The Short Form (SF)-36 health survey questionnaire as an outcome measure in contraceptive research

(Phase 1 results of the HRQL changes among DMPA users trial 2009)

Dr. Sikolia Wanyonyi
Senior resident
Dept. OBGYN
Aga Khan University Hospital
NAIROBI, KENYA

International conference on Family planning: Research and Best Practices, Kampala 2009
Outline

• Introduction
• Objective
• Methods
• Data management
• Results
• Conclusions
Introduction

• Contraceptive is often a lifestyle choice

• It could impact on the quality of life (QoL) of users

• Focus has been on side effects and contraceptive efficacy

• The effect of contraceptives on QoL could also affect acceptability, uptake and discontinuation rates

Trussell et al. Fam Plan Pers 1999(31); www.who.int
Introduction

• Contraceptive users are presumably a healthy population

• Knowledge on contraceptive related QoL changes is essential for uptake and continuation of use

• QoL tools e.g. SF-36, have not been adequately used in contraceptive research

## Characteristics of Measures of Health-related Quality of Life

<table>
<thead>
<tr>
<th>Approach</th>
<th>Strength</th>
<th>Weakness</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Generic Instruments</strong></td>
<td>• Single instrument needed&lt;br&gt;• Detects different aspects of health status&lt;br&gt;• Comparisons across conditions possible</td>
<td>• May not focus adequately on area of interest</td>
</tr>
<tr>
<td><em>e.g. SF-36</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Specific instruments</strong></td>
<td>• Clinically sensible&lt;br&gt;• More responsive</td>
<td>• Cross-condition comparisons not possible&lt;br&gt;• Limited in population and intervention</td>
</tr>
<tr>
<td><em>(condition or population specific)</em></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What Makes SF-36 a good HRQL measure?

• High signal-to-noise ratio
  – Responsiveness enhanced

• Validity
  – Consistency with theoretically derived predictions

• Interpretability
  – Differences between patients small/trivial

Main Objective

To determine the internal consistency and reliability of Short Form (SF)-36 health survey questionnaires among users of DMPA
Methods

Research question
• Is the SF-36 a reliable tool in assessing the effects of contraceptives on the health related quality of life?

Main outcome measures
• The eight scales of the SF 36 health survey profile

Setting
• The Aga Khan University Hospital and Family Health Options clinics, Nairobi, Kenya.
Mode of administration of SF-36 Questionnaire

- **Interviewer-based**
  - Maximizes response rate
  - Few if any missing items
  - Minimizes errors of misunderstanding

- **Other modes**
  - Telephone
  - Self administered
  - Surrogate responders
Data management

• Analysis: SPSS version 15.0

• Inter scale correlations- Kline’s criterion of 0.4

• Internal consistency- Cronbach’s α (Nunnally’s criterion of 0.7)

• Sub group analysis done

Study flow

147 Screened

131 recruited

16 Declined

24 excluded

107 met eligibility criteria

(For 6 months follow-up)
Results

• Mean age: 31.4 years (SD 5.8)

• Average family size: 1.7 children

• Marital status: 90.8% married

• Level of education: 78.7% tertiary

• 53% were contraceptives naive prior to DMPA
# Internal consistency of SF 36 health questionnaire

<table>
<thead>
<tr>
<th>SF Scale</th>
<th>Items</th>
<th>Alpha</th>
<th>Mean</th>
<th>Item scale correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Functioning</td>
<td>10</td>
<td>0.89</td>
<td>82.63</td>
<td>0.44</td>
</tr>
<tr>
<td>Social Functioning</td>
<td>2</td>
<td>0.56</td>
<td>77.61</td>
<td>0.39</td>
</tr>
<tr>
<td>Role limitation/physical</td>
<td>4</td>
<td>0.83</td>
<td>82.79</td>
<td>0.55</td>
</tr>
<tr>
<td>Role limitation/emotional</td>
<td>3</td>
<td>0.79</td>
<td>76.83</td>
<td>0.55</td>
</tr>
<tr>
<td>Energy fatigue</td>
<td>4</td>
<td>0.62</td>
<td>67.20</td>
<td>0.29</td>
</tr>
<tr>
<td>Mental health</td>
<td>5</td>
<td>0.75</td>
<td>71.39</td>
<td>0.38</td>
</tr>
<tr>
<td>Pain</td>
<td>2</td>
<td>0.73</td>
<td>79.05</td>
<td>0.57</td>
</tr>
<tr>
<td>General Health</td>
<td>5</td>
<td>0.59</td>
<td>73.95</td>
<td>0.23</td>
</tr>
</tbody>
</table>

*NB: Reliability is considered acceptable if $\alpha$ exceeds 0.7 or Item scale correlations above 0.4*
Conclusions

• SF-36 is a potential measure of outcome among contraceptives users

• It is acceptable, internally consistent and a reliable measure of health status

• This tool should be tested and modified among FP users for possible adoption by researchers and providers
Conclusions

• Knowledge of the impact of contraceptives on QoL could lead to better uptake of FP as a lifestyle choice

• Motivated and informed users are less likely to discontinue contraceptive methods chosen

• Specific psychometric tools could also be developed and adopted

Wan GJ et al. Contraception 2007(7); Sonnenberg FA et al. Contraception 2004(69); Hubarcher D et al. Contraception 1999(60)