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NOTE PREVIEW ARTICLE

SCHOOL HEALTH OF ADOLESCENTS: INCIDENCE AND PREVALENCE OF SYSTEMIC ARTERIAL HYPERTENSION

SAÚDE ESCOLAR DE ADOLESCENTES: INCIDÊNCIA E PREVALÊNCIA DE HIPERTENSÃO ARTERIAL SISTÊMICA

SALUD ESCOLAR DE LOS ADOLESCENTES: INCIDENCIA Y PREVALENCIA DE LA HIPERTENSIÓN ARTERIAL SISTÉMICA

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ABSTRACT

Objective: to evaluate pressure levels in adolescents enrolled in high school courses, aged 14 to 17 years, at the Farroupilha Federal Institute Campus Panambi (RS), Brazil. **Method:** descriptive, analytical, cross-sectional, quantitative approach. Data will be collected through a semi-structured instrument with socio-demographic data, blood pressure levels, anthropometric measures and health history. Then, they were submitted to statistical analysis by SPSS version 20.0. The research project was approved by the Research Ethics Committee of the Regional University of the Northwest of the State of Rio Grande do Sul - Unijuí, under the CAAE: 50784615.6.0000.5350. **Expected results:** the study will assist in the implementation of intervention actions, focused on health and prevention in school, as a transdisciplinary and multi-professional proposal among the subjects offered in the curricular plan. **Descriptors:** Blood Pressure; Adolescents; Nursing; School Health.

RESUMO

Objetivo: avaliar níveis pressóricos em adolescentes integrados aos cursos de ensino médio, na faixa etária de 14 a 17 anos, no Instituto Federal Farroupilha Campus Panambi (RS), Brasil. **Método:** estudo descritivo, analítico, transversal, de abordagem quantitativa. Os dados serão coletados por meio de um instrumento semiestruturado com dados sociodemográficos, avaliação de níveis pressóricos, medidas antropométricas e histórico de saúde. Em seguida, submetidos à análise estatística pelo SPSS versão 20.0. O projeto de pesquisa foi aprovado pelo Comitê de Ética em Pesquisa da Universidade Regional do Noroeste do Estado do Rio Grande do Sul - Unijuí, sob o CAAE: 50784615.6.0000.5350. **Resultados esperados:** o estudo auxiliará na realização de ações interventivas, focadas na saúde e prevenção na escola, como proposta transdisciplinar e multiprofissional entre as disciplinas ofertadas no plano curricular. **Descritores:** Pressão Arterial; Adolescente; Enfermagem; Saúde Escolar.

RESUMEN

Objetivo: evaluar los niveles de presión arterial en adolescentes integrados a los cursos de enseñanza secundaria, de 14 años a 17 años, del Federal Instituto Ragamuffin Campus Panambi (RS), Brasil. **Método:** estudio descriptivo, analítico, transversal, con enfoque cuantitativo. Se recogerán los datos a través de instrumento semiestructurado con datos socio-demográficos, evaluación de niveles de la presión arterial, mediciones antropométricas y el histórico de salud. Enseguida sometidos a análisis estadístico por el SPSS versión 20.0. El proyecto de investigación ha sido aprobado por el Comité de Ética en Investigación de la Universidad Regional del Noroeste del Estado de Rio Grande do Sul - Unijuí, bajo la CAAE: 50784615.6.0000.5350. **Resultados esperados:** el estudio le ayudará en la realización de las acciones interventoras, centradas en la salud y prevención en la escuela, tales como propuesta transdisciplinaria y multidisciplinaria entre las asignaturas ofrecidas en el plan de estudios. **Descritores:** La Presión Arterial; Adolescentes; Enfermería; Salud Escolar.

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INTRODUCTION

Systemic arterial hypertension (SAH) is one of the serious public health problems, responsible for 7.5 million deaths worldwide and accounts for 12.8% of the annual total.¹ According to research conducted by the *American Heart Association* (2015) in the 2001 to 2011, Brazil occupies the sixth place among the countries with the highest mortality rates due to heart disease, heart attacks and SAH. The study points to SAH as a global health risk, with a probability of 1.6 billion patients worldwide in 2025.²

SAH is considered a multi-factorial clinical condition, characterized by elevated blood pressure levels. Detection of this pathology is usually delayed, with slow and silent evolution, and may cause damage to organs such as the heart, brain, kidneys and blood vessels.³

