



A Multidimensional Analysis of Sports Participation Patterns Among Socioeconomically Disadvantaged Children in Slovakia

Authors' contribution:

- A) conception and design of the study
- B) acquisition of data
- C) analysis and interpretation of data
- D) manuscript preparation
- E) obtaining funding

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Abstract

Our study examines sports participation among socioeconomically disadvantaged children in Slovakia, with a focus on identifying barriers and motivational factors influencing their involvement. Utilizing a cross-sectional design, data was gathered from students in public schools across southern Slovakia's least developed districts, employing a stratified sampling method to ensure diverse socioeconomic representation. The primary instrument was a self-administered questionnaire which captured data on demographics, sporting habits, and perceived barriers to sports participation. The results indicate significant disparities in sports engagement between disadvantaged and non-disadvantaged children. Disadvantaged children reported higher barriers to participation, notably financial constraints, limited accessibility to facilities, and lack of social support from family and community. Despite these barriers, sports are viewed as a potential medium for enhancing social inclusion and personal development among these children. The findings suggest the need for targeted interventions to reduce these barriers, such as improved accessibility to sports facilities, financial support, and community-driven sports programs. This study contributes to understanding the multifaceted impact of socioeconomic status on sports participation and highlights the importance of sports in fostering social equity and health benefits among disadvantaged youth.

Keywords: Sports participation, Disadvantaged Children, Slovakia

Introduction

The examination of physical activity patterns and sports participation habits among socioeconomically disadvantaged children has emerged as a critical focus in contemporary sports science and sociological research. This complex subject matter is not only relevant from the perspective of maintaining physical health but also plays a fundamental role in personality development and social integration processes (Vandermeersch et al., 2017; Kovács & Nagy, 2020).

The positive effects of regular physical activity are multifactorial: they promote psychosocial development, stimulate community integration, enhance self-esteem, and facilitate the acquisition of novel competencies. These benefits are particularly salient in cases where familial or financial backgrounds provide limited opportunities for engaging in enriching leisure activities. For children in disadvantaged situations, financial constraints, social isolation, and restricted access to sports facilities often impede their participation in regular physical activities. The impact of these factors is especially crucial when

considering long-term quality of life, as the competencies developed through sports and the establishment of healthy lifestyle habits significantly influence adult quality of life (Marlier et al., 2014; Rosso & McGrath, 2016).

Elucidating the sports participation patterns of socioeconomically disadvantaged children provides an opportunity for educational institutions, local governments, and non-governmental organizations to implement targeted interventions aimed at improving access to sports. Such initiatives can contribute to the realization of social equity and long-term health preservation. Consequently, this research endeavors to investigate not only the frequency of sports participation but also the barriers and motivations associated with it, in order to construct a comprehensive profile of the sports habits of disadvantaged children.

The situation of disadvantaged children in Slovakia presents particularly complex challenges, as many children live in conditions where material, social, and infrastructural limitations constrain their developmental opportunities. These children often inhabit rural, underdeveloped regions where poverty, high unemployment rates, and low educational attainment are among the most prevalent issues, mirroring the circumstances of disadvantaged children across the V4 countries (Piwowar & Dzikuć, 2020). Southern Slovakia ranks among the least developed regions in the country, where a significant proportion of children grow up in families without sufficient financial resources to support sports participation or other leisure activities. In his study, Košdy (2024) examined the geographical distribution of regional state subsidies based on implemented projects between 2004 and 2021, with a primary focus on the least developed districts. He found that the level of subsidies provided in less developed districts—measured in terms of the number of projects and resource allocation—falls short of the level of support directed to more developed regions. This finding highlights the deepening disparity between the situation of people living in disadvantaged regions and those residing in more developed areas.

While the Slovak government has implemented measures to promote the integration of socially disadvantaged adults and children, such as educational and social support programs targeting the Roma population (Filakovska, 2007; Bobakova et al., 2022; Mladovsky, 2007; Kahanec et al., 2020), access to sports opportunities remains limited. These children frequently encounter financial barriers related to the purchase of sports equipment, transportation costs, and club membership fees. Access to community sporting events is also diminished in these regions, and families rarely possess the time or energy to support their children's sports participation.

