



To: Transport Planners

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Subject: School Travel Toolbox: No 9: After School Physical Activity: the importance of outdoor play with friends

Top line: Time spent outdoors with other children is an important source of physical activity after school. Interventions to increase physical activity may benefit from fostering friendship groups and limiting the time children spend alone.

Physical activity during childhood confers health benefits throughout the lifespan. Children aged 5–18 are recommended to engage in at least one hour of moderate-to-vigorous physical activity (MVPA) per day, but the majority of children in the UK do not meet this target. Consequently the development and implementation of policies and programmes to change this behaviour is a major public health priority. The development of such strategies relies upon an understanding of the factors influencing physical activity.

Research investigating aspects which support or facilitate physical activity can help identify target groups in need of intervention, and highlight social and environmental factors to change behaviour. It is important to consider the environmental context (i.e. location, time period, other participants, physical environment including barriers such as motorised traffic) in which physical activity occurs. Describing the value of different environmental and social settings for physical activity could inform context-specific interventions. One characteristic which could influence children's physical activity is who children spend their leisure time with. Leisure time is a key source of children's physical activity, especially during the 'critical hours' immediately after school. After school leisure time may be spent alone, with brother/sister, with friends, with mum/dad or other grown-ups. It is plausible that who children spend their time with influences the duration, intensity and types of physical activity they engage in. However, little is known about who children spend their time with after school, or how this is associated with their level of MVPA.

In a Bristol-based study, 427 children aged 10–11 participated in research to explore after school activity.¹ Physical activity was recorded using an accelerometer and matched to Global Positioning System receiver data to differentiate indoor and outdoor location. Children self-reported who they spent time with after school until bed-time using a diary. Each 10 second period was coded as indoors or outdoors and for 'who with' (alone, friend, brother/sister, mum/dad, other grown-up) creating 10 possible physical activity contexts. Time spent and MVPA were summarised for each context. Associations between time spent in the different contexts and MVPA were examined.

During the after school period, children were most often with their mum/dad or alone, especially when indoors. When outdoors more time was spent with friends (girls: 32.1%; boys: 28.6%) than other people or alone. Hours outdoors with friends were positively associated with minutes of MVPA for girls and boys. Being outdoors with brother/sister was associated with MVPA for girls but not boys. Weaker associations were observed for time indoors. Time spent alone indoors or outside was not associated with MVPA.

¹ Pearce, M. et al 2014 Who children spend time with after school: associations with objectively recorded indoor and outdoor physical activity, *International Journal of Behavioral Nutrition and Physical Activity* 2014, 11:45.