



USING THE FOOD RECORDS TO FOLLOW ADOLESCENTS' EATING BEHAVIOUR DURING THE IMPLEMENTATION OF THE EDUCATIONAL PROGRAMME 'PLANNING HEALTH IN SCHOOL'

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Keywords: Food record, eating habits, educational programme, adolescents.

Introduction/background

Children and adolescents learn about healthy eating habits at school and they know what these healthy concepts are but reality shows they do not put into action the practice based on these concepts (Ransley et al., 2010; Valente, Padez, Mourao, Rosado, & Moreira, 2010). Largely because of this, there is an exponential increase of prevalence of overweight/obesity in children and young people (Lobstein, Baur, & Uauy, 2004; Valente et al., 2010). In order to contribute to changing this current pattern, an educational programme called 'Planning Health in School' (PHS) was designed, implemented and evaluated for the expected positive changes on eating behaviours among adolescents. This PHS programme integrated healthy eating and active living issues with adolescents' participation and their motivation for healthier behaviours. The PHS programme was implemented during a complete academic year with grade 6 adolescents of 10 to 14 years old. It started with an initial diagnosis and followed with the implementation of a set of eight learning activities and the monitoring of the process with several assessment tools. To evaluate the dietary evolution among adolescents, a 3-day food records tool was used to assess their daily food intake. In this study we describe the methodological approach used with the food records (FRs) and the achieved adherence among a group of adolescents during the implementation of the PHS programme.

Theoretical/analytical framework

There is no single best method for assessing persons' food consumption as all have limitations (Thompson & Subar, 2008) because persons usually do not pay attention to the foods and beverages they eat and drink (Thompson, Subar, Loria, Reedy & Baranowski, 2010). However, there are three commonly used tools in such evaluations: food frequency questionnaire (FFQ) (Thompson & Byers, 1994), 24-hour dietary recall (24HR) (Beaton et al., 1979) and food records (FRs)(Fisberg et al., 2005).

The FFQ is suitable to assess the long-term eating behaviour over time, up to one year, providing general information about food intake (Thompson et al., 2010). The 24HR is often used to estimate usual food intake for 24 hours, but a single day evaluation gives reduced dietary habits (Dodd et al., 2006). The FRs are similar to 24HR, but give more registration days (3 to 7 days) allowing to record the actual intake of all foods and beverages with detailed information (Fisberg et al., 2005). Thus, FRs is the preferred method, especially when the main focus is raising awareness in eating behaviours to generate changes, as in intervention studies (Thompson & Byers, 1994).

The obtained information will answer the following research questions:

1. Are adolescents consuming adequate amounts of fruit and vegetables (F&V)?
2. How does the consumption of F&V vary with gender, age, day of the week, at school or at home?
3. What are the beverages that contribute mostly to adolescents' daily diet?



Methodology/methods

This longitudinal study involved 240 adolescents (130 boys, 110 girls) of grade 6, aged 10 to 14 years old. The application of a 3-day food records tool allowed students to report all the food and beverages they consumed for 3 days in high detail: time and place, cooking method, quantity, the brand, and a space to comment anything else. Before starting the FRs application set, a briefing session was organized to give instructions on how to fill correctly the food record form and its deliveries. Seven FRs were applied subsequently to the training modules, carried out along the academic year. The effectiveness of each specific module was determined by the FRs in short and long term.

Key Results

The sample was constituted by 231 adolescents, aged 10 to 14: 121 (52.4%) boys and 110 (47.6%) girls. The mean age was 11.0 ± 0.70 . The 8 modules they selected were the following: 10 steps towards a healthier lifestyle; Water & milk help to grow up; Exercising every day to be healthy; 3 fruits a day, how much good it does!; F&V are essential to health; Start on moving!; Best snacks; Final game: who has learned about everything? A total of 1091 FRs were collected, making 3273 days of food reports. The summary of the collected data is the following:

- 70 students (30.3%) returned all their 7 FRs completely filled in, with greater involvement of girls (42 = 60.0%) as compared to boys (28 = 40.0%). Only 12 students (5.2%) did not deliver any food record.
- Most of the adolescents (71.4%) delivered 4 or more FRs and 25.6% delivered less than 4 FRs. Again girls had higher rates of delivering FRs (54.5%) than boys (45.5%).
- After each training module the return of FRs was always above 70% but this was not observed with the active living and sports module that occurred near the Easter Season and school holidays (return of 44%).
- Adolescents also gave their opinion about what they liked less about their tasks during the intervention: 116 (52.3%) reported the FRs as 'too much work to do', 'too many days to record', 'whenever I eat I have to record' or 'I do not like to write'; on the other hand they agreed that FRs helped them to pay attention to what they were eating."

Conclusions

Although the FRs were considered by the adolescents as a tedious task, the FRs recovery reached high rates along the relatively long period of intervention. Girls, as a group, proved to be more engaged than boys in the recording process, delivering more information about food and beverage consumption. The FRs tool allowed access to adolescents' food choices and eating habits patterns, identifying trends, drawing conclusions and providing information for future interventions. Therefore, the use of the FRs (as a tool to monitor behaviour eating habits and their changes) proved to be an efficient method for collecting information, enabling to assess the effectiveness of the different educational modules as well as the PHS intervention as a whole. This work shows the usefulness of the food dietary report but a subsequent content analysis study will give further information about it.

Implications

Like this work, other studies have discussed the most commonly used methods to evaluate dietary intake and the need to record it in a frequent and constant manner which can be tedious work (Livingstone et al., 2004) and because of this, the participants can make incomplete FRs or give up and even drop out the study, which may cause a low rate of adherence and insufficient collected data with consequent insufficient outcomes. A careful implementation of a FRs for accessing adolescents' dietary intake: (i) to explore the food and beverage consumption patterns more closely to real life, (ii) to identify dietary intake timings (place, time, frequency, variety, quality) and the variation over time, (iii) to assess the effectiveness of the PHS intervention. The FRs, as a tool to monitor changes in dietary habits, proved to be as an efficient method for gathering information that can allow inference on the outcomes of a programme of intervention in the area of healthy eating: the successful outcomes and those less positive that can serve as indicators for process improvement in the future.

Research based ABSTRACTS

THE 4TH EUROPEAN CONFERENCE ON HEALTH PROMOTING SCHOOLS
– Equity, Education and Health – 7th-9th October 2013



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THE 4TH EUROPEAN CONFERENCE ON HEALTH PROMOTING SCHOOLS
Equity, Education and Health

7-9 October 2013, Odense, Denmark

