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THE EDUCATIONAL ROLE OF SCHOOL IN SPORT DEVELOPMENT AND HEALTH PROMOTION IN SUBURBAN AREAS - CASE STUDY

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Abstract

This study investigates the sports preferences and participation levels among young residents of Soroksár, a district on the outskirts of Budapest, Hungary. Utilizing a mixed-method approach, data was collected through a questionnaire survey conducted in autumn 2023. Statistical analysis was performed to assess the significance of factors influencing sports participation. The results indicate that local infrastructure and accessibility significantly impact sports engagement among youth, with preferences leaning towards sports readily available in the community. Notably, early initiation of sports participation positively correlated with academic achievement, emphasizing the importance of holistic development through sports. The findings underscore the need for comprehensive infrastructural development to support mass sports participation and promote healthy lifestyles. Local policymakers are urged to prioritize investments in sports facilities and opportunities, recognizing the multifaceted benefits of sustained sports engagement beyond elite-level support. This study provides insights into sports participation in Soroksár and calls for further research to inform evidence-based interventions promoting physical activity and intellectual development among youth.

Keywords: *sport preferences, health promotion, Budapest*

THEORETICAL BACKGROUND

School sports play three critical roles in the development of children: physical, psycho-social, and motor (CÔTÉ et al., 2008; STRACHAN et al., 2011). Nowadays, most children replace their active early childhood lifestyle with a sedentary one later, mainly due to the influences of the information society (BARNETT et al., 2018). Regular physical activity improves children's physical fitness, mental health, and academic performance. Additionally, it can help reduce the risk of obesity, heart disease, and other chronic illnesses (WORLD HEALTH ORGANIZATION, 2022). Shaping the health behavior of individuals and society is best focused on the young (BREINBAUER, 2005). Regular and lifelong physical activity is the basis of an educational issue, which can only become part of a carefully planned educational strategy (CSÁNYI, 2010).

It is a typical social phenomenon that people find it difficult to cooperate to achieve common goals, even if they agree on the desired outcome. (PUTNAM, 2007)
Even on such an essential topic as climate change, we cannot cooperate to solve the problems and mitigate the effects worldwide and internationally, so often, even within the regional and local context, an agreement can hardly be achieved to solve the issues.
For example, parents everywhere want better educational opportunities for their children. However, they only sometimes participate in joint efforts to develop schools, though it is a familiar idea to have parents involved in education development (MOLES, 1987). If the children come from less educated social strata, parents do not participate in their education and development to the extent they can (YORK-ANDERSON - BOWMAN, 1991). This is the case with most parents living in the vicinity of Soroksár,

PURPOSE OF THE STUDY

The research aims to clearly articulate the reasons behind developing sport infrastructure in our community. We provide background information on health maintenance and explain why this area is essential. We also provide information on what gaps in knowledge and practice hinder the development and attendance of developing society through sports.
With this research, we tried to highlight the problems which stand in the way of development.
Our research question dealt with the young generation's dilemma in embracing sports and the role of local sports infrastructure in their lives.
We have two objectives: first, to present measures that could improve the actual situation, and second, to prove our assumptions regarding sports preferences and sports activity correlation with individual development through a mixed methods questionnaire.
We want to focus on the local problems that can be generalized to the periphery of major European cities, thus generalizing our research topic from a local fact in a deductive manner.
Why would it be essential to establish a strong sports program for urban and periphery communities?
Because it would be necessary for social integration, community life, and achieving the best possible quality of life for everyone.
Sports are one of the important factors through which the quality of life can be increased (SKINNER et al., 2008), and yet, local development plans in Soroksár do not have specific measures for achieving these goals. Improving the quality of life through sports is still not implemented with acts beyond words.
Conducting a SWOT analysis at the district or regional level would also be worthwhile identifying the most appropriate solutions.
The SWOT analysis categorizes development factors into two categories:

Internal factors are those on which we can influence strengths (S) and weaknesses (W). External factors – those we cannot directly influence opportunities (O) and threats (T). SWOT analyses have already been conducted in Hungary on similar topics (HAJDÚSÁMSONI HELYI KÖZÖSSÉG, 2016). A SWOT analysis would check the availability of the following components, offering the solutions for local sports development:

Developments targeting local youth

The settlement needs more space for organizing community activities for young people, and no programs explicitly targeting young people are available.

