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Active commuting amongst school children and adolescents in a rural area of South Africa

Abstract

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Active commuting amongst school children and adolescents in a rural area of South Africa

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Introduction: Active commuting to school has health and non-health benefits which might extend to long lasting effects on adult physical activity. Systematic reviews on active commuting to school have found almost no evidence from low and middle-income countries (LMIC), including sub-Saharan Africa. The aim of the present study was to describe the prevalence of active commuting to school in children and adolescents in rural South Africa and to test for associations between active commuting and risk of overweight and obesity.

Methods: Cross-sectional study of 1500 children and adolescents (500 at ages 7, 11 and 15 years) within the Africa Centre Demographic Surveillance Area, northern KwaZulu-Natal. Body Mass Index and Percentage Body Fat were measured on each child. Prevalence of under/overnutrition was defined by BMI-for-age (using both World Health Organization and International Obesity Task Force cut-offs), Weight-for-Age (Centers for Disease Control and Prevention) and overfatness using age/gender specific cut-offs (McCarthy, 2006). Lifestyle questions were asked to all participants; these included mode of travel to school. Associations between method of travel to school and anthropometric outcome were analysed using logistic regression.

Results: Levels of active commuting to school (walking) were high, ranging from 72% to 97% across the 3 different age groups (for boys and girls, respectively, prevalence of active commuting was 75% and 72% at age 7 years, 97% and 92% at age 11 years and 89% and 81% at age 15 years). Mode of travel to school was significantly associated with BMI, using both WHO and Cole/IOTF references. Active commuting resulted in a lower risk of overweight (AOR (95%CI) WHO 0.69 (0.48–0.99) and Cole/IOTF 0.61 (0.40–0.91) for travelling to school by motor vehicle vs walking to school respectively). The results were similar when overfatness was used as an outcome, with active commuting being associated with a lower risk of overfat (AOR (95%CI) 0.51 (0.36–0.73) for travelling to school by motor vehicle vs walking to school respectively).

Discussion: In this rural African population active commuting is prevalent, and is associated with a significantly decreased risk of both overweight and overfatness. Increasing levels of active commuting as a means to decreasing risk of overweight and obesity may be important for future obesity interventions in LMIC