Tooty Fruity Vegie: getting kids to eat their fruit and vegetables - pipedream or possibility?

Jillian K. Adams
Northern Rivers Area Health Service

Sallie Newell
Southern Cross University

Margaret Miller

Anna D. Huddy
Northern Rivers Area Health Service

Libby Holden
Northern Rivers Area Health Service

See next page for additional authors

Publication details
Authors
Jillian K. Adams, Sallie Newell, Margaret Miller, Anna D. Huddy, Libby Holden, Uta C. Dietrich, and Janet Pettit

This presentation is available at ePublications@SCU: http://epubs.scu.edu.au/educ_pubs/170
Thank you, the title of the next paper is ‘getting kids to eat their fruit and vegetables – pipedream or possibility’ and I’m going to discuss the evaluation of the program.
To increase fruit and vegetable consumption by primary school kids in ten schools in the Northern Rivers region by end of 2000.

Just to recap on the goal
And the strategies. I need to emphasize that all schools took up different combinations of strategies and this has made it difficult to detect which strategies were the most successful in bringing about behaviour change.
Tooty Fruity Veggie Project

- 10 Volunteer Primary Schools in Intervention Group (1589 Students)
- 6 Primary Schools for Control (1272 Students)
- Demographically and Geographically Matched

Numbers enrolled during 2 yr period
Now I want to talk about the process and impact evaluation
Funded by cancer council and assisted by an external consultant
We conducted surveys on the whole school community 3 months after the 2 year intervention. The same surveys were given to the control schools.
We got fairly good response rates to parent and children’s surveys (we had to get parent consent for this).

Reason why volunteers numbers so low was because they were the last group surveyed and the surveys went out in the last few weeks of school. Also, the survey was similar to the parent's survey and all of the volunteers would have done this first. They may have felt that they had already given us the information we needed.
This slides shows that even with 1.1 Fte we did mange to get a wide variety of activates happening and remembered in 10 schools kids recall doing sig.

More F & V activities at school (5.4 vs. 1.8)

I parents recall kids doing sig. More F & V activities at school (5.1 vs. 2.0)

I parents recall receiving more F & V promotion materials (3.9 vs. 0.5)

I teachers recall using more F & V promotion activities (2.9 vs. 0.2)
The TFV project was overwhelmingly positively received by all target groups. 25% of the parents at intervention schools worked in some ways of TFV.

- Kids, parents, teachers and volunteers were very positive about the project.
- 20 - 25% of parents volunteered to help with project activities (and the majority enjoyed or really loved the work).
- Health professionals enjoyed being part of a well planned, structured and resourced project.
Children loved cooking, gardening and tasting new dishes of f and v. One school has reported that truancy rates were greatly reduced on days when the cooking programs were held at school.
Impact on Kids

- Kids had improved knowledge, attitudes and preparation skills around F & V
- Kids had improved access to F & V at school and at home
- Improvements greater for girls and younger children

Children’s knowledge, attitudes and f and v preparation skills all improved. They had better access to f and v at home and at school. Improvements were greeted for girls and younger children.
Impact on Kids Cont.

- I parents noticed increases in kids’ F & V interest, knowledge and requests
- I parents noticed increases in kids’ vegetable eating (but not fruit)

And parents noticed children’s changes. They noticed an increase in vegetable consumption but not fruit. This may have been because we emphasised vegetables much more heavily in the second year when we realised the baseline consumption for vegetables was so low.
Impact on Parents

- I parents had better knowledge of kids daily F & V requirements.
- I parents reported they now found it easier to promote fruit and veg at home.
- I parents had more interest & involvement in F & V activities at school.

As a result of the project, parents felt skilled and motivated to provide more fruit and vegies.
Impact on Parents Cont.

- Most volunteer parents reported having spread F & V message elsewhere.
- Teachers rated parental interest in F & V sig. Higher that C teachers.
- Improved home access to F & V highest where parents acted as volunteers.

In fact, they were so motivated they spread the message far and wide. Eg the Larnook village Hall now always has BBQed vegetables with their monthly sausage sizzles. Some parents have instituted some of the TFV strategies at preschools and day care centres.

Not surprisingly, those parents who volunteered make the biggest improvements in providing fruit and veg to their children.
Impact on Teachers

- More I teachers had positive attitudes and support for doing F & V promotions
- More I teachers felt they had skills for doing F & V promotions

It seemed that teachers felt skilled and supported for doing their bit in the classrooms. Though these differences observed were not sig different due to the small numbers of teachers surveyed
Outcome Evaluation

- Prospective 24-hour food record surveys at the beginning and end of the project explored the project's impact on kids' fruit and vegetable consumption levels.

We got all parents to write down everything their child ate and drank for 24 hours. We didn’t mention that we were specifically looking for f and v. We did this in the control schools before and 3 months after the project.
Overall: we got surveys back from 2/3 of kids pre and post
-all groups fairly evenly represented (I vs control, boys vs girls)
Looking thru the literature, we realised there was no gold standard for accurately measuring children’s fruit and veg intake without influencing their intake. So we used 24 hr food records because this method seems most reliable for this age group. Then we needed to develop a coding tool that was valid and reliable for measuring the number of serves of fruit and vegetables eaten by children before and after the intervention. This was a huge task but we feel after 3 years working on it that we now have something reliable. We tested the accuracy of parents records by comparing what was written for lunches with the observed lunchbox contents and found that there was very high validity here.
Show where I and C groups are
Show what different coloured bars mean
Shows consistent increase for I kids and traditional drop off for C kids

However absolute differences are small and there are baseline differences for boys so all results will be explored more fully in multivariate analyses
But this won’t change the direction of trends
Same patterned
Increase for I, although nor much for yrs 3 and 4
Decrease for control
I increase as before
C more mixed with boys increasing slightly while girls decreased
I increased in all age groups
C least change in older groups
Results: Changes in Vegetable Intake (1)

I kids increasing
C staying same or decrease
same
The increases are not so pronounced here because there are so few children eating adequate serves of vegetables.
Results: Changes in Vegetable Intake (4)

<table>
<thead>
<tr>
<th>% eating adequate vegetables</th>
<th>I - Yr K-2</th>
<th>I - Yr 3-4</th>
<th>I - Yr 5-6</th>
<th>C - Yr K-2</th>
<th>C - Yr 3-4</th>
<th>C - Yr 5-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>baseline (March/April 1999)</td>
<td>30</td>
<td>30</td>
<td>35</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>post (March/April 2001)</td>
<td>30</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>post (fully exposed)</td>
<td>30</td>
<td>25</td>
<td>30</td>
<td>30</td>
<td>25</td>
<td>25</td>
</tr>
</tbody>
</table>

NB: 2+ serves represented adequate fruit intake for Years K-2; 3+ serves for Years 3-6; figures shown exclude hot chips and highly processed vegetables.
Summary

• Comprehensive evaluation methods have shown a broad range of positive impacts on the primary, secondary and tertiary target groups.

• 10/10 schools continued with strategies in the year post intervention

• Commonwealth funding for 19 new schools

• ? Making project available for other Area Health services.
Tooty Fruity Vegie

Jillian Adams

Public Health Nutritionist
Health Promotion Unit
Northern Rivers Area Health Service
PO Box 498 Lismore NSW 2480

Phone: 0266 2075312
Email: Jillian@nrhs.health.nsw.gov.au