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Policy Implications for the Promotion of School-Based Physical Activity among Children and Adolescents¹⁾

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Physical activity is essential to preventing obesity and promoting mental health among children and adolescents; yet, obesity prevalence and physical activity indicators for these groups have either deteriorated or shown little improvement in recent years. In order to promote physical activity at schools, recent policy initiatives have sought to both enhance the quality of and allocate more hours to physical education (PE), and encourage school sports club activities. However, hindered by various constraints—such as shortages in workforce and material resources both within and beyond school settings, poor coordination across programs, a lack of strategies to make physical activity programs appealing to children and adolescents, and restrictions driven by concerns over potential complaints—these policy measures have often been administered in a perfunctory manner and remained limited in effect. Further promotion of school-based physical activity requires veering away from a PE-centric model toward an integrated approach to making physical settings conducive to physical activity, strengthening staffing support, developing strategies that motivate students, and linking various programs within the framework of the current Physical Activity Promotion System.

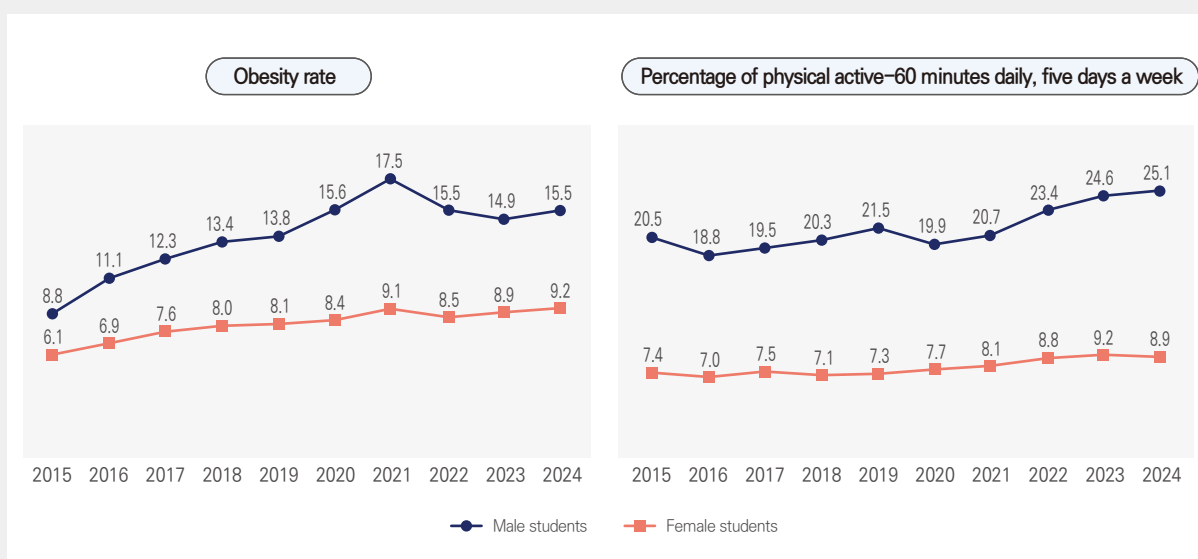
1) This article is an English translation of Issue and Focus No. 457, originally published in Korean in July 2025. The original article, based on *Policy Proposal for School-Based Interventions to Promote Physical Activity Among Adolescents* (2024; KIHASA) by Soo Kyoung Kim et al., is available at <https://www.kihasa.re.kr/publish/regular/focus/view?seq=70857>

Physical activity among children and adolescents

While childhood and adolescence are the stages of life when disease risks are at their lowest, the importance of guiding and teaching children and adolescents to develop healthy habits cannot be overstated, as these habits, formed early on, often lay the foundation for a lifetime of healthy practice.

Essential for managing chronic disease risk factors such as obesity, blood sugar, blood lipids, and blood pressure [Kim, Y. (2019). p. 1706], physical activity also helps reduce depression and suicidal thoughts [Ha, J., Cho, H., & So, H. (2011); Nam, S., Jeong, K., & Lee, E. (2007)] while enhancing self-esteem, contributing to overall mental health [Lee, H., & Kim, Y. (2017); Jeong, S., Kim, J., & Kim, S. (2006)]. However, among students in grades 7 through 12, the prevalence of obesity has increased, while the proportion of students meeting the recommended level of physical activity—‘60 minutes daily, five days a week’—remained low in 2024, at 25.1 percent for boys and 8.9 percent for girls, largely unchanged over time, according to data from the Youth Health Behavior Survey conducted annually by the Korea Disease Control and Prevention Agency.

