Brief Mindfulness Meditation for Depression and Anxiety Symptoms in Patients Undergoing Dialysis: A Randomized Control Trial

Zoë Thomas PGY-5
McGill Psychiatry
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Study Summary

- RCT set in urban dialysis unit
- 41 dialysis patients with depression/anxiety symptoms
- Randomly assigned to intervention (n=21) or TAU (n=20)
- 8 weeks, 3 times a week, 10-15 minutes chairside meditation
- Outcomes
  - 1º: Feasibility – enrolment rates, completion rates, tolerability
  - 2º: Depression & anxiety scores – PHQ-9 & GAD-7
Premise

• Depression & anxiety symptoms affect 50% of dialysis patients
  • Lower quality of life, increased dialysis non-adherence, suicidality, medical comorbidity and mortality

• Management generally inadequate
  • Low detection rates, limited access to psychotherapy, polypharmacy, minimal literature on effective treatments

• Alternative, effective, scalable strategies needed
Mindfulness Meditation

- Effective in several psychiatric conditions
  - Depression, anxiety, SUD
- Effective in several chronic physical illnesses
  - Psoriasis, breast/gyne cancer, IBD, DM, CAD, transplant
- Not tested in dialysis population

**Moment-to-moment Non-judgmental Awareness**
Methods

• Recruitment at Jewish General Hospital dialysis unit – 2016

Inclusion criteria:
  • English or French
  • Scores of ≥6 on PHQ-9 and/or GAD-7 scales

Exclusion criteria:
  • Cognitive impairment (abnormal Mini-Cog)
  • Current psychosis
  • Acute suicidal ideation with intent

• Randomized 1:1
Intervention

• Chairside meditations 3 times a week, 10-15 minutes, for 8 weeks
  • Body scan
  • Guided meditation
  • Silent meditation
  • Gentle arm movements

• Brief check-ins before & after

• Home practice encouraged

Both groups received psychoeducational literature on depression & anxiety & local resources
Results

- **Approached**: n = 179
  - Interested/Interested-Language = 56

- **Screened**: n = 123
  - Subthreshold PHQ-9/GAD-7: n = 62

- **Met Inclusion Criteria**: n = 61
  - Interested = 15
  - Delirium = 1
  - Dementia = 1
  - Questionnaires = 3

- **Randomized**: n = 41
  - Drop outs = 5
  - Home dialysis = 1

- **Intervention**: n = 21
  - Completed Intervention (> 13 sess. & up to week 8): n = 15
    - Refused = 4
    - Medically ill = 3
    - Refused = 2

- **Control**: n = 20
  - Post-Questionnaire: n = 15
## Results

<table>
<thead>
<tr>
<th>Participant Data</th>
<th>Total Sample (n=41) Mean±SD</th>
<th>Intervention (n=21) Mean±SD</th>
<th>TAU (n=20) Mean±SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demographic Information</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>33 %</td>
<td>33 %</td>
<td>35 %</td>
</tr>
<tr>
<td>Age</td>
<td>65 ± 13</td>
<td>66 ± 13</td>
<td>64 ±1.4</td>
</tr>
<tr>
<td>Married/common law</td>
<td>49 %</td>
<td>43 %</td>
<td>55 %</td>
</tr>
<tr>
<td>Non-White</td>
<td>51 %</td>
<td>48 %</td>
<td>55 %</td>
</tr>
<tr>
<td>Living with family</td>
<td>50 %</td>
<td>50 %</td>
<td>50 %</td>
</tr>
<tr>
<td>University</td>
<td>37 %</td>
<td>38 %</td>
<td>35 %</td>
</tr>
<tr>
<td><strong>Medical History</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of medical problems</td>
<td>10 ± 4</td>
<td>11±4</td>
<td>10±4</td>
</tr>
<tr>
<td>Hypertension</td>
<td>85 %</td>
<td>91 %</td>
<td>80 %</td>
</tr>
<tr>
<td>Diabetes</td>
<td>63 %</td>
<td>52 %</td>
<td>75 %</td>
</tr>
<tr>
<td>Coronary artery disease</td>
<td>44 %</td>
<td>52 %</td>
<td>35 %</td>
</tr>
<tr>
<td>CHF / arrhythmia / PVD - each</td>
<td>32 %</td>
<td>43 %</td>
<td>20 %</td>
</tr>
<tr>
<td>Respiratory illness</td>
<td>29 %</td>
<td>33 %</td>
<td>25 %</td>
</tr>
<tr>
<td>Number of current medications</td>
<td>13 ± 5</td>
<td>14±4</td>
<td>12±5</td>
</tr>
<tr>
<td>Psychotropic medications</td>
<td>46 %</td>
<td>48 %</td>
<td>45 %</td>
</tr>
<tr>
<td><strong>Habits</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td>12 %</td>
<td>14 %</td>
<td>10 %</td>
</tr>
<tr>
<td>Alcohol /drugs</td>
<td>9 %</td>
<td>10 %</td>
<td>10 %</td>
</tr>
</tbody>
</table>
Results - Feasibility

• 71% retention rate
  • Mean number of sessions = 20/24 (82% of sessions)
  • Home practice average = 3 days a week x 14 minutes

• Meditation tolerability 8/10
  • Guided meditation > gentle arm movements

• No adverse events
  • 10 participants admitted to hospital
## Results - Effectiveness

<table>
<thead>
<tr>
<th>Measure</th>
<th>Intervention Group</th>
<th>TAU Group</th>
<th>Stats</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre n=21</td>
<td>Post n=17</td>
<td></td>
</tr>
<tr>
<td>PHQ-9</td>
<td>12.7 ± 4.2</td>
<td>9.6 ± 4.9</td>
<td>-3.0 ± 3.9</td>
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<tr>
<td></td>
<td>11.9 ± 5.8</td>
<td>7.8 ± 5.1</td>
<td>-2.0 ± 4.7</td>
</tr>
<tr>
<td>GAD-7</td>
<td>6.2 ± 5.1</td>
<td>6.1 ± 4.7</td>
<td>-0.9 ± 4.6</td>
</tr>
</tbody>
</table>

**Subjective Reports**

Courage, Hope, Dignity, Self-confidence, Strength
Discussion

- Underpowered?
- Inclusion of milder psychiatric symptomatology?
- Inclusion of severely medically ill patients?
- Lack of cognitive component of intervention?
- Lack of qualitative questionnaires?
Need for depression & anxiety treatments in dialysis patients

**Barriers to usual treatments**
- Additional appointments
- Polypharmacy
- Limited effectiveness

**Meditation seems promising**
- Scalable
- Feasible
- Enjoyable

**Recommend larger studies**
- N=60
- PHQ-9 > 10
- Qualitative scales
- Cognitive component
References

References

• Gerbarg PL, Jacob VE, Stevens L, Bosworth BP, Chabouni F, DeFilippis EM, et al. The Effect of Breathing, Movement, and Meditation on Psychological and Physical Symptoms and Inflammatory Biomarkers in Inflammatory Bowel Disease: A Randomized Controlled Trial. Inflamm Bowel Dis. 2015:21(12): 2886-2896.
References

Thank you