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ACTIVE BODIES, SUSTAINABLE LIVES: THE INTERSECTION OF SPORT, HEALTH AND WELL-BEING

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Abstract. *Background*. In the context of the United Nations 2030 Agenda, Sustainable Development Goal 3 (SDG 3) – "Good Health and Well-being" – emphasizes reducing premature mortality from non-communicable diseases (NCDs) and promoting healthier lifestyles. Physical activity represents a cost-effective and accessible intervention with proven benefits for public health. Romania, however, exhibits some of the lowest sport participation rates in the European Union, posing a serious challenge to achieving SDG 3 targets. This study explores the link between physical activity and health outcomes in Romania, aiming to assess the population's engagement in sport and its impact on public health.
Objectives. The primary objective is to analyze the relationship between sport participation and key health indicators related to NCDs, using data from Eurostat and the "România Durabilă" platform. The study compares demographic patterns of physical activity with national mortality rates from cardiovascular diseases, diabetes, and chronic respiratory conditions. Special attention is paid to disparities by income, age, gender, and educational level, and to perceptions of health and infrastructure quality, particularly in schools.
Methods. A quantitative, observational methodology is employed, based on secondary data analysis. The research uses Eurostat statistics from the "Sport participation – practicing sport and physical activity" section and national SDG 3 indicators reported by România Durabilă. Descriptive comparisons and visualizations (charts, trend analysis) illustrate the correlation between physical inactivity and negative health outcomes, without inferring causality.
Results. Results reveal that only 6.3% of Romanians engage in physical activity at least once a week–one of the lowest rates in the EU. Mortality rates from cardiovascular and respiratory diseases have increased, while diabetes-related mortality remains steady. Furthermore, perceptions of health remain disproportionately positive despite low activity levels, and over 60% of respondents consider school infrastructure inadequate for physical education.
Conclusion. The findings highlight the urgent need for integrated national strategies promoting physical activity. Romania must enhance school facilities, address socioeconomic barriers, and implement public health campaigns to increase awareness and participation. Prioritizing these actions is essential for aligning with SDG 3 and ensuring a healthier future for the Romanian population.

Keywords: physical activity, sport, health, well-being, SDG 3.Active bodies, sustainable lives: the intersection of sport, health and well-being.

Introduction

Health and well-being are essential cornerstones of sustainable development, playing a crucial role in shaping the productivity, life satisfaction, and longevity of populations. Within the framework of

the United Nations 2030 Agenda, Sustainable Development Goal 3 (SDG 3) – "Good Health and Well-being" – seeks to ensure healthy lives and promote well-being for all individuals, across all age groups (United Nations, 2015). A pivotal strategy for achieving this objective involves reducing the prevalence and impact of non-communicable diseases (NCDs) through preventive measures and the encouragement of healthier lifestyle choices. Among the most effective, affordable, and universally accessible preventive measures is physical activity – a fundamental yet often underestimated driver of improved individual and public health outcomes (World Health Organization [WHO], 2021).

Engaging in regular physical activity offers a broad spectrum of health benefits. These range from enhanced cardiovascular function and strengthened immune response to better mental health and a significantly lower risk of developing chronic conditions such as type 2 diabetes, obesity, and several forms of cancer (Lee et al., 2012). Additionally, physical exercise plays a vital role in maintaining cognitive function and promoting social inclusion, particularly among vulnerable groups such as older adults and adolescents (Mănescu, D.C., 2013). On a societal scale, increased physical activity levels contribute to reduced healthcare expenditures, improved workforce productivity, and the advancement of environmental sustainability, especially when linked to active transportation and the creation of accessible green spaces (Sallis et al., 2016).