[Figure 1] Trends in obesity and ‘60 minutes daily, five days a week’ physical activity among adolescents (in %)



Source: Ministry of Education, Korea Disease Control and Prevention Agency. (2024). *20th (2024) Youth Health Behavior Survey Statistics*. (pp 70 and 94 converted to graph)

During the COVID-19 pandemic, children and adolescents faced constraints on their daily physical activity, primarily imposed by various distancing measures, including school closures and restrictions on the use of school facilities. Some physical activity indicators, which deteriorated during that time to varying extents, have still not returned to their pre-pandemic levels. For example, the daily average time spent sitting, excluding study time, increased from 2.8 hours in 2019 to 3.8 hours in 2020, and declined only slightly to 3.3 hours in 2024. Consequently, the physical fitness and athletic capabilities of this age group have been affected, sometimes to the point of causing physical development issues. The pandemic's impact is ongoing, as evidenced by the persistently high levels of sedentary leisure time.

School is where children spend one-third of their daily life, a living environment where the potential is great for interventions aimed at promoting physical activity [Kim, N., & Kim, H. (2021). p. 65]. In this light, the World Health Organization (WHO) presents “implementation of school-based obesity prevention strategies” as one of the six key areas recommended for preventing childhood and adolescent obesity. Within this area, the recommendations include: “creating a healthy school environment,” “fostering the ability of school-aged children and adolescents to manage their health and nutrition,” and “implementing comprehensive programs to promote physical activity” [World Health Organization. (2017); re-cited in Ministry of Health and Welfare, Korea Health Promotion Institute. (2023a). p. 25].

This article provides an overview of policies that are in place to promote school-based physical activity among children. Moreover, drawing on interviews with students, parents, and stakeholders, we identify practical issues having to do with program implementation and profile the perceived physical activity needs of students. In this undertaking, we aim to present suggestions on what should be done and how, in order to improve policies for promoting school-based physical activity among children and adolescents.

The recruitment of student and parent participants was entrusted to a professional survey firm. These participants were divided into groups, each of which was interviewed once. Participants were limited to residents of Seoul, Incheon, and Gyeonggi-do, to ensure accessibility of the in-person interview location. The student participants were divided into four groups—middle school boys, middle school girls, general high school students, and specialized high school students—each of which consisted of four individuals. The parent participants were divided into two groups: the first group consisted of seven parents with their firstborns in elementary school, and the second of seven parents whose firstborns were in middle or high school.

Recruited via website contact pages or through the researchers' personal networks, the stakeholder participants, fourteen in all, included six policy officials at central- and local-level governments, six frontline workers (teachers at elementary, middle, and high schools, and public health center officials), and two researchers specializing in related topics. Interviews with these stakeholders were conducted with policy officials grouped according to central- or local-level affiliation and with frontline workers divided into smaller groups according to whether they were affiliated with elementary, middle, or high schools. The focus groups were mostly of fewer than three individuals, while interviews with policy officials were in part conducted one-on-one, since each represented a distinct set of responsibilities.

Ongoing school physical activity programs for children and adolescents

[Table 1] presents a summary of policy programs that are in place to promote physical activity at elementary, middle, and high schools. These programs took shape circa the early 2010s. The shifts that occurred during that period can be summarized in three features. First, the long-standing Student Physical Fitness Test, primarily a test of students' athletic abilities, came to an end, replaced in 2009 by a Physical Activity Promotion System (PAPS)²⁾. First introduced to 5th- and 6th-grade students, the PAPS was later extended to middle and high schools, and further, in 2024, to children in grades 1 through 4. The PAPS, the implementation of which, according to the School Sports Promotion Act³⁾, is the responsibility of principals, has taken hold and is now in steady operation in all schools across the country.