Infrastructure for sports activities that can mobilize most people in the settlement

Currently, the largest segment of community activities that mobilize people in the settlement does not relate to sports, and infrastructure is needed to organize sports events properly.

Development of the local civil sector

While underdeveloped, its operation could have serious deficiencies (human, infrastructure).

Community spaces

There are few multi-functional community spaces in the settlement capable of accommodating regular community activities of different age groups, thus involving them in the community life of the settlement.

Communication

Communication between settlement areas and organizations operating in different sectors (municipal, entrepreneurial, civil) must be improved. Regularly used, effective communication channels between the various actors in community life need to be consensually developed.

The level of health consciousness among the local population

The local population needs access to sufficient quantity and quality health-promoting, enlightening, and informative events and programs, and they need to cooperate in achieving common goals.

Synthesizing the sports development opportunities offered by literature (CRAIKE et al., 2018) with programs promoting a sporting lifestyle and healthier living in disadvantaged urban areas (KLINENBERG, 2018), the following measures are of interest:

- Systems could be established to break down social, financial, and physical barriers so marginalized social groups can enjoy their beneficial effects.
- Diverse sports opportunities allow everyone to find the most suitable activity. Various activities serve various interests and abilities, encouraging broader participation.
- Community sports life and cohesion should be strengthened and encouraged with facilities close to residential areas (LACZKÓ - RÉTSÁGI, 2015).

- Considering the Overcoming Social Barriers and the Principles of Effective Local Government (KOZMA, 2005), efforts should be made to satisfy local needs on a market-based basis without cultivating mediocrity.
- Scholarships or financial support could be provided based on social and performance-oriented criteria.
- Support could be provided by local businesses, establishing and operating sponsorships.
- Inclusive activities could be facilitated by establishing barrier-free sports facilities in freely accessible public spaces, such as parks or schools.
- Activities could be adapted, or special equipment could be provided for people with impaired mobility.
- Mentor programs could provide mental support, including lifestyle counseling, nutrition information, sports activities, and healthy living.
- Data collection and evaluation should be carried out to measure the effectiveness of programs by monitoring participation rates and health outcomes.
- Promoting sustainability is a must in every socio-economic activity.

By implementing these strategies, a health education program through sports can become a powerful tool for promoting social inclusion, improving health, and fostering community spirit in urban periphery areas.
Local municipalities should benefit from these programs. They should be convinced that this is a profitable investment, which includes reducing healthcare burdens, improving public safety, and enhancing social cohesion.

DESCRIPTION OF SOROKSÁR'S SOCIO-ECONOMIC CONDITIONS

Soroksár is present in historical sources as early as the 11th century, first mentioned by Anonymus as Surucsar. By 1390, it was already an existing Hungarian village, which fell victim to the Turkish occupation. Actual development began around the 1740s when settlers arrived from southern regions of Germany. Soroksár has been part of Budapest since 1950 and is its 23rd district since 1992.
Population: According to the 2022 census, Soroksár's population is 22,633. At the end of the 19th century, more than half Soroksár's population was German. Most of its population is currently of German origin, but this cannot be proven from census data, as only around 5% identified themselves as German in the 2022 census. However, due to the communist Rákosi era and deportations, numbers are difficult to prove. What is certain is that the Swabian tradition is strongly present, which could contribute to the resistance against innovations resulting from century-old resilience.
Soroksár's economic life is vibrant enough to allocate more funds to sports. The municipal revenue allocated to sports does not include a budget for community sports and health support (SOROKSÁR ÖNKORMÁNYZAT, 2023), as is typical in other Budapest districts

(e.g., the 10th district) (KŐBÁNYAI ÖNKORMÁNYZAT, 2023). Such items are not in the 4-year development plan (SOROKSÁR GAZDASÁGI PROGRAM 2020-2024, 2020).
There is no forum in the district through which sports facilities, sports organizations, and school sports clubs can communicate with each other and the public.
According to the Soroksár municipal sports report, six new fitness locations have been established in the district in the last few years. More extensive sports facilities include a sports hall and a football field, which are inaccessible to the district's large public. There is no swimming pool or athletics track; the only freely accessible sports facility is the so-called "Tündérkert" (Fairy Garden) in one remote part of the district on Molnár Island, which includes a basketball court and a two-lane running track. At this site, other ball games, like football, can be played in the grassy area on a poorly equipped field.

