Improvement of Maternal-Child Health (MCH) through a Community-Oriented MCH Project in Ethiopia

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Overview of the project

- **Target area**
  Kilte Awlalo Woreda in Tigray, Ethiopia

- **Project period**
  2012. 3. - 2014. 8. (2 years and 6 months)

To achieve the MDG 4 & 5
- Reduce child mortality & Improve maternal health

To improve MCH and FP status of target area

1. Develop capacity of the health care providers (HCP).
2. Improve local residents’ awareness on MCH (Maternal & Child Health)/ FP (Family Planning).
3. Renovate the infrastructure of electricity and water supply in health centers.
4. Provide MCH equipment and materials in health centers.
5. Invite Ethiopian health officials involved in the project to Korea.
Overview of the Project

- Target area
  - Kilte Awlaelo woreda in Tigray, Ethiopia

MAP OF WOREDA KILTE AWLAELO

Agulae health center: Main H/C

Kihen: strategic point of outreach
Overview of the Project

- Health centers in Kilte Awlaelo woreda in Tigray, Ethiopia
Overview of the Project

- The 2-year MCH project in Ethiopia consisted of on-the-job trainings for nurses and midwives at health centers, education for health extension workers, community health education, and radio broadcasting of MCH/FP-related information.
- The project was intervened in a rural area, *Kihen* of the Tigray regional state in north Ethiopia.
Overview of the Project

- Midwife and nurse training
Methods

- One group pre-post design
- The inclusion criteria of the study were women aged 15 to 49 who were married and resided in Kihen.
- The number of the women participated in the study was 927 for pre-test and 409 for post-test.
- A complete baseline survey was done for pre-test.
- For post-test, we used a stratified random sampling method.
- Data for the pre-test were collected from October to December in 2012, and the post-test data from June to July in 2014.
Methods

Our trained research assistants visited each woman’s home and interviewed them using a structured questionnaire which was adapted from a safe motherhood population-based survey questionnaire developed by JHPIEGO (2004).
Methods

- Survey Questionnaire
Methods: Intervention

- Health education for women residents by volunteers from SNU
  - Family planning
  - Antenatal care & Safe delivery
  - Postnatal care
  - Child care: Immunization, Hygiene, Nutrition & Monitoring growth
Methods: Intervention

- Health education for children by volunteers from SNU
  - Washing hands and brushing teeth
Methods: Intervention

- **MCH-related education for local women residents**
  - **Purpose**: To improve local residents’ awareness and knowledge on MCH/FP
  - **Instructors**: Faculty members of Mekelle University
  - **Schedule**

<table>
<thead>
<tr>
<th>Date</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar 19-Mar 23</td>
<td>Family planning</td>
</tr>
<tr>
<td>Apr 9–Apr 13</td>
<td>Antenatal and delivery care</td>
</tr>
<tr>
<td>Apr 30–May 4</td>
<td>Newborn, postnatal and child care</td>
</tr>
</tbody>
</table>

- **The outreach education** was given to women residents by group which was called “Cluster”
Methods: Intervention

- MCH-related education for local women residents
Methods: Intervention

- HDA leaders
**Methods: Intervention**

- **Project promotion & dissemination**
  - Desk calendar
  - Wall calendar
Methods: Intervention

- Project promotion & dissemination_2
  - Radio broadcasting

<table>
<thead>
<tr>
<th>Day</th>
<th>Contents</th>
<th>duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon</td>
<td>To improve <strong>male involvement</strong> during postpartum</td>
<td>2’31”</td>
</tr>
<tr>
<td>Tue</td>
<td>Couple (the age group of 24-30) has 7 month-old child and are talking about <strong>contraception</strong></td>
<td>2’15”</td>
</tr>
<tr>
<td>Wed</td>
<td>Discussion among male during <strong>postpartum</strong></td>
<td>1’59”</td>
</tr>
<tr>
<td>Thu</td>
<td>Discussion on <strong>family planning</strong> among Health Development Armies (HDA)</td>
<td>1’49”</td>
</tr>
<tr>
<td>Fri</td>
<td>Discussion with the male community leaders on <strong>maternal and child health care particularly on postpartum</strong></td>
<td>2’05”</td>
</tr>
<tr>
<td>Sat</td>
<td>Feeding under 5 year-old children</td>
<td>2’03”</td>
</tr>
<tr>
<td>Sun</td>
<td>Feeding child before 6 months-old</td>
<td>1’09”</td>
</tr>
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</table>
Methods: Intervention