The Brazilian Society of Cardiology, Hypertension and Nephrology (2010) estimated that in Brazil the prevalence of two to 13% of hypertension in children and adolescents.⁴ In Brazil, data from the 2002-2003 Household Budget Survey (HBS) 19.7% of overweight/obese adolescents, since the HBS 2008-2009 presented an index of 27.3%.⁵⁻⁶ The inadequate association of diet, physical exercise and sleep can raise the level of obesity among adolescents. These factors trigger predispositions to Chronic Non-communicable Diseases (NCDs).⁷ In addition to cardiovascular risk, it can trigger hemodynamic changes that compromise ventricular function and impact the arterial system.⁸

Obesity increases worldwide among children and adolescents, considered a primary risk factor for SAH.⁹ This age group has presented changes in blood pressure (BP) at an earlier age. Modifiable risk factors such as obesity, alcoholism, smoking, sedentary lifestyle, excess sodium in the diet, and non-modifiable risk factors such as gender, age, color, race and heredity are highlighted.¹⁰ In a study carried out with 1,867 students, in the Municipality of Santa Cruz, State of Rio Grande do Sul, Brazil, observed that high BP has a higher prevalence among boys, with a history of the diagnosis of SAH in their parents.¹¹

SAH in children and adolescents is growing exponentially in developing countries, because it is a disease often asymptomatic in its early stages, which contributes to the lack of early diagnosis, together with the lack of information on the part of the population that contributes towards low control.¹²⁻³

In childhood, the BP measurement becomes essential in all clinical evaluation, since it is an excellent strategy for identifying risk and possible prevention of injuries, and should be defined as equal or greater pressure to the 95th percentile of BP distribution.⁴ The studies demonstrate that blood pressure levels in adolescence are elevated and tend to remain lifelong, this leads to early complications. For this reason, this group should be subject to educational and preventive measures.¹⁴

The implications of Nursing care in the promotion and prevention of NCDs can be addressed through the implementation of educational, playful and methodological actions in the school. With the purpose of making orientations on primary prevention and food quality, physical exercise, laser, sleep and culture. In this way, the intention is to raise awareness among schoolchildren about health self-care since childhood.

The theme of this study was developed due to its relevance in early identification of pressure levels in adolescents. Because there are not many Brazilian studies that make this estimate about the prevalence of BP in this age group, it is crucial to research and verify the pressure levels associated with the anthropometric indicators.¹⁶

The objective of this study was to evaluate blood pressure levels in adolescents enrolled in high school courses, aged 14 to 17 years, at the Farroupilha Federal Institute Campus Panambi (RS), Brazil.

METHOD

Descriptive, analytical, cross-sectional study of quantitative approach. A semi-structured questionnaire with socio-demographic data, pressure levels evaluation, anthropometric measurements and health history will be applied. The data will be collected among the 250 adolescents of the Federal Institute Farroupilha Campus Panambi (RS), Brazil, that integrate high school.

The research project was approved by the Research Ethics Committee of the Regional University of the Northwest of the State of Rio Grande do Sul - Unijuí (RS), Brazil, under the CAAE: 50784615.6.0000.5350. The collection was started in March 2016 and aims to reach a representative number of high school students of the institution. Among those who are willing to sign the Term of Free and Informed Consent (TFIC), which will be delivered in two ways, one will be in the possession of the student and the other with the researcher. All students who do not have prior authorization from those responsible for the TFIC will be

excluded. Participants will be interviewed in the health sector of the institution in order to guarantee reliability and avoid interferences in the responses of the instrument.

The data collected will be submitted to a statistical analysis by software SPSS version 20.0 and presented in figure form, analyzed and discussed in light of the literature.

EXPECTED RESULTS

This study aims to evaluate socio-demographic data, blood pressure levels, anthropometric measurements and health history. These elements will aid in the implementation of intervention actions, focused on health and prevention in the school, as a transdisciplinary and multi-professional proposal among the disciplines offered in the curricular plan. In this context, the nurse can be the multiplier of knowledge through health promotion and education.¹⁷

These actions are important in order to alert adolescents to the development and complications that may occur during adulthood.¹⁸ Nursing based on research sciences can guide students, teachers, families and the community to become protagonists in the co-responsibility of care from the prevention of CNCD infections. It will integrate the health service, the school and the various community institutions in the constitution of public health policies aimed at the preventive culture and guided by the observance of healthy habits.

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