Based on these conditions, as the local infrastructure is so incomplete, the school should have a significant role in youth's health development. Therefore, we found out how young people are involved in sports in the current conditions.
We found no scientific research investigating the sports habits of primary school-age young people living in the peripheral districts of Budapest.
By highlighting various shortcomings, we aimed to draw attention to the importance of addressing them because, as we will prove with measurement data later, early sports involvement is crucial for healthy physical development and motor capabilities.
We chose young people as the subject of our study because they represent the future, and with their help, a healthy society can be founded. They are a multifaceted developmental factor in shaping a healthy social life.

METHODS

In the fall of 2023, we conducted a cross-sectional survey of the sports habits of young people in Soroksár using an online questionnaire.
The research method consisted of a five-part questionnaire. The first part focused on demographic data, followed by questions about favorite or pursued sports. The third set of questions examined the amount of sports participation. The fourth part addressed sports careers and attempted to identify dropout rates. The final part allowed for expressing desires and expectations.
Among the questionnaire types found in the literature, ours belongs to the category of mixed-method questionnaires since it examines both qualitative and quantitative parameters. We used the International Physical Activity Questionnaire (IPAQ). Our questionnaire included open-ended, numerical, and Likert scale-type questions. We consider the qualitative aspect of preferences (SCHORNO et al., 2021).

https://doi.org/10.36439/shjs/2024/2/15401

We discovered people's need for local sports facilities and tools with questions about 'where you would prefer to play close to your residence or travel to more famous sports clubs.
Data processing was conducted using Microsoft Excel and the R open-source statistical software, and ANOVA analysis was conducted, resulting in the listed results.

SAMPLE SELECTION

In the district, there are two prominent schools and three smaller ones. Local handball and basketball clubs provide supplementary activities for their students. Other schools do not have sports clubs, so children can only participate in sports activities during school physical education classes. Several smaller sports clubs in the district focus on combat sports, competitive dancing, aerobics, and weightlifting. The local football team can be considered an isolated, closed community with a weak effect on community sports life.
The participants in the research live in the eastern and northeastern parts of Budapest's 23rd district, as well as neighboring areas.
Seventy children and adolescents were the respondents in the research, with 48% being girls and 52% boys. They reside in the suburban areas and belong to the middle class socioeconomically, with the role of the school being more important in their physical and intellectual development. Parental support for participation in sports activities can only be found in a few cases, so the school plays a significant role in organizing sports for young people.

ELEMENTS OF OUR QUALITATIVE ANALYSIS

We identify recurring elements in the responses, including common reasons for preferring certain sports.
Focus on participant individual narratives. Attention to individual development because these can provide deeper insights into personal experiences and reasons behind their preferences.
Detecting underlying motivations for sports preferences. Include enjoyment, social interaction, health benefits, or personal achievement.
Avoidance factors are detected by identifying any barriers or challenges participants face in engaging in their preferred sports. This included time constraints, accessibility issues, or lack of resources.

RESULTS

Based on the responses from the questionnaires, we believe that children are most interested in sports that can be played locally. Hence, sports facilities, equipment, and

https://doi.org/10.36439/shjs/2024/2/15401

current opportunities were decisive factors in their sport preferences. Regarding preferences, it became evident that football came in first place, followed by basketball. These are the two most accessible sports in the area. We found volleyball, combat sports, competitive dance, and table tennis among moderately popular sports. The other sports are less popular among them.

Graphical Representation of Sport Preferences

Most Prefered Sports	No.
Football	22
Basketball	10
Competition dance	5
Swimming	5
Combat sports	4
Volleyball	4
Other	3
Ping-pong	2
Handball	1
Gymnastics	1

Second preference	No.
Basketball	18
Combat sports	6
Competition dance	2
Football	8
Gymnastics	3
Handball	2
Other	4
Ping-pong	5
Swimming	4
Volleyball	4