- Project promotion & dissemination_3
- Poster
Methods: Intervention

- Project promotion & dissemination_4
Methods: Intervention

- Project promotion & dissemination
  - Project Homepage
  - Signboard
Results

- There were significant increases of the women’s knowledge on serious health problems during pregnancy ($p<.001$), labor and childbirth ($p<.001$), 1$^{st}$ 7 days after childbirth ($p<.001$), and early childhood ($p<.001$) at the completion of the project.
Results

- Awareness on health problems during pregnancy

[Bar chart showing awareness levels for various health problems during pregnancy]
Results

- Awareness on health problems during delivery:

  - Severe bleeding: 100%
  - Severe headache: 80%
  - Convulsions: 60%
  - High fever: 40%
  - Loss of consciousness: 20%
  - Labor lasting > 12hrs: 80%
  - Placenta not delivered 30minutes after baby: 60%
  - None: 20%
Results

- Awareness on health problems during post-partum period

![Bar chart showing awareness percentages for various health issues during post-partum period, such as difficult or fast breathing, yellow skin/eye color (jaundice), poor sucking or feeding, pus, bleeding or discharge from around, very small baby, skin lesions or blisters, convulsions or spasms, rigidity, lethargy or unconsciousness, red or swollen eyes with pus.]
Results

- Knowledge on Family planning

![Graph showing knowledge on family planning methods]
Results

- The women’s perceptions of father involvement in prenatal visit ($p<.001$), and childbirth ($p<.001$) were also significantly positively increased.

- The number of women currently using a family planning method was significantly increased from 31.3% to 61.8% ($p<.001$).

- The institutional birth rate was also significantly increased from 10.4% to 91.9% ($p<.001$).
Results

- Using family planning

- Baseline survey (N=927)
  - Using now 31.3%
  - No 68.7%

- Endline survey (N=409)
  - Using now 61.8%
  - No 38.2%

<table>
<thead>
<tr>
<th>Method</th>
<th>Baseline</th>
<th>Endline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injectable</td>
<td>60.8%</td>
<td>57.7%</td>
</tr>
<tr>
<td>Implants</td>
<td>35.4%</td>
<td>33.2%</td>
</tr>
<tr>
<td>Pill</td>
<td>1.4%</td>
<td>7.9%</td>
</tr>
<tr>
<td>Condom</td>
<td>0.3%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Rhythm method</td>
<td>0.7%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Female sterilization</td>
<td>1.0%</td>
<td>0.4%</td>
</tr>
</tbody>
</table>
Results

- **Prenatal care experience for women delivered within two years**

**Baseline survey (N=346)**
- Yes: 88.3%
- No: 11.7%

**Endline survey (N=123)**
- Yes: 92.6%
- No: 7.4%
Results

- **Delivery place** for women delivered within two years

**Baseline survey (N=346)**
- Home 85.5%
- Public sector 10.4%

**Endline survey (N=123)**
- Home 6.5%
- Public sector 91.9%
Results

Experience of post-partum care for women delivered within two years

- **Baseline survey (N=346)**
  - Yes: 69.0%
  - No: 31.0%
  - Breakdown of timing:
    - Within 3 days: 76.7%
    - 4-7 days: 11.4%
    - 8 days - 4 weeks: 10.5%
    - 4 weeks 1 day - 8 weeks: 1.4%

- **Endline survey (N=123)**
  - Yes: 93.4%
  - No: 6.6%
  - Breakdown of timing:
    - Within 3 days: 82.5%
    - 4-7 days: 11.4%
    - 8 days - 4 weeks: 6.1%
    - 4 weeks 1 day - 8 weeks: 0.0%
Inviting Ethiopian officials involved in the project to Korea

- Cultural Experience in Seoul
Closing Ceremony in Ethiopia
Conclusion

- Consistent with the national health policy of Ethiopia, our project was effective to improve the women’s knowledge and perceptions of MCH and their MCH practices. Our study results suggest that capacity development of nursing staffs and community health education are necessary to change knowledge and perceptions on health of community residents and ultimately to improve MCH in a developing country.
Team members
Team members in Ethiopia
Thank you