Computerized Trans-Diagnostic DBT Skills Training for Emotion Dysregulation

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GCDP Meeting, Stanford
Current project

Trans-diagnostic treatments

Use of technology as dissemination mechanism

Contribution: Develop & evaluate computerized trans-diagnostic DBT skills training treatment for emotion dysregulation
Study Aims & Design

- **Phase 1:** Iteratively develop iDBT-ER
  - 8-week open trial, 7 individuals, coming to lab
- **Phase 2:** evaluate efficacy
  - 8-week open trial, 34 individuals, over Internet
- **Compare outcomes to historical control**
# iDBT-ER Description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
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<tbody>
<tr>
<td>Number of sessions</td>
<td>8</td>
</tr>
<tr>
<td>Average length of session</td>
<td>1 hour</td>
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<tr>
<td>Session frequency</td>
<td>1 session / week</td>
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<tr>
<td>Homework assignment</td>
<td>Different skills practice assignments each week</td>
</tr>
<tr>
<td>Skills practice prompts</td>
<td>1 skills practice prompt in the morning (email / text message)</td>
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<tr>
<td>Diary card</td>
<td>1 prompt diary card in the evening (email/text message)</td>
</tr>
<tr>
<td>Session reminders</td>
<td>&lt;= 2 phone/email reminders for session not completed</td>
</tr>
<tr>
<td>DBT Skills Content</td>
<td>DBT mindfulness, emotion regulation, few distress tolerance</td>
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Goal 1: Translate DBT Skills in computerized format while maintaining efficacy and engagement

Goal 2: Keep therapist out of the loop as much as possible
Inclusion / Exclusion Criteria

- Adult, high emotion dysregulation
- Met criteria for at least one of:
  - Major Depressive Disorder (MDD)
  - Dysthymia
  - Depression NOS
  - Anxiety Disorder NOS
  - Panic Disorder (PD) w or w/o agoraphobia
  - Agoraphobia w/o panic disorder
  - Obsessive Compulsive Disorder (OCD)
  - Generalize Anxiety Disorder (GAD)
  - Social Anxiety Disorder (SAD)
  - Specific Phobia (SP)
  - Post Traumatic Stress Disorder (PTSD)
- Access to email, phone, Internet to use for the study
- Exclusion: prior DBT, cognitive impairment, mandated treatment, imminent risk risk suicide

A. Lungu
Assessments

- **Self-report questionnaires**
  - pre-treatment, 4 weeks, 8 weeks, 2 month follow-up
  - Emotion dysregulation (DERS), skills use (DBT-WCCL), general distress (OQ-45), mindfulness (KIMS), acceptability of treatment (CSQ)
Phase 2 Participants (N = 34)

Age: 42.4 (S.D 12.7)
Female: 76%
White: 74%
Employed: 53%

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Count (Percentage)</th>
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<tbody>
<tr>
<td>Depression</td>
<td>24 (70%)</td>
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<tr>
<td>Dysthymia</td>
<td>5 (14.5%)</td>
</tr>
<tr>
<td>Panic disorder</td>
<td>6 (17%)</td>
</tr>
<tr>
<td>Agoraphobia</td>
<td>3 (9%)</td>
</tr>
<tr>
<td>Generalized Anxiety Disorder</td>
<td>19 (56%)</td>
</tr>
<tr>
<td>Social Anxiety Disorder</td>
<td>10 (30%)</td>
</tr>
<tr>
<td>OCD</td>
<td>4 (12%)</td>
</tr>
<tr>
<td>PTSD</td>
<td>11 (33%)</td>
</tr>
<tr>
<td>Anxiety NOS</td>
<td>5 (15%)</td>
</tr>
<tr>
<td>BPD</td>
<td>5 (15%)</td>
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Outcomes: Feasibility

- **Client Satisfaction Questionnaire** (score 0 to 32)
  - iDBT-ER $M = 25.5$
  - TAU community mental health $M = 23.75$

- **Drop-out**
  - iDBT-ER: 6/34 (17.6%)
Outcomes

Emotion Dysregulation (DERS)

Anxiety (OASIS)

Skills (DBT-WCCL)

Depression (PHQ9)
Comparing outcomes with historical control

- **Historical control DBT-ST:**
  - Same inclusion/exclusion criteria
  - DBT skills in group, in person
  - 2 hours of therapy/week vs 1 hour/week (iDBT-ER)
  - Compare iDBT at 8 weeks with DBT-ST at 2 months
Comparison effect sizes to historical control

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<tr>
<td><strong>DERs (emotion dysregulation)</strong></td>
<td></td>
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<tr>
<td><strong>OASIS (anxiety)</strong></td>
<td>1.16</td>
<td>0.67</td>
</tr>
<tr>
<td><strong>PHQ9 (depression)</strong></td>
<td>1.53</td>
<td>1</td>
</tr>
<tr>
<td><strong>SKILLS (skills practice)</strong></td>
<td>1.11</td>
<td>0.94</td>
</tr>
<tr>
<td><strong>OQ (general functioning)</strong></td>
<td>1.24</td>
<td>0.9</td>
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- Repeated measures ANOVA - No statistical difference between slopes
Implication for depression prevention

- iDBT-ER
  - Effect sizes & drop-out comparable to therapist assisted CT
  - Intervention feasible & acceptable
  - Potential for large scale dissemination (lower cost)

- CT for prevention
  - Less treatment / more product
  - Transition to commercial environment – Key!
Challenges: academic research & industry collaboration

- Open nature of academic science vs. need to protect technology
- Focus on long-term challenges vs. time sensitive product development
- Clinical science as the only voice or one of many (engineering, design, data analysis teams)
Opportunity: academic research & industry collaboration

- Seek alignment in values (science, evidence based therapies)
- Seek alignment in goals (implementation, dissemination)
- Clearly define collaboration to benefit both parties
  - Academic research can contribute valued expertise
  - Industry can (sometimes) fund research, implement & disseminate
- Use pilot projects to test collaboration & develop trust
- Translation of knowledge into practical project value is key
- Seek common ground
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Dissertation Award

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- Lily Jiang
- Cathy Burgess
- Clare Sigler
- Beverly Kikuta
- Savannah Leavitt
- Colby Drouillard
- Anum Ghazipura
- Max Liebowitz
- Dmitry Levin

All the clients!

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