Second, policy efforts expanded the variety of programs, reshaping the contours of school PE. Key undertakings included increasing the number of class hours assigned to PE, making PE classes more substantive, fostering school sport clubs, promoting school physical activity among female students, and strengthening the implementation of the PAPS. These initiatives have been assessed as having increased opportunities for students to engage in physical and sports activities, while also diversifying the PE curriculum [Ministry of Education, Science and Technology. (2010). pp. 1-29; Yu, J. (2015); Jeong, H. (2017). pp. 35-36]. School PE goals expanded beyond contributing to the educational aim of developing the 'whole person' to include health promotion and the prevention of school violence, along with which the scope of those delivering school PE lessons expanded to include not only specialist PE teachers but also external sports coaches.

Third, the implementation of the School Sports Promotion Act in 2013 provided a legal basis for ensuring and promoting the participation not only of student-athletes but also of general students in sport activities, from which point onward policies increasingly focused on normalizing school-based physical activity [Son, S., & Hong, K. (2012)]. The relevant legal provisions, focusing specifically on the promotion of physical activity among general students, prescribe the following undertakings:

1. Expansion and installation of school sports facilities, including physical spaces and equipment;
2. Implementation of the Physical Activity Promotion System (PAPS) and the operation of health and fitness classes;
3. Operation of school sports clubs;
4. Deployment of sports instructors to elementary schools;
5. Establishment of School Sports Promotion Committees (or Associations).

2) The PAPS was designed as a system that systematically measures students' health and physical fitness and provides individual evaluation results and physical activity prescriptions to students, parents, and teachers. Unlike the traditional fitness test system, which relied on simple measurement and record-keeping, it represents an integrated concept that includes the "prescription and management" of physical activities tailored to each individual's characteristics.

3) The state shall establish an annual plan for the Student Health and Physical Fitness Assessment by March 31 each year in order to evaluate students' health and fitness levels. School principals are required to conduct the assessment according to this plan (Article 8). In addition, schools must operate a Health and Fitness Improvement Program for students who are assessed as having low fitness or obesity to promote their health and physical fitness (Article 9).

The Act assigns both central and local governments the responsibility to implement measures for revitalizing school sports, and mandates that school principals secure the necessary budget to carry out these programs. The Act is regarded as having laid the groundwork for a systematic and sustained promotion of school physical education [Cha, J. (2022). p. 562; Yeon, G. (2012). p. 56].

[Table 1] Physical activity promotion policies for elementary, middle, and high school students

	Policy	Tasks
At the Central Government Level	Expansion and Enhancement of the Physical Education Curriculum	<ul style="list-style-type: none"> • Frame PE curriculum with a strong emphasis on promoting health through physical activity (after the 2022 revision⁴⁾ of the national education curriculum). • Expand various PE content (e.g., establishment of a comprehensive school physical education portal, and develop/distribute the “Metasports SHCHOOL” app). • Run physical education as an independent subject in the “Enjoyable Life” course for 1st and 2nd graders in elementary school (Ministry of Culture, Sports and Tourism, April 29, 2024). • Deploy dedicated physical education teachers in elementary schools. • Schedule physical education classes every semester over the three years of high school.
	Promotion of Sports Activities	<ul style="list-style-type: none"> • Operate school sports clubs⁵⁾; host leagues, competitions, and festivals. • Develop and operate “365+ Physical Activity Throughout” content to expand the reach of school sports clubs. • In middle schools, conduct school sports club activity classes separately from regular physical education classes (a total of 136 hours over three years). • Support out-of-school sports activities for disadvantaged youth.
	Establishment of School Environment Conducive to Physical Activity	<ul style="list-style-type: none"> • Use of both PE teachers and certified sports instructors to assist with regular PE instruction as well as coaching and supervising school sports club activities. • Promote teacher training and academic research to prepare a workforce responsive to increasing physical activity needs. • Invest in infrastructure to expand school sports facilities, including gymnasiums, auditoriums, swimming pools, artificial turf fields, and changing rooms.
	Measurement and Evaluation of Health Indicators, Provision of Prescriptions	<ul style="list-style-type: none"> • Implement the Student Health and Physical Fitness Assessment (PAPS) system • Operate health and fitness classes for students in PAPS levels 4 and 5 and those with low physical fitness • Develop and disseminate the “Physical Activity Guidelines for Koreans by Life Stage”
	Operation of Physical Activity Programs through Local Resource Linkage	<ul style="list-style-type: none"> • When implementing the obesity prevention project “Healthy Care Playground” for children and adolescents in after-school care classes and community child centers, establish a system in collaboration with local sports associations to provide physical activity programs. • Secure human resources in physical education through city/provincial sports councils, sports organizations, and local universities, and develop and operate physical activity programs for <i>Neulbom Schools</i>.