Multiple studies show that disadvantaged children living in extreme poverty experience significant devel-

opmental delays in their abilities and skills compared to their peers from non-disadvantaged families. This developmental gap is attributed to a lack of social interaction, absence of friends and peer groups, and linguistic challenges (particularly in Roma families). Consequently, these children often exhibit below-average performance in preschool and school settings, and their school readiness is compromised.

Numerous studies (Farkašová, 2007; Henneľová, 2007; Dočkal et al., 2007) document the obstacles faced by disadvantaged children who have had limited opportunities for community social interaction prior to school entry. However, international best practices involving summer camp sports programs for disadvantaged children report positive outcomes, such as strengthened family relationships, personal growth, increased friendships, and improved social connections. These findings suggest that such programs could play a crucial role in combating social isolation and promoting integration (Anderson-Butcher et al., 2024).

Furthermore, lack of information and transportation difficulties present significant barriers. In many rural settlements, sports clubs and associations are inaccessible, depriving children of the opportunity to participate in organized sports programs. For disadvantaged children, sports could serve not only as a form of physical activity but also as a pathway to community life and social integration, provided they receive adequate support.

The situation in Slovakia thus illustrates the critical importance of examining the sports participation habits of disadvantaged children and implementing appropriate measures to ensure that these children do not fall behind their peers and are given the opportunity for a fulfilling life. This research aims to contribute to the growing body of literature on this subject and inform evidence-based policy decisions to improve the lives of disadvantaged children through sports participation.

Literature review

The examination of sports participation patterns among socioeconomically disadvantaged children has attracted widespread research interest due to the crucial role sports play in physical, mental, and social development. Numerous studies highlight that access to and participation in sports are strongly correlated with socioeconomic status. Children from disadvantaged families often have fewer opportunities to engage in organized sports activities, which can negatively impact their long-term quality of life and social integration (Bailey et al., 2013; Coalter, 2007).

Socioeconomic status significantly influences sports habits and access to sports opportunities. Gombás (2017) found that financial constraints pose the most signifi-

ant barrier for disadvantaged children, particularly concerning fees associated with sports club participation and the acquisition of sports equipment. Additionally, logistical factors such as distance to sports facilities and transportation difficulties present substantial obstacles. This issue is particularly prevalent for children living in rural areas, where sports opportunities are often limited (Somerset & Hoare, 2018).

The social aspects of sports habits and access to sports play a crucial role. Parental support, peer involvement, and community environment greatly influence children's sports participation patterns (Collins et al., 2014; Sukys et al., 2014; Dudeja & Balda, 2019; Ngangbam, 2024; Laoues 2021). Beyond teachers (Morgan & Hansen, 2008), parents' role is especially important, as they provide the financial and logistical support necessary for children's sports participation. However, in disadvantaged families, parents often lack resources and information about sports opportunities (Sanz-Remacha et al., 2019; Nelson et al., 2022).

Recent research has also explored the intersectionality of socioeconomic status with other factors affecting sports participation. For instance, Dagkas (2018) examined how race, ethnicity, and social class intersect to shape young people's engagement with physical activity and sport. This study highlighted the need for a more nuanced understanding of the complex interplay between various social identities and their impact on sports participation.

The question of motivation and attitudes towards sports deserves special attention. Sport is not merely a physical activity but can also be a means of community connection and individual development. Research indicates that motivation for sports participation is closely linked to children's social environment and the opportunities provided to them (Katona, 2019; Laoues et al., 2021). Disadvantaged children often receive less support for participation in sports activities, further exacerbating their social situation.

The role of schools in promoting sports participation among disadvantaged children has also been a focus of recent studies. Quarmby et al. (2019) investigated how schools can act as facilitators or barriers to physical activity for children from low-income families. Their findings suggest that while schools can provide crucial access to sports facilities and programs, they may also inadvertently reinforce inequalities through certain practices or policies.

The impact of sports participation on the overall well-being of disadvantaged children has been extensively studied. Holt et al. (2011) conducted a systematic review of the literature on sport for development programs targeting socially vulnerable youth. They found that well-designed sports programs can contribute to positive youth develop-

ment, including improved self-esteem, social skills, and academic performance.