In Romania, the importance of physical activity has garnered increasing attention, especially in light of persistently high mortality rates linked to cardiovascular diseases, diabetes, and respiratory conditions. Recent data from both national and European sources highlight Romania as one of the most sedentary nations in the European Union, with a considerable portion of the population reporting minimal to no engagement in physical activity during their daily routines (Eurostat, 2020). This pattern presents a substantial obstacle to fulfilling SDG 3, particularly the target aimed at reducing premature mortality from NCDs by one-third by 2030 (United Nations, 2020). Moreover, Romania's rapidly aging population and the accelerating pace of urbanization further intensify the need for proactive interventions that integrate physical activity into everyday life and urban development strategies.

Despite rising awareness of these issues, several persistent barriers hinder progress. These include limited access to quality recreational infrastructure, insufficient public funding for sports and wellness initiatives, cultural perceptions that often devalue physical exercise, and inadequate integration of physical education within the national school curriculum. Additionally, disparities in participation rates among different socioeconomic strata emphasize the urgency for inclusive and equitable policies that address the needs of rural populations, underprivileged communities, and individuals with disabilities (European Commission, 2018).

This study explores the relationship between participation in sports and overall health outcomes in Romania, employing a quantitative methodology grounded in official statistical datasets. The "Sport participation – practicing sport and physical activity" section from Eurostat offers a comprehensive lens for analyzing the frequency, intensity, and modalities of physical activity across diverse demographic groups (Eurostat, 2020). These data are juxtaposed with national progress indicators related to SDG 3, as reported by the "România Durabilă" monitoring platform, to provide a holistic view of both achievements and existing shortcomings (România Durabilă, 2022).

The primary aim is to highlight the current landscape of physical activity in Romania and to demonstrate how low levels of sport participation are closely linked to adverse health outcomes. By framing this issue within the broader context of sustainable development, the paper emphasizes the urgent need to embed physical activity into national health strategies and cross-sectoral policy agendas. Encouraging regular movement should not be viewed merely as a matter of personal responsibility, but rather as a strategic investment in the health, resilience, and human capital of the nation (Biddle et al., 2018).

Effectively addressing these challenges requires coordinated action across multiple sectors. Government agencies, educational institutions, healthcare professionals, urban developers, and civil society organizations must collaborate to build environments that facilitate and promote active lifestyles. This involves creating safe, inclusive, and accessible public spaces for physical activity,

enhancing school-based sports and movement programs, providing incentives for workplace wellness schemes, and conducting widespread public awareness campaigns that communicate the benefits of an active lifestyle. Additionally, digital technologies – such as fitness tracking applications and virtual coaching platforms – present novel avenues for engagement, especially among younger and more technologically inclined individuals (Kari et al., 2016).

Ultimately, cultivating a national culture that values and encourages physical activity is not only essential for meeting SDG 3 but also contributes significantly to other interconnected Sustainable Development Goals, including quality education (SDG 4), gender equality (SDG 5), sustainable cities and communities (SDG 11), and climate action (SDG 13). A healthier and more physically active population strengthens social cohesion, improves overall quality of life, and lays the groundwork for long-term, inclusive, and sustainable national development.

Purpose of the study

The purpose of this study is to analyze the relationship between physical activity and public health outcomes in Romania, by comparing data on sport participation from Eurostat with progress toward SDG 3 targets on reducing non-communicable diseases, as reported by România Durabilă. The aim is to highlight how increased physical activity can contribute to national efforts for improving health and achieving sustainable development by 2030.

Research objectives

The main objective of this study is to examine the relationship between physical activity and public health outcomes in Romania, within the framework of Sustainable Development Goal 3 (Good Health and Well-being). The research aims to explore the current levels of physical activity among the Romanian population, using data from Eurostat's "Sport participation – practicing sport and physical activity," focusing on differences across age and gender. At the same time, the study analyzes Romania's progress toward meeting SDG 3 targets–particularly the reduction of premature mortality from cardiovascular diseases, diabetes, and respiratory illnesses–as reported on the România Durabilă platform. By comparing these datasets, the study seeks to identify potential correlations between physical inactivity and negative health outcomes, such as lower healthy life expectancy and higher rates of non-communicable diseases. Furthermore, it aims to evaluate the role of sport as an accessible and cost-effective tool for disease prevention and to develop evidence-based recommendations for public policies that promote more active lifestyles. Through this approach, the paper contributes to a better understanding of how sport and physical activity can be leveraged to support sustainable development and improve population well-being in Romania.

