The pilot project

Preliminary results from early intervention

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&

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“Pro Kind“ – Brief description

- „Pro Kind“ is a pilot project for high-risk primiparous women and their families.

- It closely models the Nurse-Family Partnership Program (Olds, 2004) with necessary adjustments to the German social state.

  - In the U.S., nurses conduct the home visits, in Germany midwives and social pedagogues act as family attendants.

  - Randomized control group design in three federal states: Lower Saxony, Bremen/Bremerhaven, Saxony
Target Group Criteria

- Primiparous pregnant women
- Registration from the 12th until the 28th week of pregnancy
- Financial problem position
  - Unemployment compensation
  - Over-indebtedness
- At least one personal/social risk factor
  - teenage pregnancy
  - no graduation
  - social isolation
  - health problems (physic or psychic)
- Receptive and expressive German language competence
- Assured right of residence
**Project phase I:**
Prenatal Intervention

**Project phase II:**
Early Childhood Intervention

- Mother/Father
  - Neuro-developmental outcomes
    - Cognitive, motor, language development
  - Socio-emotional development
  - Life-course development
  - Relationships with friends and family
  - Health and social services

- Infant/Toddler
  - Neuro-developmental outcomes
  - Readiness for school
    - Cognitive, motor, language development
  - Socio-emotional development

- Preschooler
  - Readiness for school
    - Cognitive, motor, language development
  - Socio-emotional development

- Adolescent
  - Long-term consequences
    - Academic success
    - Positive social behavior
    - Life without drugs

Pilot project "Pro Kind"
- Human ecology theory
- Self-efficacy theory
- Attachment theory
Objectives of „Pro Kind“

- Improvement of maternal health during pregnancy and birth of a healthy child.
- Improvement of parental competence and amelioration of life-course development.
- Improvement of child health and development of cognitive and non-cognitive skills.
Research design and methods
Randomized Control Group Design

- Evaluation of program effectiveness and efficiency on
  - mothers/fathers
  - children

Randomization of participants

Treatment group
Home visiting program „Pro Kind“
+ public health and social services

Control group
Public health and social services only
Evaluation: Measurement categories

- Demographics
- Maternal health status and habits during and after pregnancy
- Stress and Coping
- Parental competency
- Life-course development
- Formal and informal networks
- Domestic violence

- Health status
- Cognitive, motor, language and socio-emotional development

- Attachment and attachment behavior

Repeated assessment times at the project run as well as scheduled follow-up-assessments
Assessment times

Registration in the project (Baseline)  36th week of pregnancy  about 6th month of age  about 12th month of age  about 24th month of age

\[ t0 \quad t1 \quad t2 \quad t3 \quad t4 \]
Cost-Benefit-Analysis

• **Aim of research**

  Investigation of societal and personal program benefits, both nonmonetary and monetary.

• **Measurement Categories:**
  - Human capital investments
  - Public revenues
  - Welfare dependency
  - Labor market participation
  - Health costs
  - Institutional childcare utilization
  - Child-welfare interventions
  - ...

Cost-Benefit-Analysis

Methods

- Usage of administrative data
  - Health insurance data
  - Association of Statutory Health Insurance Physicians
  - Federal Justice Register
  - Public Youth Service

- Telephone Interviews
  - Questionnaires to assess the measurement categories
  - Questionnaire in the first year of child’s life from the GSOEP (Mother-Child: Age 0-1)
State of the Pilot Project
&
Sample description
State of participant acquisition
(December 2008)


Source: t0-data base n = 493 women
Financial situation: Per-capita income
Compared to GSOEP primiparous women

GSOEP  n: 389
∅: 1314€

Pro Kind n: 326
∅: 597€
Personal risk factor: Teenage pregnancy
Compared to GSOEP primiparous women
Personal risk factor: School graduation
Compared to GSOEP primiparous women
Participants risk status (t0-Baseline)

<table>
<thead>
<tr>
<th>Risk Factors</th>
<th>Treatment Group</th>
<th>Control Group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2</td>
<td>67</td>
<td>52</td>
<td>119</td>
</tr>
<tr>
<td>3-5</td>
<td>130</td>
<td>126</td>
<td>256</td>
</tr>
<tr>
<td>&gt; 5</td>
<td>60</td>
<td>58</td>
<td>118</td>
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</tbody>
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Source: t0-data base n = 493 women
Preliminary Results

- Pro Kind participants
- Infants of Pro Kind participants
**Parental Self-efficacy**

(Pre-/Postnatal Parental Expectations Survey, Reece 1996)

<table>
<thead>
<tr>
<th></th>
<th>t0 (Baseline)</th>
<th>t1 (36. WoP)</th>
<th>t2 (6 months)</th>
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<tbody>
<tr>
<td><strong>3.44</strong></td>
<td>3.41</td>
<td>3.45</td>
<td>3.59</td>
</tr>
<tr>
<td><strong>3.46</strong></td>
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<tr>
<td><strong>3.66</strong></td>
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Main effect „Time“: $F_{(1;87)} = 28,483^{***}$

Source: t0-t1-t2-data base $n = 89$ women
Parental care behavior: breastfeeding
Compared to GSOEP first-time mothers

- Treatment group: n=126
- Control group: n=116
- GSOEP: n=108

Bar chart showing:
- Still breastfeeding
- Longer than four weeks breastfeeding
- Breastfeeding within the first four weeks
- No breastfeeding
Bayley Scales of Infant Development-II
Psychomotor Developmental Index (Reuner et al., 2007)

Main effect „Time“:
\[ F_{(1;40)} = 15,349^{***} \]

Source: t2-t3-data base n = 42 infants
Bayley Scales of Infant Development-II
Mental Developmental Index

Interaction effect „Time x Group“:  
$$\text{F}_{(1;40)} = 4,174^*$$

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<thead>
<tr>
<th>Treatment group (n = 17)</th>
<th>Control group (n = 25)</th>
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<tr>
<td>t2 (6 months)</td>
<td>t3 (12 months)</td>
</tr>
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</table>

- Treatment group: 90,61 (t2) to 96,61 (t3)
- Control group: 90,12 (t2) to 88,12 (t3)

Source: t2-t3-data base n = 42 infants
Summary and future prospects

- **Preliminary results**: Program effects on participants
  - Significant gains in parental self-efficacy in both groups.
  - Comparable results for maternal health habits during pregnancy and educational attitudes.

- **Preliminary results**: Program effects on infants
  - Infants of both groups show a catch-up growth in their psychomotor development.
  - **But**: Significant more positive mental development in treatment group infants than in control group infants.

- **Examination**, whether hitherto missing program effects on participants can be ascribed to...
  - ... the fact of reaching not only high-risk women?
  - ... length and intensity of home visitation?
Thank you for your attention!!