Other prefered sports	No.
Running	5
Skating	4
Biking	4
Riding	3
Taekwondo	2
Hokey	2
Rock climbing	1
Squash	1
Baseball	1
Foot Tenis	1
downhill Biking	1
golf	1
Roller skating	1
Tenis	1
Acrobatic gymnastics	1
Water sports	1
String ball	1
Skateboard	1
flour ball	1
Adventure course	1
K1 muaythai	1
Karate	1
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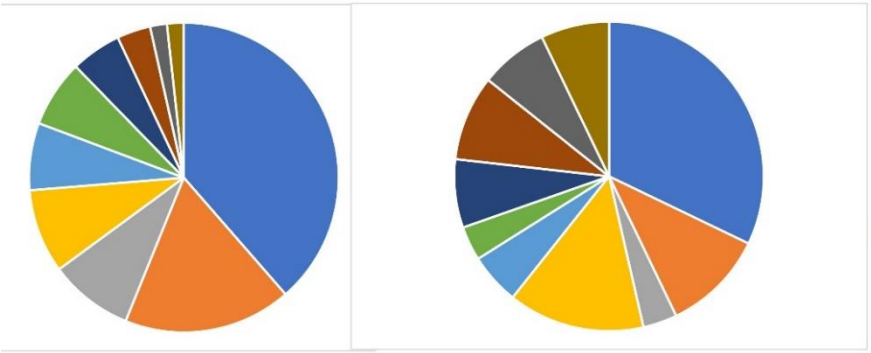

Figure. 1: Sport preferences

Regarding the amount of training, once again, the school played a decisive role because, with a few exceptions, local conditions were influential. Children gladly participated in these activities, where multiple weekly training sessions were available at school. However, in very few cases, children exercise outside school three or more times a week as professional athletes.

Regarding sports careers, most respondents stated that they associate the beginning of their sports involvement with the school, and only a few moved on to professional clubs from there; they were the minority. Most stayed in school sports and did not move on. This fact is likely attributable to the lack of parental support. A statistical analysis of the questionnaire's mathematically quantifiable answers demonstrates that sports generally benefit academic performance. Among the factors we examined, it was not elite sports that showed a positive correlation, but rather amateur sports for self-education at an early age. Calculation results show a significant positive correlation between engagement age in sport and successful academic performance.

https://doi.org/10.36439/shjs/2024/2/15401

```
> model <- aov(dependent_variable ~ independent1 * Independent2, data = data)
> summary(model)
                         Df Sum Sq Mean Sq F value  Pr(>F)
independent1              1  0.009  0.0095   0.048 0.82711
Independent2              1  1.514  1.5144   7.672 0.00745 **
independent1:Independent2 1  0.138  0.1380   0.699 0.40637
Residuals                60 11.845  0.1974
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1
```

Figure. 2: Factor correlation between academic performance, amount of training, and the time of engaging in sports activities.

Labels:

Dependent variable = ' What was your academic average last year?'

Independent factor 1 = ' How much do you exercise outside of physical education classes?'

Independent factor 2 = ' How old were you when you started sports?'

Degrees of Freedom (Df): Indicates the number of degrees of freedom for the factors and error terms.

The sum of Squares (Sum Sq): Shows the sum of squares between the factors and error terms.

Mean of Squares (Mean Sq): Indicates the magnitude of the difference between the factors and error terms.

F value: The value of the F-statistics shows the ratio of changes between the factors and the error terms.

Pr(>F): The p-value indicates the probability of the null hypothesis. If the p-value is less than 0.05, then the difference between the factors is significant.

Statistical Analysis:

The effect of the factor 'independent1' (exercise amount) is not significant ($p > 0.05$).

The F-value is 0.048, which is not large enough to reject the null hypothesis. The p-value is 0.82711, indicating no significant effect.

The effect of the factor 'Independent2' (starting age) is significant ($p < 0.05$).

The F-value is 7.672, which is relatively large. The p-value is 0.00745, indicating a significant effect.

Interaction between independent1 and Independent2 (interaction factor): The interaction effect is not significant ($p > 0.05$).

The F-value is 0.699, which is insufficient to reject the null hypothesis. The p-value is 0.40637, indicating no significant interaction effect.

