

**Paper** Development and reliability of a self-report questionnaire to examine children's perceptions of the physical activity environment at home and in the neighbourhood

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Valid and reliable instruments for measuring physical activity behaviour and factors influencing physical activity are fundamental to monitoring, surveillance and evaluating the effectiveness of physical activity programs. Information gained from such instruments is used to provide an evidence base for public health policy and practice to promote population physical activity.

While a plethora of instruments exist to measure psychosocial correlates of physical activity among adolescents and adults, there exist a paucity of instruments focusing on children. For reasons of cognitive abilities and literacy developing self-report instruments is more challenging for children with most studies relying more on parental proxy measures, which could lead to potential bias. Within this context, the development and psychometric evaluation of a self-report questionnaire to examine children's perceptions of the physical activity environment by Hume and colleagues is a timely contribution to the rapidly expanding area of research and policy development around the environmental influences on children physical activity behaviours.

Working with a convenient sample of school children attending a metropolitan school, Hume et al. administered 63 items to 39 children aged 11 years (Grades 5 and 6) on two occasions, up to nine days apart. The items asked about the size of the child's home yard, physical activity opportunities at home, home social environment including encouragement and support for physical activity, perceptions of the neighbourhood physical environment (access, aesthetic, safety) and perceptions of the neighbourhood social environment. Overall, test-retest reliability analyses as measured by intraclass correlations (ICC) and kappa statistic for continuous and categorical variables, respectively, showed moderate to good reliability for most of the items (ICC values ranged from 0.72 to 0.92; kappa percent agreement ranged from 68% to 100%), indicating that the questionnaire was acceptable and understood by this particular age group.

This study has a number of practical and research implications. First, it is possible to obtain useful information based on self-report from children, provided the development of the instruments takes into consideration the cognitive abilities of the children, is guided by evidence and theories and that the psychometric merits of the instruments are properly tested. Second, additional research, either involving bigger sample sizes or with specific cultural groups, will need to be carried out to further refine the instrument for use to enhance its translatability among the current age group. Third, while the instrument is shown to be a stable measure of children's perceptions of the physical activity social and physical environments it should be noted that given the length of the instrument that it may be more suitable for experimental studies or small-scale observational studies; the utility of the instrument for population-wide surveys would require further testing as pointed out in the preceding point. Nonetheless, this instrument should be a useful reference guide for practitioners and researchers working in the Australian context. It is reminded, however, that any use of such instrument should be carried out in consultation with the authors and pilot tested to ensure relevance and appropriate for the context being considered.