

Introduction and Background

The school playground provides children with the opportunity to engage in physical activity. Despite this, few previous studies have been conducted, examining physical activity patterns of children in the setting of Irish primary school playgrounds.

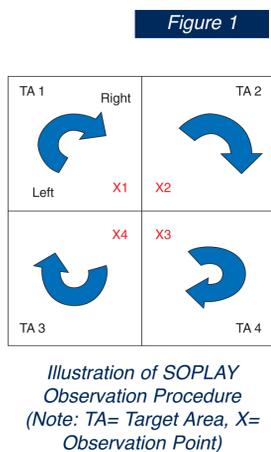
The purpose of this study was to determine if a relationship exists between gender and free-play physical activity levels of children in the school playground.

Methodology

The study sample included pupils (N=3297, 50.1% male and 49.9% female) from seven primary schools (three mixed schools, two girls' schools and two boys' schools) in the North Leinster region.

Momentary time sampling using the SOPLAY (System for Observing Play and Leisure Activity in Youth) (Mc Kenzie, 2002) observation tool was used to record each child's activity levels as sedentary, moderate or vigorous. Playground characteristics and predominant games played by the children were also recorded.

Observations were conducted in each school on two separate days and the observation procedure is illustrated in Figure 1. Prior to observation days, a mapping day was conducted in each school, which involved division of the school playground into Target Areas and smaller Scan Space.



Results

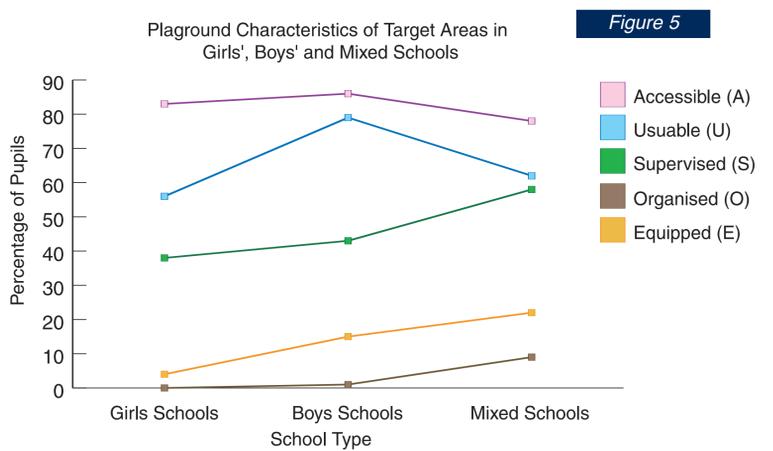
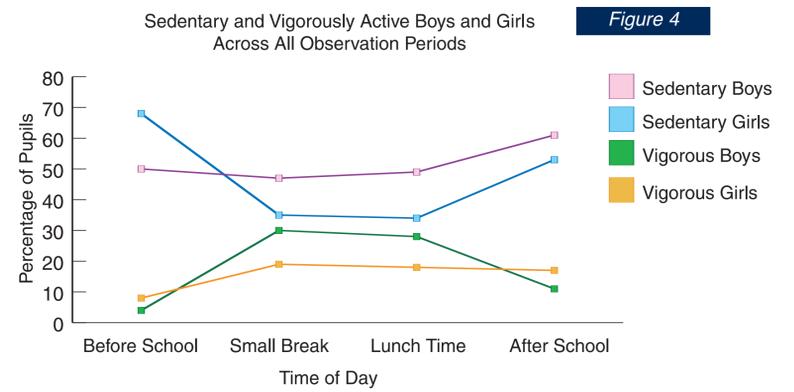
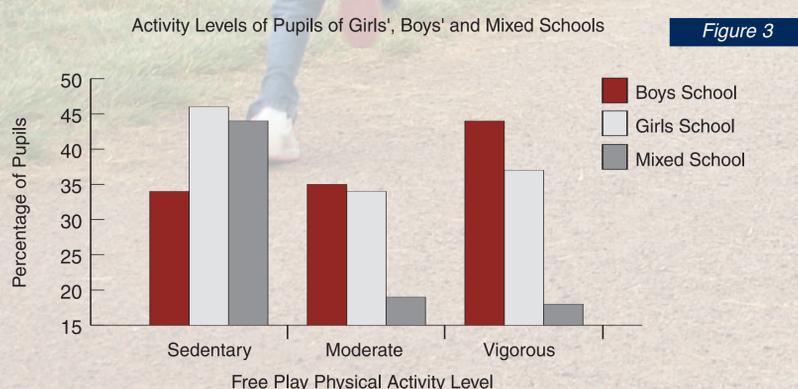
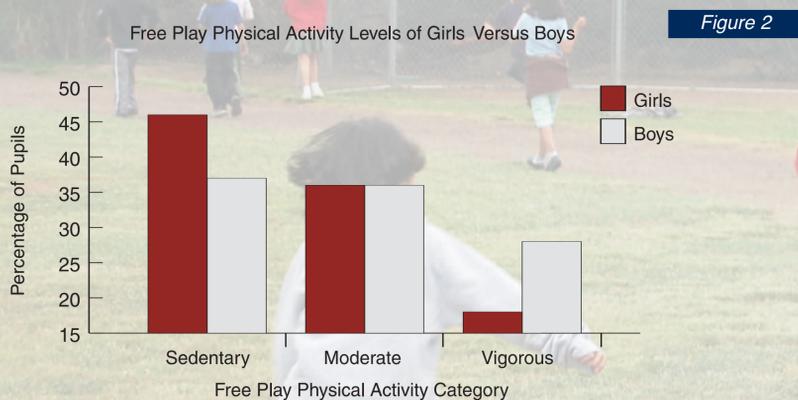
Males were more likely to be vigorously active (27.1% v 18.1%) and less likely to be sedentary (37.5% v 46.3%) than females ($p < 0.001$) (Figure 2).

