Enhancing Adolescent Mothers’ Positive Parenting through EMA: A feasibility study
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Background

- Adolescent mothers (AMs) have challenges managing multiple sources of stress in their lives including single parenthood, poverty, and balancing school and work (Letourneau et al., 2004).
- Many AMs have early histories of psychosocial adversity including childhood maltreatment which challenges their ability to adaptively regulate emotions and engage in positive parenting (Cote et al., 2010).
- Ecological Momentary Assessment (EMA) is an ecologically valid assessment and clinical tool that uses mobile technologies to monitor psychological and behavioral states in real-time and in real-life situations.
- As an assessment tool EMA evaluates the affect states of AMs in their daily lives.
- As a clinical tool EMA allows AMs to practice and enhance skills in daily life learned in the provider-delivered parenting intervention.

Objective

- The objective of this pilot study is to examine the feasibility and utilization of EMA with AMs enrolled in a larger provider-delivered parenting intervention study.

Methods

- Seven (7) AMs were provided with an android-based smartphone and EMA application for both:
  - Automatically Prompted Reports (nightly)
  - Self-initiated Reports (at any time)
- Fig 1 depicts the slider bar visual analogue scale to report stress level for both automatic and self-initiated
- Negative (“BAD”: 0 - 49) to Positive (“GOOD”: 50-100)
- Based on the stress level reported, AMs received messages of skills learned in the intervention (e.g. “Freeze, Breathe, Choose”).
- All data were collected in real-time over a secure web site. Data reported here cover a 63 day period from May 4, 2013 to July 5, 2013.

Results

- Response rates to automatic prompts were calculated (possible responses to nightly prompts is 63 total x 7 participants = 441 total possible responses).
- Response rate was nearly 40% (174/441) with high variability between participants (range 10% (6/63) to 62% (39/63).
- Fig. 2 depicts the mean response time to automatic prompts was 118.5 minutes (SD=261.17; range, 0-1202).

Conclusions

- Participants actively engaged with the EMA intervention.
- The participants tended to respond to the automatic prompt immediately and positively. They consistently responded to the automatic prompt from week to week over the course of approximately two months.
- Some more actively made self-initiated reports than others, and self-initiated reports more often occurred at night after parent had completed stressful parenting activities (e.g. bathing and putting child to bed).
- Similar to the automatically prompted reports, self-initiated reports were in the often positive range.

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References


Measures and Participant Characteristics (Table 1)

- Baseline data were collected approximately 92 days prior to study start date (SD 26.43)

Demographics and background were collected.
- Center for Epidemiologic Studies Depression Scale -8 (CES-D-8; Radloff, 1997) measures symptoms of depression; ≥7 is clinically significant.
- Parental Distress scale of the Parenting Stress Index (Abidin, 1997) measures level of stress related to parenting.

![Table 1. Participant Demographics (N=7)](image)

<table>
<thead>
<tr>
<th>Participant’s Age (yrs.) (M, SD)</th>
<th>19.6 (.53)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child’s Age (mos.) (M, SD)</td>
<td>18.4 (8.4)</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td></td>
</tr>
<tr>
<td>Latina</td>
<td>71.4%</td>
</tr>
<tr>
<td>Mixed: Black/White</td>
<td>13.4%</td>
</tr>
<tr>
<td>Mixed: Black/White/Latina</td>
<td>14.3%</td>
</tr>
<tr>
<td>Held back a school grade</td>
<td>100%</td>
</tr>
<tr>
<td>CES-D8 clinical depression</td>
<td>42.8%</td>
</tr>
<tr>
<td>Parental Distress Scale ≥ 90th #ile</td>
<td>100%</td>
</tr>
</tbody>
</table>

![Fig.1. Smartphone application with a visual analogue scale](image)

![Fig.2. Response time to automatic prompts](image)

![Fig.3. Mean valences to automatically prompted reports and self-initiated reports](image)

![Fig.4. Number of self-initiated reports by time of day](image)

![Fig.4. Number of self-initiated reports by time of day](image)