

The Research File



Summary from the Canadian Fitness and Lifestyle Research Institute and ParticipACTION

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Parental and Peer Influence on Physical Activity among Children and Adolescents

Regular physical activity (PA) offers a range of health benefits (i.e., physical, mental and social) to children and youth. Equally important is the role of PA in deterring various chronic diseases. Consistently, research has shown that the majority of Canadian children and youth do not achieve sufficient amounts of daily PA required for healthy growth and development. Public health initiatives aimed at improving rates of activity among this population will require knowledge about factors that may influence participation. Evidence in the literature suggests that both parents and peers influence PA participation among children and adolescents. This edition of the Research File aims to summarize the findings of a Canadian study conducted by Vander Ploeg et al. which examined the relationship between parental beliefs and support for PA and children's PA levels both on school and weekend days [1]. In addition, this report will also summarize the findings of a study by Verloigne and colleagues which investigates how parental and peer variables are associated with PA among adolescents [2].



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Participation in PA among children and youth

According to the findings by Vander Ploeg et al. participation in PA varies among children and youth by the day of the week [1, 2]. Specifically, they found that children's steps (measured by time-stamped pedometers) were higher on school days compared to weekend days [1]. In a similar study, Verloigne et al. reported a higher mean number of minutes/day of moderate-to-vigorous PA on weekdays (measured by accelerometer) among adolescents compared to weekend days (although the difference was not statistically significant) [2]. These findings concur with previously published studies which also noted differences in PA levels on weekdays compared to weekend days. Vander Ploeg also noted gender differences in PA levels whereby boys averaged more steps than girls and that this difference was independent of the day of week [1]. This finding concurs with previous studies which also report gender disparities in PA participation. Gender differences were not examined independently in the study by Verloigne et al. due to a small sample size [2].

Parental and peer influence on children and adolescent PA

Parental support proved to be an important correlate of children and adolescent's PA behaviour in both studies [1, 2]. In the study by Vander Ploeg et al. girls and boys PA was associated with parental encouragement for PA [1]. More specifically, girls whose parents encouraged PA 'very much' took an additional 632 steps/day on school days compared those whose parents encouraged them 'quite a lot' [1]. Similarly, boys whose parents encouraged PA 'very much' took an additional 1373 steps/day on school days compared to those who received 'quite a lot' of encouragement [1]. Interestingly, parental encouragement was also associated with girl's PA on weekend days (a difference of 997 steps between girls whose parents encourage them 'very much' compared to those who receive 'quite a lot' of encouragement) [1]. Parental engagement was also shown to be associated with children's PA [1].

Mainly, girls whose parents engage in PA with them more than four times per week average 890 more steps per day relative to those whose parents engage in PA one to three times per week [1]. For boys, decreased parental engagement (i.e., engaging in PA with their child less than once a week) was associated with fewer steps per day on weekend days [1].

Among boys, increased parental care for staying fit and exercising was associated with increased steps on weekend days (about 1381 more steps among boys whose parents reported caring 'very much' about staying fit compared to those who care 'quite a lot') [1]. After adjusting for potential confounding variables, Vander Ploeg et al. reported no significant interaction between parent variables and girls PA on school days or weekend days, whereas the interaction between parental engagement and boys PA remained significant [1].

In a similar study involving adolescents (aged 13-15), Verloigne and colleagues reported a significant (positive) correlation between parental logistic support (on weekdays and weekends) and peer interest (on weekends) and adolescent moderate-to-vigorous physical activity (MVPA) [2]. In addition, the investigators noted positive associations (although not statistically significant) between parental praise and co-participation and PA levels of teens during the weekend [2]. Conversely, parental control and parental concern was inversely related to MVPA on weekdays [2]. Equally as important, the researchers found that most of the parental/peer variables were associated with three possible mediators (i.e., internal barriers, external barriers and self-efficacy); internal barriers (i.e., lack of time and interest in PA), however, was the only personal variable which significantly mediated the association between parental logistic support and MVPA on weekdays [2]. It is important to note that in this particular study relatively more parental variables were associated with adolescent MVPA compared to peer variables [2]. These findings suggest the need for increasing parental involvement in strategies aimed at promoting PA among children and youth.

References:

- Vander Ploeg KA, Kuhle S, Maximova K, McGavock J, Wu B, Veugelers PJ. The importance of parental beliefs and support for pedometer-measured physical activity on school days and weekend days among Canadian children. *BMC Public Health*. 2013. Vol. 13:1132.
- Verloigne M, Veitch J, Carver A, Salmon J, Cardon G, Bourdeaudhuij I, Timperio A. Exploring associations between parental and peer variables, personal variables and physical activity among adolescents: a mediation analysis. *BMC Public Health*. 2014. Vol. 14:966.

What have we learned?

- Parental beliefs and support for PA is an important factor for participation in PA among children and youth
- Interventions aimed at increasing weekday and weekend PA levels among children and youth should target parents as well as peers
- Increased parental encouragement is an important factor increasing PA levels among girls specifically. This may be key for bridging the gap between girls and boys participation in PA age and that boys, especially given boys in this study were more likely to receive encouragement from parents compared to girls [1].

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