FUSAM project: evaluation of a brief psychosocial support for mothers and their severely acute malnourished children in Nepal and its effect on maternal mental health

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WAIMH Rome - May 2018
Our partners

• District Public Health Office in Saptari

• Child Health Division (MoH)

• Dr Fahmida Tofail

• Dr Jena Hamadani
Rationale

A sustainable recovery from an episode of severe acute malnutrition depends not only on health care for the child, but also on the mother’s mental health and the family support.

The link between child malnutrition and maternal mental health is a substantial one:

- Poor maternal mental health, in particular maternal depression, is a serious risk factor for early childhood underweight and stunting (Surkan, et al., 2011);

- Poor child growth increases the risk of maternal depressive symptomology (Samaroff, 2009);
Purpose of the FUSAM study

To assess the effectiveness of a brief psychosocial intervention on child nutrition, development and maternal mental health and child care practices.

Hypothesis 1
The combined nutrition & psychosocial intervention might confer a benefit on child growth and development.

Hypothesis 2
The psychosocial component might have an impact on the underlying determinants of severe acute malnutrition: child care practices and stimulation, parent-child relationships and maternal mental health.
Area and conditions

Saptari district - South-East of Nepal

Inclusion criteria

- Children aged 6-24 months and their mothers
- Uncomplicated SAM children
- Admitted into CMAM programme
**Study design: Two arms CRCT**

- **12 OTPs**
  - **6 OTPs/ intervention**
    - **NUTPSY group**
      - = **211 SAM children**
  - **6 OTPs/control**
    - **NUT group**
      - = **216 SAM children**

1 comparison group
= 213 non-SAM children

**Randomization**

**Inclusion**

- **Pre-test**
- **Post-test (10 weeks)**
- **Follow up 5**
- **Follow up 11**

**Tests**
Methodology
Methodology: the nutritional treatment

• About 2 months of nutritional treatment

➢ till discharge from the nutritional programme and considered as cured
Methodology: the psychosocial sessions in OTPs

Family welcome

Communication & Play

Breastfeeding & feeding

Massage, bathing, sleep & relaxation

Family session

5 sessions of 30 to 45 minutes
1 session: Communication & Play

**Key messages:** ‘Communication is very important for the child’s physical, mental, and social development’.

**Review of previous session**

**Presentation** of the objective of the session

<table>
<thead>
<tr>
<th>Active listening</th>
<th>Mediation</th>
<th>Theory</th>
<th>Visual</th>
<th>Practice</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>- PSW listens to the mother talking about her communication style with her child</td>
<td>- PSW shows to the mother some photos of imitation in the baby of 2/3 weeks and parents/child interaction.</td>
<td>- PSW links communication and play</td>
<td>- PSW discusses with the mother about usual moments of play with her child at home</td>
<td>- Playing Time! the mother tries to practice with the child.</td>
<td>- Feedback from the mother and suggest the exercise to be repeated at home</td>
</tr>
</tbody>
</table>

**Evaluation of the session by the mother**

Introduce topic next session

Give an appointment and say good bye to both the mother & the child
Baseline characteristics
## Baseline characteristics for mothers

<table>
<thead>
<tr>
<th>Variables</th>
<th>NUT (n=216)</th>
<th>NUTPSY (n=211)</th>
<th>p-value</th>
<th>Non SAM (n=213)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Socio-economic factors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mothers’ age (in year)</td>
<td>25 (±5.4)</td>
<td>24 (±4.5)</td>
<td>NS</td>
<td>24.2 (±4.1)</td>
</tr>
<tr>
<td>Mothers’ education (&lt;5y schooling)</td>
<td>63.4%</td>
<td>64.9%</td>
<td>NS</td>
<td>46.0%</td>
</tr>
<tr>
<td>Mothers work outside</td>
<td>9.7%</td>
<td>8.1%</td>
<td>NS</td>
<td>8.9%</td>
</tr>
<tr>
<td>More than 2 children</td>
<td>35.2%</td>
<td>28.9%</td>
<td>NS</td>
<td>23.5%</td>
</tr>
<tr>
<td>Housing (poor construction 1 or 2 part mud)</td>
<td>83.3%</td>
<td>79.1%</td>
<td>NS</td>
<td>69.0%</td>
</tr>
<tr>
<td><strong>Socio-economic Status</strong></td>
<td>4.31±2.7</td>
<td>5.39±3.2</td>
<td>&lt;0.001</td>
<td>5.4 (3.2)</td>
</tr>
<tr>
<td>Income (&lt;$112/mo)</td>
<td>50.5%</td>
<td>57.3%</td>
<td>NS</td>
<td>48.8%</td>
</tr>
<tr>
<td>Father’s presence</td>
<td>47.7%</td>
<td>46.7%</td>
<td>NS</td>
<td>57.3%</td>
</tr>
</tbody>
</table>
Attendance to psychosocial sessions
Attendance to psychosocial sessions

52% of the mothers & their children attended at least 4 or 5 sessions
Barriers to attendance to psychosocial sessions

Reasons given by mothers

- Lack of interest
- Long distance
- Lack of belief
- Poor family support
- No leisure time

The graph shows the percentage of respondents for different reasons given by mothers for different numbers of sessions attended.
Maternal Mental Health
Maternal depression

EPDS mean scores

Baseline Post-test Follow Up 5 Follow up 11

NUTPSY NUT nonSAM
Maternal depression

EPDS at pre and post test by number of psychosocial session attended

Total mean Sores

Number of psychosocial sessions

0 1 2 3 4 5

Pretest
Post test
Influencial factors on maternal depression

<table>
<thead>
<tr>
<th>Factor</th>
<th>Value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of psychosocial sessions (mean)</td>
<td>3</td>
<td>0.476</td>
</tr>
<tr>
<td>Mother’s education (&lt;5 years schooling)</td>
<td>64.9%</td>
<td>0.906</td>
</tr>
<tr>
<td>Father’s presence</td>
<td>46.7%</td>
<td>0.019</td>
</tr>
<tr>
<td>Siblings (more than 2 children)</td>
<td>28.9%</td>
<td>0.964</td>
</tr>
<tr>
<td>EPDS scores (mean score)</td>
<td>21.4</td>
<td>0.000</td>
</tr>
</tbody>
</table>

*Green t-test indicates a significant effect at 5%*
Maternal Self-esteem

Rosenberg self-esteem scores

Total mean score

Baseline  Post-test  Follow up 5  Follow up 11

NUTPSY  NUT  non SAM
Maternal Self esteem

Self esteem scores at pre and post test by number of psychosocial session attended

<table>
<thead>
<tr>
<th>Number of psychosocial sessions</th>
<th>Pretest</th>
<th>Post test</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Influencial factors on maternal self esteem**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Value</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of psychosocial sessions (mean)</td>
<td>3</td>
<td>0.077</td>
</tr>
<tr>
<td>Mother’s education (&lt;5 years schooling)</td>
<td>64.9%</td>
<td>0.925</td>
</tr>
<tr>
<td>Father’s presence</td>
<td>46.7%</td>
<td>0.003</td>
</tr>
<tr>
<td>Siblings (more than 2 children)</td>
<td>28.9%</td>
<td>0.802</td>
</tr>
<tr>
<td>Self-esteem scores (mean)</td>
<td>21.4</td>
<td>0.000</td>
</tr>
</tbody>
</table>

*Green t-test indicates a significant effect at 5%
Qualitative outcomes from the psychosocial sessions

• Mother and caregivers became aware of the importance of child care

• With the testing, mothers learned about child development and about themselves

• They are happy to see their children developing well
Thank you!