Materials and methods

This research adopts a quantitative, comparative analysis based on secondary data sourced from two major platforms: Eurostat and România Durabilă. The primary dataset includes statistics from Eurostat's "Sport participation – practicing sport and physical activity" section, which provides detailed information on the frequency, intensity, and type of physical activity practiced by individuals in Romania, disaggregated by age, sex, and educational background. This data set serves as the foundation for assessing the national levels of physical activity and identifying behavioral patterns related to sport and exercise.

In parallel, the study incorporates data from România Durabilă, the national monitoring platform for Sustainable Development Goals (SDGs), with a specific focus on SDG 3 – Good Health and Well-being. Key indicators under analysis include mortality rates from cardiovascular diseases, diabetes, and chronic respiratory conditions, as well as life expectancy and healthy life years.

The data spans multiple reporting periods, allowing for longitudinal comparison and trend identification, with a focus on the most recent year available for both datasets (currently 2022 or latest). Data visualization tools, including bar charts and line graphs, will be used to compare trends across time and between demographic categories. Correlations will be interpreted descriptively, emphasizing relationships between physical activity levels and health outcomes rather than establishing causality.

No primary data collection (e.g., surveys or interviews) was conducted for this research, due to the availability of reliable and comprehensive public datasets. The methodological approach remains observational and descriptive, aiming to provide insights that can inform public health strategies and policy recommendations.

Results and interpretation

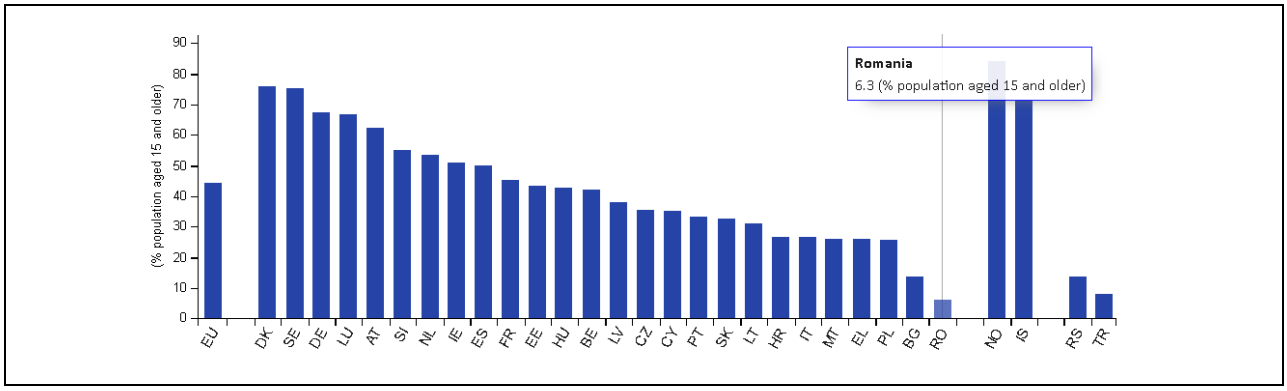

Figure 1. Practicing sport, keeping fit or participating in recreational (leisure) physical activities at least once a week, 2019.
Source: https://ec.europa.eu/eurostat/

