Influencing Nutrition and Shopping Behaviors Through the Create Farm Fresh Food Series

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Introduction
Most Americans do not consume the recommended intake of fruits and vegetables (FV), which likely contributes to the high rates of obesity and other chronic diseases in the United States. Farmers markets (FM) have been growing in popularity over the past 20 years which has resulted in improved food access and support of local farmers in many areas. Low income individuals have many barriers that prevent them from shopping at local FM to purchase FV; however, there is evidence that providing nutrition education at FM can increase FV intake. Interventions such as the Create Farm Fresh Foods (CFFF) series offered in Box Elder, Tooele, Duchesne, Salt Lake, Davis, and Weber counties have potential to improve dietary intake among low income individuals by offering educational courses about fresh FV intake. The objective of this study was to determine the effectiveness of the Create Farm Fresh Food (CFFF) series on nutrition-related behaviors of Food Sense (SNAP-Ed) participants.

Methods
The CFFF nutrition education series, offered by the Food Sense program in Utah, aimed to improve FV intake and increase use of FM among participants.

• A series of four CFFF classes were delivered in each of the aforementioned counties during the 2016 and 2017 growing seasons.
• The CFFF curriculum focused on benefits of shopping at FM; reducing barriers to shopping at FM; purchasing, storing and preparing FV; and way to get the family involved.
• Certified Nutrition Education Assistants taught the classes and encouraged participants to attend the four class series.
• Participants were asked to complete a survey after attending each class. Participants received a small kitchen gadget as an incentive.
• The survey included demographic questions, validated FV consumption questions, and questions about frequency and barriers to FM shopping.
• Survey responses were collected in Excel and imported to SPSS. Frequencies, means, and standard deviations were analyzed. Independent sample t-tests were used to compare means.

Results

• Participants were primarily non-Hispanic white females (n=229).
• Roughly 50% of participants took multiple CFFF classes (2 or more).
• Mean intakes of fruit (P=0.003), orange vegetables (P=0.004) and other vegetables (P=0.034) were higher among participants who reported shopping at the FM the week prior to attending the CFFF class as compared to participants who did not.
• No significant difference was found when comparing fruit juice, beans, dark green vegetable consumption.
• Participants reported they tasted new FV (67%), purchased more FV (59%) and purchased new FM (38%) as a result of the CFFF series.
• Of those participants who did not shop at the FM the week prior to attending the CFFF class (n=170), these barriers for shopping at the FM were most commonly reported: busy (71%), forgot (29%), prefer the grocery store (10%), no knowledge about the FM (6%), no SNAP benefits to spend (2%), and transportation (3%).

Results of t-test and Descriptive Statistics for FV Consumption by Recent FM Shopping

<table>
<thead>
<tr>
<th>FV Questions*</th>
<th>Shopped at FM Last Week</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>Mean ± SD</td>
<td>n</td>
</tr>
<tr>
<td>100% Fruit Juice</td>
<td>50</td>
<td>1.20 ± 1.525</td>
<td>170</td>
</tr>
<tr>
<td>Fruit Consumption</td>
<td>50</td>
<td>3.58 ± 1.500</td>
<td>170</td>
</tr>
<tr>
<td>Bean Consumption</td>
<td>49</td>
<td>1.94 ± 1.737</td>
<td>170</td>
</tr>
<tr>
<td>Dark Green Vegetable Consumption</td>
<td>49</td>
<td>2.78 ± 2.78</td>
<td>169</td>
</tr>
<tr>
<td>Orange Vegetable Consumption</td>
<td>48</td>
<td>2.21 ± 1.637</td>
<td>169</td>
</tr>
<tr>
<td>Other Vegetable Consumption</td>
<td>49</td>
<td>2.90 ± 1.747</td>
<td>169</td>
</tr>
</tbody>
</table>

*Validated FV Questions were adopted from the Behavior Risk Factor Surveillance System (BRFSS) Questionnaire.

Note: Levene’s Test for equality of variances was used.

Conclusions
The CFFF series may be an effective program for encouraging Food Sense participants to shop at FM to purchase produce, and subsequently increase their intake of select FV. However, a variety of barriers continue to prevent Food Sense participants from shopping at FM. Nutrition education programs should continue to emphasize ways to overcome common barriers that prevent participants from shopping at FM. Future research should focus on comparing FV intake and FM shopping behaviors before and after participating in the CFFF series.

References