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Tooty Fruity Vegie project: building school communities

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‘ Tooty Fruity Veggie ‘

Building School Communities

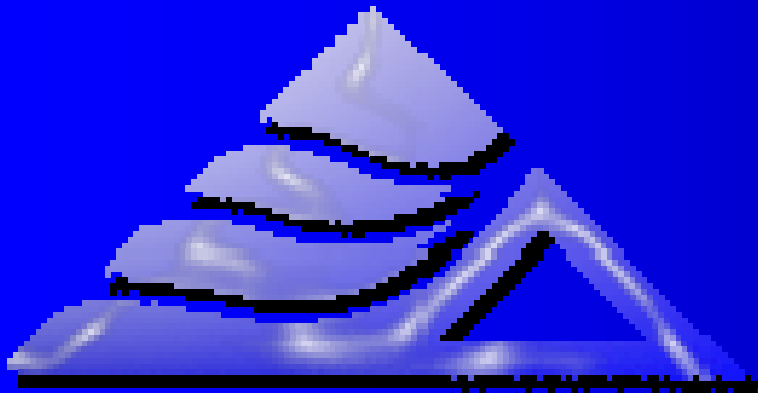
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Tooty Fruity Vegie (TFV) Project Goal

- To increase fruit and vegetable consumption by primary school children in the Northern Rivers region.



Project Goal Background

- health benefit of increased fruit and vegetable consumption on CVD and some cancers
- the efficacy of delivering a positive health message: "Eat MORE Fruit and Vegetables"
- the fact that toddlers eat more fruit and vegetables than primary school aged children, and levels of consumption continue to decline through the school years and adulthood
- the possibility of reaching large numbers of children in the school setting with small staff levels (1.1 FTE)
- using an existing framework would promote sustainability



TFV Project Overview

- TFV was a two year, multi-strategy health promotion program undertaken by the Northern Rivers Area Health Service's Health Promotion Unit during 1999 and 2000.
- 10 volunteer primary schools were recruited as the intervention schools and another 6 local primary schools were recruited as matched controls
- The project promotes a whole-of-school approach to implementing a range of school and community based strategies promoting fruits and vegetables.



TFV Project Strategy Planning

- TFV strategies were based on Literature Review of successful similar projects, with emphasis on a whole environment, multistrategic approach with community participation.
- Project Management Teams were formed in each school from representation from some or all of the school community: Principal, teachers, parents/ volunteers, other Health Professionals, Aboriginal Education Assistant (where appropriate), students and TFV Project Officer
- The Project Management Team planned, coordinated, and implemented strategies chosen from a "portfolio" of ideas.



