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The impact of cycle proficiency training on cycle-related behaviours and accidents in adolescence: findings from ALSPAC, a UK longitudinal cohort

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Objectives

In the UK, some children undertake National Cycle Proficiency Scheme [NCPS]/Bikeability training in primary school. It aims to promote cycling and safe cycling behaviours but there has been little scientific evaluation of its effectiveness. We aimed to examine the impact of cycle training on cycle-related behaviours and accidents in adolescence using self-report and hospital episode statistics (HES) data.

Approach

The sample (n=5415) were participants in the Avon Longitudinal Study of Parents and Children who reported whether or not they had received NCPS training. Self-reported outcomes at 14 and 16 years included: cycling to school, ownership of cycle helmet, use of cycle helmet and high-visibility clothing on last cycle, and involvement in a cycle accident. Hospital admission due to a cycle accident from 11-16 years was also included for a subsample (n=2222) who have been linked to HES. The association between cycle training and each of the outcomes was analysed using multilevel logistic regression (individual level 1, school level 2 [pseudo-ID of school attended obtained from linkage to National Pupil Database]), adjusted for a range of potential confounders.

Results

Approximately 40% had received NCPS training. At 14 and 16 years, trained children were more likely to cycle to school (at 16 years: adjusted OR 1.56, 95% CI 1.20-2.02) and to own a helmet (16 years: 2.03, 1.72-2.41) than those who had not attended a course. They were also more likely to have worn a helmet on their last cycle at age 14 (1.26, 1.07-1.49), and to have worn high-visibility clothing at age 16 (1.70, 1.22-2.39).

Training was not associated with self-reported involvement in a cycle accident, and only six participants with HES data had been admitted to hospital due to a cycle accident. Irrespective of training, results indicate very low use of high-visibility clothing (5%), very few girls cycling to school (<2%), and less than half of helmet owners wearing one on their last cycle. Ownership and use of helmets was particularly low in children from lower socio-economic position families.

Conclusion

Cycle training for children can have benefits that persist into adolescence. However, the low use of cycle helmets and high-visibility clothing indicate the further potential for interventions to encourage safe cycling behaviours in young people. Our hospital admissions outcome only captures individuals who sustained serious injuries; more minor cycle injuries would have been treated in A&E but a lack of detail in admission codes precludes analysis of such data.

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