Medical Xpress

Poor professional development may explain failure of push to promote physical health in schools

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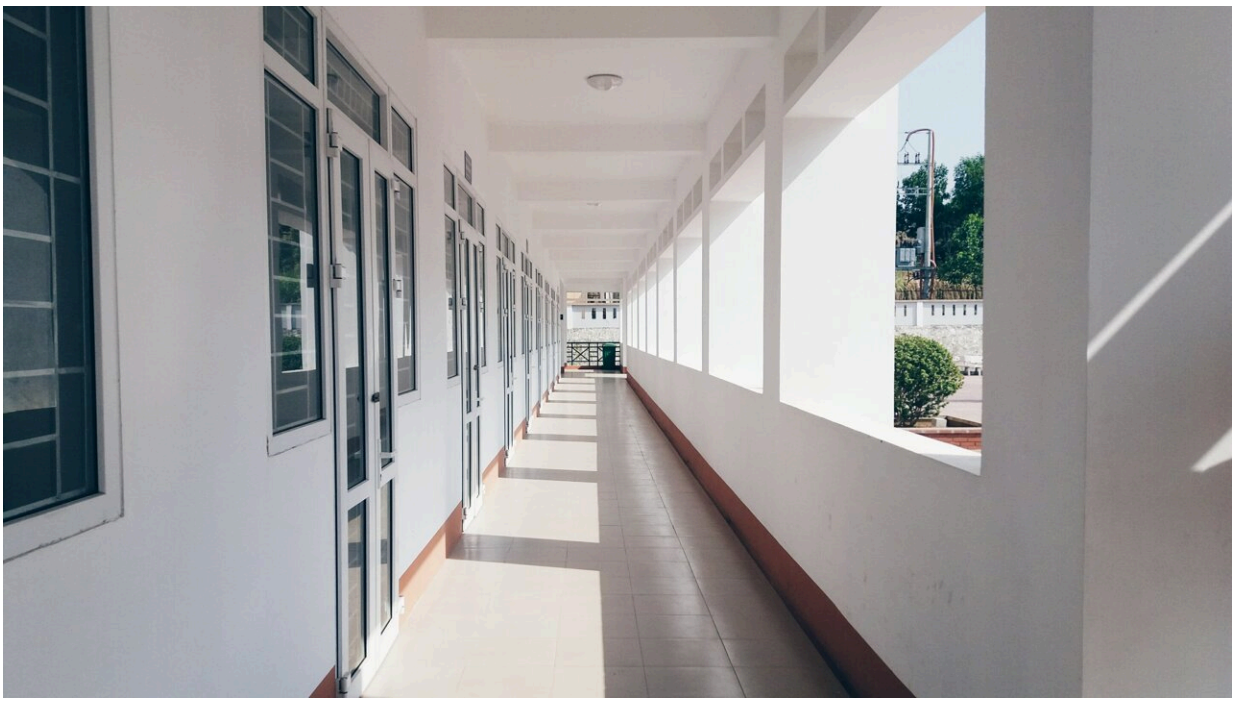

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International efforts to promote children's physical health in schools are failing because of ineffective teacher professional development, new research suggests.

A team of University of Cambridge researchers conducted a study to examine the training given to in-service teachers who are charged with implementing new physical education lessons, sports, active breaks and other programs designed to promote physical activity in schools. They found that key ingredients were often missing from the training teachers received.

They reviewed trials which covered data from hundreds of schools in 19 different countries; half of which were based in the United States, Australia and the UK. Across the board, they found little evidence that teachers were given clear goals to work towards, received regular feedback on their practice, or were provided with resources that prompted the program's integration into the school day.

The study suggests that these shortcomings make it significantly less likely that the health-promoting activities would be sustained by teachers, or have a positive impact on pupils.

The findings may explain why multiple evaluations of global efforts to promote children's physical activity in schools indicate that many of these endeavors are failing.

Many governments are currently promoting school-based physical activity programs in response to rising childhood obesity rates and associated concerns that most children and adolescents are not sufficiently active.

Judging by multiple academic assessments of the evidence, the results have been modest. In 2019, Cambridge researchers found that the impact of 17 different school-based programs on children's physical activity was "non-existent and non-significant". More recently, a larger review of programs involving 66,000 children concluded they had resulted in "little to no increase" in physical activity.

Mairead Ryan, a doctoral researcher at the Faculty of Education and Medical Research Council (MRC) Epidemiology Unit, University of Cambridge, said that schools needed clearer guidance on how to invest in appropriate training.

"Schools invest a lot of time and resources in professional development for their staff, but providers often fail to include key ingredients that support meaningful change," she said. "Our findings highlight features in professional development programs that school staff can look for and that providers should include."

Ryan and her team reviewed the staff training documented in reports from 51 randomized control trials of new school-based physical activity programs. Eight of these trials were in Britain, eight in the United States, 10 in Australia, and the remainder in 16 other countries. Collectively, they covered tens of thousands of pupils in hundreds of schools: on average, each trial gathered evidence from 14 schools and 800 pupils.

"Professional development activities that have a lasting impact look like ongoing conversations between providers and teachers," Ryan said. "Instead, what we generally saw in these programs were isolated instructional events."

Several specific training features did appear to be associated with 'successful' programs, meaning that teachers either implemented the new initiative as intended, or they resulted in improvements in pupils' health outcomes, or both.

Effective training in this sense tended to involve a clear demonstration of the activity teachers were meant to be implementing, opportunities to practice it, clear goals, allocated planning time, and routine feedback. It also typically ensured there were resources—like sports equipment—within sight to prompt the program's integration into the

school day.

Perhaps surprisingly, however, these characteristics were absent from most of the training programs the researchers reviewed—the structures of which varied wildly. Each program was analyzed using a large, standardized taxonomy which has been devised specifically to assess interventions aimed at changing behavior or practice. Just one characteristic from this list appeared in the majority of cases. This was "Instruction on how to perform the behavior"—in other words, explaining what the teachers were meant to be doing.

Professor Riikka Hofmann, from the Faculty of Education, University of Cambridge highlighted that quality professional development is often overlooked in the context of physical education: "Pupils bear the costs of this, particularly those with limited opportunities to be active outside school," she said.

Dr. Esther van Sluijs, Program Leader at the MRC Epidemiology Unit, said: "Regular physical activity is important for children's physical health as well as their well-being and academic performance. Our findings offer practical guidance for schools wishing to strengthen their provision of physical education and encourage more movement throughout the school day".

The research is published in the *International Journal of Behavioural Nutrition and Physical Activity*.

More information: Mairead Ryan et al, Features of effective staff training programmes within school-based interventions targeting student activity behaviour: a systematic review and meta-analysis, *International Journal of Behavioral Nutrition and Physical Activity* (2022). DOI: 10.1186/s12966-022-01361-6