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HOW EFFECTIVE IS SCHOOL SOCIAL CAPITAL IN PROMOTING PHYSICAL ACTIVITY? A QUANTITATIVE STUDY IN CROATIAN SECONDARY SCHOOLS

KAKO UČINKOVIT JE ŠOLSKI SOCIALNI KAPITAL PRI SPODBUJANJU TELESNE DEJAVNOSTI? KVANTITATIVNA ŠTUDIJA V HRVAŠKIH SREDNJIH ŠOLAH

ABSTRACT

Social capital has received increased attention as a potential influence on the development of youth. Accordingly, the aim of this study is to examine the role of school social capital in promoting physical activity among secondary school students in Croatia. The sample included 317 adolescents (*M*=212; *F*=105) who were in their final year of secondary school from the four largest cities in the Republic of Croatia: Zagreb, Split, Osijek, and Rijeka. Participants were aged between 17 and 20 years (18.24 ±0.58). Data were collected using a questionnaire consisting of three sections, carefully designed to cover all relevant aspects of the research. The relationship between physical activity and social capital was examined using logistic regression analysis. The level of statistical significance was set at $p<0.05$. The analysis reveals that participation in extracurricular or organized school activities is a statistically significant factor ($p=0.01$) that positively influences students' engagement in physical activity. Other variables of school social capital, including teacher-student interpersonal trust, students' interpersonal trust, students' collaboration, teachers' support, and students' relationships outside of school, did not show significant effects ($p>0.05$). In summary, these results suggest that students' participation in extracurricular or school activities can play a beneficial role in enhancing physical activity among adolescents. This is likely because such activities allow students to choose those they enjoy, which increases their motivation to engage. Additionally, participating in these activities often leads to improved relationships with others, as students connect with peers who share similar interests, further promoting an active and supportive environment.

Keywords: social capital, physical activity, health, adolescents, school

IZVLEČEK

Socialni kapital pridobiva vse večjo pozornost kot potencialni dejavnik vpliva na razvoj mladostnikov. V skladu s tem je cilj te raziskave preučiti vlogo šolskega socialnega kapitala pri spodbujanju telesne dejavnosti med srednješolci na Hrvaškem. Vzorec je zajemal 317 mladostnikov (M=212; Ž=105) četrtih letnikov srednjih šol iz štirih največjih mest v Republiki Hrvaški: Zagreb, Split, Osijek in Reka. Udeleženci so bili stari od 17 do 20 let (18,24 ± 0,58). Podatki so bili zbrani s pomočjo vprašalnika, razdeljenega na tri dele, ki so bili skrbno zasnovani, da so zajeli vse relevantne vidike raziskave. Povezavo med telesno dejavnostjo in socialnim kapitalom smo analizirali z logistično regresijsko analizo. Raven statistične značilnosti je bila določena na $p<0,05$. Analiza je pokazala, da je vključevanje v obšolske ali organizirane šolske dejavnosti statistično značilen dejavnik ($p=0,01$), ki pozitivno vpliva na telesno dejavnost dijakov. Druge spremenljivke šolskega socialnega kapitala, vključno z medosebnim zaupanjem med profesorji in dijaki, medosebnim zaupanjem dijakov, sodelovanjem dijakov, podporo profesorjev in odnosi med dijaki zunaj šole, niso pokazale statistično značilnih razlik ($p>0,05$). Sklepno, ti rezultati kažejo, da ima lahko sodelovanje dijakov v izvenšolskih ali šolskih dejavnostih koristno vlogo pri izboljšanju telesne dejavnosti med mladostniki, kar je med drugim posledica možnosti izbire dejavnosti, ki jih zanimajo, in s tem povečanja njihove motivacije za sodelovanje. Nadalje, sodelovanje v teh dejavnostih pogosto vodi do izboljšanja medosebnih odnosov, saj se dijaki povezujejo z vrstniki s podobnimi interesi, kar dodatno spodbuja aktivno in podporno okolje.

Ključne besede: socialni kapital, telesna dejavnost, zdravje, mladostniki, šola

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INTRODUCTION

Physical activity among adolescents is crucial for their physical and mental health, and the global decline in physical activity levels among this age group has raised significant concerns (World Health Organization [WHO], 2018). Regular physical activity has well-documented benefits for cardiovascular health, weight management, motor skill development, and the prevention of chronic diseases (Janssen and LeBlanc, 2010; Eime, 2013). Moreover, it has positive effects on mental health, including reducing symptoms of anxiety and depression, improving mood, and fostering cognitive development (Biddle and Asare, 2011). Despite these benefits, many adolescents fail to meet recommended levels of physical activity, especially in developed countries, where sedentary behaviors are on the rise (WHO, 2018; Guthold et al., 2020).