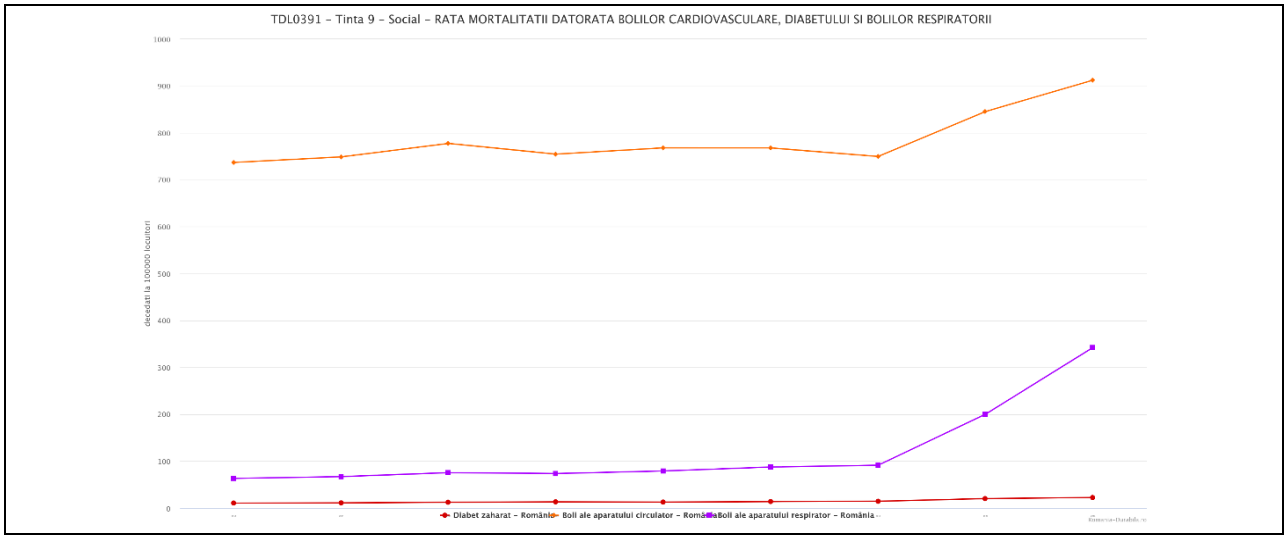

Figure 2. Mortality Rate Due to Cardiovascular Diseases, Diabetes and Respiratory Diseases.
Source: http://romania-durabila.gov.ro/

As it can be observed on the first figure, in 2019, only 6.3% of Romanians aged 15 and over reported engaging in sporting, fitness, or recreational physical activities at least once a week, according to Eurostat. This places Romania among the lowest in the EU, far behind countries where participation exceeds 50%. The stark contrast points to possible structural and cultural barriers– such as limited access to sports facilities or low awareness of the benefits of regular exercise. This low engagement raises significant public health concerns, as sedentary lifestyles are closely linked to chronic conditions like cardiovascular diseases, emphasizing the urgent need for targeted health promotion strategies.

The second figure reveals a concerning rise in mortality from cardiovascular and respiratory diseases in Romania, with rates climbing from roughly 700 to 900 and from 50 to 300 deaths per 100,000 people, respectively. In contrast, diabetes-related mortality has remained relatively stable at around 20 per 100,000. These trends suggest deeper systemic issues in public health and lifestyle, especially given Eurostat's data showing that only 6.3% of Romanians engage in physical activity weekly. This low participation likely contributes to the increase in deaths from heart and lung conditions, as regular physical activity is known to reduce such risks. While diabetes appears more stable–possibly due to effective treatment protocols–the broader pattern signals a need for integrated policies that not only promote sport and exercise, but also address other health determinants like diet, air quality, and access to care. Expanding physical activity opportunities and tailoring interventions to specific regions could help reverse these negative health trends.

