthcare, primary':ti,ab,kw OR 'primary care':ti,ab,kw OR 'primary healthcare':ti,ab,kw)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 64 |
| <b>PUBMED</b> | (Adolescen*[mh] OR Teen*[tiab] OR Youth*[tiab] OR "Adolescents, Female"[tiab] OR "Adolescents, Male"[tiab] OR "Female Adolescent"[tiab] OR "Male Adolescent"[tiab]) AND ("Social Determinants of Health"[mh] OR "Commercial Determinants of Health"[tiab] OR "Socio-Economic Determinants of Health"[tiab] OR "Structural Determinants of Health"[tiab]) AND ("Primary Health Care"[mh] OR "Care, Primary"[tiab] OR "Care, Primary Health"[tiab] OR "Health Care, Primary"[tiab] OR "Healthcare, Primary"[tiab] OR "Primary Care"[tiab] OR "Primary Healthcare"[tiab])                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 66 |
| <b>SCIELO</b> | (Adolescência OR Jovem OR Jovens OR Juventude OR Adolescen* OR "Adolescents, Female" OR "Adolescents, Male" OR "Female Adolescent" OR "Male Adolescent" OR Teen* OR Youth* OR Joven OR Jóvenes OR Juventud OR Jeunes* OR "Adolescent de 13 à 18 ans" OR "Adolescents de sexe masculin" OR "Adolescents mâles") AND ("Determinantes Sociais da Saúde" OR "Determinante de Saúde" OR "Determinantes Comerciais de Saúde" OR "Determinantes Estruturais da Saúde" OR "Determinantes Estruturais de Saúde" OR "Determinantes Sociais de Saúde" OR "Social Determinants of Health" OR "Commercial Determinants of Health" OR "Socio-Economic Determinants of Health" OR "Structural Determinants of Health" OR "Determinantes Sociales de la Salud" OR "Determinante de Salud" OR "Determinantes Comerciales de la Salud" OR "Determinantes Estructurales de la Salud" OR "Déterminants sociaux de la santé" OR "Déterminant social de la santé") AND ("Atenção Primária à Saúde" OR "Atendimento Básico" OR "Atendimento Primário" OR "Atendimento Primário de Saúde" OR "Atenção Básica" OR "Atenção Básica à Saúde" OR "Atenção Básica de Saúde" OR "Atenção Primária" OR "Atenção Primária de | 10 |



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|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
|                       | Saúde" OR "Atenção Primária em Saúde" OR "Cuidado de Saúde Primário" OR "Cuidado Primário de Saúde" OR "Cuidados de Saúde Primários" OR "Cuidados Primários" OR "Cuidados Primários à Saúde" OR "Cuidados Primários de Saúde" OR "Primeiro Nível de Assistência" OR "Primeiro Nível de Atendimento" OR "Primeiro Nível de Atenção" OR "Primeiro Nível de Atenção à Saúde" OR "Primeiro Nível de Cuidado" OR "Primeiro Nível de Cuidados" OR "Primary Health Care" OR "Care, Primary" OR "Care, Primary Health" OR "Health Care, Primary" OR "Healthcare, Primary" OR "Primary Care" OR "Primary Healthcare" OR "Atención Primaria de Salud" OR "Asistencia Primaria" OR "Asistencia Primaria de Salud" OR "Asistencia Sanitaria de Primer Nivel" OR "Atención Básica" OR "Atención Primaria" OR "Atención Sanitaria de Primer Nivel" OR "Primer Nivel de Asistencia Sanitaria" OR "Primer Nivel de Atención" OR "Primer Nivel de Atención de Salud" OR "Primer Nivel de Atención Sanitaria" OR "Primer Nivel de la Asistencia Sanitaria" OR "Soins de santé primaires" OR "Soins de santé primaire") |     |
| <b>SCOPUS</b>         | TITLE-ABS-KEY ( ( adolescen* OR teen* OR youth* OR "Adolescents, Female" OR "Adolescents, Male" OR "Female Adolescent" OR "Male Adolescent" ) ) AND TITLE-ABS-KEY ( ( "Social Determinants of Health" OR "Commercial Determinants of Health" OR "Socio-Economic Determinants of Health" OR "Structural Determinants of Health" ) ) AND TITLE-ABS-KEY ( ( "Primary Health Care" OR "Care, Primary" OR "Care, Primary Health" OR "Health Care, Primary" OR "Healthcare, Primary" OR "Primary Care" OR "Primary Healthcare" ) )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 237 |
| <b>WEB OF SCIENCE</b> | ALL=((Adolescen* OR Teen* OR Youth* OR "Adolescents, Female" OR "Adolescents, Male" OR "Female Adolescent" OR "Male Adolescent") AND ("Social Determinants of Health" OR "Commercial Determinants of Health" OR "Socio-Economic Determinants of Health" OR "Structural Determinants of Health")) AND ("Primary Health Care" OR "Care, Primary" OR "Care, Primary Health" OR "Health Care, Primary" OR "Healthcare, Primary" OR "Primary Care" OR "Primary Healthcare"))                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 106 |

### Evidence Selection, Extraction, and Analysis

After searching for materials in the selected databases, the studies will be exported to Rayyan software and duplicates will be removed. The remaining studies will undergo abstract reading, followed by a full reading by two independent reviewers, avoiding bias and ensuring the legitimacy of the proposed review. This will identify evidence that adheres to the established principles. In case of disagreement,

another researcher will be requested.

To synthesize the information, a tool developed by the reviewers will be used, identifying the title, author(s), year of publication, objectives, methodology, and main results relevant to the review protocol's investigation.

### Data Analysis and Presentation

The results will be presented narratively,



supported by tables, figures, and graphs that facilitate visualization. The documents included at the end of the scoping review will be presented, based on the information contained in the extraction tool. Thus, the specificities of adolescents' SDH in Primary Health Care will be presented. A narrative summary of the recommendations and limitations of the studies will also be presented, providing useful insights for future research on the topic.

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## Authorship criteria (author contributions)

Júlia de Miranda Bezerra: 1. contributed substantially to the conception and/or planning of the study; 2. to obtaining, analyzing, and/or interpreting the data; 3. to drafting and/or critically reviewing and final approval of the published version.

Stephanie Vanessa Penafort Martins Cavalcante: 1. contributed substantially to the conception and/or planning of the study; 2. to obtaining, analyzing, and/or interpreting the data; 3. to drafting and/or critically reviewing and final approval of the published version.

Tatiana do Socorro dos Santos Calandrini: 1. Contributed substantially to the design and/or planning of the study; 2. Obtained, analyzed, and/or interpreted the data; 3. Contributed substantially to the writing and/or critical review and final approval of the published version.

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Valdecyr Herdy Alves: 1. Contributed substantially to the design and/or planning of the study; 2. Obtained, analyzed, and/or interpreted

the data; 3. as well as in the writing and/or critical review and final approval of the published version.

**Declaration of Conflict of Interest**

Nothing to declare.

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