The HDCA’s Health & Disability Thematic group
12th June 2012

Invites You to a
Webinar on:

Impact of Community-Based Rehabilitation Programs on the Capabilities of Persons with Disabilities: Results from India and Uganda

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Tuesday June 12, 2012, 3pm to 4pm GMT (10am to 11 am EDT), Italy 4pm to 5pm
The objectives of this seminar are two

1) To present IE research on CBR in India and Uganda

2) To present qualitative and quantitative impact evaluation methodologies for CBR
Structure of the presentation

1. Brief introduction to impact evaluation
2. Background: disability models and CBR programs
   - Community Based Rehabilitation (CBR)
3. Case study: impact evaluation of a CBR program on PwD in Mandya and Ramanagaram Districts (Karnataka, India)
4. Case study: impact evaluation of a CBR program on PwD in West-Nile (Uganda)
5. General conclusions
1. Brief introduction to impact evaluation

- Two main objectives of IE (standard distinction)
  - Measuring the impact → quantitative methods
  - Understanding the process → qualitative methods

Definition of a Mixed-Method based study

“a study qualifies as adopting a mixed methods approach if qualitative data collection and analysis are explicitly included in the study design” (White, 2008)

- Integration of methodologies
- confirming/reinforcing, refuting, enriching, explaining the findings
- Merging findings
- Bridging by closing the distance
Brief introduction to impact evaluation

Why IE?
Evidence-Based Policy Making
Provide robust and credible evidence on performance and if program achieved its desired outcomes - overall info
Cause and effect questions → examines outcomes and tries to assess what difference the intervention makes in outcomes
Counterfactual → comparison group
Different modalities of IE: prospective vs retrospective

How to formulate evaluation questions and hypotheses that are useful for policy?
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This is based on a theory of change, which is a description of how an intervention is supposed to deliver the desired results. It describes the causal logic → cause-and-effect and can be modelled through logic models, logical frameworks and outcome models and with results chains

or by using theoretical models

in our exercise → CBR matrix, the CA and the HR
Evaluating the effect of a policy supporting people with disabilities (PWDs)

✓ WHAT do we want to measure?
✓ WHO are the people we want to measure these effects on?
✓ HOW can we identify the causal effect of the policy defined above?

The three questions can be considered and defined in a Causal Inference approach
Causal Inference and Counterfactuals

What is the impact or causal effect of a program \( P \) on an outcome of interest \( Y \)?

\[ \alpha = (Y \mid P = 1) - (Y \mid P = 0) \]

basic impact evaluation formula

the causal impact (\( \alpha \)) of a program (\( P \)) on an outcome (\( Y \)) is the difference between the outcome (\( Y \)) with the program (in other words, when \( P = 1 \)) and the same outcome (\( Y \)) without the program (that is, when \( P = 0 \))

→ Same individual with and without participation in a program. We can think of this as what would have happened if a participant had not participated in the program

→ the second term of the formula (\( Y \mid P = 0 \)) cannot be directly observed for program participants
A valid **comparison group** follows three conditions:

a) treatment group and the comparison group must be identical in the absence of the program

b) the treatment and comparison groups should react to the program in the same way

c) the treatment and comparison groups cannot be differentially exposed to other interventions during the evaluation period
An IE procedure based on mixed methods should

- be replicable
- be really enforceable
- allow to create a continuous relation between quantitative and qualitative methods
- allow to triangulate findings achieved through qualitative and quantitative methods
2. Background: disability models and CBR programs

- Theoretical issue and theory of change
  - Immaterial aspects of Well-being (stigma)
  - Community dimension
  - Time dimension
  → theoretical challenge

• CBR manual, CBR Matrix (WHO et al. 2010)
• Capability Approach (Sen, 1999)
• CRPD (2006)

→ Opportunity based theoretical framework
Measuring Disabilities

• A continuum between no-disability and disability – mild, moderate, severe, profound
• Context specific disability
• Can be temporary, permanent, progressive
• Can be associated with a disease
• Disabling barriers of disease can be disabilities
• Disability: Different models
  – Traditional - outside human control, mainly negative
  – Medical – something wrong/abnormal/incorrect with the person
  – Social – the way society & community is organised, it creates barriers and creates disabilities
  – Human rights – all should have the equal opportunities and rights
  – Capability approach
CBR Programs

• CBR programs are considered fundamental to improve the wellbeing of people with disabilities, and for fostering their participation in the community and society at large (Cornielje, 2009; Sharma, 2007).
  → Inclusive development and
  → Equalization of Opportunities

• CBR programmes are also considered to be the most cost-effective approach to improve the wellbeing of people with disabilities, in comparison with care in hospitals or rehabilitation centres (Mitchell, 1999).