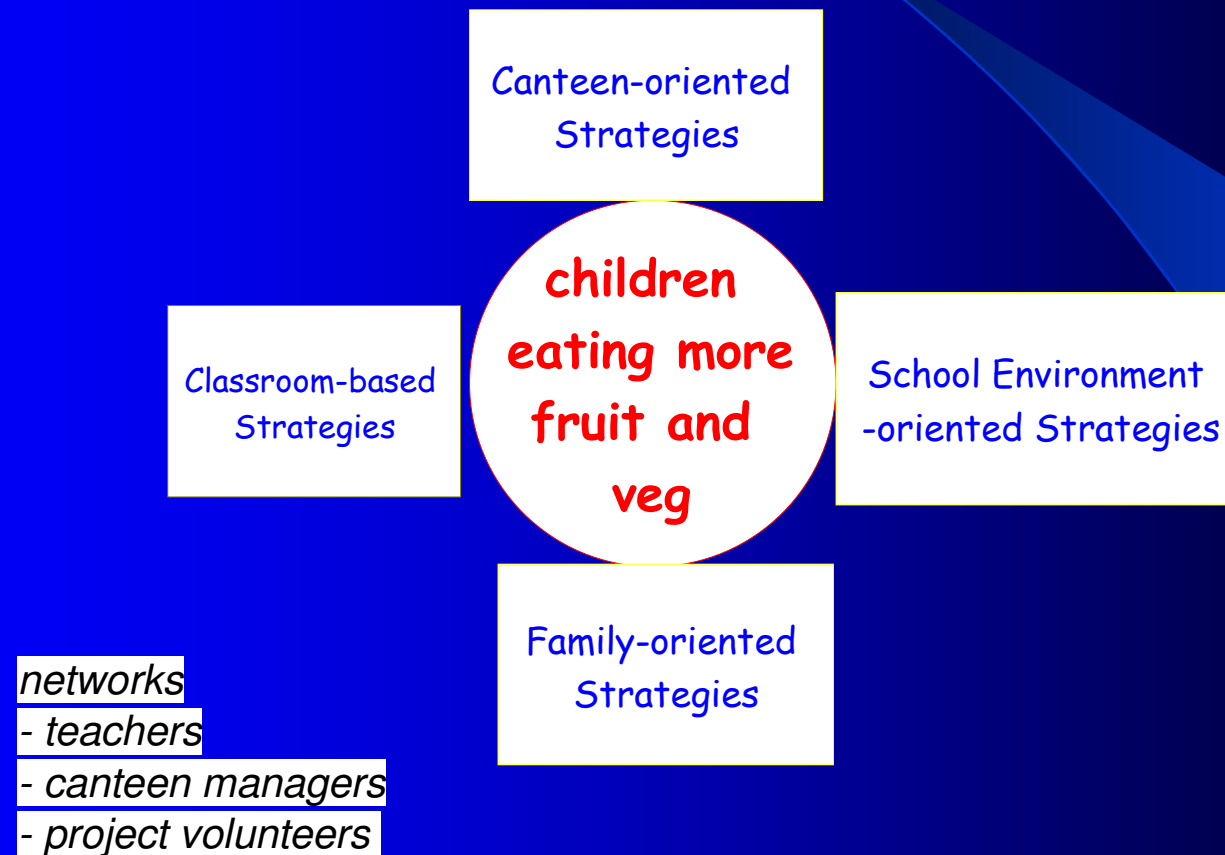
TFV Project Aims

- To effect change in a number of intermediate “process” and “impact” indicators:
- Improving children's fruit and vegetable knowledge, attitudes, access and preparation skills.
- Improving parents' fruit and vegetable knowledge and preparation skills.
- Improving parents' involvement in fruit and vegetable activities in the schools.
- Improving teachers' attitudes towards teaching about fruits and vegetables in schools.
- Improving teachers' skills and confidence in relation to teaching about fruits and vegetables.



Whole-of-school, Multistrategic Approach

School Environment



Classroom based Strategies

- Curriculum materials and training
- Web sites for teachers and children
- F & V competition for Year 3 - 6 children
- F & V competition for Kindy - Year 2
- Fruit breaks in class
- Cooking classes for children (KIK)



Family Oriented Strategies

- F & V promoting activities/ events for families at school
- Personalised school calendars with F & V recipes and info
- F & V promoting fridge magnets
- F & V competition for parents
- F & V promoting newsletter articles



School environment Strategies

- Establishing F & V gardens and plant fruit trees
- Working with local shops/events to promote F & V
- Using F & V as fundraisers
- Giving feedback about F & V in lunchboxes
- Visits to F & V growers/markets
- Providing F & V platters/tastings
- Having a TFV Project Management Team



Canteen Oriented Strategies

- Gaining membership of NSW School Canteen Association
- Canteen promotion of F & V through special events and general presentation
- Networking with other profitable, health-oriented canteens
- Reviewing F & V content/price on menus



Utilising Volunteers

- In line with the aim of creating a self-sustaining program, all intervention schools were encouraged and helped to recruit and train volunteers (mainly parents), and other Health Professionals, to help with planning and implementing many of the strategies described above.



TFV Project Evaluation Plan

- *Process evaluation*
 - to explore rates and quality of implementation of the individual TFV strategies and
 - to explore the children's, parents' and teachers' reactions to both the individual TFV strategies and the overall project.
- *Impact evaluation*
 - to explore the TFV project's impact on relevant interim outcomes, such as children's, parents' and teachers' knowledge, attitudes and behaviours regarding fruits and vegetables.
- *Outcome evaluation*
 - to explore the TFV project's impact on the children's fruit and vegetable consumption levels.



Data Collection Instruments

- Participation index: Structured interview of individual Project Management Teams to assess implementation levels
- Children's surveys: written consent obtained, self administered under direction of trained data collectors.
- Parent's, Teacher's and Volunteer's surveys: self administered
- Principal's and Other Health Professional's Surveys: structured phone interview



Rates and Quality of Implementation of Individual TFV Project Strategies

- The Participation Index rated the average implementation levels for each key TFV strategy, giving:
 - the proportion of target groups reached (reach),
 - the frequency of exposure (frequency) and
 - the quality of implementation (quality).



Level of implementation of key TFV strategies across the 10 intervention schools

- Most TFV strategies were implemented with high or medium ratings on reach, frequency and quality
- Articles in newsletters and lunchbox feedback, achieved high ratings on all three indicators.
- KIK cooking classes and the Year 3 - 6 competition both scored high on reach and quality but not frequency.
- Liaising with local shops and events and using fruit and vegetable fundraisers were the only two strategies achieving consistently low ratings.



Volunteer's, Teacher's, other HP's, Parent's and Principal's reaction implementing TFV



Volunteers' Participation in and Enjoyment of Individual TFV Project Strategies

- Overall, between a quarter and a fifth of intervention school parents reported having been involved in planning or doing TFV activities at their children's schools.
- At least two thirds of them enjoyed or really loved doing them.



