Disability and Wellbeing: Using the Capability Approach for Definition and Measurement

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Outlines

1. Conceptual Background

2. Measurement of CA-based Disability

3. Implications for data collection and monitoring
Introduction

• Disability is complex, multifaceted.
Part 1: Conceptual Background
Different Models

• The medical model considers disability as a problem of the individual that is directly caused by a disease, an injury or other health conditions.

• The Social Model.

• The ICF model and classification.
The ICF model

Health condition

Body Functions and Structures

Activities

Participation

Environmental factors

Personal Factors
### The ICF model (cont.)

<table>
<thead>
<tr>
<th>HEALTH CONDITION</th>
<th>IMPAIRMENT</th>
<th>ACTIVITY LIMITATION</th>
<th>PARTICIPATION RESTRICTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leprosy</td>
<td>Loss of sensation of extremities</td>
<td>Difficulties in grasping objects</td>
<td>Stigma of leprosy leads to unemployment</td>
</tr>
<tr>
<td>Panic Disorder</td>
<td>Anxiety</td>
<td>Not capable of going out alone</td>
<td>People's reactions leads to no social relationships</td>
</tr>
</tbody>
</table>
Disability under the Capability Approach:

• Disability has been defined in terms of capability or functioning deprivation (e.g. Burchardt 2004; Mitra 2006)

• Disability occurs when an individual with an impairment is deprived of practical opportunities or functionings.
Disability under the Capability Approach (Cont.):

• Advantages

• Disadvantages

• CA vs. ICF (Bickenbach 2014; Mitra 2014)
Part 2. Measurement of CA-based Disability
Direct measurement

A direct approach uses *broad activity limitation* questions. It is one that asks people to report, usually in only one question, if they are limited in their opportunities or achievements due to an impairment.

“*Is your child limited in the amount or the type of schooling he/she can have due to a physical, mental or emotional condition?*“
Indirect/stepwise measurement

It makes the distinction between the impairment(s), on the one hand, and wellbeing indicators, on the other.

- **Step 1:** Prevalence of impairments: $P = \frac{n_a}{N}$ where $n_a$ is the number of people with impairments, and $N$ is the number of people in the entire population. $N=n_a+n_b$, where $n_b$ is the number of people without impairments.

- **Step 2:** Deprivation headcount ratio. $H_a=\frac{q_a}{n_a}$ and $H_b=\frac{q_b}{n_b}$.

- **Step 3:** The prevalence of CA-based disability, or disability deprivation headcount ratio, is as follows:
  
  $H=H_a \times P=\frac{q_a}{N}$
Indirect/stepwise measurement (Cont)

Challenges:

(1) with the identification of impairments
Washington Group Short Disability Measure

**Introduction:**
The next questions ask about difficulties you may have doing certain activities because of a health problem.

**Seeing**
1. Do you have difficulty seeing, even if wearing glasses?

**Hearing**
2. Do you have difficulty hearing, even if using a hearing aid?

**Mobility**
3. Do you have difficulty walking or climbing steps?

**Remembering**
4. Do you have difficulty remembering or concentrating?

**Self-care**
5. Do you have difficulty (with self-care such as) washing all over or dressing?

**Communicating**
6. Using your customary language, do you have difficulty communicating, for instance? understanding or being understood?
Indirect/stepwise measurement (Cont)

Challenges:

(2) with the measurement of wellbeing:
  . measurement of capabilities in general;
  . measurement of capabilities mapped onto health conditions (Coast et al. 2013; Simon, Anand et al. 2013); measurement of its multiple dimensions (Alkire and Foster 2011).

(3) terminology: disability as ‘capability-deprived’ vs. disability as ‘with an impairment or health condition’.
Indirect/stepwise measurement (Cont)

Opportunity:
To identify a particular group that may be disadvantaged.

Sen (2009): “Justice-enhancing changes or reforms demand comparative assessments, not simply an immaculate identification of ‘the just society’ (or ‘the just institutions’)” (emphasis in original) (p. 401).