Social capital has received increased attention as a potential influence on the development of youth (Kawachi, Subramanian, and Kim, 2008). Social capital represents the resources available to individuals through their social networks and relationships, playing a crucial role in various aspects of human life, including health, education, and social cohesion (Putnam, 2000). Social capital has been shown to positively impact various health outcomes in young people, including obesity (Richmond and Subramanian, 2008), diabetes (Boone-Heinonen and Gordon-Larsen, 2012; Kawachi et al., 2008), cardiovascular disease (Kawachi et al., 2008), and infectious diseases (Kawachi et al., 2008; Novak and Kawachi, 2015). There are multiple layers of environmental influences that can affect a child's development—beginning with the immediate people and institutions surrounding the child, such as parents and family, extending to school environments, residential neighborhoods, and eventually the broader societal culture (Morrow, 1999). While an initial lack of primary research was a limitation (Morrow, 2004), empirical evidence has accumulated over the past decade. Numerous studies now suggest that social capital is a valuable asset for the health and well-being of children and adolescents, including their mental and physical health (Morrow, 2004; Caughy, Nettles, O'Campo, 2008; Morgan, 2010; McPherson et al., 2014; Stevenson, 1998; Drukker et al., 2003).

When it comes to health and education, the school environment, where adolescents spend a significant portion of their day, offers a valuable opportunity to promote physical activity and encourage healthy behaviors (Putnam, 2000). More precisely, schools provide structured opportunities for physical activity through physical education classes, sports programs, and extracurricular activities. In line with that, school social capital refers to the resources

embedded in the relationships and networks within a school community, including trust, shared values, and a sense of belonging (Putnam, 2000). The level of connectedness among students, teachers, and the broader school environment can influence students' academic and non-academic outcomes, including health behaviors (Szreter and Woolcock, 2004). Accordingly, it can be concluded that a school fostering strong social ties, positive relationships, and a supportive environment may encourage students to engage in health-promoting activities such as physical exercise (Pulimeno et al., 2020). Also, some previous studies shown that school social capital can positively influence youth physical activity by providing emotional support and a sense of belonging, thereby increasing their motivation to participate in physical activities (Alvarez, Kawachi and Romani, 2017; Novak, Doubova and Kawachi, 2016). Horizontal connections among students, such as friendships and team spirit, can encourage participation in sports and recreational activities (Smith, 2003). Vertical connections, including support and encouragement from teachers and coaches, can also play a significant role in promoting physical activity (Eccles and Roeser, 2011). Considering the above, it is evident that social capital within schools provides a foundation for creating a positive environment that promotes physical activity and a healthy lifestyle among adolescents.

Moreover, extracurricular activities in schools provide vital opportunities for adolescents to engage in regular physical activity outside the traditional classroom setting. Participation in these activities, such as sports teams, fitness clubs, and recreational groups, has been shown to positively impact both physical and mental health by increasing daily activity levels and fostering a sense of enjoyment associated with exercise (Fredricks and Eccles, 2006). Extracurricular programs also allow students to develop essential social skills, build friendships, and establish connections with peers and mentors, which are key components of social capital (Mahoney, Harris and Eccles, 2005). Research suggests that students involved in physical extracurriculars exhibit higher levels of motivation and commitment to staying active, as these programs often promote teamwork, discipline, and a sense of belonging (Darling, Caldwell and Smith, 2005).

Despite growing recognition of the importance of school social capital, research specifically examining its role in promoting physical activity among secondary school students in Croatia remains limited. A study from the western Balkan countries found that Croatian adolescents reported higher levels of family and social loneliness, along with reduced influence from parents and friends and lower quality of friendships, compared to their peers in Bosnia, Herzegovina, and Macedonia (Klarin et al., 2012). These findings indicate that Croatian

adolescents may experience distinctive social conditions that could impact their physical activity levels. Additionally, Novak et al. (2016), in their study involving 3427 Croatian high school students, concluded that high social capital is associated with regular moderate to vigorous physical activity in boys and regular overall activity in girls. In mentioned studies (Klarin et al., 2012; Novak et al., 2016), it was also emphasized that most research predominantly focuses on developed countries, with limited exploration of the unique social and cultural contexts of less developed regions. In line with this, it is important to note that these parallels and discrepancies highlight the need for a deeper understanding of how social capital operates across different cultural and social contexts. Additionally, some studies often overlook specific aspects of social capital, such as interpersonal trust between students and teachers, which may play an important role in understanding the influence of school social capital on physical activity (Pulimeno et al., 2020). Furthermore, the role of certain connections, such as peer friendships and collaboration, is frequently underexplored despite its potential to enhance adolescents' motivation to engage in physical activity (Smith, 2003).

