

Creating active playgrounds in primary schools

Pip Budgen, Susan Furber, Erica Gray and Avigdor Zask

Introduction

Improved school environments have been shown to stimulate students to be more physically active.¹⁻⁴ However, to our knowledge few studies have reported on the process of engaging schools to make environmental changes to increase physical activity. The former Illawarra Health Promotion Unit (IHPU) was interested in investigating sustainable environments in schools that could promote increased physical activity. The purpose of this case study was to identify a model for a process that would support schools to implement environmental modifications in playgrounds aimed at increasing physical activity.

Methods

The former IHPU commissioned Kidsafe NSW (Playground Advisory Unit) to develop playground concept designs, safety

audits and detailed reports for three primary schools. The Playground Advisory Unit was also commissioned to provide training in playground safety, inspection and maintenance for these schools. The Kidsafe NSW reports provided suggestions for modifications and the development of each school's outdoor areas in order to improve safety and student participation in active recreation and learning. The reports also contained a plan of the existing outdoor spaces, a plan of concept designs for outdoor spaces, a plan and fact sheet for a sandpit, a playground safety inspection checklist, a maintenance routine for fixed playground equipment and a guide to frequency of maintenance plus other resources. The present study focuses only on the parts of the report that were related to structured and unstructured types of physical activity.

Funding and resource constraints within the area health service required the targeting of three primary schools from the Illawarra

Abstract

Issue addressed: To identify a model for a process that will support schools to implement environmental modifications in playgrounds aimed at increasing physical activity.

Methods: Kidsafe NSW (Playground Advisory Unit) was commissioned by the former Illawarra Health Promotion Unit (IHPU) to develop playground concept designs, safety audits and detailed reports for three primary schools. Each report contained several environmental recommendations to increase participation in physical activity. During this study one school was destroyed by fire. The former IHPU supported the remaining two schools to implement environmental modifications for increasing physical activity through a process of meetings and interviews.

Results: Principals of both schools said they found the process to be valuable and it encouraged them to implement changes to their school environment for the purpose of increasing physical activity. School staff and the Parents and Friends Association felt that having a report from Kidsafe NSW increased the credibility and importance of the recommendations. Both schools made several changes to their playgrounds that were recommended in the report.

Conclusions: The process of providing a Kidsafe NSW playground report, as well as support through meetings and interviews, appears to promote environmental change in schools.

Key words: Physical activity, environmental modifications in school playgrounds, Kidsafe NSW playground report.

Health Promotion Journal of Australia 2007;18:77-9

So what?

This case study has demonstrated that a supportive process enables environmental changes to be undertaken in primary school playgrounds that may increase students' physical activity levels. A larger study needs to be conducted to generate the evidence for the effectiveness of this process.

and Shoalhaven regions of New South Wales (NSW); priority was given to disadvantaged schools identified by the Department of Education and Training. The three primary schools that were selected also had a large number of Aboriginal and Torres Strait students and the strong support of their school principal to work collaboratively with the area health service. Kidsafe NSW provided reports at a minimal cost to the IHPU as they supported the area health service’s approach to working with disadvantaged communities.

During our study one school was destroyed by fire so although the plans, audits and reports were completed for the three schools, the study continued with the two remaining schools. School 1 was a rural school situated in the Shoalhaven region and had 520 students including 50 classified as ‘special education’ students. School 2 was an urban school situated in the south-western part of the Illawarra region and had a student population of 403, with a significant proportion of culturally and linguistically diverse students. Agreement was sought from each school principal to participate in the process of improving the school environment.

The process to encourage schools to implement environmental modifications for increasing physical activity included the following steps:

- Involvement of school principals and IHPU staff in the initial school audit process conducted by Kidsafe NSW.
- Provision of a detailed playground report, plans and fact sheets by Kidsafe NSW to three schools.
- The IHPU used the Kidsafe NSW report to generate a list of physical activity recommendations for each school.

- Interviews with principals, the Parents and Friends Association, and students on the recommendations from the playground reports occurred several times over a two-year period.
- Selection, prioritisation and implementation of environmental modifications undertaken by schools.