• About the most important areas for measuring impact of CBR projects on their lives: Accessing assistive devices; changes in self-confidence; people call them by their names; greater participation in family discussions and decisions; ability to influence and change services to make them accessible such as shifting of certain government services to ground floor in a building; discussing problems in self-help groups and start to save money;
CBR literature

• Alavi and Kuper (2010) identify a total of 51 studies evaluating the impact of rehabilitation for people with disabilities in Africa, Asia and Latin America (only two of these studies evaluating CBR programmes or services used a comparison group)

• Considering that this is a worldwide survey of researches and methods, the literature can be considered still limited especially from an overall impact point of view.
Different stakeholders of a CBR programme

Source: WHO (2010a, p. 42)
CBR MATRIX

WHO et al. 2010
“CBR programmes are not expected to implement every component and element of the CBR matrix. Instead the matrix has been designed to allow programs to select options which best meet their local needs, priorities and resources. In addition to implementing specific activities for people with disabilities, CBR programs will need to develop partnerships and alliances with other sectors not covered by CBR programs to ensure that people with disabilities and their family members are able to access the benefits of these sectors” (WHO 2010)
3. Case study: impact evaluation of a CBR program on PwD in Mandya and Ramanagaram Districts (Karnataka, India)

- Desk review
  1. Quantitative based on standard information collection instruments including questionnaire, participation scale
  2. Qualitative
  3. Emancipatory – research decided and conducted by persons with disabilities
The CBR project managed by SRMAB (Sri Raman Maharishi Academy for Blind) called Malavalli Project was initiated in 1997 in 25 villages, now reaches to about 1300 villages spread over 5 taluks (sub-districts) with around 11,000 persons with disabilities belonging to all the different groups of disabilities.

The CBR project managed by MOB (Maria Olivia Bonaldo) called Mandya Project was initiated in 1998 in 4 villages, now reaches to 1200 villages spread over 4 sub-districts and reaches about 10,000 persons with disabilities belonging to all the different groups of disabilities.
Sampling scheme

3 variables chosen for stratification of first stage units:

✓ Size of the Village (more/less than 1,000 units)

✓ Geographical position

✓ Year the CBR started
Most of the outcome variables (section 4) will be measured at various fixed moments in time (e.g. 2002 – 2006 – 2009)

This can seem time-consuming (and probably it is!) but it is very important for at least two purposes:

1) For the relative comparison approach

2) It allows to use the same unit as treated or control depending on the instant considered
Impact evaluation through propensity score matching

In this research we assume that people joining and not joining the program can be systematically different, but that we can control for this effect using a set of variables available for both groups. This assumption (namely “unconfoundedness”) requires that all variables (covariates) that could influence both outcome and the probability of participating in the CBR are observed.

Rosenbaum and Rubin (1983) developed the “propensity score” methodology. The propensity score is defined as the probability of a unit (e.g., a PwD) being assigned to a treatment (e.g. be part of the CBR program) → the conditional probability, for a PwD, of joining the program
Impact evaluation through propensity score matching

Vector of observed covariates:
Age
Gender
Household size
Type of disability
Level of disability
Caste
Level of wealth

Vector of observed covariates for community:
Secondary school, distance to main road, hospital or clinic, size of the village, asphalted road
## Summary table of quantitative results using PSM

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Question</th>
<th>Variable (Objective Subjective)</th>
<th>2 YEARS</th>
<th>4 YEARS</th>
<th>7 YEARS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>9.2</td>
<td>Specialist visit</td>
<td>Not usable</td>
<td>Not usable</td>
<td>Not usable</td>
</tr>
<tr>
<td>Education</td>
<td>10.1</td>
<td>Education</td>
<td>Not usable, few data</td>
<td>Not usable, few data</td>
<td>Not usable, few data</td>
</tr>
<tr>
<td>Education</td>
<td>11.1</td>
<td>Job Training</td>
<td>Positive and sign.</td>
<td>Positive and sign.</td>
<td>Positive and sign.</td>
</tr>
<tr>
<td>Livelihood</td>
<td>11.5</td>
<td>Loan</td>
<td>Not usable</td>
<td>Not usable</td>
<td>Not usable</td>
</tr>
<tr>
<td>Social Inclusion</td>
<td>12.2</td>
<td>Marriage</td>
<td>NO effect</td>
<td>NO effect</td>
<td>NO effect</td>
</tr>
</tbody>
</table>
Our results show that CBR programs have an overall positive and significant impact on the health, livelihood, social participation and empowerment of participants with disabilities, especially after four years of CBR activities.
Different impact for different disabilities

