APPLYING MOBILE DIARIES IN INTERVENTION DESIGNS: EXPERIENCES FROM PILOT STUDIES
Anna Rönkä
University of Jyväskylä

A paper presented at the NIRE seminar “Diaries and intensive longitudinal data in intervention designs, June 9, 2016, Oxford
My orientation and aims of presentation

1) To introduce a mobile diary for interventions and its theoretical and methodological origins within family research

2) To present results of pilot (case) studies where mobile diary intervention was tested in two contexts: family intervention and health promotion

3) To discuss the strengths, limitations and further possibilities of the mobile diary
1. Introduction of the mobile diary for interventions
From research method to intervention tool

**STEP1**
Use of (Mobile)diary method in family studies since 2002
Finding in 2007: the positive effect of diary keeping in family relations

**STEP 2**
The development and evaluation of mobile diary in family intervention 2009-2012

**STEP 3**
Further development and testing of mobile diary in health promotion
Use of mobile diary in larger samples and with various focus and age groups
The power of diary method in family research (e.g., Laurenceau & Bolger, 2005)

- Being sensitive to short-term family dynamics and temporal variation in moods, interactions and routines
- Giving access to everyday family situations and moments; seeking factors that account for good vs. bad periods in family life
- Possibility to study family life from the perspective of different family members, dyads (e.g. crossover), family as a whole (e.g. family atmosphere) and the links between family and other contexts (spillover)
Diary as a tool for change: starting points

**BOOSTING THE POSITIVE IN THE DAILY LIFE**
- Resilience, positive parenting, daily uplifts, gratitude, relationship flourishing, relationship maintenance

**DIARY METHOD, AND THE POSSIBILITIES OF MOBILE TECHNOLOGY**
- Going near to daily moments, study daily life as it is lived

**DEVELOPMENT OF WORK PRACTICES**
- Potential of mobile technology in clinical work
- Digitalization of health and social services
Benefits of mobile technology

- bridges the gap between inpatient and outpatient care
- enhances the therapist-patient bond,
- improves the transfer to everyday life (Preziosa et al, 2009)
- **Cost-effective** and wide reaching
- Targets large samples and hard-to-reach-groups
- Enhances modification and monitoring of lifestyle (Blake, 2008)
The mobile diary intervention in a nutshell

Technically: a web-program adapted for mobile devices

The web-program includes a package of evaluative and interventive questions

The counselor/group supervisor/researcher uses the web, the client his or her own mobile phone (via sms or web-link)
Mobile diary intervention

1) Evaluation of families’ daily life and possible change (Evaluative questions)
   - Situational and non-memory biased information about daily life and its fluctuations

2) Intervention (”homework”) (Reflective and action – oriented ”interventive” questions)
   - Engagement, activating, taking responsibility
   - Invoking situated learning and reflection
   - Keeping in mind, enhancing the learning and groups process
   - Repetition and reminding, reinforcement
Examples of the interventive diary questions

FAMILY INTERVENTION
- Describe one situation today where you succeeded well in setting limits to your child (reflective)
- On a scale from 1 to 7, how much you and your spouse agreed in child rearing issues? (evaluative)
- What did you do to enhance good atmosphere today? (action-oriented)
- On a scale from 1 to 7, how well did you succeed in leaving your work at the workplace today? (reflective, action-oriented)

HEALTH PROMOTION
- How motivated you currently are in taking care of your own wellbeing (1-7)? (evaluative)
- Please report one concrete thing by means of which you could improve your wellbeing today (action-oriented)
- How well did you succeed in recovering from your work strain after your last work shift? (1-7) (evaluative, reflective)
a) Mobile-diary intervention design in family counseling context “eFamily coach”

1. A meeting between the family counselor and a family. Discussion about the aims of the mobile assisted family guidance.

2. Family counselor chooses questions from the platform and programs the timing of the text messages.

3. Family members answer to the questions. The answers go in real time to the web-platform.

4. Family counselor and family discuss together about what they have learned.

Family members work towards the agreed tasks (with the assistance of evaluative, reflective and instructive questions).

Rönkä et al., 2015
b) Mobile-diary intervention for groups (eGroup coach)

- Group session 1
  - Homework relating to theme 1 as text messages twice a week

- Group session 2
  - Text messages related to theme 2 twice a week

- Group session 6
  - Text messages related to theme 6 twice a week

Pre-test questions (5 text messages)

Post-test questions (10 text messages, questionnaire)
2) Results of the pilot studies

"It was good that you really had to think about daily issues"

"The messages reminded about the important things in the daily life and made me to stop and think about these issues"

"It brought about conversation at home and was visible inside home walls"

"It was good that you really had to think about daily issues"
a) Piloting mobile diary in the context of family intervention

<table>
<thead>
<tr>
<th>Context</th>
<th>Sample</th>
<th>The intervention</th>
<th>Methods of evaluation</th>
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</thead>
<tbody>
<tr>
<td>Family counseling office</td>
<td>48 participants, feedback questions were sent to 26 adults and 4 children</td>
<td>A six week period; mobile assisted work every other week (5 questions, 2 times a week)</td>
<td>Feedback questions as sms, web-questionnaire, focus group interviews for counselors</td>
</tr>
<tr>
<td>Parental group</td>
<td>9 families recruited from an occupational therapy clinic</td>
<td>7 weeks, 5 sessions (questions twice a week)</td>
<td>Feedback questions, web-questionnaire</td>
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### What did families think?

