Understanding User Experiences with a Short Message Service (SMS) Based Illness Self-Management Intervention

Presented by Jana LeBert at the The Summer Research Institute at the Louis de la Parte Florida Mental Health Institute

Project Team:
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Background

The Rise of mHealth
  ▶ Benefits of mHealth
    ▶ Increases public access
    ▶ Encourages self-management

Text Message Interventions
  ▶ Short Message Service (SMS)
    ▶ New approach
    ▶ Increases lines for communication, allows for relevant information about mental health to be accessible
    ▶ Supports mental health literacy
Background

Program Description
- SMS-based support program
- Sends daily messages at random intervals
- Focuses on cognitive restructuring

Target Audience
- USF medical students
  - Have higher rates of reported stress
- Lack of Treatment
  - Stigma surrounding mental health
  - Low help-seeking rates
Study Details

Research Focus:
- Understand user experiences with a text messaging-based mental health intervention
- Understand user perceptions of mobile sensing in mental health research

Method:
- Mixed methods study with concurrent design
- Qualitative interviews & quantitative surveys

Participants:
- USF 2nd year College of Medicine students
## Participant Demographics

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>N</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>White or Caucasian</td>
<td>3</td>
<td>75</td>
</tr>
<tr>
<td>Asian/Asian American</td>
<td>1</td>
<td>25</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group</th>
<th>Average Age of Participants</th>
<th># of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>College of Medicine SELECT</td>
<td>26.00</td>
<td>1</td>
</tr>
<tr>
<td>College of Medicine</td>
<td>26.33</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td>Female</td>
<td>3</td>
<td>75</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sexual Orientation</th>
<th>N</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heterosexual</td>
<td>4</td>
<td>100</td>
</tr>
</tbody>
</table>
## Participant Demographics

<table>
<thead>
<tr>
<th>Seen a mental health professional for difficulties</th>
<th>N</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes (Psychiatrist, Psychologist)</td>
<td>2</td>
<td>50</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Received Diagnosis of Mental Illness</th>
<th>N</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td>Anxiety</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td>More than one</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>25</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Taken medication for mental health</th>
<th>N</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>2</td>
<td>50</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>50</td>
</tr>
</tbody>
</table>
## User Experiences

<table>
<thead>
<tr>
<th>Cope Notes Message Rating Table</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cope Notes messages were relevant to my life as a whole, regardless of when they were received.</td>
<td>5.50</td>
<td>1.29</td>
</tr>
<tr>
<td>Cope Notes messages came at a relevant time in my life.</td>
<td>5.25</td>
<td>1.71</td>
</tr>
<tr>
<td>Cope Notes messages were not relevant to my life at all.</td>
<td>1.50</td>
<td>0.58</td>
</tr>
<tr>
<td>I think of Cope Notes messages often, and remembering them helps me face new situations.</td>
<td>4.75</td>
<td>1.71</td>
</tr>
<tr>
<td>Cope Notes Messages provoked a positive feeling.</td>
<td>5.50</td>
<td>1.00</td>
</tr>
<tr>
<td>Cope Notes messages provoked a negative feeling</td>
<td>1.50</td>
<td>0.57</td>
</tr>
<tr>
<td>I fully understood the sentiment behind Cope Notes messages.</td>
<td>5.25</td>
<td>1.50</td>
</tr>
<tr>
<td>Cope Note messages helped me view myself or my situation differently.</td>
<td>5.50</td>
<td>1.29</td>
</tr>
<tr>
<td>Cope Notes messages helped me deal with or relieve pressure or stress.</td>
<td>5.00</td>
<td>2.00</td>
</tr>
<tr>
<td>I have shared Cope Notes messages with others or posted them on a social networking site.</td>
<td>5.50</td>
<td>1.29</td>
</tr>
</tbody>
</table>
**Overarching Themes**

- Likes/Perceived Benefits
- Dislikes/Limitations
- Alternative mHealth Resources
- Suggested Changes
- Perceptions of Ubiquitous Sensing
- Cultural Sensitivity
- Stigma/Peer Support
Overarching Theme 1: Likes/Perceived Benefits

- Advice/Help/Support
- Convenience
- Positive Reframing
- Message Timing
- Variety of Targeted Outcomes
- Content: depth and variability
- Triggers Awareness/Self-Reflection/Mindfulness
- Enticed Action/Behavioral Prompt
- Gap Filler
Overarching Theme 2: Dislikes/Limitations

- Message Length
- Instructional Texts
- Timing
- Cost of Subscription
- Multiple Texts vs. Conversation Thread
Overarching Theme 3: Suggested Changes

- Message Variability
- Interactive Graphics
- Customized Delivery
- Bookmarking Content
Overarching Theme 4: Alternative mHealth Resources

- Headspace
- Three Good Things
- ASMR videos/playlists
- Early Alert texts
Overarching Theme 5: Perceptions of Ubiquitous Sensing

- Battery Usage
- Privacy
- Specific App Tracking
- Customized Data Collection
- Transparency of Access
Overarching Theme 6: Cultural Sensitivity

- Generally Culturally Sensitive
- Western Pop Culture References
- Lifestyle Assumptions
Overarching Theme 7: Stigma/Peer Support

- Stigma Reduction
  - Founder’s Lived Experience
- Acknowledgement of Pre-Formed Notions
- Normalizes Help-Seeking
Limitations

▸ Sample size is small; ongoing data collection
▸ Very specific population

Future Directions

▸ Significance of personality/characteristics
▸ Enhancements with mobile sensing
▸ Exploring cross-disciplinary applications