4) The revised curriculum will begin to be applied to grades 1–2 of elementary school from 2024, to grades 3–4 of elementary school, 1st year of middle school, and 1st year of high school in 2025, to grades 5–6 of elementary school, 2nd year of middle school, and 2nd year of high school in 2026, and to 3rd year of middle school and 3rd year of high school in 2027, in a phased manner.

5) School sports clubs refer to sports clubs composed of students from the same school, from grade 2 of elementary school to grade 3 of high school, who are interested in physical activities. They were introduced to focus on recreational sports and to allow any student to easily participate in sports activities [Song, J. (2024, February 22)]. Article 10 of the Act on the Promotion of School Sports mandates that each school principal operate school sports clubs in order to provide students with a variety of physical activity opportunities.

[Table 1] Continued

	Policy	Tasks
At the Metropolitan/ Provincial Office of Education Level	Operation of Comprehensive School Health Programs	• Implement integrated programs combining nutrition and health education with physical fitness promotion (e.g., “Seoul Students Strength Recovery Project,” Gyeonggi “Healthy Dream School”).
	Expansion of Online/Remote Physical Activity Programs	• Develop and distribute physical activity apps (e.g., Sejong/Gyeongbuk “School Health” app, Incheon “Mobile PT Teacher Health Class” app).
	Expansion of On-Campus Physical Activities and Creation of Activity-Friendly Environments	• Encourage physical activity during short breaks (e.g., “Seoul Students Running Again in the Morning,” Busan “Morning Change,” Daegu “365 Our School Project”). • Provide physical activity opportunities by incorporating diverse technologies (e.g., Gyeonggi IT-based integrated education content and digital equipment installation; Jeonbuk virtual and augmented reality health promotion experiences).
	Activation of Off-Campus Physical Activities	• Operate family-linked physical activity programs (e.g., Gyeonggi “Let’s Try Together with Dad and Mom,” Jeju “Handimoyoung” exercise program). • Operate community-linked physical activity programs (e.g., Ulsan “Sports Bus” program).

Sources: Ministry of Culture, Sports and Tourism. (2022). *2021 White Paper on Sports*; Ministry of Culture, Sports and Tourism. (2023). *2022 White Paper on Sports*; Ministry of Education. (2015). Ministry of Education Notice No. 2015-74, [Supplement 11] Physical Education Curriculum; Ministry of Education. (2015); Ministry of Education. (with 17 Metropolitan/Provincial Offices of Education, and School Sports Promotion Association). (2023). *365+ Physical Activity Throughout*; Inter-Ministerial. (2023). *2nd Basic Plan for Student Health Promotion (2024–2028)*; Ministry of Health and Welfare; Korea Health Promotion Institute. (2023b). *Physical Activity Guidelines for Koreans*; Ministry of Health and Welfare; Korea Health Promotion Institute. (2023c). *2022–2023 Child Obesity Prevention Project “Healthy Care Playground” Performance Report*; Ministry of Education. (2022, June 27). *Promoting health and fitness! Everyone joins forces*. Curriculum Policy Bureau, Arts and Physical Education Support Team [Press release]; Gyeonggi Provincial Office of Education. (2023, December 7). *Health Dream School and IT Physical Education Classroom Performance and Best Practice Sharing Meeting*. Physical Health and Physical Education Policy Division [Press release]; Incheon Metropolitan Office of Education. (2024). *Mobile PT Teacher Health Classroom Participation Guide*; Moon, J. (2022, October 5). *Let’s manage health with the School Health App. Sejong’s Voice*. <https://www.sjsori.com/news/articleView.html?idxno=60219>; Seoul Metropolitan Office of Education. (2023, May 22). *“Enjoy PE anytime in small spaces” Seoul Education Office’s ‘Tumttum PE Project’ implementation*. Physical Health, Culture, and Arts Division [Press release]; Seoul Metropolitan Office of Education. (2023, October 9). *“Season 2: Seoul students run again in the morning” Morning Exercise Activation Project*. Physical Health, Culture, and Arts Division [Press release]; Jeonbuk Provincial Office of Education. (2023, November 24). *Jeonbuk Office of Education uses digital technology to promote student health*. Arts, Physical Education, and Health Division [Press release]; Ulsan Metropolitan Office of Education. (2022). *Happy Together Ulsan Sports Camp: Sharing and learning hope and consideration*; Hong, C. (2023, June 8). *Jeju runs pilot program for family-unit nutrition management and physical activity activation. Headline Jeju*. <https://www.headlinejeju.co.kr/news/articleView.html?idxno=516894>