Accordingly, understanding how social capital within schools influences adolescents' physical activity can provide valuable insights for designing effective interventions and policies aimed at promoting healthier behaviors among youth. Therefore, the aim of this study is to examine the role of school social capital in promoting physical activity among secondary school students in Croatia. The study will focus on understanding how various dimensions of school social capital, including teacher-student interpersonal trust, students' interpersonal trust, student collaboration, participation in extracurricular or organized school activities, teacher support, and students' relationships outside of school, affect physical activity levels in adolescents. The hypothesis is that higher levels of school social capital are positively associated with increased physical activity levels among secondary school students in Croatia.

METHODS

Participants

The sample included 317 adolescents (M=212; F=105) who attended the final year of secondary school from the four largest cities in the Republic of Croatia: Zagreb (*n*=82), Split (*n*=80), Rijeka (*n*=65), and Osijek (*n*=90). Participants were aged between 17 and 20 years (18.24±0.58). The research was conducted in accordance with the Declaration of Helsinki and

was approved by the Ethics Committee of the Faculty of Kinesiology, University of Zagreb (number 33./2021). All participants were informed about the protocol and purpose of the research prior to its commencement and provided written consent to participate. The complete testing protocol was explained to them in detail, with special emphasis on the fact that the research did not require any additional physical effort beyond their regular activities.

Measurements Instruments

Data were collected using a questionnaire consisting of three sections, carefully designed to cover all relevant aspects of the research. The first section of the questionnaire collected demographic data from the participants, while the second section focused on assessing students' physical activity during a typical week using the "Global Physical Activity Questionnaire (GPAQ)". This questionnaire, developed by the World Health Organization, is designed to investigate the role of physical activity on individuals' well-being. The GPAQ has proven to be a valid and reliable measurement instrument, with Cronbach's alpha (CA) values typically ranging from 0.68 to 0.85 depending on the population and culture being studied (Ács et al., 2020; Rudolf et al., 2020). The third section assessed social capital in the family, neighborhood, and school using a social capital questionnaire with acceptable metric characteristics (CA=0.71-0.79) (Carrillo-Álvarez et al., 2019; Wang et al., 2014). The questionnaire was designed to cover important aspects of physical activity and social capital, allowing for a deeper understanding of how these factors are related. It is especially useful for studying different demographic groups, as it helps assess factors affecting both physical and social well-being.

Variables and Protocol

Before beginning the questionnaire, each participant was given a detailed explanation of the instructions and the completion process, with the opportunity to ask questions if anything was unclear. For the collection of demographic data about the study participants, the following variables were used: age, gender, the city from which the participants come, and the educational program of secondary school (Table 1). The physical activity of the students, derived from the GPAQ questionnaire, was created as a binary variable, with the first category including participants who are highly physically active and the second category including those who are moderately or lightly physically active (Table 1).

Table 1. Frequencies of categorical variables.

Variables (*n*=317)	Group	Frequency	%
Gender	M	212	66,88
	F	105	33,12
City	Zagreb	82	25,87
	Split	80	25,24
	Rijeka	65	20,50
	Osijek	90	28,39
Education	G	107	33,75
	4V	146	46,06
	3V	64	20,19
Physical Activity	Low/Mod	91	28,71
	High	226	71,29

Notes. M: male; F: female; G: gymnasium; 4V: 4-year vocational; 3V: 3-year vocational

Statistical Analysis

The obtained data were processed in the program Statistica 14.0.1.25 (TIBCO Software, Inc.) for the Windows operating system and in Microsoft Excel 2016 (Palo Alto, CA, USA). Basic descriptive parameters (mean and standard deviation) were used to describe each variable. The normality of the distribution was tested with the Kolmogorov-Smirnov test. The relationship between the variable "physical activity" and the set of social capital variables in the school was examined using a logistic regression analysis. This analysis included the calculation of values for the Omnibus test, Hosmer-Lemeshow test, Cox and Snell's and Nagelkerke's coefficients of determination, and the calculation of regression coefficients and their significance levels. The level of statistical significance was set at $p < 0.05$.

