



EU Platform on Diet, Physical Activity and Health

LIFE SKILLS WORKSHOP – 17/02/2006

OUTCOMES

Summary

Prevention of overweight in children requires an integrative approach, with specific attention to the involvement of all players who may have an influence on children's lifestyles (parents, day care centres/kindergartens/schools, media, role models...).

There is some evidence as to interventions that have succeeded in achieving behaviour change (e. g. fruit distribution schemes in schools). However, conclusive evidence about the long-term effects on bodyweight of most intervention schemes is still lacking. Therefore, further monitored pilot actions may be needed in order to evaluate which are the most promising approaches; these should include interventions integrating social marketing and behavioural branding approaches. Possible success factors include addressing not only the physical, but also the psychological characteristics of children, using peer models, and emphasizing the 'fun aspect' of healthy behaviours. In general, locally-rooted and broad based multi-player approaches seem to be the most effective.

It is not sufficient just to inform and educate children. Rather, it is essential to shape environments which make the healthy choices easy for children – and for their parents (e.g. safe walking or cycling paths to school, attractive playgrounds within easy reach, "healthy" food easily available in school...). Comprehensive and multi-stakeholder efforts are needed to shape these environments; Platform members can contribute both to the education/information side, and to addressing obesogenic environments.

Conclusions

General

- Children are vulnerable – their health needs particular attention.
- Lifestyle choices pre-determining health at adult age are made early in life. Children and young people are therefore a priority target group as far as the promotion of healthy dietary habits and physical activity is concerned.
- A life-course perspective is essential for obesity prevention; infancy (e. g. promotion of breastfeeding) and childhood are critical periods for interventions.
- There are different approaches aimed at providing children with the skills they need to lead healthy lives. When conceiving actions, Platform members should give priority to approaches that have a proven sustainable impact on behaviours. Further monitored pilot actions are needed in order to evaluate which approaches will have a sustained impact on body weight.
- Approaches to tackle obesity should pay attention to underlying socio-economic inequalities in health. Special attention needs to be paid to children in deprived communities / children from less privileged socio-economic backgrounds.

Best practice

- Generally speaking, locally-rooted and broad based multi-player approaches are those which appear to have the highest impact on behaviour change, and to be most cost-effective. It appears essential to integrate concepts that are used also for social marketing and behavioural branding, such as compliance with the physical and mental needs of children, using peer models and emphasizing the ‘fun aspect’ of healthy living (*example of the “Food Dudes” project, where free provision of fruit and vegetables at schools is accompanied by a video using peer models*).
- When up-scaling or replicating successful interventions, these may need to be adapted to different settings, different target populations, and different cultural or socio-economic backgrounds. Countries where life skills interventions are not yet carried out at a larger scale should be considered a priority for replications of successful programmes.
- Informing children about healthy lifestyles, and providing them with the skills they need in order to lead a healthy life are important elements of any strategy aimed at obesity prevention. However, beyond information and education, it is essential to shape environments which make the healthy choices easy for children, and for their parents (e.g. safe walking or cycling paths to school, attractive playgrounds within easy reach, “healthy” food easily available in school and in neighbourhood...). Comprehensive and multi-stakeholder efforts are needed to shape these environments. Platform members can contribute both to the education/information side, and to addressing obesogenic environments.

Role of schools, parents and the media

- Parents and schools have particular responsibility for providing children with the skills they need to lead healthy lives. Schools should set the example for healthy nutrition through the school meals they offer, and through the foods that are on sale in the schools (vending machines...); moreover, education towards healthy life styles and frequent and regular physical activity should be part of the curricula (*example of the Growing Through Adolescence approach, where intermediaries like teachers or school nurses or others are trained in a standardised and structured way to promote healthy lifestyles*). Curriculum researchers should work together with psychologists in order to conceive school-based programmes.
- The media have a role in supporting parents in their efforts to provide their children with skills for healthy living (*example of health supplements published in papers like Bild am Sonntag*); messages may have a stronger impact when transmitted by celebrities and recognised medical authorities. Above all, the media should not counteract parents' and schools' efforts by promoting the wrong role models; rather, they should contribute to branding healthy behaviours as fashionable and positive.
- Meals prepared and eaten together at school and in the family can also contribute to develop children's taste for healthy foods (*example of EuroToques shows how professional organisations can contribute*).

Evidence and monitoring

- There is some evidence as to interventions that have succeeded in achieving behaviour change (e. g. fruit distribution schemes in schools). However, conclusive evidence about the long-term effects on bodyweight of most intervention schemes is still lacking.
- The monitoring of life skills activities carried out by Platform members should therefore not only include impact on behaviours, but also long-term effects on body weight.
- A framework for monitoring the effectiveness of life skills interventions is needed; this will also be useful in the broader context of monitoring the commitments of Platform members.

A document outlining measures that could be used to assess the effectiveness of interventions to enhance children's eating habits and levels of physical activity is attached to this report (discussion paper prepared at the request of the Commission by Prof. Fergus Lowe, University of Wales, Bangor); this should be further discussed in a plenary meeting of the Platform.

Campaign by Platform members

- Within the framework of the workshop, the Confederation of the Food and Drink Industries (CIAA) presented a preliminary proposal for a joint Platform commitment aimed at the development of a public information campaign on healthy lifestyles. The main aim is to raise awareness of individuals, and children in particular, of the steps that can be taken to improve diets and

increase physical activity. The proposal contained a list of possible contributions by several stakeholders and a timeframe.

- The campaign proposal met with some objections (effectiveness of information campaigns in general, acceptability of industry-sponsored information). After discussion in a Platform plenary meeting, the way forward could be to go ahead with the first phase of the project, at the end of which more clarity about the orientation, target groups, geographical coverage, success potential and acceptability of the campaign should be achieved.