Instead, Sen proposes a comparative approach to justice that focuses on questions related to how justice could be enhanced.
An implementation of the stepwise measurement

$H_a$ and $H_b$ calculated as multidimensional headcount ratios as per Alkire and Foster (2011).
An implementation of the stepwise measurement: Results

<table>
<thead>
<tr>
<th></th>
<th>Disability prevalence (%)</th>
<th>Deprivation headcount among persons with disabilities (%)</th>
<th>Disability and deprivation headcount (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sub-Saharan Africa</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>7.95</td>
<td>96.16</td>
<td>7.64</td>
</tr>
<tr>
<td>Ghana</td>
<td>8.41</td>
<td>67.30</td>
<td>5.66</td>
</tr>
<tr>
<td>Kenya</td>
<td>5.30</td>
<td>66.94</td>
<td>3.55</td>
</tr>
<tr>
<td>Malawi</td>
<td>12.97</td>
<td>90.39</td>
<td>11.72</td>
</tr>
<tr>
<td>Mauritius</td>
<td>11.43</td>
<td>15.19</td>
<td>1.74</td>
</tr>
<tr>
<td>Zambia</td>
<td>5.78</td>
<td>81.01</td>
<td>4.68</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>10.98</td>
<td>68.66</td>
<td>7.54</td>
</tr>
</tbody>
</table>
An implementation of the stepwise measurement: Results (Cont.)

<table>
<thead>
<tr>
<th>Prevalence of disability: P</th>
<th>Year n</th>
<th>Year n+1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficulty Seeing</td>
<td>2.4</td>
<td></td>
</tr>
<tr>
<td>Difficulty walking or climbing steps</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td>Difficulty concentrating</td>
<td>4.2</td>
<td></td>
</tr>
<tr>
<td>Difficulty with self care</td>
<td>2.5</td>
<td></td>
</tr>
</tbody>
</table>

Disability and deprivation headcount ratio: $H = P \times H_a$

<table>
<thead>
<tr>
<th>Deprivation headcount ratio among persons with disabilities: $H_a$</th>
<th>Year n+1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate of deprivation in indicator #1 (less than primary school completion)</td>
<td>91.91</td>
</tr>
<tr>
<td>Rate of deprivation in indicator #2 (non-employment)</td>
<td>66.25</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Deprivation headcount ratio among persons without disabilities: $H_b$</th>
<th>Year n+1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difference ($H_a - H_b$)</td>
<td>3.19 *</td>
</tr>
<tr>
<td>Rate of deprivation in indicator #1 (less than primary school completion)</td>
<td>89.26</td>
</tr>
<tr>
<td>Difference</td>
<td>2.65</td>
</tr>
<tr>
<td>Rate of deprivation in indicator #2 (non-employment)</td>
<td>40.88</td>
</tr>
<tr>
<td>Difference</td>
<td>25.36 *</td>
</tr>
</tbody>
</table>
Part 3: Implications for Data Collection and Monitoring Economic and Social Justice
Implications

• Using a CA-based measure seems particularly appropriate for monitoring
  - the Convention on the Rights of Persons with Disabilities; and
  - the Post-2015 Development Agenda.

• But data is missing for this measure, especially in low- and middle-income countries (LMICs).
Yet, we know that....
• Growing evidence about the association of disability and poverty, especially when poverty is measured multidimensionally (Trani and Cunning 2013; Mitra et al 2013).
There is a need for a two-layer disability data system.

- **Layer #1:** Global disability data

- **Layer #2:** Disability-specific data on disabilities, wellbeing, and factors that influence both (barriers and facilitators).
• Global institutions such as the World Bank and donors that fund international data collection efforts such as USAID can play a key role in developing and encouraging this disability data collection system.

• To some extent, this system already started when the U.N. Washington Group on Disability Statistics was formed. It needs to continue in order to deliver global and country-specific data.

• Without a global two-layer disability data system, injustices will continue, largely invisible and uncontested.
Citation:

Thank you!

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