Volunteers' Participation in and Enjoyment of Individual TFV Project Strategies (cont'd)

- Well over half the total volunteer hours contributed went into the KIK cooking classes, with virtually all volunteers involved. It was the most enjoyed activity and one of those people would be willing to help with again.
- The second most popular activity was the fruit and vegetable tastings at special school events, which most volunteers reported enjoying and being willing to do again.
- Although involving the least number of volunteers, the school trips to growers and markets were also highly enjoyable and all involved would do them again.

Why did Volunteers Participate

- Main motivator was enjoyment of the types of activities involved and of working with children generally
- Willingness to volunteer varied between schools and seemed easier for food preparation activities
- Most principals felt the volunteers responded more positively to involvement in the TFV activities than other activities, attributed to:
- training provided for the KIK cooking classes, and giving volunteers a TFV project apron was a good incentive.



Teachers reaction to carrying out/ participating in TFV implementation (cont'd)

- school teachers' comments about the TFV project were similarly positive, some also commented on the need for more parental interest and participation, better promotion of TFV project materials directly to the teachers (rather than to principals) and of the pressure to fit many things into teaching programs.



Teachers reaction to carrying out/ participating in TFV implementation

- Intervention school teachers reported having used a wider range of fruit and vegetable promoting resources
- Providing classroom resources to teachers significantly increased the number of such resources used.
- Most used and highly-rated resources were the Kids in the Kitchen cookbook and manual and the TFV "More Teacher Resources for Classroom Activities" folder.



Other health professionals involvement in TFV activities

- In order to maintain other health professional participation in TFV activities, they need to be relevant to the workers' core duties.



Parent involvement in TFV activities

- Parental participation in TFV activities could be increased by:
 - improved scheduling and training,
 - offering transport and childcare,
 - increased use of incentives or rewards and
 - encouraging current volunteers to share their positive experiences.



Children's and parents' reactions to individual TFV strategies and the overall project



Children's reactions to TFV strategies

- Intervention school children reported higher levels of involvement in and enjoyment of fruit and vegetable activities at school than control school children.



Children's reactions to TFV strategies

- Most memorable for children :
 - the KIK cooking classes,
 - canteen promotions and
 - classroom lessons

- Most enjoyed:
 - school trips to growers/markets,
 - KIK cooking classes,
 - fruit and vegetable tastings and
 - helping in the fruit and vegetable gardens.



Parents' reactions to family based strategies

- Intervention school parents reported higher recall of receiving and (check) utilisation of a number of fruit and vegetable promotional materials from schools (check response to F&V activities)
- Most memorable :
- fruit and vegetable related newsletters, pamphlets and recipes. Most parents recalling receiving materials at least had a good look at them with many reporting going on to use the fruit and vegetable recipes



Teachers, volunteers, principals (Qual):
“Most successful strategies for improving children’s fruit and vegetable knowledge, attitudes and skills”

- KIK cooking classes,
- fruit and vegetable tastings,
- fruit and vegetable gardens and
- visits to growers and markets.
- Their fun and practical nature and parental involvement were viewed as key factors in their success.



Attitudes Towards the TFV Project Overall

- Qualitative comments from children, parents, teachers and volunteers in I schools
- The majority were overwhelmingly positive, reporting:
 - High levels of enjoyment, particularly with the fruit and vegetable cooking and tasting activities.
 - The project promoted positive attitudes to fruits and vegetables from a young age.
 - Positive outcomes for the parents who participated.
 - A strong desire to continue from all groups.



Impact evaluation

to explore the TFV project's impact on relevant interim outcomes, such as children's, parents' and teachers' knowledge, attitudes and behaviours regarding fruits and vegetables.



TFV Project impact on children's fruit and vegetable knowledge, attitudes and skills

- Parents at all schools reported more impact of participation in fruit and vegetable promotional activities on children's interest, knowledge, requests and eating of vegetables than fruit.
- This impact appeared to be greater in control than intervention schools although it was confounded by up to 10 per cent missing responses



TFV Project impact on children's fruit and vegetable knowledge, attitudes and skills

- Most principals thought that the TFV project was very or extremely successful in creating positive attitudes in children towards fruit and vegetables.



TFV Project impact on children's fruit and vegetable knowledge

- Level of knowledge of recommended intakes was higher for fruit (48-88% correct) than vegetables (21-82% correct) for all children and
- significantly more children in intervention schools gave the correct answer for minimum number of fruit serves needed daily



TFV Project impact on teacher's and parent's fruit and vegetable knowledge

- In control schools teacher knowledge of recommended intakes was significantly higher than parent knowledge (73% vs 63% fruit and 56% vs 28% vegetables) whereas in intervention schools there was no difference (78% vs 72% fruit and 56% vs 47% vegetables).



