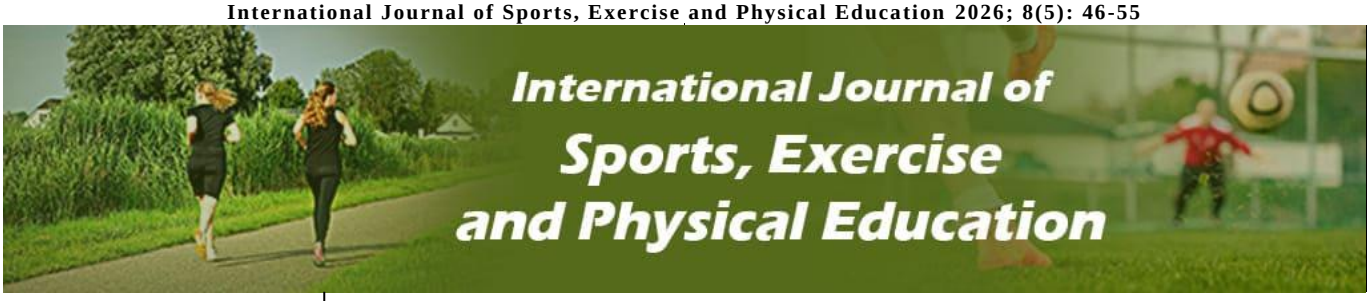


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Physical education development policy in countries with different levels of socio-economic development: A comparative analysis of Germany, Kazakhstan, and Poland

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Abstract
Physical activity constitutes a fundamental determinant of public health, yet its promotion and institutionalization vary considerably across countries with differing socio-economic profiles. This research presents a comparative analysis of physical culture development policies in Germany, Poland, and Kazakhstan, examining how each country's level of economic advancement shapes the organizational model, financing mechanisms, and effectiveness of strategies aimed at increasing population-level physical activity. Drawing on policy documents, program evaluations, and population-level physical activity data aligned with World Health Organization recommendations, the research identifies three distinct policy models: a decentralized, health-system-integrated approach in Germany; a mixed administrative-sports model in Poland; and a centralized, state-driven framework in Kazakhstan. Findings indicate that across all three countries, children and adolescents aged 5-17 exhibit the lowest compliance with WHO physical activity guidelines (15-25%), while adult populations show moderate-to-high adherence (55-75%), with notable disparities linked to gender, education, and urbanization. Germany demonstrates the highest rates of organized sports participation (~30-35% club membership) and the most comprehensive intersectoral coordination through programs such as IN FORM, supported by statutory health insurance funding for preventive physical activity. Poland achieves moderate outcomes through government-led initiatives including the Orlik infrastructure program and Sport for All, though coordination gaps and low senior participation persist. Kazakhstan, despite ambitious legislative targets under its 2023-2029 development concept, faces challenges related to limited infrastructure, regional inequality, and low organized activity participation (<10% club membership). The analysis confirms that higher socio-economic development correlates with greater policy decentralization and intersectoral integration, though financial resources and infrastructure alone prove insufficient without addressing social motivation, cultural barriers, and localized implementation capacity. These findings offer practical implications for policymakers seeking to design context-sensitive physical activity promotion strategies.

Keywords: Physical culture policy, physical activity promotion, comparative public policy, WHO physical activity guidelines, sports infrastructure, Germany, Poland, Kazakhstan, decentralization, public health strategy

Introduction
The development of physical education and its health benefits has been taking place since ancient times. Even in Ancient Rome, it was believed that 3,000 steps meant a long, healthy walk, and gymnastics or spending time in the baths meant beneficial activity for the body (Tipton, 2014; Murray, 2015) [1, 2]. The same was true in Ancient Greece, although there physical activity had a largely military significance. However, to this day, paintings and sculptures, largely medieval, though modeled on ancient ones, depicting humans in perfect physical shape, present athleticism as a manifestation of strength, health, and causative power (Thuillier, 2004; Cucu, 2016; Holleran, 2011) [3, 4, 5]. The development of the world and technology has introduced many conveniences. It has reformed the time and form of work, and often changed access to leisure time for the better. This process is related to the level of advancement and general prosperity in states, depending on the policies pursued and the applicable law, which allows for a certain diversity in development. This translates into

the use of free time, health awareness, popularity, and willingness to engage in physical activity (Lembessis *et al*., 2021; Kapoor *et al*., 2022) [6, 7]. It cannot be denied that lifestyle diseases play a significant role here. They occur in similar or unchanged forms across different geographic regions and are also related to lifestyle. All kinds of conveniences, including those related to owning one's own transportation, reduce the natural dose of physical activity resulting from necessity. Therefore, the last 20 years have seen a significant increase in obesity, cardiovascular diseases, type 2 diabetes, and those related to the nervous system and broadly defined as low mood (Garg, 2025; Chaithanya *et al*., 2025) [8, 9]. Physical activity undertaken on one's own is a natural and most accessible means of preventing these diseases, and also brings a number of beneficial effects. Among the main benefits are the beneficial effects on the circulatory and respiratory systems, including normalization of blood pressure and heart rate, increased respiratory surface area, and improved microcirculation. Furthermore, these include better neuromuscular coordination, improved cognitive abilities and increased concentration, maintaining high bone density, and increasing overall immunity. It should be noted that these effects are age-neutral, as preventive measures and possible benefits are available at virtually every stage (Rhodes *et al*., 2017; Anokye *et al*., 2012) [10, 11].