RESULTS

Table 2 shows the basic statistical parameters for the set of social capital variables. The social capital questionnaire for the school (SCS) consisted of six questions assessing different aspects of social capital within the school environment. The questions related to trust between teachers and students, trust among students, cooperation among students, participation in school

activities, encouragement from teachers to seek help, and socializing with other students during free time. Responses to the questions in the questionnaire were rated on a Likert scale from 1 to 5, which allowed for the assessment of the frequency of these actions within the school context. It is noticeable that social interactions among students outside of school received the highest scores among the measured variables for social capital. Additionally, moderate to high levels of mutual trust were reported between teachers and students, as well as among students themselves. In contrast, student involvement in extracurricular activities was lower, suggesting weaker engagement in such activities compared to other aspects of social capital.

Table 2. Basic descriptive parameters of the variables for social capital.

Variables	x̄	SD
SCS-1 (Teacher-student interpersonal trust)	3.44	0.97
SCS-2 (Students' interpersonal trusts)	3.68	0.89
SCS-3 (Students' collaboration in school)	3.78	0.89
SCS-4 (Students' participation in extracurricular or school activities)	2.78	1.33
SCS-5 (Teachers' support)	3.62	1.03
SCS-6 (Students' relationships outside of school)	3.96	1.10

Notes. x̄: mean; SD: standard deviation; SCS: social capital in school

Table 3 presents the coefficients from the logistic regression analysis, where the results of the Omnibus test suggest a statistically significant association between social capital and physical activity ($p = 0.03$), although the explained variance was low ($R^2 = 0.04 – 0.06$).

Table 3. Coefficients of logistic regression analysis.

Variables	Omnibus test of model coefficients (df = 6)	Hosmer and Lemeshow test (df = 8)	Pseudo R^2 (Cox and Snell test)	Pseudo R^2 (Nagelkerke test)
PA – SCS-1-6	$p = 0.03$*	$p = 0.35$	$R^2 = 0.04$	$R^2 = 0.06$

Notes. PA: physical activity; SCS: social capital in school; df: degrees of freedom; *p*: significance of the variable; *: statistically significant; R^2: proportion of explained variance

Table 4 presents the coefficients for the three sigmoid functions in the regression model. The analysis reveals that participation in extracurricular or organized school activities is a statistically significant factor ($p = 0.01$) that positively influences students' engagement in

physical activity. In contrast, other variables do not show significant effects ($p > 0.05$) on students' physical activity levels.

Table 4. Coefficients of sigmoid functions of the regression equation.

Variables	B	SE	*p*
SCS-1 (Teacher-student interpersonal trust)	-0.17	0.17	0.33
SCS-2 (Students' interpersonal trusts)	0.06	0.20	0.75
SCS-3 (Students' collaboration in school)	0.26	0.17	0.12
SCS-4 (Students' participation in extracurricular or school activities)	0.31	0.11	0.01*
SCS-5 (Teachers' support)	0.03	0.14	0.82
SCS-6 (Students' relationships outside of school)	-0.07	0.12	0.56

Notes. SCS: social capital in school; B: regression coefficient; SE: standard error; *p*: significance of the variable; *: statistically significant

DISCUSSION

This study aims to examine the role of school social capital in promoting physical activity among secondary school students in Croatia. The analysis of the research results indicates that the most significant factor contributing to students' physical activity is their participation in extracurricular or organized school activities. This finding underscores the important role that these activities play in fostering an environment that encourages and sustains physical engagement among students. Such findings have also been presented in previous studies, which indicate that generalized interpersonal trust and the teacher's role in promoting school and extracurricular physical activity programs are important components relating social capital to physical activity (Putnam, 2000; Vincent et al., 2003). Also, Acar and Yigit (2023) suggest that participation in extracurricular activities may have positive effects on social capital and academic achievement, but this relationship is complex and varied and may be modified by a variety of personal and contextual factors. In contrast, a previous study indicates that participation in extracurricular activities in China had no direct impact on students' academic success or any indirect effects by structuring students' social relationships in school (Tan, Cai and Bodovski, 2021). Moreover, peer discussions about participation in extracurricular activities act as a motivating factor and complement the arguments for engaging in structured forms of activity. Recent studies suggest that teacher-student interpersonal trust, students'

interpersonal trust, and students' relationships outside of school are of utmost importance for maintaining students' physical activity (Mieziene et al., 2021).