Furthermore, the potential of sports as a tool for social inclusion has gained increasing attention. Spaaij et al. (2019) explored how sports-based interventions can promote social inclusion among disadvantaged youth. Their research emphasized the importance of culturally sensitive and community-driven approaches to maximize the inclusive potential of sports programs.

The COVID-19 pandemic has added a new dimension to the challenges faced by disadvantaged children in accessing sports opportunities. Marcén-Cinca et al. (2021) investigated the impact of the pandemic on physical activity levels among children from different socioeconomic backgrounds. Their findings highlight the need for targeted interventions to address the widening gap in sports participation exacerbated by the pandemic.

In conclusion, the examination of sports participation patterns among disadvantaged children extends beyond physical activity to encompass social, economic, and cultural dimensions. Research consistently demonstrates that sports can play a pivotal role in reducing social inequalities, provided that appropriate measures ensure access for all children. Future research should focus on developing and evaluating innovative strategies to overcome the multifaceted barriers to sports participation faced by disadvantaged children, taking into account the complex interplay of socioeconomic factors, cultural contexts, and emerging global challenges.

Materials and methods

Study Design and Ethical Considerations

This cross-sectional study was conducted in public educational institutions across southern Slovakia. Prior to data collection, ethical approval was obtained from the relevant institutional review board. Comprehensive information about the study's objectives was provided to teachers, students, and parents. Participation was voluntary and anonymous, with assurances that data would be used solely for academic purposes. Parental consent forms were obtained for all participating children.

Participants

The study sample comprised students from public schools in southern Slovakia. Participants were recruited through a stratified sampling method to ensure representation across different socioeconomic backgrounds. Inclusion criteria were: (1) enrollment in a participating public school, (2) age between 7 and 18 years, and (3) provision of parental consent. To ensure that the sample aligns with the main focus of the research—namely, examining the patterns of sports participation among

socially disadvantaged children—the data collection focused on the districts of Trnava, Nitra, Galanta, and Šaľa, selected from Slovakia's top 10 least developed districts. This classification was based on official data provided by the Slovak Centre for Labour, Social Affairs, and Family (2024). Based on these specifications, the sample consisted of 388 schoolchildren with a gender distribution of 33.5% boys and 66.5% girls. The average age was 14.34 years ($SD = 2.43$ years). The majority of respondents (77.8%) lived in rural areas. As mentioned before, the districts sampled (Trnava: 23.8%, Nitra: 27.5%, Galanta: 21.4%, and Šaľa: 27.3%) were among the top 10 least developed districts of Slovakia, based on official data from the Slovak Centre for Labour, Social Affairs and Family (2024). The sample comprised 56.7% disadvantaged children (DC) and 43.3% non-disadvantaged children (NDC). Most respondents came from households with four or more people, and 56.7% fell into the lowest income category (under 300 euro per capita monthly net income).

Data Collection Instrument

A paper-based, self-administered questionnaire was developed for this study. The instrument consisted of three main sections:

1. Sociodemographic profile: This section collected information on gender, age, parental educational attainment, and other variables to construct a comprehensive social background profile.
2. Sporting habits and attitudes: This segment included topic-specific inquiries focused on students' sporting behaviors and attitudes towards physical activity.
3. Social disadvantage and sports participation: This section explored sports habits in relation to various aspects of social disadvantage, including potential barriers to participation.

Questionnaire Development

The questionnaire was designed with particular attention to the early and mid-stages of the sporting trajectory, considering the respondents' age range. It aimed to examine choice of sport, engagement in sporting activities, characteristics of active involvement, and the value systems influencing sustained participation among disadvantaged students.

The development of the questionnaire was informed by theoretical models from sports science research, particularly those modeling sports selection for both able-bodied and disabled individuals (Sáringerné, 2014). This approach allowed for an examination of key socialization environments influencing choice of sport among disadvantaged children and potential differences compared to their non-disadvantaged peers.