Results and Discussion

Principals of both schools said they found the process of discussing their school environment with staff from Kidsafe NSW and the IHPU to be valuable and were keen to implement changes for the purpose of increasing physical activity. They also felt that having a report from Kidsafe NSW assisted the Parents and Friends Association in deciding which type of environmental changes their school could undertake. In addition, there was the perception that having the report from a credible organisation such as Kidsafe NSW added to its importance. One school said that the report provided the impetus to redirect the school fund-raising priorities to undertake the modifications over the next few years. The students had many ideas on how to improve physical activity participation in the playground; their ideas were discussed with the principal and Parents and Friends Association. The school community chose the recommendations that they wished to implement based on factors such as cost and feasibility of implementing the playground modification. The collaborative approach between the school community, Kidsafe NSW, and the IHPU ensured that the recommendations in the Kidsafe NSW reports took into account each school’s needs and practical issues such as cost of implementation and ongoing maintenance costs. Table

Table 1: Physical activity recommendations from the Kidsafe NSW Playground report and implementation status.

School 1	School 2
✓ Paint games and targets (e.g. handball, hopscotch, snakes and ladders) on walls and under the covered outdoor learning area (COLA)	✓ Construct a COLA
✓ Improve the existing long jump pit	✓ Paint games and targets under COLA
✓ Re-lay existing cricket pitch	✓ Construct a basketball court
✓ Purchase detachable soccer nets	^ Remove the netball court or re-cover with a wetpour rubber wear layer, disguising deteriorations
✓ Construct a garden area and large chess board tiled area	^ Construct a small court suitable for volleyball, handball, badminton
✓ Paint line marking on pathways leading to the K to 2’s equipment area and the lower quadrangle	? Build a small court/performance area immediately in front of the deck seating/stage aimed at creating an arena facility
^ Install volleyball posts on the sidelines of existing netball court as a multi-purpose court	? Construct a half-size athletics oval
? Re-lay existing hard surface basketball/netball courts	? Relocate the existing basketball court
? Replace the fitness track	? Construct a long jump pit
? Apply a half-size athletics oval	? Construct a junior cricket oval
? Paint field markings on the sports field	? Construct a medium-size soccer field with side bench seating
? Construct a half basketball court	
Key: ✓ Completed ^ Planned ? Undecided at this time	

1 summarises the physical activity recommendations from the playground report and indicates their implementation status.

To maximise physical activity opportunities, some playground changes would require teachers' input and knowledge of the correct way for students to interact with the modifications (e.g. how to use the painted games under the covered outdoor learning area). In addition, teachers may need to develop skills in managing activities associated with the playground changes. Strategies on ways to maximise children's use of facilities in the playground are also needed, for example schools could have different play times for younger and older children. Schools could explore the possibility of having volunteers, such as parents, retired school teachers, or student teachers, who could encourage students to take part in physical activities during recess and lunch times.

Some of the Kidsafe NSW recommendations were associated with facilities that promote structured team activities, while others, such as line marking, would promote informal types of physical activity that could occur during recess and lunch times. Opportunities for both structured and unstructured activities in the school playground may encourage greater participation in physical activity for the whole school population. As some of the recommended environmental modifications would be

expensive to undertake, schools may need assistance on ways to raise money.

Based on the interesting findings of this case study, we propose the hypothesis that the process of providing a Kidsafe NSW playground report, as well as meetings and interviews between the schools and health promotion staff, promotes environmental change in schools. However, a larger study needs to be conducted to generate the evidence for the effectiveness of this process.

Acknowledgements

This study was supported by an Illawarra Health Research and Development Grant. We thank Jane Wilson and Angela Tobin and the Illawarra primary schools for their support, and the reviewers of this article for their suggestions.

References

1. Sallis JF, Conway TL, Prochaska JJ, McKenzie TL, Marshall SJ, Brown M. The association of school environments with youth physical activity. *Am J Public Health.* 2001;91:41-3.
2. Wechsler H, Devereaux RS, Davis M, Collins J. Using the school environment to promote physical activity and healthy eating. *Prev Med.* 2000;31:S121-S37.
3. Stratton G, Mullane E. The effect of multicolour playground markings on children's physical activity level during recess. *Prev Med.* 2005;41:828-33.
4. Ridgers ND, Stratton G, Fairclough SJ. Physical activity levels of children during school playtime. *Sports Med.* 2006;36:359-71.

Authors

Pip Budgen, Susan Furber and Erica Gray, South Eastern Sydney Illawarra Area Health Service, New South Wales
Avigdor Zask, North Coast Area Health Service, New South Wales

Correspondence

Dr Susan Furber, Health Promotion Service, South Eastern Sydney Illawarra Area Health Service, Locked Bag 9, Unanderra, New South Wales 2526. Tel: (02) 4221 6700; fax: (02) 4221 6722; e-mail: susan.furber@sesiahs.health.nsw.gov.au