Various social initiatives and national policies can either encourage or discourage physical activity. More and more government officials and a growing segment of society understand that physical activity and its importance are key factors in health care, and from a state management perspective, a way to save money on healthcare costs. Furthermore, physical activity is crucial for the body and its performance, which directly translates into strength and productivity. Individual countries support the development of physical culture and encourage its implementation with varying degrees of intensity and commitment. Of course, it is much easier to undertake such activities when all basic necessities are provided and this involves the possibility of devoting attention to other areas, but the truth is that regardless of all circumstances, physical activity and health care should be an important part of everyday life. The World Health Organization (WHO) recommends 150-300 minutes of moderate physical activity per week, which also includes household chores and walking. This amount of activity, absolutely not excessive, is beneficial for health and does not require a significant amount of daily time. In this way, significant benefits can easily be achieved, regardless of many other circumstances. The main obstacles to engaging in such activity are most often physical barriers, including injuries, pain, or other conditions for which physical activity is not recommended (Pronk *et al*., 2026). Therefore, promoting physical activity seems to be one of the main health-related tasks implemented by public policy. For the purposes of this article, a comparison was made of the activities of three countries in this area-Kazakhstan, Poland, and Germany. Kazakhstan is a country located on the geographical border of Europe (12%) and Asia (88It is a semi-presidential republic with a population of 20 million and a GDP per capita of $11,486. Poland is a European Union country with a population of 37.5 million, with a GDP of $28,484 per capita. Germany is the wealthiest country in the European Union, with a population of 84 million and a GDP of $51,383 per capita (Eurostat).

The aim of this study was to compare physical education development policies in Germany, Poland, and Kazakhstan and to identify the relationship between the level of socio-economic development and the adopted institutional, financial, and programmatic solutions.

The following specific objectives were helpful in achieving this goal:

- Identifying physical education policy models in the studied countries,
- Analyzing support instruments (financial, legal, organizational),
- Comparing the roles of the state, local governments, and non-governmental organizations,
- Assessing the effects of the policy (social participation, infrastructure availability),
- Identifying good practices and barriers to development.

The main research hypothesis formulated as follows:

A higher level of socio-economic development in a country influences greater decentralization and effectiveness of physical culture development policy.

As well as the following auxiliary hypotheses

Highly developed countries (Germany) are characterized by a greater involvement of local governments and non-governmental organizations in implementing physical culture policy.

Medium-developed countries (Poland) demonstrate a mixed model, combining centralized control with local implementation.

Developing countries (Kazakhstan) are characterized by greater centralization of physical culture policy.

A higher level of economic development correlates with greater public spending on physical culture per capita.

Comparative analysis of physical culture development policy in Germany, Poland, and Kazakhstan

In Kazakhstan, the development of physical culture and sport is currently one of the priority areas of the state's social policy, implemented in the educational, health, cultural, national, youth, and international spheres. The relevance of this issue also stems from the need to understand the current state of physical culture and sport development in the Republic of Kazakhstan at various levels. Physical education and sport contribute to shaping the internal and external image of the state and the patriotic feelings of society, which is emphasized in many publications and state documents. In this context, it is crucial to examine the main trends in the development of physical education and sport in the Republic of Kazakhstan, from a historical and pedagogical perspective. Undoubtedly, attempts are being made to implement global standards in the development of the national physical education system, in line with trends in physical education, as well as the creation of innovative educational institutions to train physical education specialists, creating a network of children's and youth sports schools, sports complexes in rural areas, and socio-cultural centers, where physical development is one of the implemented elements. The axiological directions of development of physical education and sport in the Republic of Kazakhstan are being updated in line with promising trends in physical education; the humanization of national education is based on the values of

a healthy lifestyle for every person, which should serve not only at a young age but also in later life. Therefore, the need to design a system for training future specialists, taking into account the analysis of national experiences, is emphasized in order to create a scientific and technical foundation for implementing innovative technologies in physical education and sport (Avsiyevich, 2017) [14].

In terms of basic characteristics, among children aged 5-17, 15-20% of the population meets the WHO standards for physical activity requirements, which corresponds to the problems in this area in the other countries analyzed. Among adults aged 18-64, this group accounts for approximately 60-65%. Among seniors, i.e., those over 65, 20-30% meet WHO standards. In Kazakhstan, a significant gender difference is evident. Active men constitute 65-70%, while only 45-55% of women declare activity. An interesting observation can be made regarding the most frequently declared form of activity. Besides walking, this is so-called active transportation. Membership in sports clubs and associations is declared by less than 10% of people, which is the lowest among the analyzed countries (Ibrayeva *et al*., 2025) [15]. On the path to true political sovereignty, Kazakhstan has encountered a number of challenges: the economic crisis, foreign debt, social tensions, declining living standards, unemployment, environmental problems, crime, and corruption. Each of these elements could have meant that the need for physical activity was not a priority. To meet these challenges, it was necessary to face the challenges of economic restructuring, reorienting the economy towards modern, knowledge-based technological sectors; creating a socially oriented market based on the principle of equal opportunities; establishing the rule of law and civil society institutions; and developing culture, education, and science, and, finally, sports and physical culture accessible to all. Looking to the future, it can be concluded that in the sovereign Republic of Kazakhstan, the development of physical culture and sports is of exceptional importance, as confirmed by a number of state regulations introduced over many years. These include, in particular, the Law of the Republic of Kazakhstan "On Physical Culture and Sports," the Decree of the Government of the Republic "Presidential Physical Fitness Tests," and a number of other regulatory documents aimed at improving the physical health of the population. It should be emphasized that in the case of Kazakhstan, the role of the state plays the greatest role in imparting knowledge and implementing selected activation programs.

