Supplementary Table 1. Details of the published manuscripts and abstracts related to the Action Schools! BC efficacy trial.

Author	Sample	Objective	Instrument	Outcomes	Statistical Analysis	Results
Naylor et al [40]	N = 10 schools (4 LS, 3 CS, 3 UP) N = 7 administrators N = 49 teachers N = 26 students	1. To describe the implementation (feasibility/fidelity) of AS! BC 2. To evaluate the impact of AS! BC on the provision of PA	1. Teacher Activity Logs 2. Action Plans 3. Teacher surveys 4. Focus groups (Administrators, teachers, parents, students)	1. Minutes per week of classroom PA. 2. Teacher compliance 3. Teacher satisfaction 4. Qualitative outcomes (from focus groups)	Physical activity: Linear mixed model - DV = minutes/week of PA - Fixed effect = group - Random effect = school - Group x Phase (I or II) interaction included Qualitative outcomes: - NVivo and an editing analysis approach with open coding	1. Physical activity delivered was significantly greater in LS and CS schools compared with UP schools (~10-12 min/day, $p < 0.05$). 2. Teacher compliance with AS! BC was moderate (75%). 3. Teachers were highly satisfied with training and support. Benefits of AS! BC included positive changes in students and school climate.
Macdonald et al. [44]	N = 410 (281 INT, 129 CON; 209 boys, 201 girls)	To determine if AS! BC was effective for increasing bone strength at the distal tibia and tibial midshaft.	Peripheral quantitative computed tomography (pQCT)	**Distal tibia:** Bone strength index (BSI) **Midshaft tibia:** Polar strength-strain index (SSI_p)	Linear mixed model - DV = change in BSI and SSI - Fixed effect = group (INT, CON) - Random effect = school - Covariates = baseline bone value, baseline weight, change in leg length, change	1. INT boys tended to have a greater gain in BSI and SSI_p than CON boys, but the difference was only significant for BSI among prepubertal boys (BSI, $p = 0.03$). 2. Change in BSI and SSI_p was similar between INT and

					in muscle area, final Tanner stage (girls) - Group x maturity (pre- or early pubertal) interaction	CON girls.
Ahamed et al. [51]	N = 287 (214 INT, 73 UP; 143 boys, 144 girls)	To assess the influence of school-based physical activity on children's academic performance.	Canadian Achievement Test (CAT-3)	**Total score** – summation of scores from the math, reading and language/writing components	Linear mixed model - DV = Total score at followup - Fixed effects = group (INT, CON), sex - Random effect = school - Covariate = baseline Total score	1. No difference in Total Score between INT and UP at followup. 2. Group x sex interaction not significant.
Rhodes et al. (abstract) [52]	N = 344 children	To determine the effect of AS! BC on perceived competencies.	Harter's perceived competence scale for children	1. Athletic competence 2. Social competence 3. Academic competence 4. General self-esteem	Repeated measures ANOVA - time x group interaction terms	1. Time x group interaction was not significant for any outcome. 2. Significant main effect of time for all outcomes – perceived competencies decreased during the study.

Naylor et al. [42]	N = 444 children (165 LS, 146 CS, 133 UP; 225 boys, 219 girls)	To determine the effect of AS! BC model on children's physical activity levels.	1. Pedometers 2. Physical Activity Questionnaire for Children (PAQ-C)	1. Steps/day (average of 4 time points) 2. Minutes of MVPA/day	Linear mixed effects model - Fixed effect = group (LS, CS, UP) - Random effect = school - Analyses conducted for boys and girls together and separately	1. Children in LS schools took ~1200 more steps per day than children in UP schools ($p = 0.04$). Analysis by gender showed this group difference to be significant for boys only. 2. Girls in the CS group reported more minutes per day of PA than girls in the LS and UP groups ($p < 0.05$).
Reed et al. [41]	N = 237 (156 INT, 81 UP) N = 77 for blood samples	1. To determine if AS! BC is an effective model for decreasing CVD risk factors. 2. To assess the CVD risk profile to the intervention in children deemed "at risk".	1. Leger's 20-m incremental shuttle run test 2. Automated sphygmomanometer 3. Intravenous blood samples	1. Fitness 2. Systolic & diastolic blood pressure 3. Total cholesterol, high and low density lipoproteins, apolipoprotein B, C-reactive protein and fibrinogen.	ANCOVA - DV = fitness, BP, BMI, blood markers - Fixed effect = group (INT, UP) - Covariates = baseline value for each DV ANOVA (for 'at-risk' comparison of 4 groups with Bonferroni correction) - UP NORM - UP RISK - INT NORM - INT RISK	1. INT children had greater increases in fitness and lower increases in BP than UP children ($p < 0.05$). 2. INT children had larger (NS) decreases in all serum variables than UP children. 3. INT children in the 'at-risk' group had significantly greater changes in BP and serum markers than INT children in the NORM group.

Macdonald et al. [43]	N = 412 (294 INT, 117 CON; 213 boys, 199 girls)	1. To evaluate the effectiveness of AS! BC for enhancing femoral neck bone strength in boys and girls. 2. To determine the effects of AS! BC on total body, lumbar spine and proximal femur bone mass.	1. Dual energy X-ray absorptiometry (DXA) 2. Hip structure analysis (HSA)	**Femoral neck:** - section modulus (FN- Z) (indicator of bone bending strength), cross-sectional area and subperiosteal width - Bone mineral content (BMC) - Bone area **Total body, lumbar spine & proximal femur** - Bone mineral content - Bone area	Linear regression - DV = change in bone outcomes - variance inflation factor applied to standard error to account for clustered design - group = INT, CON - covariates = baseline height (girls) or weight (boys), change in height, change in lean mass, final Tanner stage	1. Change in FN-Z tended to be greater (+3.5%, p=0.1) in INT girls. This difference increased to 5.4% (p=0.05) in a per-protocol analysis that included girls who teachers reported at least 80% compliance. 2. INT boys had greater gains in BMC at the lumbar spine (+2.7%, p=0.05) and total body (+1.7%, p=0.03) than CON boys.

LS = Liaison schools; CS = Champion schools; UP = Usual practice; AS! BC = Action Schools! BC; PA = physical activity; DV = dependent variable; IV = independent variable; INT = intervention; CON = control; CVD = cardiovascular disease; ANCOVA = analysis of covariance; ANOVA = analysis of variance