identified following a literature review to identify determinants of children's physical activity. Our assessment of local authority 'need' included measures of children and adult's physical activity and excess weight, children's mental health needs, access and utilisation of outdoor space for exercise, and deprivation. We grouped local authorities using a hierarchical cluster analysis. The optimal number of clusters for our data was three clusters. We estimated the association between 'need' and registration to TDM with a Poisson regression.

Results We identified three distinct clusters of need for children's physical activity interventions representing 4.5 million primary school children. High-need, medium- need, and low-need local authorities included 24%, 56% and 20% of 123 upper-tier English local authorities respectively. Schools in local authorities of high-need were more likely to be registered to TDM (IRR: 1.25, 95%CI:1.12–1.39) compared with schools in low-need local authorities, where registration to TDM ranged from one in five schools in the low-need cluster to one in four in the high-need cluster.

Conclusion Our study suggests that TDM is an equitable intervention reaching schools in areas with the highest need. Areas of highest need are concentrated in particular areas in England, for example the North East. Matching public health interventions to the needs of the population is more efficient and equitable than blanket policies directed at whole populations. This identification of clusters of local authorities that share patterns of need may guide shared learning between local authorities that share similar challenges and contextual features.

OP53 EXPLORING VIEWS ON POTENTIAL COMPONENTS OF A DIET AND PHYSICAL ACTIVITY INTERVENTION WITH PARENTAL INVOLVEMENT AMONG CHILDREN IN NIGERIA

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Background There is limited evidence on diet and physical activity (PA) interventions to prevent childhood over- and under-nutrition in Nigeria, and none focused on parental involvement. Knowledge of socio-cultural and environmental contexts, prioritising views of target populations, is needed to inform intervention strategies. The aim of this study was to explore parents, children and other stakeholders' views on the factors that might enable or hinder participation in diet and PA interventions and parental involvement, and potential intervention components likely to be feasible and acceptable.

Methods A grounded theory, qualitative cross-sectional study was conducted in culturally diverse local government areas of Lagos State, Nigeria. Participants were identified through purposive and theoretical sampling, and data collected over three iterative phases. Eleven boys and girls aged 8–11 years; 19 women and 14 men aged 19–60 years who were parents, teachers/school heads, community leaders, health workers, and health or education civil servants, took part in 25 semi-structured one-to-one interviews and three focus groups. Discussions were digitally recorded and transcribed verbatim. Manual thematic analysis and independent coding of the transcripts generated key themes and reduced bias in the analysis.

Results Three overarching themes were identified: 1. Active community collaboration 2. Strategies for involving families; and 3. Schools as key settings for interventions. Adult participants voiced active partnership between communities and schools as essential to addressing barriers to diet and physical activity interventions, such as inconsistent funding and lack of safe outdoor space for PA. Children reported concerns about school meal quality and poor access to clean water and menstrual hygiene products impacting PA participation. Suggested solutions achieved by community partnerships included security for outside play areas, and infrastructure improvements using recycled/locally sourced materials, and health campaigns funded by local dignitaries. Suggested activities for engaging families in interventions included health literacy teaching for parents, using learning aids tailored to literacy levels and local dialects, and involving religious leaders.

Conclusion This study highlighted the challenges for consideration in childhood diet and PA intervention development in Nigeria. The feasibility and acceptability of grassroots suggestions for intervention components and parental involvement could usefully be explored in future pilot studies.

OP54 ASSOCIATIONS BETWEEN SOCIOECONOMIC POSITION ACROSS LIFE AND GRIP STRENGTH AT AGE 46 YEARS: FINDINGS FROM THE 1970 BRITISH COHORT STUDY

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Background Muscle weakness is a key criterion for important age-related conditions including sarcopenia and frailty. Research suggests lower childhood socioeconomic position (SEP) contributes to muscle weakness in later life but there is little evidence in younger adults closer to peak muscle strength from more recently born cohorts. We aimed to examine the relationships between indicators of SEP in childhood and adulthood and grip strength at age 46 years.

Methods A total of 3,113 men and 3,132 women from the 1970 British Cohort study, with data on paternal occupational class and parental education levels at age 5 and own occupational class, education level, grip strength and covariates including height, body mass index and occupational activity at age 46, were included in analyses. Interactions between sex and each SEP indicator were formally assessed, and models were sex-stratified if evidence of interaction was found. Linear regression models were used to test associations of childhood and adulthood SEP with maximum grip strength.

Results Among women, there was evidence of associations between lower SEP in childhood and adulthood and weaker grip strength. For example, women whose fathers were in the lowest occupational classes had 1.14kg (95%CI: -1.74,-0.54) weaker grip strength than women whose fathers were in the highest occupational classes, and these associations were not fully explained by covariates (fully-adjusted regression coefficient: -0.81kg (-1.39,-0.22)). Among men, different patterns of association were observed (p-values for sex interactions <0.05). In unadjusted models, lower SEP in both childhood and adulthood was associated with stronger grip, and these associations strengthened after adjustment for height. For example, men whose fathers were in the lowest occupational classes had stronger grip strength 1.01kg