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State of knowledge about pathophysiology, treatment and complication of diabetes mellitus among Polish medical and non-medical students

Abstract

Introduction: Diabetes, alongside cardiovascular diseases, cancer, and chronic respiratory diseases, is recognized as one of the four non-communicable diseases posing the most significant challenge to contemporary medicine, both in Poland and globally. In recent decades, there has been a marked increase in the prevalence of diabetes mellitus. Preventive measures for diabetes, which encompass both a well-balanced diet and regular physical activity, are critical factors that can substantially decrease the incidence of this condition. It is therefore imperative to identify the specific needs of the population and tailor prevention programs to align with the current level of public awareness.

A demographic that warrants particular focus consists of university students who are transitioning into adulthood and developing their dietary habits and overall lifestyle choices. They are not only the primary architects of their own health but also possess the potential to serve as educators within their immediate and broader communities. Within this student population, medical students deserve special attention due to their future roles in influencing patient care and health outcomes, as well as non-medical students, including those in pedagogy, who will be responsible for the care of children diagnosed with diabetes.

Aim of the study: The primary objective of this study is to evaluate the level of knowledge concerning diabetes mellitus among both medical and non-medical students. This research aims to assess familiarity with essential aspects of diabetes, including its etiology, pathophysiology, clinical manifestations, diagnostic approaches, and preventative strategies designed to mitigate complications. By comparing the knowledge levels between the two groups of students and across various academic years, potential disparities arising from differing educational backgrounds can be identified. This evaluation will also inform the need for implementing educational interventions and health promotion initiatives. Furthermore, the study's findings may facilitate revisions to academic curricula.

Material and method: Students enrolled in both medical and non-medical programs at Polish universities participated in a survey comprised of 25 questions. The questionnaire was divided into two sections: the first focusing on sociodemographic information (such as age, gender, height, weight, field of study), and the second addressing detailed inquiries regarding the etiology, pathophysiology, clinical symptoms, complications, as well as the treatment and prevention of diabetes.

Results: A total of 310 students from medical and non-medical disciplines across Polish universities completed the survey, with a balanced ratio of medical to non-medical students (1:1). The findings clearly indicate that medical students possess a significantly higher level of knowledge regarding diabetes, including its pathophysiology, clinical symptoms, treatment, and preventive measures, compared to their non-medical counterparts. Additionally, increased knowledge was noted among

individuals who have a personal connection to someone with diabetes, whether in their immediate or extended social network.

Conclusions: The knowledge level among medical students, attributable to the nature of their educational training, is markedly superior to that of non-medical students. In light of the increasing rates of diabetes in Poland and globally, it would be prudent to consider the initiation of educational campaigns and the incorporation of health promotion courses into the curricula of all academic fields. Such efforts could potentially reduce the incidence of new diabetes cases and delay the development of complications, which holds considerable significance for the healthcare system both in Poland and on a global scale.