Pupils attending boys' schools were more likely to be physically active than pupils attending mixed or girls' schools ($p < 0.001$) (Figure 3).

Across observation periods, boys were engaged in more MVPA than girls during small break (63.5% v 56.3%), lunch-time (64.9% v 52.3%) and after school (48.9% v 36.8%) ($p < 0.001$). Before School was the only observation period in which girls were more physically active and less sedentary than boys (Figure 4).

In schools 82.4% of Target Areas were usable, but only about 66.8% of these activity areas were accessible to pupils during the school day. Boys' schools rated highest in terms of usability and accessibility of activity areas, while levels of supervision, equipment provision and organised activities were highest in mixed schools (Figure 5). Girls' schools rated lowest overall in terms of playground characteristics, as although 83.5% of all Target Areas were usable, only 58.4% of these Target Areas were accessible and 39% were supervised.

The most prominent activity that girls (85%) and boys (50%), engaged in was coded as 'no identifiable sport, game or exercise'. The second most popular activity among boys (27%) and girls (7%) was 'Tag or chasing games'.



Conclusion

The highest proportion of pupils were sedentary (42.0%), followed by moderately (35.7%) and vigorously (22.3%) active. Girls were less likely to be physically active and more likely to be sedentary than boys.

The following are recommended, in order to increase free-play physical activity levels of pupils:

Equipment provision	Playground Markings
Conduct structured fitness training breaks	Increase levels of supervision
Increase duration of break-times	Program school playground environments
Supervisors encouraging children to be physically active	Address the culture of the school in relation to physical activity in general

Further Research

Future research should examine the impact of physical activity restrictive or enhancing school policy on the playground environment.

Future research should be conducted throughout the entire school year, to allow for seasonal variability.

This study was only conducted in the North Leinster region, there is a need for research in this area to be conducted throughout Ireland.

References

- Armitage C. (2005) An Evaluation of the Playground Games and Markings Project. HSE Dublin Mid Leinster Region.
- Mc Kenzie TL, Marshall S.J., Sallis, J.F., Conway, T.L. (2000) Leisure Time Physical Activity in School Environments: An Observational Study Using SOPLAY. Journal of Preventive Medicine, 30, 70-77.
- Mota et al. (2005) Physical activity and school recess time: differences between the sexes and the relationship between children's playground physical activity and habitual physical activity. Journal of Sport Sciences, 23 (3), p. 269-275.