Issues in current policies

◆ PE-centric physical activity promotion

In elementary schools—over 30 percent of which lack dedicated PE teachers—PE and sports club sessions, with the burden of preparation falling heavily on homeroom teachers, are often conducted as mere formalities [Kim, Y. 2023. (October 22)]. Similarly, in middle schools, sports club activity sessions—typically assigned only one or two hours per week, apart from regular PE classes—remain low in quality, as they are often taught by teachers who are neither PE specialists nor sports instructors, and whose role is largely limited to supervision and ensuring safety [Kim, N. & Jeong, D. (2016). p. 38]. In high schools, PE classes hold little interest or priority for students, parents, and the school authorities, whose overriding concern is the college entrance examination, with the result that PE hours are often repurposed for self-

study [Yoon, J., Jeon, S., & Kang, B. (2019). p. 196].

Students interviewed generally felt that the hours allocated to PE could well be used for recess or self-study. However, some favored making it mandatory for every student to participate in physical activities, or hoped PE classes would provide practice in specific movements or tailored instruction for PAPS fitness test items.

The interviews with teachers and local officials involved in school PE revealed that fewer than 10 percent of students were participating in and thus benefiting from school sports club programs. Furthermore, student interviewees noted that these school sports clubs and organized sports activities consist mainly of student-athletes or those who are particularly passionate about or talented in sports, which often discourages wider student participation.

Insofar as physical activity is a matter of lifestyle, promoting curricular PE and organized sports does not suffice on its own. The related policies, implemented under the assumption that enlivening PE alone would somehow fix all issues related to the decline in students' physical fitness, activity levels, and health, have fostered the perception that the health of students is the sole responsibility of education authorities—the Ministry of Education, Offices of Education, and schools.

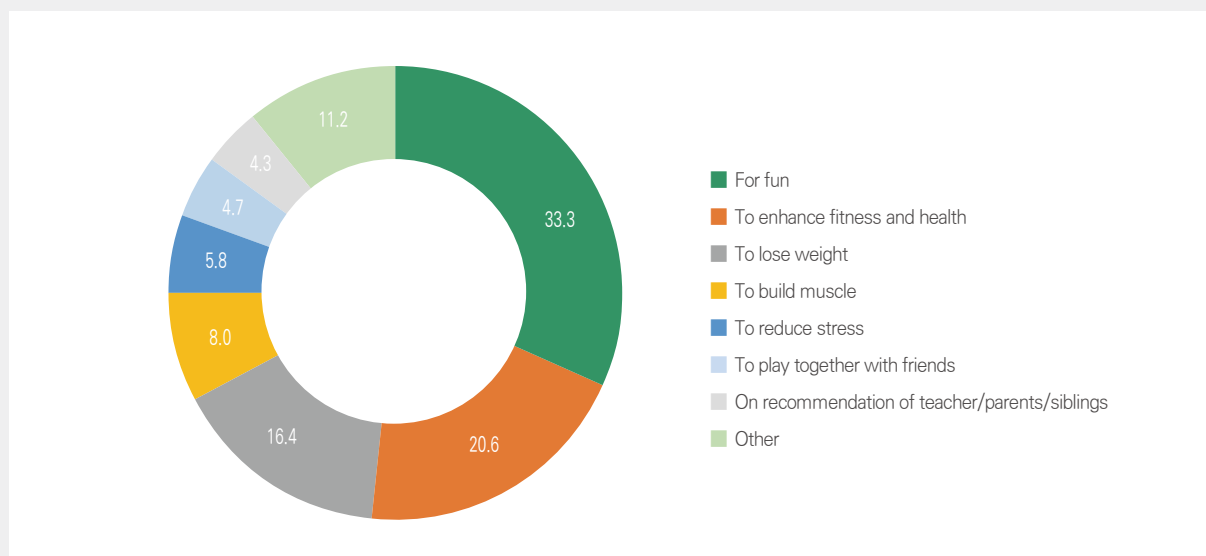
◆ *Short of space, equipment, and staff*

