

ABSTRACT

Objective: To evaluate the effectiveness of a two-part community intervention on fresh and frozen produce access and self-perceived diet quality among participants of a local food pantry.

Design: Quasi-Experiment

Methods: A two-part intervention consisting of marketing efforts and recipe distribution was examined through a pre and post-survey to examine the changes in pantry food donations as well as nutrition intake and self-perceived efficacy of meal preparation and diet quality.

Setting: The Living Well Mission, Penn Yan, NY

Participants: In 2022, 10 community members were recruited to participate in the intervention. Selected participants were required to have a basic functioning kitchen.

Intervention: Social media marketing efforts took place to advocate for fresh and frozen produce donations over the course of four weeks. Three recipes per week, totaling 12 recipes, were also provided with the required ingredients and tips for substitutions.

Results: Four participants did not partake in the post-survey intervention. Low level marketing efforts had no impact on food donations. The weekly grocery supplies and recipes did not significantly improve intake of fresh or frozen despite no waste being reported by post-survey participants. The intervention did prevent hunger during the last week of the month for one participant.

Conclusion: The intervention did not reveal significant results. Low level marketing efforts were ineffective towards changing food donations and recipe and ingredient distribution did not improve self-efficacy and diet quality despite similar studies finding significant results. Recipe sampling or more nutrition education may be necessary in future studies.

INTRODUCTION & GOALS

- Disparities in fruit and vegetable intake are highly prevalent among individuals experiencing greater poverty. These individuals also rely heavily on food assistant programs and food pantries.¹
- A 2017-2019 Minnesota study revealed that the top 5 commonly reported foods of interest among pantry participants were 1) meat, poultry, and fish; 2) dairy; 3) fresh fruits and vegetables; 4) eggs; 5) spices and oil. In 2019, fresh produce moved to the number 2 spot of importance.²
- It has not been until recent that research and collaboration regarding public health promotion and access to healthier, whole food choices has been examined among this sector.
- The increase in long-term reliance on food pantries is prompting new policies and interventions to address the healthfulness among clientele with a individual-focused approach.
- Recipe distribution may increase self-efficacy and self-perceived diet quality based on similar studies.^{3,4}
- Limited research due to the recent attention this sector has had, has examined the effects that marketing may have on the types of food donated to food pantries.
- While some pantries are contracted with local grocers or other, larger food banks, each pantry varies and functions with varying space and even access to hold perishable food items.
- To address these concerns, the purpose of this study was to evaluate the change in the types of foods donated for a rural food pantry and the effect on self-efficacy and diet quality in a two part intervention.

METHODS

- This study was conducted at The Living Well Mission food pantry from 2021-2022.
- The project included 10 participants who were at least 18 years of age or older who rely primarily on The Living Well Mission's food pantry.
- A needs assessment, and agency staff members, identified a need for fresh produce and meat and poultry donations in 2021.
- Marketing efforts were carried out on the agency's Facebook page.
- Weekly groceries were provided for four weeks with three weekly recipes suggesting how to make healthy recipes with the food and ingredients they received.
- Three participants had prearranged transportation with the primary investigator in order to partake in the intervention.
- Participants received weekly phone calls reminding them of Friday pick-up.
- Intake of fresh, frozen and canned produce, hunger, food access, and perceived diet quality and meal preparation self-efficacy was evaluated through a pre and post intervention survey.
- Quantitative data was compared using Mann Whitney U t-tests using SPSS software and a p-value <0.05 was considered significant

RESULTS

Table 1. Comparison of Fresh Produce Among Participants

	Pre-Intervention Mean (n = 10)	Post-Intervention Mean (n = 6)	Std. Deviation	P-value
Fresh Fruit Consumption	7.25	10.58	1.15	0.18
Fresh Vegetable Consumption	8.15	9.08	1.50	0.71

Table 2. Self-Efficacy and Diet Quality Statistics

	Pre-Intervention Mean (n = 10)	Post-Intervention Mean (n = 6)	Std. Deviation	P-value
Access to Desired Foods	7.90	9.50	1.31	0.56
Access to Fresh Produce, Meat, & Poultry	8.70	8.17	1.21	0.88
Feels Good About Foods Consumed	9.30	7.17	1.15	0.43
Knows how to Cook Healthy Meals	9.45	6.92	1.10	0.31

RESULTS CONTINUED

Figure 1. Perceived Access to Fresh Produce

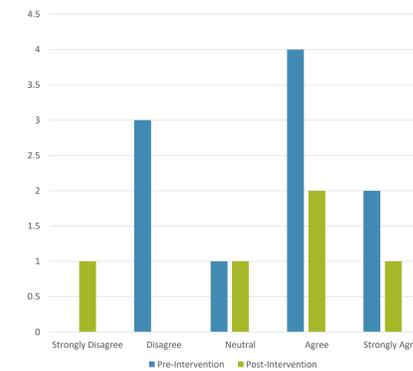


Figure 2. Feels Good About Foods Consumed

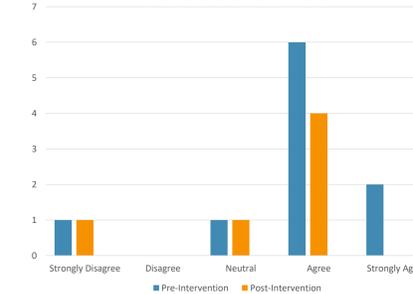
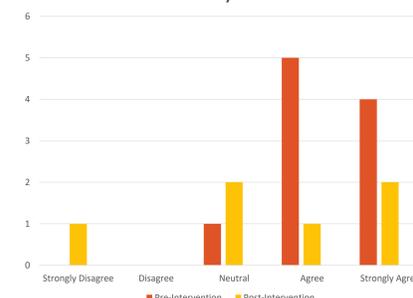


Figure 3. Knows How to Cook Healthy Meals



RESULTS CONTINUED

- The intervention did not significantly impact the consumption of fresh fruits or vegetables ($p > 0.05$) with $p = 0.18$ and $p = 0.71$, respectively
- Insignificant results were found regarding Self-Efficacy and Diet Quality. Access to desired foods had an associated p-value of 0.56; access to fresh produce, meat, and poultry had an associated p-value of 0.88; self-perception regarding how participants felt about the foods they consumed had an associated p-value of 0.43; knowing how to cook had an associated p-value of 0.31.

DISCUSSION

Low level marketing was ineffective in changing food donations and thus, likely requires more in-depth multi-level marketing efforts. Due to losing four participants by the end of the intervention, potentially significant findings could not be found regarding improved intake of fresh or frozen produce, improvements in diet quality or in improvements towards self-efficacy. The weekly recipes did not significantly impact diet quality as initially believed as seen in the Plate It Up! Kentucky Proud project. Indirect findings found that transportation was a contributing factor for some participants regarding food access, participation in the study, and picking up weekly food donations.

CONCLUSIONS

Since recipe distribution did not significantly improve self-efficacy in preparing healthy meals and recipe sampling should be considered in the future to encourage individuals to test new recipes at home. Nutrition education should also be considered in the future to explain to individuals what "healthy" means. Since transportation was such an important factor for some individuals, future study designs should focus on access to reliable transportation services.

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