Factors hindering sports participation were adapted from previous research (Sanz-Remacha et al., 2019; Gombás, 2017; Laoues et al., 2021; Lukács & Lenténé, 2022; Collins et al., 2014; Katona, 2019; Somers et al., 2018; Tintori et al., 2021). The following dimensions were covered:

- Logistical barriers (e.g., "I cannot get to the location.")
- Informational barriers (e.g., "I am not aware of the opportunities.")
- Financial barriers (e.g., "There are financial reasons.")
- Personal/Intrinsic barriers (e.g., "I am not interested.")
- Social barriers (e.g., "My parents do not support it.")

Attitudes toward sports, physical activity, and healthy lifestyle were assessed based on previous research, covering key aspects such as:

- Health and well-being (e.g., "Health Prevention")
- Personal development and achievement (e.g., "Learning new skills")
- Social relationships and interactions (e.g., "Meeting new people")
- Recreation and enjoyment (e.g., "Hobbies").

Data Collection Procedure

Questionnaires were administered in classroom settings under the supervision of trained research assistants. Participants were given ample time to complete the questionnaire and were encouraged to ask for clarification if needed.

Data Analysis

Statistical analyses were performed using SPSS (version 26, IBM Corp., Armonk, NY, USA). Descriptive statistics were calculated for all variables. Participants were categorized into disadvantaged and non-disadvantaged groups based on pre-defined criteria, with a monthly net income per capita below 300 euro serving as the criterion for this classification.

Comparative analyses between disadvantaged and non-disadvantaged children were conducted using three statistical approaches. First, a Chi-square test was applied to examine differences in the categorical variables related to the influence of various factors on sports participation. Additionally, two independent samples t-tests were performed to compare the mean differences between the two groups: one assessing barriers to participation and the other analyzing attitudes toward sports and a healthy lifestyle. All statistical tests were two-tailed, with a significance level set at $p < 0.05$, and effect sizes were calculated and reported where applicable.

Results

The results are presented in four main areas: demographic characteristics, influences on sports participation,

barriers to engagement, and the importance placed on various aspects of sports and personal development.

The sample consisted of 388 schoolchildren, with a gender distribution of 33.5% boys and 66.5% girls.

Table 1. Demographic characteristics of the sample (N=388)

Demographics	Category	Distribution (%)
Gender	Male	33.5
	Female	66.5
Age	Early Childhood (7-9 yrs)	2.1
	Pre-Adolescence (10-12 yrs)	22.7
	Early Adolescence (13-15 yrs)	39.2
	Late Adolescence (16-18 yrs)	36.1
Place of Residence	City	22.2
	Village	77.8
District	Galanta	21.4
	Nitra	27.5
	Šaľa	27.3
	Trnava	23.8
Social background	Disadvantaged children	56.7
	Non-disadvantaged children	43.3
Father’s education	Incomplete primary education	4.7
	Completed basic education	11.3
	Secondary education	66.7
	Higher education	17.3
Mother’s education	Incomplete Primary Education	3.1
	Completed Basic Education	11.9
	Secondary Education	61.0
	Higher Education	23.9
Household size	2	5.7
	3	21.6
	4	43.3
	5 or more	29.2
Monthly net income per capita (euro)	Under 300	56.7
	Between 300 – 600	29.4
	Between 600 – 900	11.9
	More than 900	2.1

The average age was 14.34 years (SD = 2.43 years). The majority of respondents (77.8%) lived in rural areas. The districts sampled (Trnava: 23.8%, Nitra: 27.5%, Galanta: 21.4%, and Šaľa: 27.3%) were among the top 10 least developed districts of Slovakia, based on official data from the Slovak Centre for Labour, Social Affairs and Family (2024).

The sample comprised 56.7% disadvantaged children (DC) and 43.3% non-disadvantaged children (NDC). Parental education showed similar patterns for both parents, with the majority having secondary education. Most respondents came from households with 4 or more people, and 56.7% fell into the lowest income category (under 300 euro per capita monthly net income).

