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Simple messages to improve dietary quality: A pilot investigation

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Simple messages to improve dietary quality: A pilot investigation

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• Public health recommendations for a healthy diet often involve complex messages, requiring in-depth knowledge for understanding and compliance.

• Sahyoun and colleagues reviewed nutrition intervention studies published from 1990-2003 and concluded that studies that limited dietary educational messages to one or two simple messages were more likely to have positive outcomes.

INTRODUCTION

• The present study compared the feasibility and initial efficacy of two simple messages (a high fiber diet or a low saturated fat diet) to a combination message (high fiber and low saturated fat) on the potential to impact dietary quality and metabolic health.

OBJECTIVE

• Thirty-six participants were randomized to one of three intervention conditions: 1) increase fiber intake ≥30g/day; 2) decrease saturated fat intake ≤7% of calories; and 3) increase fiber and decrease saturated fat.

• Participants received 7 individual dietary counseling sessions over 5 months to help them make the prescribed dietary change.

• Study assessments occurred at baseline, 3 months, and 6 months. Feasibility measures included: retention, session attendance, and participant satisfaction with the intervention.

• Mean dietary quality score, saturated fat, fiber, and body weight by visit and study group was estimated using SAS PROC MIXED.

RESULTS

• The sample was 84% female (mean age=49 years) and 94% Caucasian. Mean body mass index (BMI) was 31.0 kg/m².

• Ten subjects (83.3%) completed all 7 sessions in the high fiber condition (mean=6.75 sessions, SD=0.62), and 7 participants (70%) completed all 7 sessions in the low saturated fat condition (mean=6.30, SD=1.16). Seven participants (70%) completed all 7 intervention sessions in the combination condition (mean attendance=6.60, SD=0.70).

• At the 6-month assessment phase, we retained all 12 patients in the high fiber diet arm, 10 of 12 in the low saturated fat arm, and 9 of 12 in the combination arm.

• Participants reported that the dietary fiber intervention was easier to maintain compared to the other two intervention conditions (83% for dietary fiber, vs. 60% for low saturated fat, and 33% for the combination, p=0.008).

• (See Table) Overall dietary quality, saturated fat and fiber improved in all three conditions during the study (p=0.01). In addition to increasing fiber, the high fiber condition decreased their saturated fat intake, even though reduction in saturated fat was not a part of that intervention arm. Conversely, the saturated fat condition slightly improved dietary fiber intake, although it was not a part of their intervention.

• (See Table) Participants in all three conditions lost an average of 9 lb (4 kg) from baseline weight (p<0.001).

CONCLUSIONS

• A simple dietary message appears to improve overall dietary quality and aid in weight management.

• Simple messages are a novel approach which could make a significant impact on the prevention and treatment of chronic disease as well as weight management.

• Results support the need for a larger randomized controlled trial that is powered to examine the efficacy of a simplified dietary recommendation for dietary quality and metabolic health.

• It would be worth exploring the impact of simple messages in a larger trial to determine their usefulness as simple public health messages as an alternative to the current complex recommendations.

ACKNOWLEDGEMENTS

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• The authors greatly appreciate Alison Kiely for her diligence and attention to the dietary assessment calls to the participants in the study.

Table. Change in dietary quality, saturated fat intake, dietary fiber and body weight during the study, Cancer Dietary Objectives Study (Can Do Study), Worcester, Massachusetts, 2007-2008

<table>
<thead>
<tr>
<th>Study visit</th>
<th>Baseline</th>
<th>Intervention effect</th>
<th>p-value for intervention effect (p-value for time)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Combo</td>
<td>high-fiber</td>
<td>Low-sat fat</td>
</tr>
<tr>
<td>Dietary quality score</td>
<td>38.85 (3.24)</td>
<td>36.73 (2.81)</td>
<td>31.40 (1.07)</td>
</tr>
<tr>
<td>% calories</td>
<td>10.96 (6.77)</td>
<td>11.21 (5.76)</td>
<td>11.80 (8.31)</td>
</tr>
<tr>
<td>Total dietary fat (g/day)</td>
<td>22.80 (2.30)</td>
<td>17.90 (1.39)</td>
<td>14.47 (2.18)</td>
</tr>
<tr>
<td>Weight (lb)</td>
<td>193.3 (9.0)</td>
<td>191.3 (7.7)</td>
<td>205.8 (8.5)</td>
</tr>
</tbody>
</table>