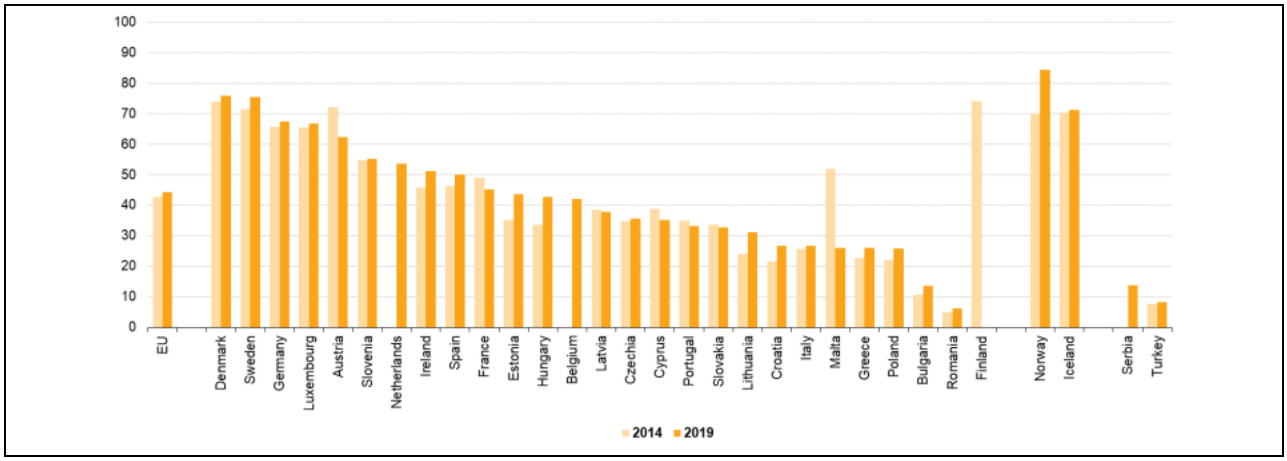

Figure 3. Practicing Sport, Keeping Fit or Participating in Recreational (Leisure) Physical Activities At Least Once A Week, 2014 And 2019 (%population aged 15 and older).

Source: https://ec.europa.eu/eurostat/

The figure captures the percentage of the population aged 15 and older who engage in regular physical (sport, fitness, or leisure) activities. It compares data for two moments in time–2014 and 2019–offering insight into trends over the five-year period. While precise numerical values aren't available here, prior discussions have noted that Romania features very low participation rates (as low as approximately 6.3% in recent contexts). Even if there have been slight changes between 2014 and 2019, the overall impression is that relatively few Romanians are regularly active.

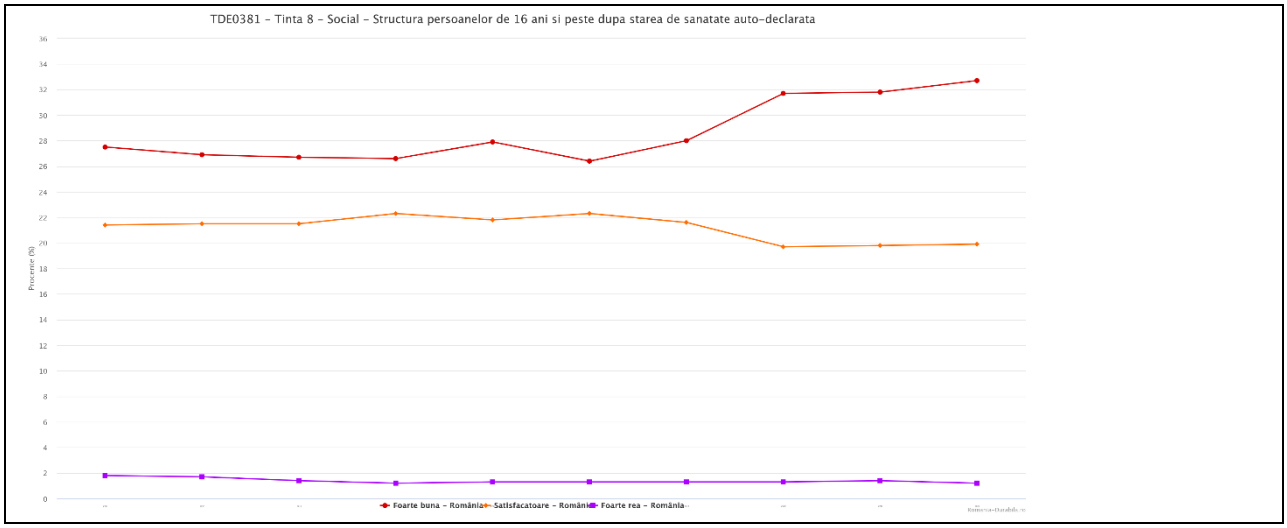

Figure 4. Structure Of People Aged 16 And Over by Self-Declared Health Status.
Source: http://romania-durabila.gov.ro/