INTERVENTIONS TO IMPROVE CHILDREN'S EATING HABITS AND PHYSICAL ACTIVITY: MEASURES OF BEHAVIOUR CHANGE AND HEALTH OUTCOMES

(Discussion paper prepared by Prof. Fergus Lowe, University of Wales, Bangor)

There are two key measurement domains: first, measures of the behaviour change that the intervention is designed to produce — in this case, changes in food consumption and/or activity levels — and, second, measures of the health benefits that are consequent upon the obtained behaviour change.

BEHAVIOUR CHANGE

Measures of Dietary Change

Weighed measures. Amount consumed of a particular food is calculated by weighing the portion of food before presentation and afterwards subtracting the weight of food not eaten. For example, in evaluations of the Food Dudes programme, portions of fruit and vegetables were weighed before and after the children's consumption and the amount consumed in grams was calculated for each child. Although labour-intensive, this is the “gold standard” because it is an objective, highly reliable measure of actual consumption that does not rely on verbal recall or other subjective assessments.

Direct observation. Trained observers estimate the amounts of food consumed by the children. For example, in evaluations of the Food Dudes programme, observers made visual estimations of children's consumption of standardized portions of fruit and vegetables in accordance with a 5-point scale (i.e., 0%, 25%, 50%, 75% or 100% of the food was seen to be consumed). With large groups this procedure is again fairly labour intensive, but with appropriate training, it also results in highly reliable measures that can be validated against a weighed sub-sample.

Verbal report measures — questionnaires and dietary recall. These measures are derived from reports from children and/or their parents/teachers given in the following forms: (1) 24-Hour Recall (the child and/or adult recalls and lists everything the child ate or drank during the previous day); (2) Food Records (written accounts of actual intake of food and drinks consumed during a specified time period, usually 3, 5, or 7 days); and (3) Food Frequency Questionnaires (the child/adult reports the child's usual intake of a list of foods over a specified period of time). Adult assistance is needed for younger children. Although relatively easy to administer and inexpensive, self-report measures may be subject to recall inaccuracies and, importantly, social desirability bias. It is also more difficult to quantify amounts consumed. Adults also may not be aware of foods consumed by children outside of the home.

Physical Activity Measures

Pedometer. A motion counter that provides a total count of accumulated steps. Pedometers have been validated for use with children and provide an objective

measure of daily physical activity levels. Pedometers are lightweight and unobtrusive, and may be worn all day without interfering with children's usual activities. The units are inexpensive and may be used repeatedly. However the pedometer is not able to capture activity levels during water-based activities (e.g., swimming) or cycling.

Accelerometer. A sophisticated activity monitor that objectively measures the intensity, duration, and frequency of daily physical activity. Triaxial accelerometers are able to assess 3-dimensional movement. Accelerometers thus provide a more detailed picture of children's physical activity than pedometers. However, accelerometers are higher in cost and the large amount of data obtained is time-consuming to analyze.

Verbal report measures — e.g., interviews, physical activity diaries, and surveys. Parent/teacher reports are commonly used with children under 9 years of age. These measures typically ask about the type, frequency, duration, and intensity of the child's physical activity over a specified period of time. As for the dietary measures, self-reported physical activity measures may be compromised by recall errors and social desirability biases. Children are less able than adults to accurately estimate time and effort.

Combination of Objective and Subjective Measures

The main advantage of questionnaires and dietary recall procedures is that they are cheaper than objective measures. Provided that specified forms of such procedures are first properly validated against more objective measures (i.e., weighing or direct observation), there may be a place for using them in order to keep down measurement costs.

It should be noted that it is possible to evaluate the effects of even a very widespread school-based programme by using the most objective measures in just a small number of randomly selected schools (the bigger the behaviour-change produced by the intervention the more straightforward this will be). In combination with these objective measures, dietary recall procedures can also be used to provide a more rounded picture of dietary change.

Food Sales

If all schools in one location benefit from an effective intervention then the effects should be seen in sales of food. For example, analysis of supermarket till receipts will show an increase in sales of fruit and vegetables. This is a very inexpensive but hard measure of behaviour change.

HEALTH OUTCOMES

As my area of expertise lies principally in the domain of behaviour change, I am less well placed to advise on what might be the most appropriate measures of health outcomes (medical colleagues may well suggest other measures than those I outline below). Which measures might be included will depend on a variety of factors, not least the period over which outcomes will be assessed. For example, one would expect an effective intervention to have a major impact on the incidence of *cardiovascular disease* and *cancer*, but we must assume that these benefits would not

become evident for a number of years. How long it would take to see impacts on other illnesses such as *asthma* and *diabetes* remains to be empirically determined. That said, what follows is a list of fairly straightforward short-term measures that could be employed:

Body Mass Index (BMI). Calculated as $\text{weight}/\text{height}^2$. May be used to classify children as overweight or obese using age and gender-specific cut-off points. BMI is an indicator of total fatness but gives no information about body fat distribution. Additionally, it does not distinguish fat mass from fat-free mass, e.g., an individual with a high level of muscle will have a higher BMI as a result of muscle weight rather than fat.

Waist circumference. Provides a measure of central fatness, which is associated with raised levels of cardiovascular risk factors in children and adults. Waist circumference has been advocated as a more sensitive index of obesity in children than BMI.

Percentage body fat (e.g., skinfold thickness measure).

Aerobic fitness.

Bone health (bone mineral content and density).

Cholesterol level.

Lung function (wheeze).

Blood pressure.

Dental health.