To identify the main trends, it is necessary to analyze the implementation of the fourth long-term priority area of the strategy, titled "Health, Education, and Well-Being of the Citizens of Kazakhstan," which aims to ensure a healthy lifestyle for the residents of modern Kazakhstan, and above all, for children. In this plan, prioritizing health over other important values justifies the need to reorient state interests toward strengthening the social orientation of policy outlined in the "Human Development Concept," which characterizes current trends and evaluates the Human Development Index. It is particularly important that this concept presents the individual as the ultimate goal, not a means, of transformative reforms. Based on these actions, the Ministry of Education and Science is taking steps to implement the "Kazakhstan 2050" Strategy. One of the main priorities of the republic's long-term development strategy is the development of Kazakhstan's human resources. This is also reflected in the improvement of the national education system, both general and physical, which can also be defined to some extent by a psychophysical, or even holistic, approach. Its dynamic development trends are clearly visible. Among the measures aimed at supporting the development of physical culture, among others, are: - the use of new information technologies for learning; - the diversification of higher education, its linkage with all levels of the education system, and the transition to lifelong learning; - the use of open educational methods; transformation of the educational space into a multicultural and socially oriented one, focused on human development; social partnership (research and analysis of needs in terms of educational programs, training and retraining of staff, use of students' professional experience related to their academic activities; - appropriate replacement of the concept of "professional qualifications" with the concept of "competences", which more closely corresponds to the systemically organized requirements for professional, intellectual, communicative, reflective and moral qualities, enabling the effective organization of physical education and sports classes; - the integrative nature of the physical education system, which involves the implementation of modern norms and standards in education, science and technology, as well as the dissemination and implementation of cultural, scientific and technological achievements. In 2013, Kazakhstan adopted the Concept of Physical Culture and Sports Development. Activities under this program were implemented until 2025. Based on the experience of countries in the Organization for Economic Co-operation and Development (OECD), it aims to promote policies focused on economic growth and the social well-being of citizens, improving their quality of life through implementing measures to develop mass sports and mass physical activity. The priority of the state's sports policy, proposed by then-Head of State N.A. Nazarbayev, was to improve the nation's health through physical education, the development of mass and youth sports, and to strengthen Kazakhstan's image through competitiveness and international sports results. A key element of mass sports was the so-called Presidential Trials, which began in April 2014 and were open to all interested parties throughout the republic. In the first half of 2015 alone, 2.6 million people participated in the Presidential Trials. The Presidential Trials lasted throughout the fourth quarter of 2015.

To develop sports for children and youth, local governments and the Ministry of Education and Science are collaborating, creating conditions for the establishment of sports sections and sports clubs in schools and organizing league competitions within schools. Thanks to the state's management policy, 34,931 sports facilities are operational, of which approximately 25,700 are educational institutions, including sports schools, and only 9,258 are physical education and sports facilities. To ensure the accessibility of sports facilities in the regions, projects to build 100 sports and fitness centers are being implemented through the implementation of a subsidy model, in which 70% of the funds come from the state budget and 30% from the local budget. The Ministry of Culture and Sport of the Republic of Kazakhstan is responsible for the organization of national competitions, training, and the participation of national sports teams of the Republic of Kazakhstan (national sports teams) of persons with disabilities in international sports competitions, including the Paralympic Games, the Deaflympic Games, and the Special Olympics World

Games. Following the signing of the Convention, a department for national sports and work with people with disabilities was established at the Ministry of Culture and Sports of the Republic of Kazakhstan. Local executive bodies ensure access to sports facilities for people with disabilities for physical culture and sports and provide specialized sports equipment; They facilitate the establishment of sports clubs, schools, and sections; organize local sporting events; and facilitate the preparation and participation of people with disabilities in national sports competitions. One of the key challenges in the industry remains the shortage of qualified personnel, including in sports management and business, as well as in the field of adaptive physical education.

The "Kazakhstan-2050" strategy primarily aims to improve citizens' health through physical culture and sport. It is worth emphasizing that this is one of the ways to achieve the goals and objectives of the state development program document. Physical culture and mass sport are among the most accessible and effective mechanisms for improving public health, self-fulfilment, and development. Therefore, studying the development of mass sport is important from both the perspective of sports science and the social sciences.

Another, and still relevant, program related to the development of physical culture is the Concept of the Development of Physical Culture and Sport of the Republic of Kazakhstan. The Action Plan for the Implementation of the Concept of Physical Culture and Sports Development of the Republic of Kazakhstan for 2023-2029 assumes, among other things:

- The percentage of children and youth regularly participating in physical education and sports will increase to 45% by 2029 (2023-27%, 2024-30%, 2025-33%, 2026-36%, 2027-39%, 2028-42%, 2029-45%)
- The opening of at least 800 sports sections per year in cities, districts, and rural settlements, as well as additional sports sections, including through per capita funding for state sports and creative projects for children and youth;
- The creation of at least one team in every school/vocational education institution, sports clubs, and teams, operating continuously; - Strengthening the material base and sports equipment in educational institutions (schools, vocational training institutions, and technical and vocational training institutions);
- Developing incentives for businesses to support sports teams and clubs, including those in rural areas;
- Implementing the "Accessible Sports" project in all regions of the country, including Nordic walking, running, gymnastics, yoga, fitness, street work, cross-country skiing, table tennis, ice skating, and other sports;
- Organizing at least three Spartakiads per year (among specific groups of teams, officials, trade unions, people over 50, healthcare workers, media, people with disabilities, etc.);
- The percentage of people with disabilities regularly participating in physical education and sports, without contraindications to physical education and sports, will increase to 23% by 2029 (2023-17%, 2024-18%, 2025-19%, 2026-20%, 2027-21%, 2028-22%, 2029-23%).
- Construction of 113 new sports facilities (stadiums, physical education, health and sports complexes, swimming pools, etc.) (Government of the Republic of Kazakhstan. (2023, March 28). Ob utverzhdenii Kontseptsii razvitiya fizicheskoy kul'tury i sporta Respubliki Kazakhstan na 2023-2029 godady (Decree No. 251). Adilet Legal Information System. https://adilet.zan.kz/rus/docs/P2300000251; Куатбеков *et al*., 2023; Омарбекова, 2016; Чипов *et al*., 2023)

