Application of the Mother-Generated Index to German-speaking women for the assessment of cultural differences in postnatal quality of life

European Master of Science in Midwifery, Lausanne, 02.09.2013
Susanne Grylka-Bäschlin
Supervisor Thesis: Kathrin Stoll PhD; PD Dr. Mechthild M. Gross

Midwifery Research and Education Unit

Hannover Medical School
General aspects of the concept of quality of life

• Health related quality of life is a multidimensional construct including social, mental and physical health dimensions (Mogos et al. 2013).

• Quality of life is the «individuals’ perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns» (WHO 1997, p.1).

• Good life can be observed on a spectrum ranging from subjective to existential to objective (Ventegodt et al. 2003).

World Health Organization (1997) "Measuring Quality of Life, the World Health Organization quality of life instruments (the WHOQOL-100 and the WHOQOL-BREF), www.who.int
Postnatal quality of life

- Physical, psychological, social and economic concerns have an impact on postnatal quality of life (Symon et al. 2002).

- Positively experienced intrapartum care and a positive birth experience have a favourable effect on postnatal quality of life (Gürber et al. 2012).

- The effectiveness of universal postpartum support on postnatal quality of life is not demonstrated (Shaw et al. 2006).

- The relationship between maternity as well as midwifery care and postnatal quality of life remains unclear.

The „Mother-Generated Index“ (MGI)

• The MGI is a validated instrument to assess overall postnatal quality of life.

• The MGI measures the subjective part of quality of life and does not contain a predefined checklist of problems.

• Up to now:
  ➢ The MGI was not translated into German.
  ➢ The MGI has not been used for cross-cultural comparison.
  ➢ The MGI has not been used directly after birth.
  ➢ Associations between the scores of the MGI and maternity care related variables have not been researched.

## The MGI form

**The Mother-Generated Index ©**

### Step 1:
**Identifying areas**

We would like you to think of the most important areas of your life that have been affected by having a baby. These can be **Positive** or **Negative**, or perhaps **Both**, or **Neither** really one nor the other. Please write up to eight areas in the boxes below, and indicate if you think the area is positive, negative, or neither of these.

**Examples other mothers have given are:**
- How they feel about themselves
- How they feel about their baby
- How they feel about their relationship with their partner or other family members
- Physical or emotional issues (good or bad)
- How they feel about going back to work
- How they feel about their social life

These are only examples. We want you to say what you feel.

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
<th>Both / Neither</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please circle whether you think this point is **Positive**, **Negative**, or **Both / Neither**.

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
<th>Both / Neither</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Step 2: Scoring each area

Now please score the areas you mentioned in Step 1. This score should reflect how you have been affected by this area over the past month.

Please place a cross along the line in each case:
- 0 is the worst - you couldn’t feel any worse than this
- 10 is the best - you couldn’t feel any better than this

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
<th>Both / Neither</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Step 3: Allocating points

Please think how important these areas are to your quality of life. You have 20 points to allocate. You don’t have to allocate points to an item if you don’t want to. Give more points to the areas you think are most important.

Wipe the points in the boxes below.

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
<th>Both / Neither</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remember: points in Step 3 must add up to 20
Research questions

• How do the responses to the MGI differ between German and Swiss German women?

• Are there significant associations between scores of the MGI, maternity and midwifery care?

• What are the psychometric qualities of the translated MGI? How do scores of the MGI correlate with the responses to the Hospital Anxiety and Depression Scale (HADS) and with the responses to the Postnatal Morbidity Index (PMI)?
Conducting the study

- Prospective, cross-cultural, two stage survey, carried out in two rural hospitals situated in the south of Germany and in the north of Switzerland:
  - 1. stage: on average three days after birth, questionnaire completed during the hospital stay.
  - 2. stage: on average seven weeks postpartum, questionnaire sent by post mail.
- Both questionnaires included the MGI, the HADS, the PMI, socio-demographic questions, perinatal and midwifery care related questions.

Study course

Development of the questionnaires

Forward-backward translation

Pilot-testing

Survey, data collection

Data processing

Data analysis
Development process of the questionnaires

- The questionnaires were developed during the «Short Term Scientific Mission» at Bournemouth University.

- The development process included four steps:
  - Searching for existing maternity surveys, reported in the literature.
  - Analysing these surveys for questions which were relevant for the current study and composing a draft of the questionnaires.
  - Group of experts: feedback from different professionals.
  - Analysis of the feedbacks and finding consensus-> definitive English version of the questionnaires.
Forward-backward translation

• There is no standardised translation method.