This figure shows how individuals aged 16+ perceive their health, with about 28% rating it as "very good" and 23% as "satisfactory." Only a small percentage–roughly 2% and 1%–rate their health as "bad" or "very bad." Despite low levels of physical activity in the population, most people maintain a positive self-image of their health. This gap between perception and objective health indicators may reflect cultural optimism, differing standards for what is considered "good health," or limited awareness of the long-term risks associated with sedentary behavior.

Figure 2 shows that only a small fraction of adults in Romania engage in regular physical activity, highlighting a clear sedentary trend. In contrast, Figure 4 reveals that many still perceive their health as "very good" or "satisfactory," indicating a mismatch between behavior and perception. Over time, there's little sign of significant improvement in activity levels, while self-perceived health remains relatively stable. This suggests that people may judge their health more on the absence of illness than on preventive behaviors like exercise. The gap could also be explained by cultural norms, delayed effects of inactivity, or other lifestyle factors like diet and social environment that shape how individuals assess their well-being.

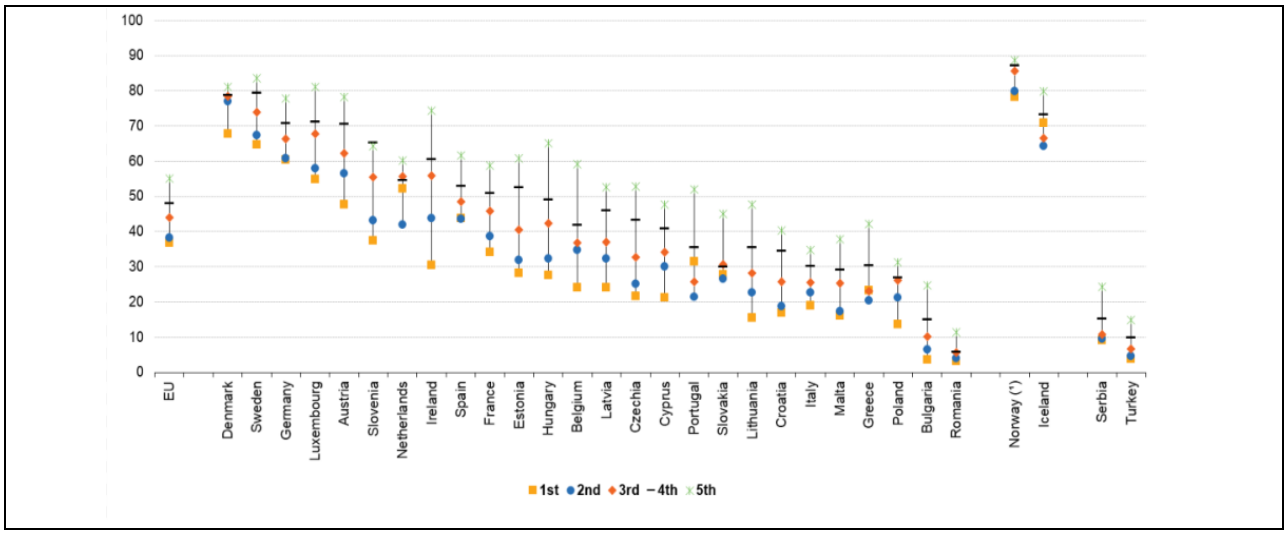

Figure 5. Practicing Sport, Keeping Fit or Participating in Recreational (Leisure) Physical Activities At Least Once A Week, By Income Quintile, 2019.
Source: https://ec.europa.eu/eurostat/

Figure 5 presents the percentage of the population aged fifteen and older in various European countries who practice sport, keep fit, or participate in recreational physical activities at least once a week in 2019. Data is disaggregated by income quintiles (from the first, typically lower income, up to the 5th, typically higher income).