These findings demonstrate that top-down, state-sponsored efforts in the field of physical education have gained in importance over the past decade or so. Numerous initiatives, infrastructure investments, support for professional sports, sports for people with disabilities, as well as support and increased professionalism in children's education and public engagement in recreational physical activity, are already yielding noticeable results, although the results of public activity, as in Poland and Germany, indicate that there is still much room for improvement. In Kazakhstan, similarly to Poland, only approximately 15-20% of children aged 5-17 meet WHO physical activity guidelines. Among adults, this figure is 60-65%, and among seniors, 20-30%, which is comparable to the most developed European Union countries. It appears that Kazakhstan still has the most room for improvement in terms of participation in organized forms of physical activity. Membership in clubs and associations is reported by less than 10% of the population, which is the lowest among the compared countries. It is also worth noting that women in Kazakhstan are the least physically active compared to men, although, as in the other two countries analyzed, the frequency of physical activity is positively correlated with increasing education. In Kazakhstan, similarly to Poland, the percentage of people declaring complete inactivity reaches up to 25%.

Table 1: Physical activity of children and adolescents (5-17 years old)

Indicator	Value
Meets WHO standards	~15-20%
Does not meet standards	~80-85%

Table 2: Physical activity of adults (18-64 years)

Indicator	Value
Meets WHO standards	~60-65%
Does not meet standards	~35-40%
Exercises regularly	~25-35%

Table 3: Physical activity of seniors (65+)

Indicator	Value
Meets WHO standards	~20-30%
Does not meet standards	~70-80%

Table 4: Level of physical activity by gender

Group	Value
Active Men	~65-70%
Active Women	~45-55%

Table 5: Preferowane formy aktywności fizycznej

Activity	Percentage
Walking/Getting around	~60-70%
Active transportation	~40-50%
Recreational sports	~20-30%
Fitness/Gym	~10-20%

(Ibrayeva *et al*., 2025) [15]

In Germany, the current situation regarding physical activity and its implementation varies across age groups. A significant deficit and problem exists in the youngest age group, those aged 5-17. Only 15-20% of people in Germany meet the WHO recommended activity level of at least 60 minutes of physical activity per day. This period is characterized by the most intense psychophysical development and two peak motor skills, characterized by the greatest need for physical activity, which is related to the biological structure of the body. Interestingly, the highest rates are observed in the German population in the 18-24 age group, where 50-55% engage in regular activity according to WHO recommendations (EURONEWS). This may indicate not only the fulfillment of the need for exercise but also an awareness of its importance and impact on psychophysical structure, quality of life, and the ability to more effectively complete daily tasks related to personal and professional life. This activity applies to both recreational and organized sports, such as club sports, which is highly developed in this country. In subsequent stages, this level of activity decreases, although it is still higher than in many European Union countries. For people aged 25-39, it is approximately 42% active, while for those aged 40-54, it is approximately 32%. In later age groups, this percentage varies, with individual dispositions and health opportunities having a significant impact. The level of active people is approximately 20%. On the one hand, there is considerable prosperity and access to recreational physical activity, but on the other, the comfortable conditions available to society often demotivate people from undertaking the effort of physical activity.

Among recreational activities, individual, light forms of activity, such as walking and cycling, clearly dominate. From the perspective of health and the functioning of individual body systems, such as the circulatory, nervous, musculoskeletal, and respiratory systems, this form of activity has a significantly positive impact on the level and quality of their functioning, and above all, it is not strenuous. Additionally, there are minor barriers to participating in this type of activity, the most common of which are orthopedic injuries, chronic pain, or chronic diseases.

Table 6: Physical activity of children and adolescents (5-17 years old)

Indicator	Value
Meets WHO standards	~20-25%
Does not meet standards	~75-80%

Table 7: Physical activity of adults (18-64 years)

Indicator	Value
Meets WHO standards	~70-75%
Does not meet standards	~25-30%
Exercises regularly	~50-60%

Table 8: Physical activity of seniors (65+)

Indicator	Value
Spełnia normy WHO	~25-35%
Nie spełnia norm	~65-75%

Table 9: Activity by education and income

Group	Level of activity
Higher education	~75-85% active
Low education	~50-60% active

Table 10: Preferred forms of physical activity

Activity	Percentage
Walking	~70%
Cycling	~50-60%
Recreational sports	~40-50%
Fitness/gym	~25-35%

Table 11: Club system

Indicator	Value
Club membership	~30-35% of the population
Number of members	~27 million

(Koch, 2018; WHO, 2022; Koch, 2022; WHO, 2024)

A remarkable advantage compared to many countries around the world is membership in organizations dedicated to recreational and professional physical activity (sports). As many as one-third of the population is affiliated with various organizations, which undoubtedly contributes to an increase in overall activity levels. Membership in organizations is often associated with greater activity and, ultimately, regularity.

In Germany, the national "IN FORM" program plays a crucial role, providing information on healthy eating and regular physical activity. This initiative, promoting healthy eating and physical activity, was launched in 2008 as a response to the growing problem of obesity in society. It is a comprehensive action plan aimed at improving eating habits and increasing physical activity levels among the German population, due to alarming rates of overweight, which can be considered a lifestyle disease. The main goal is to sustainably reduce the number of overweight and obese people, particularly through education and lifestyle changes, starting from a young age. This is crucial given the still unsatisfactory rate of physical activity among the youngest age group. The initiative itself encompasses numerous educational campaigns and reforms aimed at promoting health in schools, preschools, and workplaces. The project is jointly implemented by the Federal Ministry of Food and Agriculture (BMEL) and the Federal Ministry of Health (BMG). Although the initial timeframe set goals until 2020, the initiative's success has led to its transformation into a long-term project, regularly updated (the last major update took place in 2021) to address current societal needs, such as digitalization and the resulting digital hygiene and sustainability. The IN FORM initiative is based on the premise that healthy eating and physical activity are two equally important pillars of well-being. The main goals are:

- **Improving the quality of public catering:** Implementing uniform standards for meal quality in preschools, schools, workplaces, and nursing homes.
- **Education and competencies:** Increasing consumer knowledge about food and promoting daily physical activity as a natural part of lifestyle.
- **Prevention in risk groups:** Special support for children (ensuring a "healthy start"), the elderly, and groups with disadvantaged socioeconomic circumstances.

