Examining the Impact of Access and Encouragement on Consumption in an Elementary School Vegetable Snack Program

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INTRODUCTION

Background

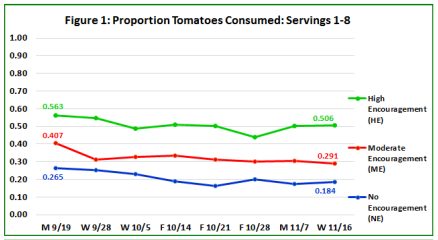
Given our study design explained on the previous poster, we now present results of our analyses. This poster provides both graphical and statistical comparisons of vegetable consumption across intervention conditions (no encouragement, moderate encouragement, high encouragement).

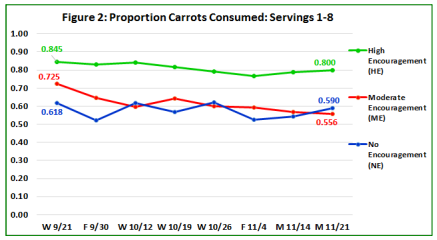
Our primary outcome measure is proportion consumed calculated as (pre – post weight)/(pre – cup weight). This process yielded a continuous intake measure ranging from 0.00 to 1.00 for each student for each day that each vegetable was served.

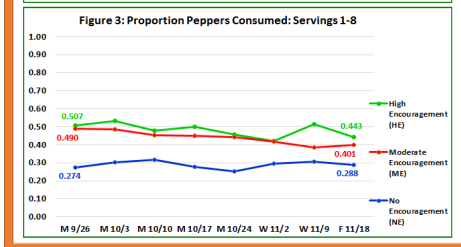
Independent samples t-tests were conducted to assess differences in student consumption across encouragement intervention conditions.

Consumption differences within encouragement conditions were also analyzed over time using paired samples t-tests.

OVERVIEW OF CONSUMPTION RESULTS







INDEPENDENT SAMPLES T-TEST CONSUMPTION RESULTS

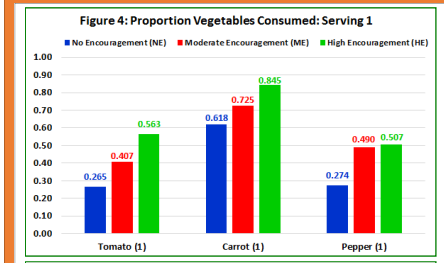


Table 1

Vegetable Consumption Difference in Means: Serving 1			
Vegetable	HE - NE	ME - NE	HE - ME
Tomato	0.298***	0.142*	0.156**
Carrot	0.227***	0.107	0.120**
Pepper	0.233***	0.216***	0.017
Tomato N: NE = 71, ME = 69, HE = 68			
Carrot N: NE = 73, ME = 72, HE = 69			
Pepper N: NE = 72, ME = 70, HE = 70			
Statistical Significance: *** P ≤ 0.01, ** p ≤ 0.05, * p ≤ 0.10			

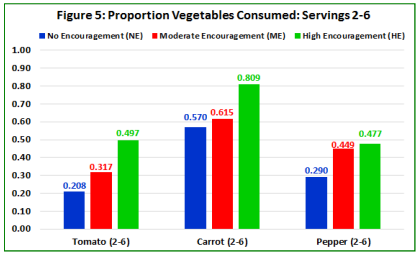


Table 2

Vegetable Consumption Difference in Means: Servings 2-6			
Vegetable	HE - NE	ME - NE	HE - ME
Tomato	0.289***	0.109***	0.180***
Carrot	0.239***	0.045	0.194***
Pepper	0.187***	0.159***	0.028
Tomato N: NE = 356, ME = 347, HE = 345			
Carrot N: NE = 353, ME = 350, HE = 344			
Pepper N: NE = 355, ME = 357, HE = 338			
Statistical Significance: *** P ≤ 0.01, ** p ≤ 0.05, * p ≤ 0.10			

