

Letters to the Editor

A peer-modeling and rewards-based intervention is effective in increasing fruit and vegetable consumption in children

To the Editor:

We read with interest the systematic review of interventions designed to increase children's consumption of fruit and vegetables conducted by Knai et al. (2006). Although this review is both timely and valuable, it unfortunately contains a serious factual error.

On page 87, Knai et al. conclude that: "Of the eleven studies on primary school children, nine had a significant positive effect on fruit and vegetable consumption, and two did not". Though they include in this latter category the Food Dudes peer-modeling and rewards-based intervention, the effectiveness of this intervention has, in fact, been demonstrated in every study conducted to date (Horne et al., 1995; 1998, 2004; Lowe et al., 1998, 2004).

In their review, Knai et al. refer to a whole-school evaluation of the intervention that was conducted in an experimental school and matched control school. While they appear to have used a working paper of ours, the results have also since been published in the *European Journal of Clinical Nutrition* (Horne et al., 2004). Both publications clearly report that lunchtime fruit and vegetable consumption increased significantly during the intervention, with effects maintained at 4-month follow-up. For example, at baseline, 5- to 7-year-olds consumed on average just 20% of a piece of fruit (weighing approximately 80 g). This more than tripled to 69% during the intervention and remained at 56% at follow-up ($P < 0.002$), with similar increases seen in 7- to 11-year-olds. Fruit and vegetables consumed at home also showed significant increases during the intervention. Thus there can be no justification for concluding that the Food Dudes program did not have a significant positive effect on fruit and vegetable consumption.

On page 89 (in Table 2), regarding our study, the authors themselves report "Lunch fruit and vegetable[s were] significantly higher at follow-up", which flatly contradicts their earlier statement. Only in the case of breaktime fruit consumption, assessed for 5- to 7-year-olds only, did the intervention show no statistically significant difference between baseline and follow-up, though even here there was a significant increase during the intervention period, despite the already very high levels of consumption (i.e. 75%) at baseline. On page 89, the authors also report that our study found a "Non-significant overall change in

all groups", which does not make sense unless it refers to the follow-up breaktime results mentioned above.

We also wish to highlight our use of observational and weighed measures to assess fruit and vegetable consumption. Most of the studies included in Knai et al.'s review employed self-report measures, the limitations of which are acknowledged by the authors. Our use of observational and weighed measures avoids the biases and inaccuracies associated with self-report (e.g., social desirability bias, cognitive limitations of younger children) and would be expected to yield more accurate estimates of consumption.

Given the implications for children's health, it is important to maintain high standards of accuracy in reviews in this domain. We hope we have set the record straight.

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