Figure 2 (previously discussed) showed that overall, only a small percentage of the population (as low as 6.3% in certain cases) engages in regular physical activity. Figure 5 deepens this perspective by revealing that income matters: higher-income quintiles tend to have better physical activity participation compared to lower-income groups. Higher-income individuals are more likely to afford gym memberships, have access to safe and well-equipped outdoor spaces, and may have more flexible work hours, all of which contribute to greater levels of engagement in physical activity. Conversely, lower-income individuals may face structural challenges–such as fewer recreational opportunities, less access to safe exercise environments, or time constraints because of longer working hours or multiple jobs–which can reduce their participation rates.

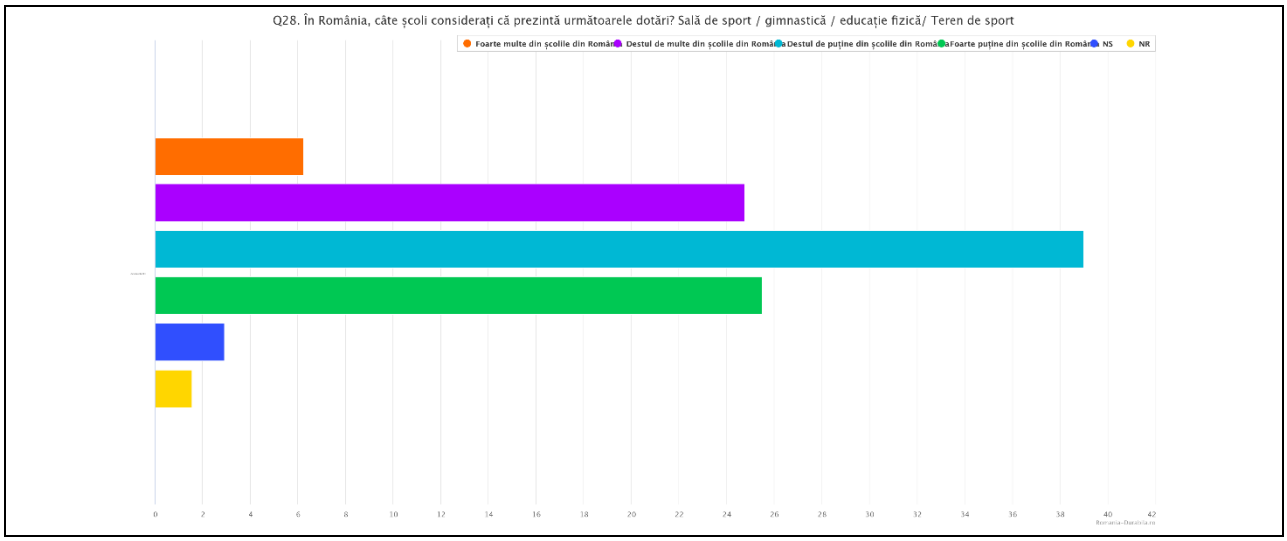

Figure 6. Structure In Romania, how many schools do you think have the following facilities? Gym / gymnastics / physical education / Sports field?
Source: http://romania-durabila.gov.ro/

The data in Figure 6 shows that only 6.28% of respondents believe that very many schools are well-equipped for physical activity, while 24% think quite a few have adequate facilities. In contrast, 39% believe only a limited number of schools are equipped, and 25% say very few are. This means 64% of people have a negative view of school infrastructure for physical education, suggesting a widespread concern about its insufficiency.

With less than a third of respondents expressing optimism, the perception points either to a real lack of facilities or low public awareness. Given Romania's low physical activity rates and the positive self-perceptions of health, poor school infrastructure could be a key factor behind these trends. If young people don't have proper spaces to engage in physical exercise at school, it may contribute to a long-term sedentary lifestyle, affecting public health in the long run.