The program is implemented through hundreds of smaller projects tailored to specific living environments.

- **DGE (German Food and Nutrition Association) Standards:** One of IN FORM's most important achievements is the development and popularization of certified nutritional standards for educational institutions and companies. These specify, among other

things, the frequency of serving meat and fish and promote whole grains and seasonal vegetables.

- **IN FORM in schools and preschools:** Programs such as "KlimaFood" combine learning about healthy eating with environmental education (e.g., through cooking workshops for families and youth).
- **"Wir sind IN FORM" partnership:** The initiative involves over 250 partners from the public, economic, and scientific sectors, allowing for synergy of activities and a broad campaign reach.
- **Counseling for seniors:** Special projects aimed at older adults, promoting diets that prevent malnutrition and exercise programs that enhance mobility.

IN FORM places great emphasis on ensuring that meals served in cafeterias are not random. According to the guidelines of the German Nutrition Society (DGE), a healthy diet should be based on:

- A large amount of colorful vegetables and fruits.
- Preferring whole grains and vegetable oils.
- Limiting sugar, salt, and meat (especially red and processed meat).
- Ensuring regular meals (particularly important for children's nutrition).

Furthermore, in Germany, health insurance funds (Krankenkassen) have a statutory obligation to finance primary prevention. Preventive health care includes many programs related to, among others, Physical activity:

- **Preventive courses:** Every insured person can benefit from subsidies (often up to 80-100%) for certified exercise courses, such as yoga, Pilates, aqua aerobics, or spine training. These courses must meet quality standards set by the Central Prevention Unit (ZPP).
- **Bonuses for exercise:** Many health insurance funds offer bonus programs (Bonushefte), which reward you with cash or points for regularly participating in sports at a club or running events.

In addition, there are specialized targeted programs. Germany implements projects tailored to specific needs and living environments. These include:

- **Alltags-Trainings-Programm (ATP):** A program aimed at people over 60. It focuses on using everyday situations (e.g., climbing stairs, carrying groceries) to improve strength and balance, which helps prevent falls.
- **GKV-Bündnis für Gesundheit:** A joint initiative of health insurance funds that funds projects in so-called "neighborhoods with special needs." These programs are designed to facilitate access to sports for the unemployed, refugees, and low-income families.
- **Movement Summit (Bewegungsgipfel):** Since 2022, the Federal Ministry of the Interior and the Ministry of Health have been organizing regular meetings aimed at improving political cooperation with sports clubs, so that Germany can become a "sports nation" (Geidl, 2020; Jordan *et al*., 2024; Messing *et al*., 2025).

Poland, as a country, is currently undergoing dynamic development, ranking 21st economically in the world and aspiring to join the G20. However, its population currently performs averagely in terms of physical activity. Among children and adolescents aged 5-17, approximately 15% engage in sufficient activity according to WHO recommendations. This means that as many as 85% of this population does not meet the recommended exercise requirements at all. Among adults aged 18-64, 55-65% meet the recommended exercise requirements, which is already an improvement in this regard. At the same time, 30-40% participate in sports regularly, which should be considered a good indicator. Among seniors, the declared activity level is approximately 20% and does not differ significantly from other analyzed countries in this respect. In Poland, the correlation between activity and education is also very favorable. People with higher education declare activity levels of approximately 65-75%, compared to only 40-50% of those with secondary education or less. Walking and cycling are the most common forms of activity, but it is worth noting that gym attendance is quite high. Membership in sports clubs and associations is declared by approximately 10-15% of the population, which is lower than in Germany (University of Physical Education in Warsaw. (2024). PE from AWF-report on the physical condition of children and youth in Poland; Zembura *et al*., 2022; Ziemba *et al*., 2024; Central Statistical Office. (2024). Physical Culture in Poland in 2023-2024. Warsaw, Ministry of Sport and Tourism. (2019). Physical Activity in Society-Reports and Analyses.

In Poland, a system of sports and physical activity promotion predominates, with significant involvement of the administration. Naturally, the main goals are consistent with other countries and concern increasing the overall level of physical activity in society, reducing overweight and obesity, encouraging children and youth to participate in sports, and counteracting lifestyle diseases.

Among the main programs implemented in recent years was the National Health Program 2021-2025. It focused on increasing the number of healthy life years, reducing social inequalities in health, and preventing common threats, including lifestyle diseases, obesity, addictions, and mental health problems, by promoting a healthy lifestyle and environment. One of the fundamental factors supporting these processes and achieving the desired goal was physical activity, promoted across all social groups, although it is unlikely to be a pillar of the entire system.

More specific elements related to physical activity are included in the "Sport for All" program. Key areas and objectives of the program include:

- **Activation of various social groups:** Organizing activities for children, adolescents, adults, and seniors, aimed at combating lifestyle diseases, including overweight and obesity.
- **Sport in rural areas:** Promoting physical activity in rural communities (e.g., "Active Village" projects).
- **Support for small clubs:** Direct funding (grants) for small and medium-sized sports clubs for equipment, training, and camps.
- **Organization of sporting events:** Support for amateur tournaments, competitions, and festivals.
- **Educational values:** Promoting the health-promoting, social, and educational aspects of sport.

The School Sports Club (SKS) program is a broad program aimed at children and youth. The "School Sports Club" (SKS) program is a nationwide initiative of the Ministry of Sport and Tourism, aimed at promoting physical activity among children and youth. It offers free, extracurricular sports activities (usually 60 minutes, twice a week) aimed at comprehensive development, improving fitness, and promoting a healthy lifestyle.