As mentioned earlier, PAPS and other policy programs, aimed at promoting physical activity among children and adolescents, have been implemented to encourage PE-related activities in schools. However, under current circumstances, where many schools lack resources, new programs risk becoming mere formalities. In fact, many schools struggle to deliver PE classes because they lack sports coaches to support curricular sessions and to lead or oversee in-school sports clubs [Kim, Y. 2023. (October 22)]. The teachers interviewed noted that for any good program to be effectively implemented and have sufficient impact, it must be accompanied by infrastructural enhancements (a running track, artificial-grass ground, etc.). Some schools, short on playground space, resort to measures such as dividing their playgrounds into sections for different grade groups or designating specific days for use—practices that restrict students' freedom to engage in physical activity.

◆ *Short of strategies to attract interest*

It is important to note that when children and adolescents engage in sports or physical activities, they do so primarily because they find them “fun.” (see Figure 2). To encourage children to become physically active, they must be offered diverse opportunities through which they become and stay interested in physical activity. However, as noted earlier, school sports programs, though designed to attract interest, benefit only a fraction of students, excluding those who are uninterested or less skilled. Furthermore, programs operating with insufficient resources—such as space, facilities, and staff—often become mere formalities and fail to engage students who are less health-conscious or indifferent to health promotion.

[Figure 2] Main reasons for engaging in sports or physical activity (in%)



Source: Ministry of Education, Korea Disease Control and Prevention Agency. (2022). 18th (2022) Youth Health Behavior Survey Results. (Table 3-10 converted into a pie chart)

◆ *Short of cross-program linkage*

The PAPS, though designed as a systematic assessment program, has been administered only once or twice a year and primarily to evaluate students' athletic abilities, reverting in effect to the Fitness Test it was intended to supplant. The Health and Fitness Class, designed for students whose PAPS results indicate a need for intervention, is usually offered for just two weeks at a time and conducted perfunctorily, on the grounds that it creates additional administrative burden for PE teachers and that funding and facility availability are limited [Jeong, H., & Jeong, H. (2023). p. 59]. Students interviewed generally felt that participating in the Health and Fitness Class for such a short period would not improve fitness levels in any tangible way.

Planned though it was as a system for linking different physical activity programs together, the PAPS has not functioned as such, leaving schools to run these programs independently at the expense of placing extra work demands on teachers. The corollary is that much of what the programs are supposed to provide is delivered only as formalities.

◆ *Constraining school physical activity for fear of potential complaints*

Because they are mostly carried out outdoors, physical activities are often the subject of complaints. Our focus-group interviews revealed that teachers feel particularly burdened by safety-related accidents and injuries involving students. In order to forestall complaints, schools impose various restrictions on students' physical activities, such as closing the school gym after an accident, abolishing sports day events, posting signs like "Do not run" or "Do not overexert yourself," and requiring students to take turns using designated sections of playgrounds. Most interviewed parents felt it was inappropriate to constrain

students' physical activities merely to prevent school accidents, and suggested developing alternative coping strategies based on input from both students and parents.

Concluding remarks: suggestions for school-based physical activity promotion

While school PE undoubtedly constitutes a key part of students' physical activity [Lee, G., & Yang, T. (2021); Jang, J., Lee, K., & Park, J. (2020)], it does not suffice on its own. Existing physical activity promotion policies, administered within the constrained bounds of schools, have, if anything, impeded the participation of various stakeholders from within and outside the school and instead fed into the notion that health policies targeting students are reserved exclusively for education authorities.

