

Effectiveness of a Parent Health Report in Increasing Fruit and Vegetable Consumption Among Preschoolers and Kindergarteners



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INTRODUCTION

- Patterns of healthy fruit and vegetable consumption start in childhood and track to adulthood (Mikkilä et al., 2004).
- Increasing fruit and vegetable intake in preschool and kindergarten aged children to five servings a day may reduce the probability of chronic disease and obesity (Gerberding & Marks, 2004; Van Duyn & Pivonka, 2000).
- Parents, as gatekeepers of their child's nutrition, seem to be an important factor in modifying dietary behavior.
- Increasing availability and accessibility of fruits and vegetables in the home has been associated with increased intake (Patrick & Nicklas, 2005). This may represent a modifiable aspect of the home environment.
- A health report card targeting parents may be a simple and sustainable way to disseminate health information.

Hypothesis: Preschooler's and kindergartener's fruit and vegetable consumption will increase after parents receive a personalized health report targeting these behaviors.

METHOD

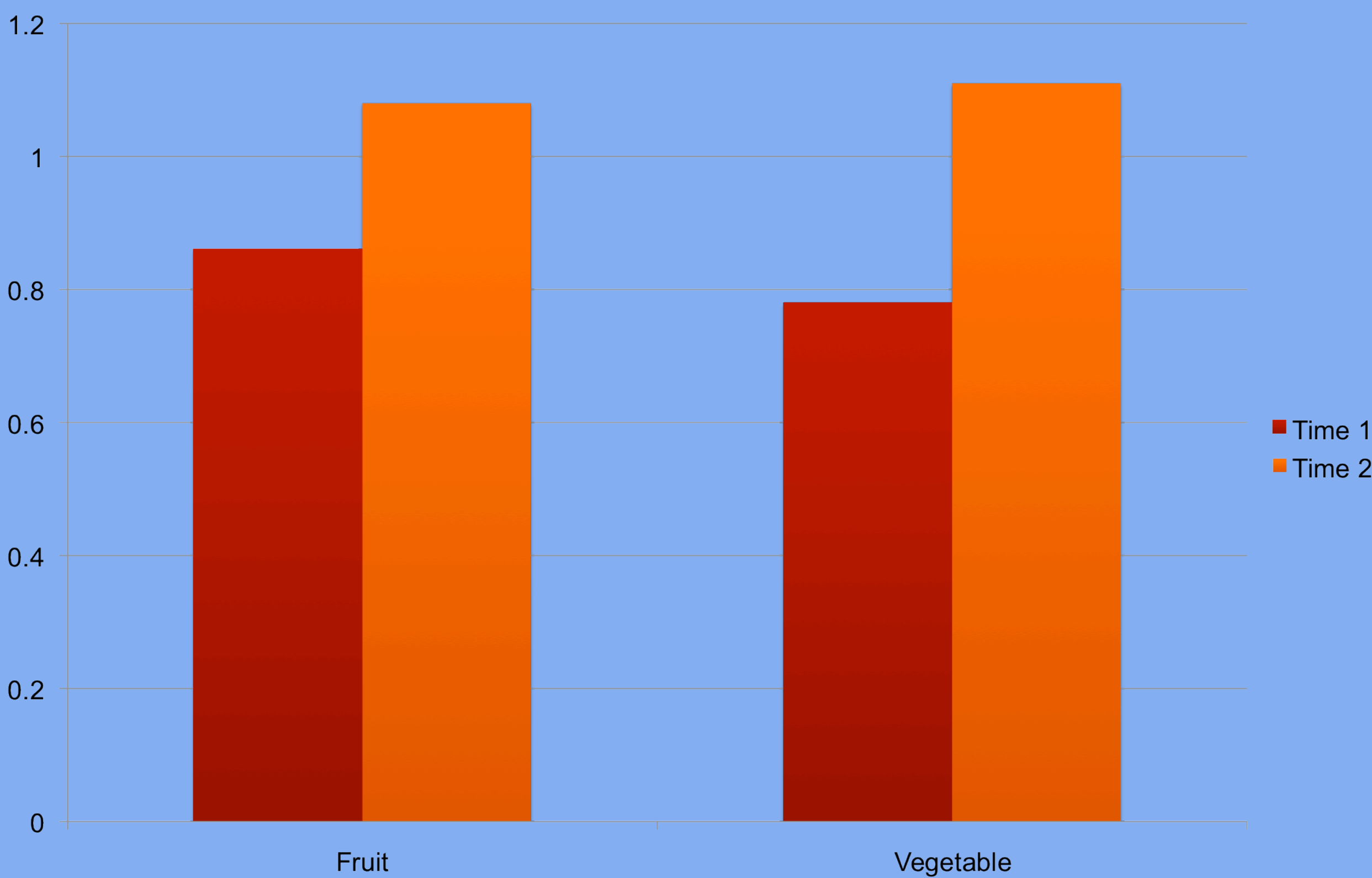
- Parents completed NCI Fruit and Vegetable Screener
- Data was analyzed for average daily fruit and vegetable consumption
- Parents were e-mailed a health report that provided them with (1) information about their child's average daily fruit and vegetable intake as compared with the national standard of five fruits and vegetables per day and (2) recommendations to increase consumption.
- A month after baseline data was collected parents completed the screener again.

