



## A peer-led walking intervention for adolescent girls (the WISH study): a cluster-randomised controlled trial

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## **The Walking In Schools (WISH) Study, a peer-led walking intervention for adolescent girls: Results of a clustered randomised controlled trial**

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**Author contributions:** The study design and concept were conceived by AC, MHM and AMG. AC conducted the feasibility study as part of her PhD under the supervision of MHM and AMG. RJ designed the process evaluation and advised on study methodology. IML wrote the statistical analysis plan, conducted the sample size calculation and data analysis. SMO’K and LCD were Trial Managers on the study and were responsible for ethical approval, school and pupil recruitment, data collection and data cleaning. GMD assisted with data collection and data cleaning. MF advised on issues relating to the conduct of research, school recruitment and interoperability in Ireland. All authors provided edits and critiqued the abstract for scientific content.

**Competing interests:** The authors declared no conflicts of interest

**Background:** Adolescent girls fail to meet physical activity (PA) guidelines. PA behaviours track from childhood into adulthood. The effects of walking interventions on adult health are known, however the potential of walking to promote PA in adolescents is less known. This study evaluated the effectiveness of a novel, school-based walking intervention at increasing PA levels of adolescent girls.

**Methods:** Female pupils aged 12-14 years, were recruited from eighteen (mixed or single-sex) schools across the Border Region of Ireland/Northern Ireland. Schools were randomised to control (usual physical activity; n9) or intervention (n9) by independent faculty staff using randomization.com. In intervention schools, female pupils (15-18 years), were trained as walk leaders and led the younger pupils in 10-15min walks before school, at break and lunchtime. Walks were in school grounds and pupils were encouraged to join as many walks as possible. Excluding holidays, the intervention was delivered for a full school year (18-21 weeks). Accelerometers measured PA and the primary outcome was total PA (cpm). Ethical approval was granted by Ulster University Research Ethics Committee and written informed consent (parent/guardian) and assent (pupils) was obtained.

**Findings:** In total, 589 pupils were recruited (intervention: n286; control n303). Baseline moderate-vigorous PA (MVPA) for the intervention group was (median (IQR)) 36.1 (23.0) mins per day and 35.3 (19.8) mins per day in the control group. Only 15% (n37) of intervention and 10% (n29) of control participants met PA guidelines (60 mins MVPA per day). The mean post-intervention total PA for the intervention group was 676cpm and 710cpm in the control group. Post-intervention total PA did not statistically differ between groups when adjusted for age, body mass index z-scores and baseline PA (mean difference, -33.5, 95% CI= -21.2 to 88.1; p=0.213).

**Interpretation:** 'Scaling-up' PA interventions is challenging. Despite a promising feasibility study, the results of this fully powered trial indicate that in this context, the walking programme did not increase PA. Since the COVID-19 pandemic, school environments have changed and although pupils enjoyed the programme, attendance at walks was low. There is a need to better understand the implementation of interventions such as this within schools.