The main assumptions and goals of the SKS program are:

- **Physical activation:** Motivating students to exercise, especially those less active, to improve their fitness.
- **Free activities:** Creating a safe, extracurricular environment for sports participation in primary and secondary schools.
- **Diversity of forms:** Recreational and sports activities, adapted to the age, gender, and physical fitness of participants.
- **Staff support:** Financing the work of teachers conducting the activities.
- **Habit formation:** Building personal health and hygiene awareness, and sports habits.

The "Club" program provides technical and infrastructural support for organized physical activity among children and youth. The program focuses on:

- Promoting sports for children and youth.
- Supporting sports training by co-financing coaches' salaries, purchasing equipment, and organizing sports camps.
- Activating local communities and supporting clubs operating as associations (often in smaller towns).

Key program objectives:

- **Beneficiaries:** Small and medium-sized sports clubs, often with a single section.
- **Funding objective:** Coaches' salaries, purchasing equipment, organizing camps.
- **Action:** The program has been implemented since 2016 and is a key element of financing children's and youth sports in Poland.

By far the largest undertaking supporting the development of sports and recreational infrastructure is the "Orlik" program. Previously, it was a joint government-local program aimed at building sports fields in every municipality by 2012. The program's motto is: Healthy and smiling children-the most important thing!!!. Football can be played on a 30 m x 62 m football field with an artificial turf surface (artificial grass). Handball, basketball, and volleyball can be played on a 20 m x 30 m multi-purpose field with an artificial turf surface (tartan). The program was completed in December 2012. Over the five years, approximately 2,600 facilities were built, with an initial plan of 2,012. Between 2008 and 2012, nearly one billion złoty was allocated from the state budget for this purpose. A total of 1,668 municipalities took advantage of the offer over the five years. Approximately 65% of the initial project was completed. The program was continued after 2020. The "Moje Boisko-Orlik 2012" sports complex modernization program (continued after 2020) involves co-financing by the Ministry of Sport and Tourism for the renovation, reconstruction, and modernization of existing fields. The goal is to prevent the deterioration of infrastructure built before 2012, improve safety, replace the playing surface, and modernize lighting and sanitary facilities.

The key objectives of the program after 2020 are:

- **Goal:** Maintain the functionality of the Orlik sports fields and prevent their closure due to poor technical condition.
- **Scope of work:** Repair or replacement of the playing surface (football/multi-purpose), modernization of lighting (LED), fencing, ball catchers, and renovation of locker rooms.
- **Modernization and innovations:** The program also provides for the possibility of expansion with additional facilities, such as skate parks, pump tracks, tennis courts, and running tracks.
- **Financing:** Local governments can obtain funding, which often covers from 50% to as much as 80% of eligible costs (depending on the program and the commune's wealth).
- **Accessibility:** The priority remains the general accessibility of facilities for the local community, children, and youth.

The "Active +" program was developed for older adults. The goal was to increase the involvement and participation of older adults in all areas of social life. The program was implemented by the Ministry of Family and Social Policy. It has now been replaced by the "Active Seniors-ASY" program. This program achieved excellent results from the very beginning. The number of older adults participating in physical activity nearly tripled, including 98,000 people with disabilities.

The key objectives of the program are:

- **Main objective:** Managing seniors' free time, engaging them in participatory processes (e.g., seniors' councils), and building a positive image of old age.
- **Activities:** Co-financing projects of non-governmental organizations (associations, foundations) that organized sports, cultural, educational, and volunteer activities, as well as activities that increased the safety and digital competences of older adults.
- **Target audience:** Seniors and organizations working on their behalf.

In the area of activating older adults, the continuously developing Universities of the Third Age are worth mentioning. 100,000-150,000 older adults participate in these programs, and the activities include various recreational activities, walking, yoga, gymnastics, and dance training. All programs are designed to adapt the intensity of exercise to the abilities of the participants.

In addition to analyzing implemented programs, it's also worth considering regular participation in physical activity in Poland across various age groups. Poland fares very poorly in terms of children's activity, which, as mentioned, is an age naturally prepared for maximum activity. Only about 15% of people aged 5-17 meet the WHO guidelines for daily exercise. This trend seems to be associated with very negative prognoses, as habits formed in early childhood often determine later behavior, and a lack of appropriate physical activity contributes to the development of many diseases, including lifestyle diseases. Among adults, this percentage is better, hovering around 55-65%. This may also indicate more convenient work arrangements and more flexible workloads these days, which contribute to more frequent physical activity. Among seniors, however, only about 20% meet the recommended standards (Ministry of Sport and Tourism. (2023). "Sport for All" Program-assumptions and implementation reports. Warsaw, Ministry of Family and Social Policy. (2021). "Active+" Program for 2021-2025. Warsaw).

Table 12: Activity level by age (WHO)

Grupa wiekowa	Spełnia zalecenia WHO	Nie spełnia zaleceń
Dzieci (5-17 lat)	~15%	~85%
Dorośli (18-64 lata)	~55-65%	~35-45%
Seniorzy (65+)	~20%	~70-80%

Table 13: Activity by gender

Group	Percentage
Men	~60-70%
Women	~50-60%

Table 14: Activity by education

Educational level	Percentage
Higher	~65-75%
Low	~40-50%

Table 15: Forms of physical activity

Activity	Percentage
Walking	~60%
Cycling	~40%
Running/Fitness	~20-30%
Gym	~15-25%

Table 16: Physical activity-comparison (Poland PL vs Germany DE vs Kazakhstan KZ)