Table 2. Influences on starting sports participation (N=388)

Factor	DC (%)	NDC (%)	p-value
Parents	26.4	40.5	*0.004
Peers	4.5	11.9	*0.012
Friends	35.5	45.2	0.059
Coach	3.6	11.9	*0.003
Teacher	17.3	16.7	0.893
Sibling	1.8	2.4	0.731
Media	1.8	0.0	0.137
Myself	12.7	11.9	0.877

Note: * $p \leq 0.05$

In order to examine the factors influencing sports participation among disadvantaged and non-disadvantaged children, we used the Chi-square test to compare differences in response frequencies between the two groups, with a 5% level of significance. This test was applied to determine whether a significant difference existed in the influence of various factors, such as parents, peers, coaches, media, etc. on children's decision to participate

in sports. By analyzing the prevalence of these influences, we identified which factors played a more prominent role in shaping sports participation across the two groups. Significant differences were observed between disadvantaged children (DC) and non-disadvantaged children (NDC) in three cases: parents ($p = 0.004$), peers ($p = 0.012$), and coaches ($p = 0.003$) had a stronger influence on non-disadvantaged children's sports participation (Table 2).

Table 3. Barriers to sports participation (N=388)

Statement	t-value	p-value	Overall Mean	DC Mean	NDC Mean
I cannot get to the location.	3.105	*0.002	2.32	2.58	1.98
I am not aware of the opportunities.	2.449	*0.015	2.19	2.37	1.95
I lack assistance.	2.780	*0.006	2.22	2.45	1.93
There are financial reasons.	3.859	*0.000	2.01	2.31	1.62
I am not interested.	0.683	0.495	2.49	2.55	2.40
My health condition does not allow it.	0.879	0.380	1.82	1.88	1.74
I do not have time.	-1.121	0.236	2.77	2.67	2.90
My parents do not support it.	0.887	0.375	1.75	1.81	1.67
I have no company	2.314	*0.021	2.22	2.41	1.98
There is no suitable sport for me	1.215	0.225	1.85	1.93	1.74

Note: DC= Disadvantaged children's mean score; NDC= Non-disadvantaged children's mean score

* $p \leq 0.05$

In addition to examining the factors influencing participation, we also investigated potential barriers to engaging in sports activities. Ten statements reflecting various barriers were presented to the respondents, which had to be rated on a 1 to 5 Likert scale (1= Completely disagree, 5= Completely agree). Prior to the analysis, pre-tests were conducted to assess the normality and homogeneity of

the data. Both the Kolmogorov-Smirnov normality test and Levene's test for homogeneity of variances yielded acceptable results for all ten statements ($p > 0.05$). Consequently, comparisons between the two groups were performed using an independent samples t-test. Disadvantaged children rated 9 out of 10 barriers to sports participation higher than non-disadvantaged children. Sig-

nificant differences were found in five cases: accessibility ($p = 0.002$), awareness of opportunities ($p = 0.015$), lack of assistance ($p = 0.006$), financial reasons ($p = 0.000$), and lack of company ($p = 0.021$) (*Table 3*).

Table 4. Importance of various health and lifestyle related factors (N=388)

Statement	t-value	p-value	Overall Mean	DC Mean	NDC Mean
Health prevention	-1.920	0.056	5.48	5.33	5.69
Family	-1.118	0.264	6.05	5.96	6.15
Hobbies	-2.214	*0.027	5.60	5.45	5.80
Learning new skills	-3.285	*0.001	4.65	4.38	5.01
Staying fit	-2.391	*0.017	4.98	4.77	5.25
Playing sports	-2.420	*0.016	4.88	4.67	5.15
Trying new things	-3.942	*0.000	5.15	4.85	5.55
Meeting new people	-4.422	*0.000	4.53	4.14	5.05
Learning	-3.320	*0.001	4.13	3.83	4.52
Being good at everything	-3.003	*0.003	4.53	4.25	4.88
Spending time alone	-2.642	*0.009	4.57	4.34	4.88
Standing out	-4.188	*0.000	3.98	3.58	4.50
Spending time with friends	-2.596	*0.010	5.58	5.38	5.85

Note: DC= Disadvantaged children's mean score; NDC= Non-disadvantaged children's mean score

* $p \leq 0.05$

Similar to the analysis of barriers to sports participation, we also examined participants' attitudes toward sports and a healthy lifestyle. This section included 13 factors, which respondents rated on a 5-point Likert scale (1 = Not important at all; 5 = Extremely important). Prior to comparing the responses of the two groups, we conducted a pre-test to assess normality and homogeneity, following the same procedure as in the previous analysis. Both the Kolmogorov-Smirnov normality test and Levene's test for homogeneity of variances yielded acceptable results for all thirteen statements ($p > 0.05$). Consequently, comparisons between the two groups were performed using an independent samples t-test. Of the 13 statements, 11 demonstrated significant differences between the two groups, with non-disadvantaged children rating these items as significantly more important compared to disadvantaged children. Only "Health prevention" and "Family" showed no significant difference between the groups (*Table 4*).