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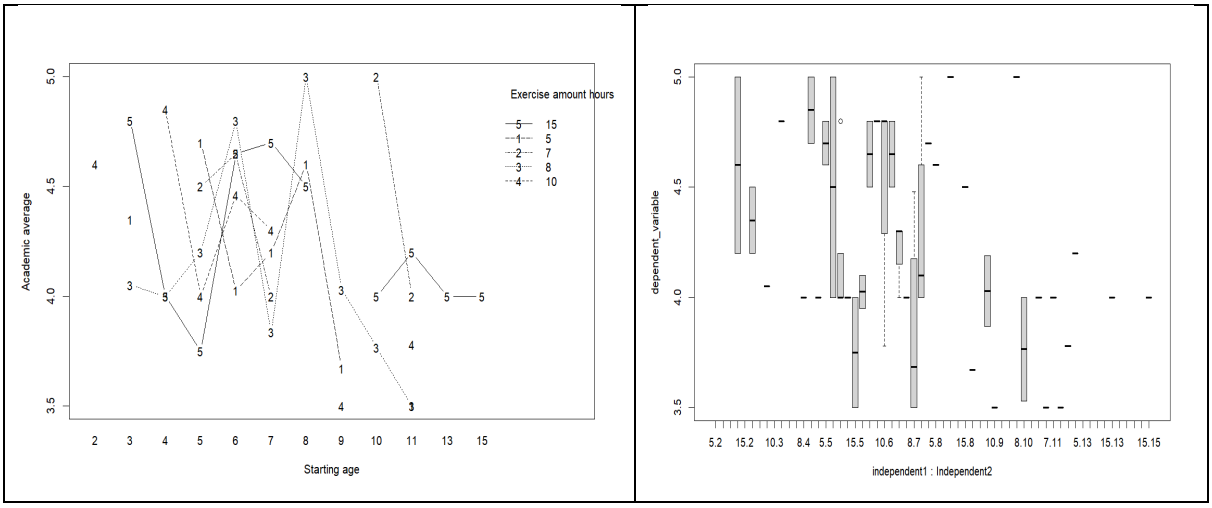

Figure. 3: Statistical factors

DISCUSSION

Summarizing the key findings, we can state that our research revealed that children prefer sports that are locally accessible, with less infrastructure. The most popular sports include football, followed by moderately popular sports like volleyball, combat sports, and competitive dance. Sports facilities, equipment availability, and school-provided opportunities played crucial roles in shaping these preferences. Children participated more in training when multiple sessions were offered at school but showed little interest in training outside of school. While most children associated their sports involvement with the school, few moved on to professional clubs, likely due to a lack of parental support. The statistical analysis showed that early amateur sports participation had a significant positive correlation with academic performance, while elite sports did not. However, the amount of exercise and engagement age did not interact significantly with academic performance.

Our findings suggest that local conditions, such as the availability of facilities and the convenience of access, heavily influence children's sports preferences. Our neighborhood school plays a pivotal role in shaping children's engagement in sports, indicating that infrastructure and school programs are critical in promoting regular physical activity. The association between amateur sports and academic success reinforces the importance of early, non-elite sports involvement for intellectual development.

Our study's Benefits and implications highlight the importance of local infrastructure in promoting sports participation among children. Ensuring that sports facilities are easily accessible can foster more active lifestyles and lead to both physical and cognitive benefits. The lack of parental support for transitioning to professional sports points to a broader issue that could be addressed through community programs or awareness campaigns. The positive link between amateur sports and academic performance

suggests that integrating physical activity into educational curricula may yield broader developmental benefits.

LIMITATIONS

The study's main limitation is its reliance on qualitative data from a limited sample size of 70 responses, which provides only a snapshot of children's sports preferences in a specific geographic area. Additionally, while the statistical analysis offers insights into the relationship between sports and academic performance, further quantitative data would be needed to generalize these findings to a larger population. Parental influence and socio-economic factors should have been thoroughly explored, potentially affecting the results.

CONCLUSIONS

Our responses provided information on young people's sporting habits living in the suburban areas of Budapest. Additional data is needed for quantitative measurements.
The children with whom we conducted the public opinion research willingly participated in sports activities, and their preference always turned towards locally available sports.
Local decision-makers are responsible for ensuring that infrastructural developments occur in Soroksár, as the numerous industrial facilities provide adequate financial resources. Providing better facilities for a healthy lifestyle for children and adults is necessary, creating conditions for mass sports.
Our study suggested that the accessibility of sports facilities and opportunities determines how much children enjoy and participate in sports.
Apart from elite sports, long-term participation in sports is the most effective for a healthy lifestyle and intellectual development.

RECOMMENDATIONS

Future research should include a larger and more diverse sample size, allowing for more comprehensive quantitative analyses. There is also a need to investigate the role of parental support and other external factors in influencing children's long-term sports involvement. Practical applications could include increasing local sports infrastructure, creating more accessible opportunities for children and adults to participate in physical activities, and incorporating sports as a vital component of educational programs.

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