<table>
<thead>
<tr>
<th>Mobile-assisted family counseling…</th>
<th>Disagree (1,2,3)</th>
<th>Neutral (4)</th>
<th>Agree (5,6,7)</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults (N=26)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fulfilled my needs</td>
<td>9</td>
<td>4</td>
<td>14</td>
<td>4,38</td>
</tr>
<tr>
<td>Encouraged me to work for better family functioning</td>
<td>9</td>
<td>2</td>
<td>14</td>
<td>4.16</td>
</tr>
<tr>
<td>Was easy and handy</td>
<td>3</td>
<td>2</td>
<td>20</td>
<td>5,35</td>
</tr>
<tr>
<td>Children (N=4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affected positively to my family relations</td>
<td>1/3</td>
<td></td>
<td>2/3</td>
<td></td>
</tr>
<tr>
<td>Was nice and fun</td>
<td>1/4</td>
<td>3/4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was easy and handy</td>
<td>4/4</td>
<td></td>
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</table>
Feedback from the participants

<table>
<thead>
<tr>
<th>Family counselors</th>
<th>Parents</th>
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<tbody>
<tr>
<td>• Modern way to work with families-</td>
<td>• It evoked reflections- made to think</td>
</tr>
<tr>
<td>Useful as an additional support structure</td>
<td>• The messages worked as reminders in the daily life and kept things in</td>
</tr>
<tr>
<td>• Motivates and reminds clients about the goals of the</td>
<td>mind</td>
</tr>
<tr>
<td>counseling</td>
<td>• It was easy</td>
</tr>
<tr>
<td>• Helps clients in their own processes and to keep</td>
<td>• One had to take the other family member’s point of view</td>
</tr>
<tr>
<td>important issues in mind</td>
<td>• It motivated to do things such as giving positive feedback</td>
</tr>
<tr>
<td>• Gives families responsibility over their life</td>
<td>• Challenging to answer in a hurry and tired</td>
</tr>
<tr>
<td>• Makes different voices in the family more visible and</td>
<td>• Repeating of same questions start to tire</td>
</tr>
<tr>
<td>increases communication</td>
<td></td>
</tr>
<tr>
<td>• Opens up discussion in the counseling</td>
<td></td>
</tr>
<tr>
<td>• Not suitable for all families! Does not replace the</td>
<td></td>
</tr>
<tr>
<td>counselor</td>
<td></td>
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<tr>
<td>• Some workers have negative attitudes towards technology</td>
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Rönkä et al., 2015
Current state analysis
- mobile diary
- web-survey

Challenges in employees' well-being:
- Level of physical activity is low.
- Problems in recovering after work.
- Problems in combining work and leisure time.

The 1st meeting
"What is well-being? My own well-being?"
Steps of making a change in lifestyle
"My own aim of my well being?"

Intervention period:
12 weeks (n=16)

Recovery and sleep
Work and leisure time
Physical activity and eating habits

Methods for promoting well-being:
- SMS messages (mobile phone)
- Well being diary (paper book)
- Group web site

Group meeting – themes:
- "Have I succeeded?"
- "What I’ve been trying to do/to make a change?"
- "Updating my aim?"
- "Well being in every day life"

The Final meeting
Successes and shortcoming
"My current well being and next steps"

Assessment and follow-ups
Final survey
1 month, 3 months and 6 months follow-ups

Punna et al., 2014
Aims of the pilot intervention

• To promote general well being of participants according to their own aims
  - increase interest and motivation for self-care
  - promote adoption of good habits into participant’s everyday life
  - provide support and opportunities to steps towards healthy lifestyle

• To develop methods and tools with participants to promote well being of employees in 24 hour economy
  - evaluate mobile tools as means to promote self care
  - find suitable ways to motivate and encourage participants to adapt and commit to healthy lifestyle
  - help participants to gain confidence to discuss lifestyle matters among their colleagues and create positive atmosphere towards healthy lifestyle choices in their work places
Feedback on mobile

• "Raised thinking and in total worked well"
• Most participants (around 70%) reported that the formation of messages, the number of messages and the answering time were suitable
• Participants felt that mobile messages were supporting them to improve their daily well being with respect to their own goals
• The number of successes in personal goals increased during the intervention and at 1 and 3 month follow-up points but decreased after 6 months

"I have slept better and increased physical activity"

"I met friends and the whole day was relaxing and refreshing"
3) Discussion
Mobile intervention: conclusions

- Offers an additional support structure that activates and intensifies counseling processes.
- Effective in combination with peer group sessions.
- Interventive questions received at home in the middle of family life effective in invoking reflections, keeping important issues in mind and testing family/health practices at home.
- Works best as an intensive, short term booster of a positive behavior.
- Motivation decreases over time; there should be variation in the content and form of questions.
Further development of the mobile diary intervention: school context

From monitoring to the support of agency
Important to set one’s own goals

School/classroom context:
• promoting children’s agency in relation to learning and homework
• Supporting healthy sleep-wake patterns and self-monitoring the time spent in internet
• Improving daily routines
• Intensive support during transitional periods
• Involving also parents

How well have you managed to control your time at the computer today?
Describe one situation today at school in which you enjoyed learning?
References & further reading

Thank you!

Mobile diary intervention teams:

- At the University of Jyväskylä: Kaisa Malinen, Eija Sevon, Johanna Hyväluoma, Kimmo Jokinen
- At the JAMK University of Applied Sciences: Mari Punna, Sanna Sihvonen, Sanna Häkkinen, Ulla Teppo
- Drawings: Dr. Virpi Uotinen
- Contact information anna.k.ronka@jyu.fi