Extracurricular and organized school activities, such as sports teams, clubs, and other structured programs, provide students with opportunities to engage in physical activities beyond the standard physical education curriculum (Buckley and Lee, 2021). These activities also play a helpful role in the development of social capital, as they offer students the opportunity to interact with peers who share similar interests and passions (Putnam, 2000). In addition, extracurricular and organized school activities often create a sense of community and belonging, which can be motivating and rewarding for students. When students are involved in activities that they enjoy and feel passionate about, they are more likely to engage consistently and enthusiastically, leading to higher levels of overall physical activity (Michael et al., 2016). Additionally, these activities often come with a social component, where students build relationships and develop teamwork skills (Rahayu and Dong, 2023). This social aspect can enhance students' motivation to participate regularly, as they may view these activities not just as a form of exercise but as an opportunity to connect with peers and form lasting friendships. The positive reinforcement and encouragement from peers and instructors can further bolster students' commitment to maintaining an active lifestyle (Rahayu and Dong, 2023). Moreover, extracurricular activities often provide structured environments with regular schedules, which can help students develop routines and habits that promote physical activity. By integrating physical activity into their daily lives through these activities, students are more likely to develop a long-term commitment to staying active, which can benefit their overall health and well-being (Branquinho et al., 2024).

Furthermore, the results of this study are consistent with previous research that highlighted how school social capital positively affects youth physical activity by providing emotional support and a sense of belonging, which increases motivation to participate in physical activities (Alvarez et al., 2017; Novak et al., 2016; Novak, Suzuki and Kawachi, 2015). Some studies also indicate that various dimensions of school social capital, including teacher-student interpersonal trust, students' interpersonal trust, student collaboration, and students' relationships outside of school, affect physical activity levels (Eccles and Roeser, 2011; Jusienė et al., 2022; McNeal, 2005, Smith, 2003) and improve adolescents' perceived social acceptance and well-being (Doré et al., 2020). The findings of this study can also be integrated into the broader body of research on pediatric exercise science and developmental kinesiology. The observed benefits of extracurricular and organized school activities align with established

principles of developmental kinesiology, which emphasize the importance of structured and age-appropriate physical activities in fostering motor skill development, physical fitness, and psychosocial well-being in adolescents. However, it is important to consider potential confounding factors that may have influenced these results. For example, variations in individual levels of physical activity prior to participation in extracurricular programs might have affected the outcomes, as students who are already active may be more inclined to engage in these activities. Additionally, differences in the quality and accessibility of school-based social capital, such as teacher-student trust, peer relationships, or overall school climate, could play a significant role in shaping physical activity patterns. Psychological effects of exercise, including improved mood, self-esteem, and stress reduction, may have also contributed to students' increased motivation to participate.

When it comes to Croatian adolescents, one of the studies examines the relationship between self-rated health and social capital among Croatian high school students (Novak, Suzuki and Kawachi, 2015). The sample included 3,427 students (1,688 males, 1,739 females), aged 17-18 years. The results indicate that higher family social capital, neighborhood trust, and school reciprocity were significantly associated with better self-rated health. Similarly, the authors Novak and Kawachi (2015) found that teacher-student interpersonal trust and student interpersonal trust were significantly inversely associated with psychological distress among Croatian adolescents. Additionally, Novak, Kawachi, and Doubova (2016) found that high social capital is associated with physical activity among Croatian high school students aged 17-18 years. Based on the findings, it can be concluded that interventions that promote community social capital may serve as an effective health promotion strategy for youth. Recent research has shown that physical education can enhance the social capital of university students by improving family, neighborhood, and academic relationships through group exercises (Novak et al., 2024). In a randomized controlled trial in Zagreb, Croatia, 976 students aged 19–20 participated. The intervention group (n=472) engaged in teamwork exercises, while the control group (n=504) did individual exercises. The results showed significant improvements in trust and collaboration within the university environment, with positive correlations between the intervention and increased trust among students and teachers, as well as overall social capital. Residence in the parental home was linked to higher social capital, and older male students reported lower levels of trust and cooperation. These findings suggest that group-based physical activities should be included in higher education curricula to promote social inclusion and well-being. Furthermore, recent research by Petrušič and Novak (2024) confirms the results of this

study, highlighting how an extracurricular program with only two additional weekly sessions significantly improved physical fitness components, though in a younger sample of 8-9-year-olds. The results of this study can also be compared with findings from international research. For example, a study conducted in Canada showed that high levels of social connectedness in schools increase participation in physical activity, which, in turn, improves adolescents' perceived social acceptance and well-being (Doré et al., 2020). Similarly, research conducted in Lithuania demonstrated that interpersonal trust between students and teachers positively influences adolescents' physical activity (Jusienė et al., 2022).