TFV Project impact on children's fruit and vegetable attitudes

- Children were asked to
- name their five favourite foods,
- indicate their level of agreement with 18 statements about fruit and vegetables, and
- indicate the level of effect of fruit and vegetable activities at school on ten attitudes and behaviours.



TFV Project impact on children's fruit and vegetable attitudes (cont'd)

- More children from control than intervention schools named vegetables amongst their favourite foods (48% vs 57%, $p=0.008$)
- more children from intervention schools named vegetable meals (67% vs 55%, $p=0.003$) and named more than one vegetable (17% vs 8%) or vegetable meal (27% vs 10%)



TFV Project impact on children's fruit and vegetable attitudes (cont'd)

- About 70 per cent of children from both control and intervention schools named fruit amongst their favourite foods.
- Twice as many children from intervention schools compared to control schools named more than one fruit amongst their top five favourites (41% vs 19%, $p=0.001$)



TFV Project impact on children's fruit and vegetable attitudes (cont'd)

- More children at intervention schools had positive attitudes towards vegetables (no significant differences for fruit) including:



TFV Project impact on children's fruit and vegetable attitudes (cont'd)

- I like trying new veg (76% vs 55%, $p=0.001$)
- Most veg tastes good (74% vs 58%, $p=0.001$)
- I like raw veg (54% vs 45%, $p=0.05$)
- Most of my friends like raw veg as snacks (33% vs 19%, $p=0.001$)
- I want to eat more vegetables now (17% vs 7% answered a 'lot' ($p=0.056$))
- I know that fruit and veg can taste good now (35%I vs 22%C answered a 'lot' ($p=0.013$))
- I'm more interested in trying new vegetables (80%I vs 64%C answered a lot, a fair bit or a little ($p<0.05$))



TFV Project impact on children's fruit and vegetable attitudes (cont'd)

- Significantly more children at intervention schools reported an effect of fruit and vegetable activities at school on:
 - Interest in (77% vs 67%, $p=0.06$) and trying more vegetables (80% vs 64%, $p<0.05$)
 - Knowing that fruit and vegetables are healthy (96% vs 84%, $p=0.002$) (greater effect for girls)
 - Knowing that fruit and vegetables can taste good (a lot 35% vs 22%, $p<0.05$) (greater in younger)
 - Thinking raw fruit and vegetables are good for snacks (78% vs 59%, $p=0.008$)



TFV Project impact on children's fruit and vegetable skills

- Significantly more children at intervention schools had self-efficacy in fruit and vegetable preparation
 - I can get my own fruit and veg snacks at home (93% vs 84%, $p=0.001$).
 - I'm good at preparing fruit and veg (74% vs 49%, $p=0.001$).



TFV Project impact on children's fruit and vegetable consumption

- Food Record Surveys have been collected at baseline, mid project and at the end of implementation
- To be coded for fruit and vegetable content and compared pre- vs post-, and intervention vs control



TFV Project impact reported on children's fruit and vegetable consumption

- Children (I and C) did not self report eating more fruit and vegetables than they used to, but more children at intervention schools said that they asked for more fruit and vegetables at home
- No differences between I and C for interest in trying new fruit and eating more fruit
- Parents perceived increased interest in and greater consumption by children of vegetables



TFV Project sustainability

- Most school Project Management Teams reported intending to continue with a number of the TFV strategies. Most popular:
- KIK cooking classes,
- fruit breaks in class,
- classroom activities,
- web sites for teachers,
- school newsletter articles,
- fruit platters,
- school vegetable gardens,
- lunchbox feedback and
- canteen menu reviews



TFV Project sustainability (cont'd)

- Principals: all but one school planned to continue with the TFV project in some way, most planning to continue the KIK cooking classes.
- Supportive arguments were:
 - teaching resources provided during the pilot,
 - training and experience of volunteers,
 - provision of seed funding for cooking equipment and
 - positive experiences from the pilot.
- Concerns were:
 - finding time to fit TFV activities into a full curriculum and
 - maintaining parental involvement.



TFV Project sustainability (cont'd)

- the vast majority of volunteers were willing to help with the same activities in the future, especially the cooking, tasting and canteen activities



TFV Project sustainability (cont'd)

- Some principals felt their schools were now well equipped to continue the TFV project without outside support due to the teaching resources provided during the pilot, the training and experience of volunteers, the provision of seed funding for cooking equipment and the positive experiences from the pilot.



TFV Project sustainability (cont'd)

- However, some principals expressed concerns about finding time to fit TFV activities into a full curriculum and maintaining parental involvement. A Community Nutritionist also expressed concern about maintaining the enthusiasm of Project Management Teams. Despite these concerns, principals reported that all but one school planned to continue with the TFV project in some way, with most planning to continue the KIK cooking classes.



Title

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