Discussion

The results of this study provide valuable insights into the sports participation patterns and barriers faced by disadvantaged children in southern Slovakia. The find-

ings reveal significant differences between disadvantaged and non-disadvantaged children in terms of influences on sports participation, barriers to engagement, and the importance placed on various aspects of sports and personal development.

Influences on Sports Participation (*Table 2*): Our study found that parents, peers, and coaches had a significantly stronger influence on non-disadvantaged children's sports participation compared to disadvantaged children. This aligns with previous research highlighting the importance of social support in youth sports participation. For instance, Sukys et al. (2014) found that parents' exercise habits significantly predicted adolescents' involvement in sports. Similarly, Wenner et al. (2022) emphasized the crucial role of parental support in fostering children's sports participation, particularly in disadvantaged communities. The lower influence of these factors on disadvantaged children suggests a potential gap in social support systems, which could be addressed through targeted interventions.

Barriers to Sports Participation (*Table 3*): The identification of significant barriers for disadvantaged children, particularly in terms of accessibility, awareness, financial constraints, and lack of assistance, corroborates findings from other studies. Somerset and Hoare (2018) conducted a systematic review that identified similar barriers to voluntary participation in sport for children. Our findings

on financial barriers are particularly concerning and echo the results of Gombás (2017) and Nelson et al. (2022), who identified financial constraints as a major obstacle for disadvantaged children's sports participation.

The accessibility issues reported by disadvantaged children in our study align with the findings of Laoues-Czimbalmos (2021), who found that children with disabilities often participate in school-based sports programs due to difficulties in accessing other venues. This suggests a need for more localized, easily accessible sports programs in disadvantaged areas. Dagkas and Quarmby (2012) and Quarmby and Pickering (2016) further emphasize how the intersection of social class, ethnicity, and gender can compound these barriers, highlighting the need for intersectional approaches in addressing sports participation disparities.

Attitudes and Values (*Table 4*): The significant differences observed in the importance placed on various factors related to sports and personal development between disadvantaged and non-disadvantaged children provide new insights into the complex interplay between socioeconomic status and attitudes towards physical activity. These findings expand on the work of Katona (2019), who examined the sports habits and opportunities of disadvantaged students in Hungary.

The lower importance placed on factors such as "Learning new skills" and "Trying new things" by disadvantaged children may reflect limited exposure to diverse sporting opportunities, which aligns with the findings of Quarmby et al. (2019), who highlighted how schools can inadvertently reinforce inequalities in physical activity opportunities for children from low-income families. Additionally, Vandermeersch et al. (2017) found that socioeconomic status significantly influences young people's participation in club-organized sports, which often provide more varied skill-development opportunities.

Interestingly, our finding that both groups placed similar importance on "Health prevention" and "Family" contrasts with some previous research. For example, Sáringerné (2014) found that adults with disabilities engaged in regular sports activities primarily for reasons such as competition, skill development, and social integration. This discrepancy may be due to age differences in the study populations or cultural factors specific to the Slovak context. Pawlowski et al. (2014) suggest that perceptions of the value of sports participation can vary significantly across different socioeconomic groups, which may explain some of these differences.

The lower emphasis on achievement and recognition among disadvantaged children, as evidenced by the significant differences in ratings for "Being good at everything" and "Standing out," raises important questions about the role of competitive sports in these communities. This finding adds nuance to the discussion on

using sports as a tool for social inclusion, as explored by Spaaij et al. (2019). It also aligns with the work of Haudenhuyse et al. (2012), who argue for a shift from performance-oriented sports programs to more inclusive, development-focused approaches when working with socially vulnerable youth.