Conclusions

SDG 3–Good Health and Well-Being–promotes a comprehensive, inclusive, and preventative approach to health, emphasizing not only medical services but also the broader social, economic, and environmental determinants that influence lifelong wellness. Central to this goal is the reduction of

non-communicable diseases (NCDs), the enhancement of mental health, and the promotion of healthier lifestyles through integrated, proactive strategies. Within this framework, sport and physical activity emerge as critical instruments, not only in preventing chronic conditions such as cardiovascular disease, type 2 diabetes, obesity, and respiratory disorders but also in fostering psychological resilience by mitigating symptoms of stress, anxiety, and depression (Penedo & Dahn, 2005; Biddle et al., 2018). When introduced from an early age–particularly through well-designed school-based physical education programs–physical activity has the potential to instill lifelong habits that enhance both individual and collective well-being (Pedersen & Saltin, 2015).

Despite these known benefits, Romania continues to face significant structural and socio-cultural barriers in implementing SDG 3 effectively. Sedentary behavior is widespread among Romanian adults, and the country consistently ranks among the lowest in the European Union for engagement in regular physical activity (Eurostat, 2020). This pattern is particularly troubling given that many Romanians self-report good or very good health–an optimistic perception that may obscure the latent health risks posed by physical inactivity and unhealthy behaviors. Compounding this issue is a troubling statistic: approximately 64% of individuals surveyed have pointed to inadequate physical education facilities in schools. This deficiency severely restricts the ability of educational institutions to promote early physical literacy and active lifestyles, limiting students' exposure to the long-term benefits of sport and exercise.

To overcome these challenges, Romania must adopt a cohesive and multisectoral strategy that places sport and physical activity at the forefront of public health, educational reform, and sustainable development agendas. A first step involves significant investment in the modernization and expansion of sports infrastructure at both school and community levels. Such improvements are crucial not only to ensure compliance with basic physical education requirements but also to cultivate inclusive, attractive environments that motivate participation across all demographics–regardless of age, gender, or socioeconomic status (Bauman et al., 2012).

Secondly, nationwide public awareness and behavior-change campaigns must be developed and implemented to reshape societal attitudes toward physical activity. These initiatives should emphasize the extensive physical, psychological, and social advantages of an active lifestyle, utilizing diverse channels such as mass media, social networks, and community outreach to effectively engage various population segments. Special attention should be directed toward groups that traditionally encounter higher barriers to participation, including children and adolescents, older adults, and socioeconomically disadvantaged communities.

Thirdly, targeted interventions and strategic partnerships are essential to reducing disparities in access and participation. Policies that support subsidized memberships to sports centers, workplace wellness programs, collaborative school-community physical activity initiatives, and incentives for active transportation–like walking and cycling–can help normalize daily movement and embed it into the fabric of everyday life. Such interventions are grounded in global evidence demonstrating that environments that facilitate and support physical activity lead to higher engagement rates and better health outcomes across populations (Sallis et al., 2016).

Additionally, it is critical that physical activity be systematically integrated into broader national policy domains such as urban planning, transportation, and education. Designing cities that prioritize green spaces, dedicated bike lanes, and safe pedestrian pathways can naturally encourage higher levels of physical movement, contributing not only to SDG 3 but also to other interlinked objectives, including SDG 11 (Sustainable Cities and Communities) and SDG 13 (Climate Action). Countries that have adopted such holistic, cross-sectoral frameworks demonstrate stronger public health performance and more sustainable urban ecosystems (Guthold et al., 2018).

In conclusion, Romania's path toward fulfilling SDG 3 represents both a critical challenge and a transformative opportunity. By prioritizing investments in sports infrastructure, advancing health education, and enacting inclusive, evidence-based policies, Romania can redefine its national health trajectory. This commitment would not only accelerate progress toward its global obligations but

also lay the groundwork for a healthier, more resilient, and economically vibrant society that can thrive well into the future (WHO, 2021).

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