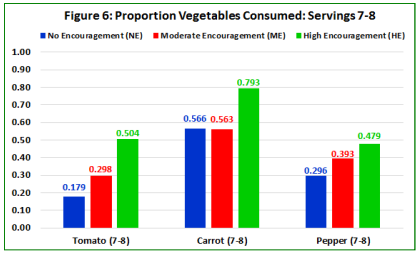


Table 3

Vegetable Consumption Difference in Means: Servings 7-8			
Vegetable	HE - NE	ME - NE	HE - ME
Tomato	0.325***	0.119**	0.206***
Carrot	0.227***	-0.003	0.230***
Pepper	0.183***	0.097*	0.086
Tomato N: NE = 140, ME = 145, HE = 139			
Carrot N: NE = 142, ME = 139, HE = 135			
Pepper N: NE = 143, ME = 142, HE = 135			
Statistical Significance: *** P ≤ 0.01, ** p ≤ 0.05, * p ≤ 0.10			

PAIRED SAMPLES T-TEST CONSUMPTION RESULTS

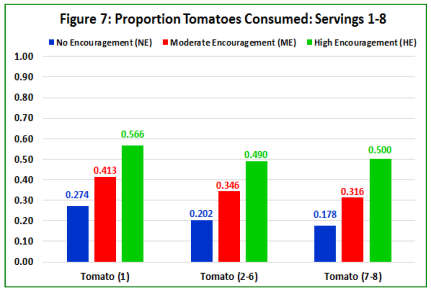


Table 4

Tomato Consumption		
Condition	(2-6) - (1)	(7-8) - (2-6)
NE: N = 65	-0.072***	-0.024
ME: N = 68	-0.067**	-0.030
HE: N = 65	-0.076***	0.010
Stat Sig: *** P ≤ 0.01, ** p ≤ 0.05, * p ≤ 0.10		

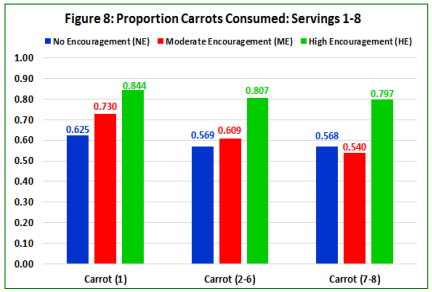


Table 5

Carrot Consumption		
Condition	(2-6) - (1)	(7-8) - (2-6)
NE: N = 69	-0.056	-0.001
ME: N = 65	-0.121***	-0.069**
HE: N = 66	-0.037	-0.010
Stat Sig: *** P ≤ 0.01, ** p ≤ 0.05, * p ≤ 0.10		

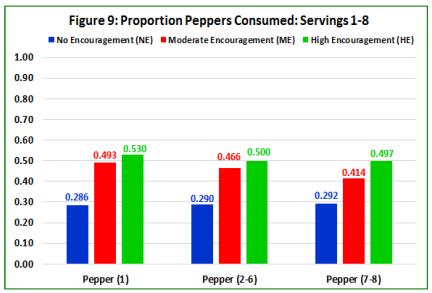
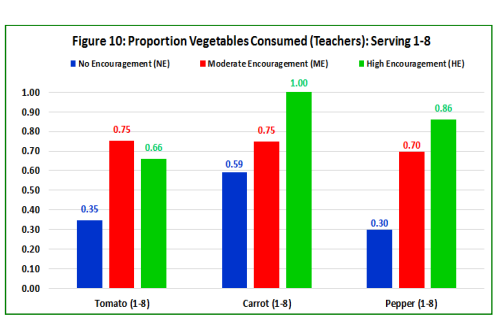


Table 6

Pepper Consumption		
Condition	(2-6) - (1)	(7-8) - (2-6)
NE: N = 69	0.004	0.002
ME: N = 66	-0.027	-0.052*
HE: N = 63	-0.030	-0.003
Stat Sig: *** P ≤ 0.01, ** p ≤ 0.05, * p ≤ 0.10		



CONCLUSION & DISCUSSION

This intervention was designed to assess the influence of teacher encouragement on children's consumption of free vegetables served in school for afternoon snack.

Results indicate significantly higher consumption for moderate and high encouragement classrooms compared to no encouragement in most instances. The exceptions were no difference in consumption of carrots between students in no encouragement and moderate encouragement conditions and no difference in pepper consumption between students in moderate and high encouragement conditions.

We also find evidence of sustained higher vegetable consumption after encouragement activities were removed, especially for students in the high encouragement condition. Lastly, consumption of tomatoes and peppers were significantly lower than carrots among all groups.

Please see our third poster titled, *Using Regression Analysis to Analyze Consumption Effects from an Elementary School Vegetable Snack Program*, for a more in-depth examination of the influence of teacher encouragement on children's vegetable consumption.

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