In summary, the results of this study highlight the importance of schools as institutions that provide valuable opportunities for physical activity and a healthy lifestyle. Specifically, the findings confirm that fostering social capital within schools is meaningful for increasing physical activity among adolescents and supporting their overall development. In line with this, these results suggest that students' participation in extracurricular or school activities can play a beneficial role in enhancing physical activity among adolescents. This is likely because these activities allow students to choose those that they enjoy, which increases their motivation to engage. Additionally, participating in such activities often leads to improved relationships with others, as they connect with peers who share similar interests, further promoting an active and supportive environment. Therefore, it is valuable to continue efforts to strengthen social connections within the school environment, especially during times of crisis. In this way, significant contributions can be made to the overall health and well-being of adolescents. In addition to examining the role of school social capital, this study highlights important practical implications for coaching practice. Coaches and physical education teachers should consider integrating strategies that foster interpersonal trust and collaboration among students. For instance, designing activities that emphasize teamwork, and mutual support can help strengthen the social bonds that motivate students to stay engaged in physical activities. Coaches should also be mindful of creating inclusive environments where all students feel welcome, regardless of their initial physical ability or fitness level, as this can further enhance participation and promote long-term commitment to physical activity. Furthermore, the findings of this study suggest several policy implications. Policymakers should prioritize funding and support for extracurricular programs and organized school activities, as these are shown to significantly contribute to students' physical activity levels and overall well-being. Additionally, policies that promote professional development for teachers and coaches in the areas of social capital and trust-building can maximize the impact of these programs.

However, this study has certain limitations. First, the cross-sectional design of the study means that it cannot establish a causal relationship between physical activity and social capital, as the observed low levels of physical activity may simply coincide with low levels of social capital. Second, the data collected is subjective, relying on self-report measures that may be influenced by personal biases or inaccuracies in the participants' responses. Additionally, the study used a limited number of items to assess social capital, which may not capture the full complexity of this construct. Finally, while the study combines the theory of physical education with practical applications to improve youth's health and physical activity levels, a longer follow-up period would be beneficial to assess the long-term sustainability of these activity patterns. Despite these limitations, the findings provide valuable insights into the role of social capital in promoting physical activity. To enhance the validity and generalizability of future studies, several improvements are needed. First, adopting a longitudinal design would help better understand the directionality of the relationship between physical activity and social capital, allowing for clearer conclusions about causality. Additionally, future research should incorporate more comprehensive measures of social capital, capturing its complexity and different dimensions, as well as using objective data collection methods to overcome the limitations of self-reported physical activity. Expanding the sample population to include a more diverse range of demographics, such as age, socioeconomic status, and geographic location, would increase the external validity and applicability of the findings to broader populations. By addressing these areas, future research can provide more conclusive evidence and a deeper understanding of how social capital influences physical activity.

CONCLUSION

The results of this research confirmed the hypothesis and showed that participation in extracurricular activities within the school positively influences adolescents' physical activity, and that organized school events increase the likelihood that adolescents will be highly physically active. Thus, our findings provide useful information about the critical role that schools play in fostering physical activity among young people. By creating environments that support and encourage engagement in extracurricular activities, schools can significantly enhance students' overall activity levels and contribute to their long-term health and well-being. These insights emphasize the importance of investing in and expanding school-based programs that promote physical activity. Schools should strive to offer a variety of extracurricular

opportunities that cater to different interests and abilities, ensuring that all students have access to activities that can keep them active and engaged. Furthermore, this research highlights the need for schools to actively promote and facilitate social interactions and teamwork, as these elements can further motivate students to participate in physical activities and sustain an active lifestyle. In summary, our findings reinforce the value of extracurricular and organized school activities in promoting physical activity among adolescents, suggesting that schools have a vital role in supporting the health and development of their students.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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