• A multi-step method is recommended to assure quality.

• The chosen method was the following:
  ➢ Two forward-translators, mother tongue German, different backgrounds.
  ➢ One backward-translator, mother tongue English.
  ➢ Harmonisation and reconciliation process.
  ➢ Phrasing and spelling adaptations.


Pilot-testing

- Was conducted with five women during the hospital stay and with five women in the later postpartum period.
- Evaluation of language and content comprehension (de Grahl et al. 2012).
- Consequences:
  - Different phrasing adaptations.
  - Need to give detailed verbal explanations on how to complete the MGI form.

Data collection

• **Participants:** All women, who gave birth between October, 1\textsuperscript{st} and December, 15\textsuperscript{th}, 2012 with sufficient German language and without referral of the baby to a neonatal care unit.

• **Response rates:**
  - 226 questionnaires distributed directly after birth → 129 participants (57.1%).
  - 98 questionnaires sent by post mail six weeks after birth → 83 participants (84.7%).
Data analysis

- **Data analysis:**
  - Descriptive statistics: for total sample, German and Swiss hospital.
  - Bivariate analysis: comparison between hospitals, associations between MGI scores, socio-demographic and perinatal care related variables.
  - Multivariate analysis: linear regression models with the MGI primary score as dependent variable.
  - Validity of the MGI: correlations with HADS and PMI.
  - Qualitative analysis of identified areas of life: planned, not carried out.
The MGI in cross-cultural comparison

• Cross-cultural differences in the MGI scores:
  ➢ There were no significant differences between German and Swiss women.
  ➢ No comparative values for the assessment directly after birth existed.
  ➢ After 6-8 weeks, German-speaking women had more favourable scores compared to Scottish women and Indian women.
  ➢ Differences in quality of life or perception of the concept of «quality of life» or differences in scoring?

• The MGI may be able to detect differences in postnatal quality of life among women with more divergent cultural backgrounds.

Nagpal, J., et al. (2008) "An exploratory study to evaluate the utility of an adapted Mother Generated Index (MGI) in assessment of postpartum quality of life in India", *Health and quality of life outcomes*, vol. 6, pp. 107
Association between MGI and perinatal care

• Gaps in maternity and midwifery care were detected:
  ➢ Inadequate provision of information during pregnancy.
  ➢ More favourable scores after epidural anaesthesia → importance of effective pain relief methods.
  ➢ The expensive attending doctor system has to be questioned and more research is needed to investigate this finding.
  ➢ Not individualized postpartum care during the hospital stay.
  ➢ Not enough support for exclusively breastfeeding mothers.

• The MGI seems to be an interesting instrument for cross-cultural comparison research to assess the outcomes of maternity and midwifery care.
The psychometric qualities of the translated MGI

- Significant associations between postnatal quality of life, mental and maternal physical health was demonstrated.

- The correlations were low and were lower compared to the original Scottish study:
  - Quality of translation -> method was rigorous and transparent.
  - Differences in the samples.

- Astonishing small difference between the correlations three days after birth and seven weeks postpartum.

- The correlations between the scores three days and seven weeks after birth indicated that a significant number of women with low scores at seven weeks could be predicted directly after birth.
Strengths and weaknesses of the study

• **Strengths:**
  - All women giving birth in a defined time period could participate in the study -> representative samples.
  - This is currently the third largest study including the MGI.
  - The study provided knew knowledge, because it was the first one investigating associations between the MGI and perinatal care, applying the MGI directly after birth and conducting a postnatal follow-up.

• **Limitations:**
  - Relatively small sample to achieve significant results.
  - Use of a self-translated HADS (Cronbach’s Alpha > 0.7) despite the existence of a German version of the tool.
  - Self-completion of the instrument is a possible source of errors.
Usefulness for midwifery practice

• The MGI seems to be an interesting tool in midwifery to identify women with lower quality of life during the first days after birth, in order to provide them with special attention and midwifery care during the postnatal period:
  ➢ Shorter hospital stays after birth require early identification of women at risk of long term reduced quality of life.
  ➢ There is evidence that women at risk of postnatal depression may profit from home visitations (Shaw et al. 2006).
  ➢ Further research investigating the application of the MGI during the early postpartum period is necessary.

Acknowledgment

• Many thanks to the COST action ISO 907 for the funding of the «Short Term Scientific Mission» at Bournemouth University.

• A great thank is afforded to Professor Edwin van Teijlingen from Bournemouth University, who spent hours to accompany the development process of the questionnaires.
Thank you for your attention!