Indicator	PL Poland	DE Germany	KZ Kazakhstan
Children meeting WHO standards	~15%	~20-25%	~15-20%
Children not meeting standards	~85%	~75-80%	~80-85%
Adults meeting WHO standards	~55-65%	~70-75%	~60-65%
Inactive adults	~35-45%	~20-25%	~30-40%
Seniors meeting standards	~20%	~25-35%	~20-30%
Inactive seniors	~70-80%	~65-75%	~70-80%
Women's activity (vs. men)	lower (~10 p.p.)	lower (~10 p.p.)	Much lower
Education impact	+15-20 p.p.	+15-20 p.p.	High impact
Social inequalities	High	moderate	High
Regular activity (total)	~30-40%	~50-60%	~40-50%
No activity at all	~20-25%	~8-10%	~15-25%
Club membership	~10-15%	~30-35%	<10%
Active transport	low-medium	High	Low-medium
PE in schools	3-4 h/week	2-3 h/week	2-3 h/week
Work activity (programs)	Low	High	Very low
Integration with the health system	Low	Very high	Low
System financing	Public	Mixed (including insurance)	Public
Activity trend	slow growth	Stable	Slow growth
Disease risk (lack of exercise)	High	moderate	High
Category	Poland	Niemcy	Kazakhstan
Model	sports and administrative	Health-systemic	Central
Sector integration	Low	Very high	Low
Main programs	Sport for All, Orlik	IN FORM, PA recommendations	Active Longevity
Effectiveness	moderate-low	High	Moderate
Society activity	low (64% no sports)	Higher	Medium
Role of public health	Limited	Key	Growing
Financing	public + local governments	Multi-source	Public
Target groups	children, youth	Lifecourse	Seniors + general population
Problems	lack of coordination	Inequalities	Infrastructure + culture

Table 17: Comparison of public policies and strategies

Element	Poland	Germany	Kazakhstan
Main Strategy	Development of grassroots sport	Public health + activity	Sports system development
Strategic Documents	National Health Programme, NPRS	IN FORM, PA recommendations	Sports Act
Approach	Sectoral	Holistic	Central
Horizon of Action	Medium-term	Long-term	Long-term (state)
Coordination	Limited	Very high	Centralized
Role of Research	Medium	Very high	Low

Table 18: Sports infrastructure and accessibility

Element	Poland	Germany	Kazakhstan
Sports facilities	Well-developed (Orliki)	very developed	uneven
Local accessibility	High	very high	medium
Cycling infrastructure	Developing	very developed	limited
Free access	Frequent	often	less frequent
Regional differences	Moderate	small	large

Table 19: Financing and economics

Element	Poland	Germany	Kazakhstan
Main Source	State budget + local governments	multi-source	Country
Role of Health Insurance	None	very high	None
Private Spending	Growing	high	Limited
Financial Stability	Average	high	High (central)
Spending Efficiency	Moderate	high	Difficult to assess

(Eurostat)

Conclusion

An analysis of physical culture development policies in Poland, Germany, and Kazakhstan indicates that all three countries are implementing strategies aimed at increasing physical activity levels in society, but they differ in the degree of institutional development, system organization, and effectiveness of implemented measures.

In Germany, as a highly developed country, a decentralized and highly institutionalized model predominates. Policy based on the "IN FORM-Nationaler Aktionsplan" program is comprehensive and integrates activities in the areas of public health, education, and sports infrastructure. Federal states, local governments, and non-governmental organizations play a significant role, confirming the hypothesis of a high participation of local and social actors in developed countries. Despite this high level of organization, the relatively high percentage of physically inactive people remains a challenge, indicating that the effectiveness of the policy depends not only on the level of economic development but also on social and behavioral factors.

Poland, representing a country with a medium level of socioeconomic development, implements a mixed model. On the one hand, there is strong state involvement through the 2030 strategy and numerous government programs (e.g., "Sport for All" and "School Sport Club"). On the other, local governments and local organizations play a significant role in implementing activities. This confirms the hypothesis of a hybrid system in moderately developed countries. Poland achieves moderate results in terms of public participation in physical activity, but low activity among older people and social inequalities in access to sport remain significant problems. This indicates the limited effectiveness of policy instruments in reaching groups at risk of exclusion.

In Kazakhstan, as a developing country, physical culture policy is more centralized and based on a strong legislative foundation (the "On Physical Culture and Sports" Act) and government programs. The state plays a dominant role in planning and implementing activities, confirming the hypothesis of greater centralization in countries with lower levels of development. Despite the set goals (e.g., achieving 30% of the population being active), participation rates remain relatively low, with limited infrastructure, regional inequalities, and insufficient quality of physical education being the main barriers. The analysis confirms the main research hypothesis, according to which a higher level of socio-economic development promotes greater decentralization and higher effectiveness of physical education policy. Germany is characterized by the most developed system of intersectoral cooperation and the highest degree of decentralization, Poland adopts an intermediate model, while Kazakhstan exhibits characteristics of a centralized system.

The assumptions of the auxiliary hypotheses are also confirmed, as:

- Germany demonstrates extensive participation of local governments and non-governmental organizations,
- Poland operates a mixed model,
- Kazakhstan is dominated by centralized policy control,
- countries with a higher level of development demonstrate greater investment and a more comprehensive approach to public health and social inclusion.

At the same time, the analysis indicates that the availability of financial resources and developed infrastructure alone do not guarantee a high level of physical activity in society. Social, cultural, and motivational factors, as well as the effectiveness of policy implementation at the local level, are crucial. The comparative analysis also allows for the formulation of practical observations, namely: practical conclusions

- Existing "Good Practices": a comprehensive approach in Germany (integration of public health, education, and sports), infrastructure and program development in Poland, and a strong legal framework in Kazakhstan.
- Main barriers: lack of social motivation (Germany), inequality and low activity of seniors (Poland), limited infrastructure and centralization (Kazakhstan).
- Implications: Effective policy requires not only financing and regulation, but also actions to increase social motivation and tailor programs to the specific needs of target groups..