In conclusion, our study provides a comprehensive picture of the complex factors influencing sports participation among disadvantaged children in southern Slovakia. The findings highlight the need for targeted interventions that address not only physical and financial barriers but also social and attitudinal factors. This aligns with the recommendations of Whitley et al. (2019), who emphasize the importance of culturally relevant and community-driven approaches to promoting sports participation in disadvantaged communities.

Conclusion

This study provides valuable insights into the sports participation patterns, influencing factors, and barriers faced by disadvantaged children in southern Slovakia. The findings highlight significant disparities between disadvantaged and non-disadvantaged children in terms of access to sports, social support, and attitudes towards physical activity.

The results underscore the complex interplay of socioeconomic factors in shaping children's engagement with sports. Disadvantaged children face multiple barriers, including limited access to facilities, financial constraints, lack of awareness about opportunities, and reduced social support from parents, peers, and coaches. These barriers not only affect their current participation in sports but may also have long-term implications for their physical health, social development, and overall well-being.

The study also reveals important differences in the values and attitudes towards sports and personal development between disadvantaged and non-disadvantaged children. While both groups recognize the importance of health and family, disadvantaged children place less emphasis on factors such as skill development, social interaction, and personal achievement through sports. This suggests a need for targeted interventions that not only address practical barriers but also work to shift perceptions and attitudes towards sports participation among disadvantaged communities.

The findings of this study have important implications for policy makers, educators, and community leaders. They highlight the need for targeted programs that improve accessibility to sports facilities and opportunities in disadvantaged areas, financial support mechanisms to reduce the economic barriers to sports participation, educational initiatives to raise awareness about the benefits

of sports and available opportunities, community-based approaches that involve parents and local leaders in promoting sports participation, and school-based interventions that ensure equitable access to diverse sporting activities for all children.

Future research directions should include longitudinal studies to examine the long-term impacts of early sports participation on social mobility, health outcomes, and overall well-being in disadvantaged populations. Evaluations of community-based interventions designed to increase sports participation among disadvantaged children are also needed. Qualitative research could gain deeper insights into the attitudes, motivations, and experiences of disadvantaged children regarding sports participation. Cross-cultural studies to compare the situation in Slovakia with other countries could identify best practices and culturally specific challenges. Investigations into the role of digital technology in promoting sports participation and overcoming barriers faced by disadvantaged children would also be valuable.

By addressing these research gaps, we can develop more effective strategies to promote equitable access to sports and physical activity, ultimately contributing to better health outcomes and social inclusion for all children, regardless of their socioeconomic background.

Limitations

While this study provides valuable insights, it is important to acknowledge its limitations:

The study's cross-sectional nature limits our ability to establish causal relationships between socioeconomic factors and sports participation patterns. Longitudinal research would be necessary to determine cause-and-effect relationships. The reliance on self-reported information may introduce bias, as participants might have over- or under-reported their sports participation or the importance of various factors. The study focused on southern Slovakia, which may limit the generalizability of findings to other regions or countries with different socioeconomic contexts or sports cultures.

While the sample size was adequate, a larger and more diverse sample might have provided more robust results, particularly for subgroup analyses. The study primarily focused on socioeconomic disadvantage, but did not extensively explore how this intersects with other factors such as gender, ethnicity, or disability status. The timing of data collection may have influenced responses, as sports participation can vary seasonally. A year-round study might provide a more comprehensive picture.

The quantitative nature of the study, while providing valuable statistical insights, may not capture the full complexity of participants' experiences and motivations.

Participants who are more interested in sports may have been more likely to complete the survey, potentially skewing the results. The study did not include a comprehensive assessment of the available sports facilities and programs in the studied areas, which could provide context for the reported barriers. While the study considered parental education and income, it did not extensively explore parental attitudes towards sports, which could be a significant influencing factor.

These limitations should be considered when interpreting the results and can serve as starting points for future research in this area.

Ethics approval and informed consent

This study was conducted in accordance with the Declaration of Helsinki and approved by the Institutional Review Board (or Ethics Committee) of the University of Debrecen GTK-KB 005/2024 (14 May 2024). Informed consent was obtained from all subjects involved in the study.

Competing interests

The authors declare no conflicts of interest.

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