Meta-Analysis of Remotely-Delivered Youth Psychotherapies

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Why Investigate Remote Therapies?

- Essential during this pandemic and circumstances that rule out in-person care (Gruber et al., 2020)

- Therapies with no in-person contact seem very different from in-person psychotherapies
Why Investigate Remote Therapies?

- Most youths who need it do not access traditional mental health care (Merikangas et al., 2011; Rathod et al., 2017)
Study Aims

• Characterize existing literature on remote youth psychotherapies

• Answer two questions:
  • How effective are remote youth psychotherapies overall?
  • What moderates their effectiveness?
Inclusion Criteria:

• Mean age of study sample: 3.5-18.4 years

• Selected and treated for: Anxiety Problems (including trauma and OCD), Depression, ADHD, or Conduct Problems

• Randomized Clinical Trial (random assignment to treatment vs. control condition)

• At least one psychological therapy condition remotely-delivered—i.e., with no in-person therapeutic contact
Full-text articles assessed for eligibility (n = 5,054)

Articles meeting inclusion criteria (n = 41)

Articles with sufficient information to extract effect sizes at post-treatment (N = 37)

Total studies (N=43)

Full-text articles excluded (n = 5,015)
- Not an RCT of a psychotherapy targeting youth anxiety, depressive, ADHD, or misbehavior problems (n = 4,334)
- Did not include a remote psychotherapy condition (n = 681)
Included Study Characteristics:

- Mean age = 9.38 (SD = 4.19)
- Mean duration = 9.14 (SD = 4.28) weeks
- 37.21% included majority Caucasian participants
- 51.16% included majority female participants

Media of Therapy:
- 50.49% involved phone
- 62.79% involved computer programs
- 23.26% involved email
- 44.19% involved pre-recorded videos
- 37.21% involved written texts
- 19.44% involved long-form feedback
Included Study Characteristics:

• Target Problem:
  ◦ 39.53% anxiety
  ◦ 23.26% conduct
  ◦ 23.26% ADHD
  ◦ 9.30% depression
  ◦ 4.65% multiple externalizing (ADHD and conduct)

58.14% included therapeutic provider contact
55.81% included synchronous (i.e., real-time) provider contact
How well do Remote Therapies work?

About as well as in-person psychotherapies at post (N=43)

Post-Treatment Effect Sizes (Hedges g)

- Remote Therapies: 0.47
- All Psychotherapies: 0.46

Even better at follow-up (n=12)

Follow-up Effect Sizes (Hedges g)

- Remote Therapies: 0.44
- All Psychotherapies: 0.36
## Significant Binary Moderators of Remote Therapies

<table>
<thead>
<tr>
<th>Moderator</th>
<th>ES (g) with</th>
<th>ES (g) without</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Therapeutic Provider Contact</td>
<td>0.64</td>
<td>0.22</td>
<td>.024</td>
</tr>
<tr>
<td>Logistical Provider Contact</td>
<td>0.24</td>
<td>0.68</td>
<td>.023</td>
</tr>
<tr>
<td>Synchronous Provider Contact</td>
<td>0.67</td>
<td>0.21</td>
<td>.014</td>
</tr>
<tr>
<td>Attention/Working Memory Training</td>
<td>-0.18</td>
<td>0.60</td>
<td>.001</td>
</tr>
<tr>
<td>Phone Contact</td>
<td>0.65</td>
<td>0.19</td>
<td>.036</td>
</tr>
<tr>
<td>Skill Building Provider Contact</td>
<td>0.68</td>
<td>0.18</td>
<td>.025</td>
</tr>
<tr>
<td>Discussing Implementation Difficulties with Providers*</td>
<td>0.80</td>
<td>-0.11</td>
<td>.0001</td>
</tr>
</tbody>
</table>

*Exploratory analysis without small sample correction – too few degrees of freedom to interpret model with the small sample correction. Note that the small sample correction was a precaution, not a necessity, for this study.
## Other Sig. Moderators of Remote Therapies

<table>
<thead>
<tr>
<th>Moderator</th>
<th>ES (g) Anxiety</th>
<th>ES (g) Conduct</th>
<th>ES (g) ADHD</th>
<th>p-values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target Problem</td>
<td>0.65</td>
<td>0.78</td>
<td>0.09</td>
<td>&lt;.05</td>
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</table>

<table>
<thead>
<tr>
<th>Moderator</th>
<th>ES (g) Youth-Focused Behavior Therapy</th>
<th>ES (g) Caregiver-Focused Behavior Therapy</th>
<th>ES (g) Other Therapy</th>
<th>p-values</th>
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</thead>
<tbody>
<tr>
<td>Therapy Type</td>
<td>0.59</td>
<td>0.74</td>
<td>-0.05</td>
<td>&lt;.05</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Moderator</th>
<th>ES (g) &lt;25%</th>
<th>ES (g) ≥25%; &lt;50</th>
<th>ES (g) ≥50%</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of Therapy with Provider Contact</td>
<td>0.15</td>
<td>0.86</td>
<td>0.70</td>
<td>&lt;.05</td>
</tr>
</tbody>
</table>
Limitations

- It is difficult to disentangle potential confounds among variables—a common challenge in meta-analyses
- Limited studies using certain media (i.e., video-chat, instant messaging, and text messaging) prevent analyses of ESs for these media
- Communication via technology is evolving rapidly -- the landscape of remote therapies may look quite different quite soon
Future Directions

• Use the findings to inform design and practice of remote therapies
• Invest in alternative remote techniques for addressing ADHD (e.g., medication; physical activity)
• Conduct studies of remote therapies for depression and multiple problems
• Investigate why some interventions without therapeutic provider support do work (e.g., Schleider & Weisz, 2018)
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