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School-home partnerships: the missing piece in obesity prevention?

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Abstract
Although the prevalence of child obesity has plateaued in some demographic groups, it remains high in most high-income countries.Schools have been identified as a key setting for preventing childhood obesity and improving obesity-related behaviours.Many such school-based interventions have been tested over the past 20 years, but only a handful of these have been successful...

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We declare no competing interests.

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School–home partnerships: the missing piece in obesity prevention?

Although the prevalence of child obesity has plateaued in some demographic groups, it remains high in most high-income countries.[1] Schools have been identified as a key setting for preventing childhood obesity and improving obesity-related behaviours.[2] Many such school-based interventions have been tested over the past 20 years,[3] but only a handful of these have been successful.[4,5]

We suggest that a reason for the failure of these interventions might be the challenge of getting traction in the environment that has arguably the greatest effect on a child's diet and physical activity—the home. Many well designed interventions that use robust health promotion approaches such as the Health Promoting Schools (HPS) framework[6] seem to have an effect on the formal curriculum and even the school's physical and policy environment. However, the third component of the HPS framework, the school–home–community interface, has been the most difficult setting in which to implement initiatives that support and enhance behavioural changes with adequate fidelity.

In *The Lancet Child & Adolescent Health*, Jenny Lloyd and colleagues[7] report results from a school-based cluster randomised controlled trial, which aimed to prevent obesity in children aged 9–10 years in 32 primary schools in southwest England.[7] The authors developed a programme of activities that aligned with the HPS framework, which included physical activity workshops, education and drama sessions, and goal setting with parental support and one-to-one discussions with study coordinators. Unfortunately, the findings were null for the primary outcome: Mean BMI SDS was 0·32 (SD 1·16) at baseline and 0·35 (1·25) at 24 months in the intervention group (n=628), and 0·18 (1·14) at baseline and 0·22 (1·22) at 24 months in the control group (n=616). With adjustment for school-level clustering, baseline BMI scores, sex, cohort, and number of year-5 classes and socioeconomic status of each school, the mean difference in BMI SDS score (intervention–control) at 24 months was –0·02 (95% CI –0·09 to 0·05), p=0·57. The intervention also had no effect on weight status, waist circumference, percentage body fat, physical activity, and self-reported eating behaviour, except for consumption of energy-dense snacks and negative food markers, which were lower in the intervention group than in the control group at 18 months. Strengths of the trial include its high-quality methods, transparent reporting, and high retention of participants, which give confidence in the robustness of the findings. However, a more in-depth discussion of the reasons for the null findings would have been helpful. Schools and students received more than 90% of the intervention, and therefore poor implementation of the school-based components did not seem to be a contributing factor. However, for the home component, nearly half of the intervention group did not have a family member attend at least one of the parent sessions. Furthermore, parents were required to provide input to the behaviour modification goals set by their child

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on only one occasion, and 37% of participants' parents did not provide input. Although schools are a useful setting for childhood obesity interventions and have the potential to involve a large number of children, parental involvement is also crucial. A review by Ho and colleagues[8] noted that nearly all interventions that were successful had family involvement (either child and parent or parent-only sessions), particularly when targeting children younger than 12 years. The intervention used in Lloyd and colleagues' trial[7] clearly reflects a recognition of the important role of parents in obesity-related behaviour change. However, the intervention design did not translate into high parental involvement, despite formative research for this study involving an intervention mapping process, for which parents and teachers provided input to the design of the intervention.[9]

Lloyd and colleagues[7] are not alone in the struggle to attain high levels of fidelity for the school–home–community component of the HPS framework. We too have had negative findings in trials designed to prevent obesity in linguistically diverse primary school children,[10] or to prevent the decline in physical activity in adolescent girls.[11] Taken together, these study findings reinforce the challenges of establishing and strengthening relationships with families and the need to test innovative strategies to do so.

The other area of interest is the school ethos or physical and policy environment (the second component in the HPS framework), which supports what is being taught in the school curricula at the broader school environment level. Without this support, health promotion initiatives are unlikely to succeed. For example, educating students about healthy eating is of little use if the school canteen does not support this by providing only healthy food and beverage options. Aspects of the broader school environment (eg, status of the food environment) were not clear in Lloyd and colleagues' study. If initiatives such as a school meal programme for all students or a breakfast club were not already in place, implementation of these might have led to more positive dietary outcomes. A systematic review by Waters and colleagues[12] found that the more successful obesity prevention interventions make changes to the food provided to children at school in addition to the curriculum or education.

Lloyd and colleagues are to be commended for their study because it not only reinforces the need to create school environments that support healthy behaviours but also raises questions about how to increase parental engagement. Their study reflects the challenge of effectively implementing health promotion interventions in a setting in which the primary focus is on delivering academic outcomes. Perhaps if the school–home–community component of the HPS framework were more successfully implemented, school-based interventions might be more effective in preventing childhood obesity.

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We declare no competing interests.

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