Physical activity being fundamentally a matter of lifestyle, there is a need to make the infrastructural, conceptual, and cultural conditions supportive of physical activity in and outside schools [Kim, H., Cho, J., Kim, S., & Kang, Y. (2014). p. 161]. In these efforts, schools should adopt school-based approaches, drawing on their own strengths, while also, if need be, making use of resources from students' homes and the local community.

This study makes three suggestions. First, there is a need to develop a medium- to long-term framework for promoting health and physical activity among students. This should involve a shift in focus from the previous 'thematic health approach' to a 'whole-school approach' or 'health-promoting school approach' which mandates that the various components of student health—physical activity, dietary patterns, mental health, tobacco use, and alcohol consumption—be addressed not separately but as a whole, building on the understanding that they are all interrelated. This notion extends to the idea that students' health affairs are not a concern reserved for a particular group of authorities, but warrant participation from diverse stakeholders from within and outside school [WHO. (2022)], which is tantamount to saying that efforts to promote health and physical activity among students must involve harnessing human, spatial, and facility resources both inside and outside schools.

For example, a new program could be introduced in which schools assign physical activity tasks, with instructions, for the student and parents to carry out together. Likewise, policymakers might consider engaging the community, in which case, schools would deliver curriculum PE programs for students in general, while local public health centers could offer special Saturday programs for students with obesity, and local Fitness Award centers could be used to assess students' fitness levels and engage outside experts to provide support for those needing additional physical activity. To coordinate these efforts, communities could establish a shared resource pool that not only helps manage programs but also informs families about local facilities and upcoming events. Reducing barriers to physical activity, often imposed by fear of complaints, requires a shift in mindset, which should consist in the traditional 'teachers versus students' or 'teachers versus parents' perspective giving way over time to a spirit of collaboration and mutual understanding, with the common goal of promoting student health.

Second, promoting physical activity among children and adolescents requires infrastructure

enhancements within and outside schools and increased support in human resources. Infrastructure here means not only space and facility resources for physical activity, but also digital equipment and gadgets on which children and adolescents can monitor their physical activity and which can keep them interested. When it comes to support in human resources, a needed approach is to shift from the widely-held perspective that issues about physical activity among students are the responsibility solely of PE teachers, toward bringing together various school human resources—school nutritionists, school nurses, and non-PE teachers—under the same mission that is student health promotion. In this approach, additional workloads must be incentivized to reward performance.

When students engage in physical activity, they do so primarily because they find it fun. With policy support and efforts from teachers, school physical activity programs can offer greater variety and features that attract more students, further promoting their health. In that sense, identifying the features that appeal to students and developing a detailed plan of action is essential. In this regard, our interviewees suggested several options worth considering. These include: deciding which sports to prioritize in school sports clubs based on students' preferences; introducing a ranking system to encourage healthy competition among students; implementing a system that rewards students for reaching specific activity goals or winning league-based tournaments; and providing tools—including heart rate monitors—that enable students to track their athletic performance over time.

Third, the PAPS should be implemented as intended—to function as a system combining evaluation and prescription. Rather than designing a new set of physical activity programs aimed at promoting the fitness and health of students, options should be sought within the existing PAPS with enhanced support. The evaluation of students' athletic abilities in various PAPS test items, mostly carried out during PE classes, should in the future be both preceded and followed by guidance and opportunities for students to practice these items, as recommended by students interviewed. The Health and Fitness Class, insofar as it is designed to cover, from 2024 onward, students with obesity or those assessed as having poor fitness levels, as well as those wishing to participate [Inter-Ministerial. (2023)], could divert part of the time allocated to existing programs—such as school sports club activities—for its delivery, rather than taking up additional class hours. Operated this way, the Health and Fitness Class could offer sessions with the duration and intensity required to actually raise students' fitness levels. In addition, as a way to link together different programs around the PAPS, policymakers might consider putting to use students' fitness data collected from PAPS-based evaluation in assessing the effectiveness of ongoing sports and physical activity programs.

As for the 'prescription' part of the PAPS, which concerns making effective, tailored interventions for promoting students' fitness and health levels, it requires health authorities to play an active role, especially in decisions regarding the content of physical activity programs, the provision of staff support, and the assessment of program impact.

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