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References

1. Tipton CM. The history of “Exercise Is Medicine” in ancient civilizations. Adv Physiol Educ. 2014;38(2):109-117.
2. Murray SC. Sport and education in ancient Greece and Rome. A companion to ancient education. 2015:430-443.
3. Thuillier JP. Athletic exercises in ancient Rome. When Julius Caesar went swimming. Eur Rev. 2004;12(3):415-426.
4. Cucu M. Ancient Greece exercise, physical training and harmonious physical development improvement pattern. Fiat Iustitia. 2016;(2).
5. Holleran C. The street life of ancient Rome. Rome, Ostia, Pompeii: Movement and Space. 2011:245-261.
6. Lembessis P, Mourtakos S, Philippou A. Physical activity in our modern world: An evolutionary necessity. Clin Hematol Blood Transfus. 2021;1(1):1-2.
7. Kapoor G, Chauhan P, Singh G, Malhotra N, Chahal A. Physical activity for health and fitness: past, present and future. J Lifestyle Med. 2022;12(1):9.
8. Garg RK. The alarming rise of lifestyle diseases and their impact on public health: A comprehensive overview and strategies for overcoming the epidemic. J Res Med Sci. 2025;30(1):1.
9. Chaithanya DJ, Nagaraja BG, Ravikiran HK. Advanced predictive analytics with synthetic data: A comprehensive machine learning approach for predicting chronic and lifestyle diseases. J Integr Sci Technol. 2025;13(6):1139-1139.
10. Rhodes RE, Janssen I, Bredin SS, Warburton DE, Bauman A. Physical activity: Health impact,

prevalence, correlates and interventions. Psychol Health. 2017;32(8):942-975.
11. Anokye NK, Trueman P, Green C, Pavey TG, Taylor RS. Physical activity and health related quality of life. BMC Public Health. 2012;12(1):624.
12. Pronk N, Arena R, Zimmerman FJ, Woodard C. Driving physical activity policy for improved population health demands political action. Br J Sports Med. 2026;60(4):300-301.
13. Eurostat.
14. Avsiyevich V. Analiz razvitiya massovogo sporta i fizicheskoy kultury v Kazakhstane na sovremennom etape. Teoriya i Metodika Fizicheskoy Kultury. 2017;(2):46-51.
15. Ibrayeva A, Shoranov M, Muminov T, Ismoldayev Y, Tanabayeva S, Fakhradiyev I. Physical activity levels in Kazakhstan: A cross-sectional nationwide study on demographic, socioeconomic, and regional factors. Medicina. 2025;61(11):1913.
16. Government of the Republic of Kazakhstan. Ob utverzhdenii Kontseptsii razvitiya fizicheskoy kul'tury i sporta Respubliki Kazakhstan na 2023-2029 gody (Decree No. 251). Adilet Legal Information System. 2023 Mar 28. Available from: https://adilet.zan.kz/rus/docs/P2300000251
17. Kuatbekov SH, Kargapoltseva NA. Osnovnye napravleniya razvitiya sistemy fizicheskogo vospitaniya v Respublike Kazakhstan. Vestnik Orenburgskogo Gosudarstvennogo Universiteta. 2023;2(238):18-24.
18. Omarbekova JD. Gosudarstvennaya politika v sfere fizicheskoy kultury i sporta Respubliki Kazakhstan. Innovatsiyalyq Evraziya Universitetiniñ Khabarshysy. 2016;61.
19. Chipov AH, Rakov FI, Tokov KH. Vliyanie sistemy fizicheskoy kultury i sporta na sotsialno-ekonomicheskoe razvitie regiona. Zhurnal Prikladnykh Issledovaniy. 2023;(4):43-47.
20. Robert Koch Institute. Physical activity in adults in Germany: Results from GEDA 2019/2020-EHIS. J Health Monit. 2022.
21. Robert Koch Institute. Physical activity of children and adolescents in Germany-Results from KiGGS Wave 2. J Health Monit. 2018.
22. World Health Organization. Physical activity factsheet: Germany. 2021.
23. World Health Organization. Health behaviour in school-aged children (HBSC) study: Physical activity findings for Germany. 2024.
24. Messing S, Birkholz L, Resch J, Brandl J, Lorenz E, Abu-Omar K, *et al*. Physical activity and physical activity promotion in Germany-An overview. J Health Monit. 2025;10(4):e13557.
25. Geidl W, Abu-Omar K, Weege M, Messing S, Pfeifer K. German recommendations for physical activity and physical activity promotion in adults with noncommunicable diseases. Int J Behav Nutr Phys Act. 2020;17(1):12.
26. Jordan S, Domanska OM, Carl J, *et al*. Physical activity-related health competence among adults: Findings from GEDA study. Dtsch Arztebl Int. 2024.
27. Główny Urząd Statystyczny. Kultura fizyczna w Polsce w latach 2023-2024. Warszawa; 2024.
28. Ministerstwo Sportu i Turystyki. Program „Sport dla Wszystkich"-założenia i raporty realizacyjne. Warszawa; 2023.
29. Ministerstwo Rodziny i Polityki Społecznej. Program "Aktywni+" na lata 2021-2025. Warszawa; 2021.
30. Ministerstwo Sportu i Turystyki. Aktywność fizyczna społeczeństwa-raporty i analizy. Warszawa; 2019.
31. Zembura P, Korcz A, Nałęcz H, Cieśla E. Results from Poland's 2022 Report Card on Physical Activity for Children and Youth. Int J Environ Res Public Health. 2022.
32. Ziemba M, Groffik D, Frömel K, Vorlíček M. Surveillance of physical activity and sedentary behavior in Polish children and adolescents: A scoping review. Health Probl Civiliz. 2024.
33. Akademia Wychowania Fizycznego w Warszawie. WF z AWF-raport o kondycji fizycznej dzieci i młodzieży w Polsce. 2024.