A Healthy Meal Kit Intervention Improves Food Security Status and Fruit and Vegetable Intake of Families with Low Income

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ABSTRACT

BACKGROUND

Healthy diets that include a variety of fruits and vegetables (FV) can provide several health benefits, such as blood sugar regulation and support for vision, immune function, and heart health.1 Generally, few adults meet the recommended FV intake; adults with low income are even less likely to report a diet rich in FV.2 Families with low income face many barriers to meeting FV recommendations, as shown in Figure 1.3,4,5 Meal kits can improve FS scores and FV intake as well as promote sustained FV consumption and FS in families with low income.6

OBJECTIVE

To evaluate the impact of a healthy meal kit intervention on food security status and FV intake.

STUDY DESIGN, SETTINGS, PARTICIPANTS

Main preparers of food (N=110) in a household with at least one child, recruited from rural, suburban, and two urban communities, completed a six-week meal kit intervention. Demographic data were collected at baseline. Food security (FS) status and self-reported FV intake were collected at baseline, post-intervention, and at LTFU using the USDA 18-item Household FS Survey Module and short Healthy Eating Index (sHEI) Screener, respectively.

RESULTS

Table 1. Participant Demographic Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Suburban</th>
<th>Rural</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>55 (41.0)</td>
<td>26 (23.8)</td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td>13 (10.3)</td>
<td>1 (0.4)</td>
<td>14 (5.6)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>21 (16.7)</td>
<td>1 (0.4)</td>
<td>22 (8.7)</td>
</tr>
<tr>
<td>Non-Binary/Third Gender</td>
<td>3 (2.5)</td>
<td>0 (0.0)</td>
<td>3 (1.1)</td>
</tr>
<tr>
<td>Family size (mean)</td>
<td>3.9 ± 1.5</td>
<td>4.1 ± 1.8</td>
<td>4.0 ± 1.6</td>
</tr>
<tr>
<td>Monthly household income (n = 109)</td>
<td>≤ $49,999</td>
<td>37 (94.9)</td>
<td>24 (100.0)</td>
</tr>
</tbody>
</table>

Demographic data were analyzed using descriptive statistics. FS scores/status and FV intake were compared over all FS scores and FV intake significantly improved from baseline to post with no significant changes at LTFU. Results suggest that a healthy meal kit program can improve FS scores and FV intake as well as promote sustained FV consumption and FS in families with low income.7

CONCLUSIONS

Over a third of participants improved their FS (Fig. 3) and FV (Fig. 4) intake at post. Overall FS (Fig. 4) and FV intake (Fig. 6) significantly improved from baseline to post with significant changes at LTFU. Results suggest that a healthy meal kit program can improve FS scores and FV intake as well as promote sustained FV consumption and FS in families with low income.

REFERENCES