PARTICIPANTS

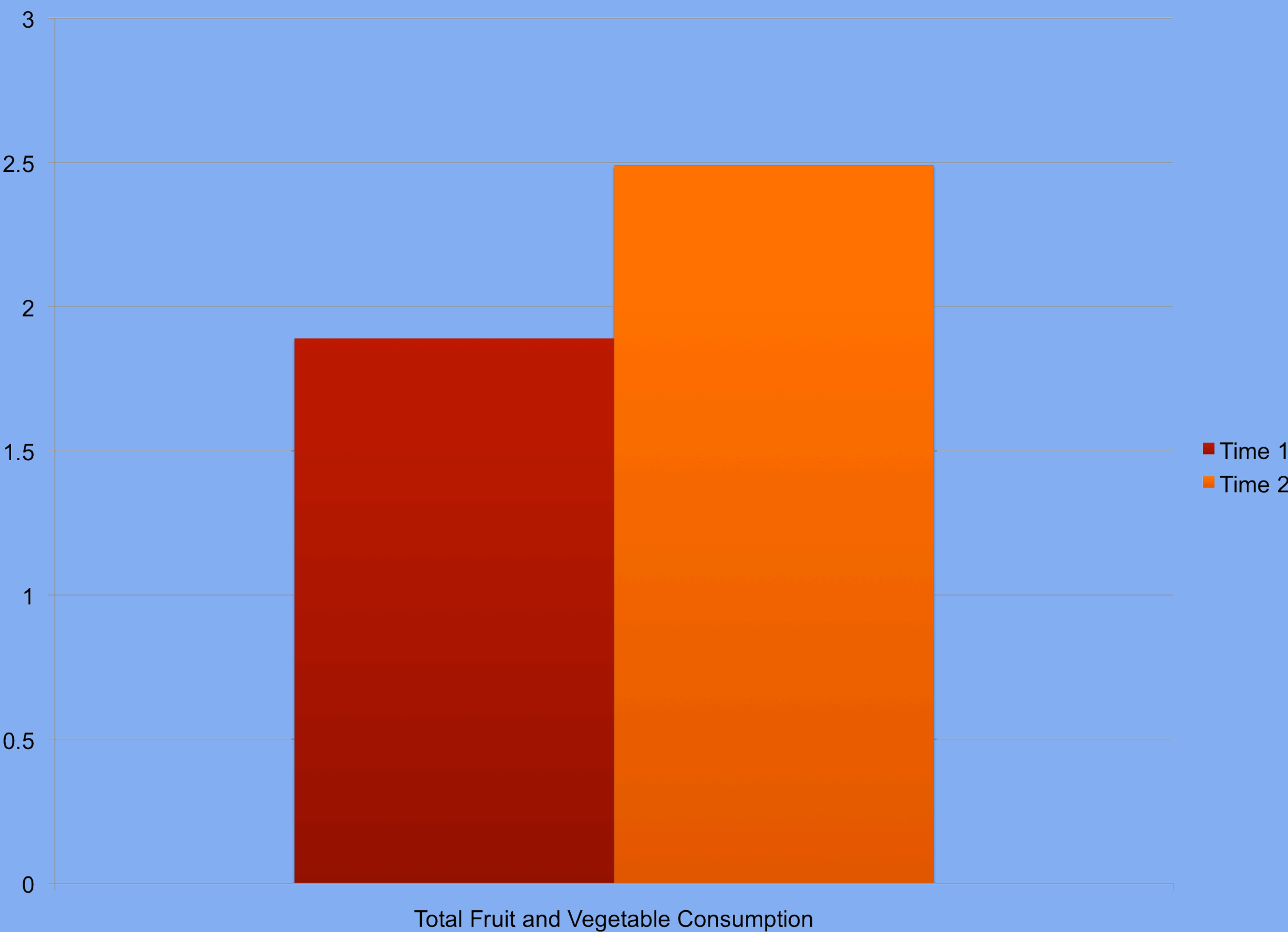
- Parents of 38 male and 25 female preschool and kindergarteners from BYU's Child and Family Studies Laboratory
- The parent who was most responsible for preparing meals was invited to participate (only mothers participated)
- Mean age = 4.52 (SD = .59; Range = 4-6 years old)
- Mean Monthly income = \$5358.82 (SD=\$3710.98)

MEASURE

- The National Cancer Institute (NCI) Fruit and Vegetable Scanner
 - 100% juice, fruit, lettuce salad, white potatoes (not French fries), beans, tomato sauce, vegetable soup, other vegetables
 - Analyzed serving and portion size



Average fruit and vegetable consumption before and after the intervention



RESULTS

- Repeated measures ANOVA were conducted comparing fruit, vegetable, and fruit and vegetable consumption before and after the intervention.
- A significant difference between fruit intake pre- (M=0.86, SD=.6) and post- (M=1.08, SD=0.83) intervention was observed; $F(60)=4.165$, $p<.05$; $d=0.30$.
- A significant difference between vegetable intake pre- (M=0.78, SD=0.55) and post- (M=1.11, SD=.073) intervention was observed; $F(57)=13.14$, $p<.01$; $d=0.46$.
- A significant difference between fruit and vegetable intake pre- (M=1.89, SD=1.03) and post- (M=2.49, SD=1.14) intervention was observed; $F(56)=15.35$, $p<.001$; $d=0.51$.
- Follow up tests examining potential covariates (age and gender) revealed no interaction effects with any of the aforementioned variables.

CONCLUSION

- A parent health report targeting fruit and vegetable consumption may be a feasible way to increase intake in preschoolers and kindergarteners.
- Combined fruit and vegetable consumption appeared to increase by approximately 1.4 servings.

IMPLICATIONS

- A parent health report card may be a simple and cost-effective way of increasing fruit and vegetable consumption.
- Adding a control group to future interventions will increase confidence in the validity of these findings.
- Future studies may also want to target juice intake as this has also been associated with childhood obesity (Dennison, Rockwell & Baker, 1997).

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