Qualitative Findings from a Smartphone Intervention Application for Individuals on Medication for Opioid Use Disorder: How User-Centered Design Offers Promise for Harm Reduction

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INTRODUCTION

Smartphone intervention applications (apps)
- Help augment or improve treatment delivery
- Offer support for harm reduction & self-change
But ensuring user satisfaction is challenging. Thus, we must:
- Find balance between evidence-based & user-centered designs
- Ensure usability & acceptability among different populations

Parent study (i.e., ATS) developed an attentional bias retraining (ABR) app to orient attention away from substance related cues towards neutral cues for people on medication for opioid use disorder (MOUD).

METHODS

Inclusion Criteria
- Men & women ages 18-65 (Goal to enroll 30)
- Currently on MOUD for at least 1-month
  - Verified by a urine drug test & confirmation by provider/physician
  - Meet DSM-5 criteria for OUD (via SCID interview)
- Have an iPhone or willing to use a study iPhone

Participants were randomized to 2-weeks of ABR or a control-training condition. All participants were randomly notified 4 times per day. ABR condition had 3 retraining sessions and 1 session measuring AB daily. Questions about craving, mood, & pain followed all sessions.

Parent Study Descriptives N=18

<table>
<thead>
<tr>
<th>Age [M (SD), range]</th>
<th>37 (5.83), 29-50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race</td>
<td>[n, (%)]</td>
</tr>
<tr>
<td>Caucasian</td>
<td>15 (83.3)</td>
</tr>
<tr>
<td>Asian</td>
<td>2 (11.1)</td>
</tr>
<tr>
<td>Black or African American</td>
<td>5 (5.6)</td>
</tr>
<tr>
<td>Female</td>
<td>8 (44.4)</td>
</tr>
<tr>
<td>Ethnicity (Hispanic or Latino)</td>
<td>1 (5.6)</td>
</tr>
<tr>
<td>Employed (for wages/self-employed)</td>
<td>5/3 (27.8/16.7)</td>
</tr>
<tr>
<td>Never Married/Single</td>
<td>7 (38.9)</td>
</tr>
<tr>
<td>Experienced recent pain-Baseline</td>
<td>9 (50)</td>
</tr>
<tr>
<td>Individual with a disability</td>
<td>7 (38.9)</td>
</tr>
</tbody>
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CURRENT STUDY AIMS & ANALYSIS

Aims: Explore participant perspectives regarding the ABR app & identify themes to learn how app-based interventions can be used as an adjunct to other harm reduction strategies (e.g., MOUD) to further improve treatment outcomes (e.g., reduce pain and craving levels).

Examine responses from a semi-structured follow-up interview
- Qualitative interview themes analyzed using Grounded Theory
- Participants (n=15) discussed overall experience with the app

Semi-structured questions covered:
- Interpretation of the app’s ease of use
- How helpful participants thought the app was
- How comfortable they felt using the app

RESULTS

7 Final Qualitative Themes

1. App was easy to use
2. Attention (Briefer assessments are better!)
3. Cravings
4. Pain
5. Mood monitoring
6. Relevance is important (tailoring towards each individual)
7. Offering space for participant app feedback is important

Overall participants were enthusiastic about the app’s potential
- They appreciated their phone being part of their recovery process
- They felt it was helpful to have an app check-in with them periodically
- Found it encouraging to do daily self-check-ins to more closely monitor their recovery progress from moment to moment

Participant quotes about helpful ABR app facets
- Participants liked it was “like a game” & “worked out your brain”
- Craving questions helped “be honest with myself”
- Pain questions helped those with pain to “measure my day”
- Mood questions “made me more aware of my feelings every day”

LIMITATIONS

- Small sample size
- iOS smartphones only & app updates limited some data collection
- Physician MOUD verification: safe & rigorous but slowed enrollment
- COVID-19

DISCUSSION

Findings illuminate benefits that app-based interventions offer to those on MOUD and emphasize harm reduction in practice by meeting individuals where they are from day-to-day.

App-based interventions help facilitate self-monitored, daily check-ins, which are important during the recovery process and should be incorporated in future studies for potentially improved treatment outcomes.

ACKNOWLEDGEMENTS / REFERENCES

For references or questions please contact: frohe06@uw.edu

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