Since there are still no universally agreed criteria for the evaluation of CBR programmes (Finkenfugel et al., 2007), we propose a technique based methodologically on propensity score matching and theoretically both on the capability approach (Sen, 1999; Nussbaum, 2000) and CBR matrix (developed by WHO: health, education, work, empowerment and social participation, WHO et al 2010).

In a capability approach perspective, this signifies an increase in opportunities for people with disabilities to conduct the life they value which includes dignity, respect and social participation.
4. Case study: impact evaluation of a CBR program on PwD in West-Nile (Uganda)

Promoted by the Italian well-known NGO Doctors with Africa CUAMM with ASL 7 Siena
Funding of orthopedic workshops (labs for production of prothesis and orthesis), and purchase of epilepsy drugs
Training of physiotherapists and community workers assisting people with disability and carrying out communication campaigns

Role of COMBRID (Friends of Disability, i.e. local NGO)
L’area dell’intervento
Good Practices in West-Nile

- Cuamm Doctors with Africa
- COMBRID Friends of Disability Local NGO

Mobile clinics for epilepsy

Network of
CBR workers

CBR activities

Information

Fight stigma

Uganda, West Nile (2011)
Qualitative methods to explore the potential outcome variables and causes

In depth interviews
Elena Como interviews Local expert Patrik Pariyo
Causes and conceptualizing the dimensions of the analysis and ranking
Participatory Rural Appraisal

Focus group discussion (FGD),
Local expert Ismael Tuku and Mario Biggeri
Conceptualizing the dimensions of the analysis and ranking, main issues
Structured FGD with baseline and comparison group

i) Familiarize the participant with the dimensions
ii) familiarize with marking
iii) validate the dimensions using a benchmark (column)
iv) partial ranking of the dimensions (three most relevant)
v) validate different opportunities for different characters
vi) significance/attribution to the program by dimensions and by characters
vii) validate the whole the exercise by commenting it

Three persons are necessary:
One facilitator, One to note taking, One to help facilitators

Time: from 2 hours to 4 hours depending on the n dimensions
Conclusions (Uganda)

Our results show that CBR programs have an overall positive and significant impact on the health, livelihood, social participation and empowerment of participants with disabilities.

Different impact for different disabilities:

1. High impact for physical disabilities;
2. High impact for visual disabilities;
3. Very low impact for mental disabilities;
4. High impact for epilepsy.
5. General conclusions

FINDINGS

• CBR results were incredible good in India and Uganda in the area covered by the research

• A mixed methods procedure, bridging between the qualitative and the quantitative, allows to create a positive strong and continuous synergy

• The procedure allows to triangulate findings achieved through qualitative and quantitative methods where qualitative methods have a central role for some dimensions and community aspects

• The results of the mixed methods procedure presented here are quite encouraging and replicable for different issues and enforceable in different contexts
Thanks for your attention!

INDIA: Thanks to AIFO, AIFO India, SRMAB and MOB NGOs (India)
We acknowledge that the research in India was sponsored by AIFO through international donors and involved many researchers and institutions without which we could even start to think to conduct this study in India. We are extremely grateful for the research in India to Sunil Deepak (general coordinator), Vincenzo Mauro (main statistician), JeanFrancois Trani (main trainer), Jayanth Kumar Y. B., Parthipan Ramasamy, Parul Bakhshi and Ramesh Giriyappa and to many other persons including first of all the stakeholders but also many international and local institutions.

UGANDA: Thanks to COMBRID and CUAMM and Patrik Pariyo and the Tuscany Region (Health Sector International Cooperation). We are extremely grateful for the research in Uganda to Andrea Ferrannini, Elena Como, Nicolò Bellanca, Ismael Tuku and Patrik Pariyo and his team at COMBRID and local stakeholders.

A special thanks to all the people with disabilities from rural villages who helped us in the field research!