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Which food and fitness interventions targeting children and young people will help address health inequalities?

Evidence symposium briefing paper

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Which food and fitness interventions targeting children and young people will help address health inequalities?

Obesity during childhood and youth has reached epidemic proportions (WHO, 2000). In addition to the long-term health risks, obesity during childhood and youth is associated with multiple adolescent health problems ranging from type-2 diabetes to depression (Lobstein and Jackson, 2007). Being overweight during youth is also associated with a range of adverse psychosocial outcomes including lower self-esteem (Griffiths et al., 2010). Obesity is now seen as a health and economic 'time bomb' (Department of Health, 2002) with the direct costs to the NHS already estimated to be over £5 billion per year (Scarborough et al., 2011).

While increasingly prevalent nationally, that is not to say obesity is evenly distributed: children growing up in a poor family are most likely to be overweight, and those areas with the highest levels of poverty have the highest proportion of overweight children and youth (White, 2007). For example, the 2011/12 Welsh Child Measurement survey found that by age five obesity prevalence was nearly twice as high in Merthyr Tydfil (16.2%) as in Monmouthshire (9.0%) (Humphreys et al., 2013). By 2025 it's predicted that fourteen per cent of the British population aged under twenty will be clinically obese and health inequalities will have further accelerated as a result (McPherson et al., 2007).

Addressing obesity early in the lifecourse is therefore an imperative for health improvement professionals and public policy-makers aiming to reduce health inequalities. Informed by the socio-ecological model of health (McLeroy et al., 1988), this briefing paper synthesises evidence from recent studies to identify some promising types of food and fitness interventions targeting children and young people. First, evidence-based, family-level methods of intervention are identified, and compared with current Welsh policy and practice. Then promising approaches to changing school and community settings are outlined and the policy implications are discussed. This briefing does not provide a systematic review of the evidence as such a project is ongoing (Bambra et al., 2012).

Family-focussed behaviour change methods

Systematic reviews of trials and other controlled studies have found that educational, family-level intervention methods can be effective for promoting healthier diets and physical activity early in the life-course (Waters et al., 2011; Bourke et al., 2014). In particular, family-based interventions that educate and train parents to provide nutritious foods, encourage sports activities, and try to minimise family 'screen time' have been found to be effective for changing behaviour and improving health outcomes among 6-12 year-olds (Waters et al., 2011). Bourke and colleagues (2014) also found that family-focused educational interventions are appropriate for increasing daily fruit and vegetable consumption among younger children. However, there is much less evidence about family-focused educational and skills training interventions targeting teenagers and their parents (Waters et al., 2011).

How does this evidence compare with the current policy and practice in Wales? Current Welsh family-focussed interventions, such as the MEND scheme, do provide education and skills training for children and their parents and aim to encourage them to be more active. However, MEND targets the most overweight children and therefore will not have primary prevention benefits nor will it reach a large number of the population. New methods targeting teenagers and their families also need to be developed, piloted and evaluated. Furthermore, alongside this focus on evidence-based, family-focussed methods, effective school- and community-based interventions will be an important, synergistic complement (McLeroy et al., 1988).

'Settings based' approaches

In addition to working directly with families, public health professionals and policy makers also need to employ multi-level approaches in schools and other community settings to address individual factors such as knowledge, attitudes and skills and also address the wider environmental determinants of diet and physical activity (Oude Luttikhuis et al., 2009; Greaves, et al., 2011; Waters et al., 2011). Schools provide a universal and well-resourced setting for improving health and the following school-based methods have all been identified as consistently having positive effects, especially for 6-12 year-olds: classroom-based education about diet, physical activity and body image; increasing physical activity time; improving school-food's nutritional quality; and, teacher-training to implement these strategies (Waters et al., 2011).

Welsh Government currently invests in a wide range of such school-based activities, which are supported by the Welsh Network of Healthy School Schemes (WNHSS). These activities include the 'cooking bus', a '5 x 60' activity programme, and a greater emphasis on "physical literacy" following Dame Tani Grey-Thompson's Schools and Physical Activity Task and Finish Group (2013) final report. The provision of universal free breakfasts in primary schools, rolled out via a 'policy trial' in Wales, has been effective at increasing healthy eating and reducing breakfast skipping among children from more disadvantaged backgrounds (Moore et al., 2014). Universal free primary-school meals would also likely further improve the diet of children from poorer families (Dimpleby and Vincent, 2013). Evidence-based examples of how to involve students in changing the school environment, such as the M-SPAN programme (Sallis et al., 2003), should also be piloted and evaluated in Wales via a policy trial.

The community context is more uncertain with comparatively little good evidence regarding community-based methods and approaches (Waters et al., 2011). We know that the community settings where we work, travel, shop, exercise, and eat all influence the risk of people being overweight and obese, including at a young age, but further studies are urgently needed to develop and evaluate multi-level, community-based interventions to address key area-level factors (Cummins, 2009). For example, how can we change community parks and public spaces to promote young people's physical activity? More broadly, to ensure healthy community environments, policy areas such as urban planning and transport should be 'health proofed' – an option currently being considered by Welsh Government (Fletcher, 2013). This is likely to be the most 'upstream' lever available to ministers in Wales at present as addressing poverty directly is largely beyond scope of the devolved government.

Recommendations

Successful public health interventions tackling childhood obesity will need to take a holistic approach and make changes in multiple aspects of children and young people's lifestyles and their surroundings. Systematic reviews have consistently found that multi-level approaches, addressing both individual and environmental determinants of behaviour, are the most effective (Oude Luttikhuis et al., 2009; Greaves, et al., 2011; Bourke et al., 2014) and cost-effective (Chokshi and Farley, 2012). There is some evidence to suggest that the current investment in food and fitness interventions targeting children and young people, and the general policy direction, in Wales is appropriate. However, additional investment and further evaluation is urgently required to address the health and economic 'time bomb' that is childhood and youth obesity (Department of Health, 2002).

Firstly, some of the highly-targeted, family-focussed behaviour change methods need to be either complemented or replaced by more universal family interventions that will have sufficient reach to ensure population-level health improvement via primary prevention at a young age. Second, a wider range of educational approaches specifically for teenagers

need to be developed, including using social media. Third, we know that free breakfasts make a positive difference to the diets of children from poorer families and the universal provision of both free school breakfasts and lunches would allow Welsh Government to further mitigate some of the worst effects of poverty and complement other positive activities already going on within school settings. Fourth, children and young people should be supported to change their own school and community environments to ensure they feel safe and confident enough to be active and eat well (Sallis et al., 2003). Finally, the principle of “Health in All Policies” and use of policy trials should be further pursued in Wales (Fletcher et al., 2013).

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