Self-Management of Dietary Intake Using Mindful Eating by People with CKD: Acceptability of the Intervention

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Acknowledgements

- Funded by Center for Transdisciplinary Collaborative Research in Self-management. NIH, NINR, P30 NR01533511.
- The content is solely the responsibility of the authors and does not represent the official views of NIH.

Transdisciplinary team

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- Richard Lewis MD (Nephrology)
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- Holli Temple, PharmD (Pharmacy)
- Research Assistants: Muna Tahir (Nutrition) & Marlene Tovar (Nursing)
- Intern: Christina Stull
Scope of the problem

- CKD affects > 10% of the US population
- Major causes - diabetes and hypertension
- May progress to kidney failure
- Disease progression leads to:
  - Reduced quality of life & poor health outcomes
  - Increased health care burden and cost

Complex dietary recommendations

- Improvements in dietary intake for person with CKD (stages 1-3) can prevent or delay progression of CKD.
- Common dietary recommendations that may improve outcomes include:
  - Limit kcal intake for wt loss
  - Reduce sodium
  - Increased fruits & vegetables

Purpose

- To determine the acceptability of the Self-Management of Dietary Intake Using Mindful Eating intervention for persons with Stage 1-3 CKD.
- Acceptability of an intervention is key to sustaining dietary changes.
Theoretical Framework
Stuifbergen’s Explanatory Model of Health Promotion and Quality of Life in Persons with Chronic Disabling Conditions

**Intervention**
- Intervention and study designed refined with:
  - Community Advisory team
  - Trans-disciplinary team
  - Small groups with significant others
  - Six weekly, 2 hour classes
  - Weekly homework and goal setting

<table>
<thead>
<tr>
<th><strong>Dietary Information</strong></th>
<th><strong>Mindful Eating and Meditations</strong></th>
</tr>
</thead>
</table>
| 1 Essential Self-Management Skills (goal setting, problem solving, reading food labels, behavior change strategies) | Introduction to Principles of Mindful Eating and Mindful Meditation  
Practice Mindful Eating (raisins & grapes) |
| 2 Weight Management; Heart Healthy Eating (good vs bad fats); Macronutrients; Strategies to Feel Full & Stay Full Longer | Mini-Meditations; Hunger Awareness vs Emotional Hunger  
Practice Mindful Eating (cheese & crackers) |
| 3 Your CKD Diet; Salt Restriction; Avoiding Excess Protein; Potassium & Phosphorus Dietary Management | Taste Satisfaction and Fullness Awareness Meditation  
Practice Mindful Eating (chocolate) |
**Dietary Information**

<table>
<thead>
<tr>
<th>Session</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>4</td>
<td>Managing Food Environment; Strategies for Eating Out</td>
</tr>
<tr>
<td>5</td>
<td>Food Groups &amp; Portions; Diabetes, CKD &amp; Carbs; Coping with Changes</td>
</tr>
<tr>
<td>6</td>
<td>Review of Previous Sessions; Relapse Prevention; Staying Motivated; Long Term Goal Setting</td>
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</table>

**Mindful Eating and Meditations**

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<thead>
<tr>
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<tbody>
<tr>
<td>4</td>
<td>Making Mindful Eating Choices; Mini-Meditations with Hunger &amp; Fullness; Practice Mindful Eating (cookies &amp; chips)</td>
</tr>
<tr>
<td>5</td>
<td>Eating Triggers Meditation; Salad Skills; Practice Mindful Eating (soda &amp; hot)</td>
</tr>
<tr>
<td>6</td>
<td>Integrated Mindful Eating Meditation; Visualization of Favorite Meal; Review and Practice of Mindful Eating</td>
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</tbody>
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**Target population**

- Individuals 45-78 years old
- Stages 1-3 CKD
- Recruited from primary care clinics and nephrology offices

**Exclusion criteria**

- Autoimmune diseases, psychiatric disorders;
- New or unstable hypothyroidism;
- Cognitive impairment;
- Steroid use that affects weight;
- BMI <18.5 kg/m².
Measures

- Acceptability:
  - Attendance
  - Retention rates
  - Content analysis of exit interviews

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Results: Demographics (n=19)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequencies</th>
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<tbody>
<tr>
<td>Participant completion</td>
<td>90.5% completed study (19 out of 21)</td>
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<tr>
<td>Mean number of classes attended</td>
<td>5.6 ± 0.65</td>
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<tr>
<td>Number of classes attended</td>
<td>✔ 58% attend all 6 classes;</td>
</tr>
<tr>
<td></td>
<td>✔ 32% attended 5 classes (4 opted to come early to make up the missed session);</td>
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<tr>
<td></td>
<td>✔ 10% attended 4 classes</td>
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<tr>
<td>Mean age (years)</td>
<td>64.7 ± 8.1</td>
</tr>
<tr>
<td>Gender</td>
<td>73.7% Male</td>
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</table>

<table>
<thead>
<tr>
<th>Variable</th>
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</thead>
<tbody>
<tr>
<td>Ethnicity</td>
<td>36.8% Hispanic</td>
</tr>
<tr>
<td></td>
<td>63.2% Not Hispanic</td>
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<tr>
<td>Race</td>
<td>36.8% Non-Hispanic White</td>
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<tr>
<td></td>
<td>36.8% Hispanic White</td>
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<tr>
<td></td>
<td>15.8% African American</td>
</tr>
<tr>
<td></td>
<td>10.6% Asian</td>
</tr>
<tr>
<td>High Blood Pressure</td>
<td>94.7% have High Blood Pressure</td>
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<tr>
<td>Diabetes Mellitus</td>
<td>52.6% have Diabetes Mellitus</td>
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Exit survey

Open-ended face-to-face exit interview questions were obtained to determine perceived acceptability of the intervention and skills gained:

Example question and content analysis:

2. How have the classes influenced your eating behaviors?

- "I know how to fix a well-balanced salad now and I know how much to serve and eat" (more awareness of portion sizes)
- "More observant of what I eat!"
- "More observant about what I eat, started to pre-plan what I will eat, more aware of what I am eating now!"
- "Much more observant about what I eat in general -- did not change specific habits"

Content analysis of exit surveys

- Participants had positive responses for both the intervention and intervention materials.
- Mindful eating and mindful eating meditations were the top ranked intervention component spontaneously identified (7 of 19 participants).
- Goal setting (7 of 19 participants) followed by label reading (6 of 19 participants) were identified as being the most useful of the homework assignments.

Content analysis of exit surveys

- When asked about making improvements to the intervention, 10 of 19 participants had no suggestions and 5 participants recommended more sessions.
Conclusion

- This data supports a high level of acceptability to participants.

- In addition to efficacy, interventions must meet the needs of patients (acceptability) in order to be viable.