Poverty and Childhood Disability: Promising Interventions

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Objectives

- **Tools** for detection; identifying risk factors
- Link between **surveys** and **services**
- **Evidence based** programs based upon best interest of the child and family
- **Human resource** development
- **Advocacy**
Mortality declining, Disability rising

Children with Disability in Bangladesh

Any
Hearing
Cognition
Vision
Behavior
Motor
Seizure

per 1000 children

1988
2001

Bangladesh Health Watch, 2006
Epidemiology of Childhood Disability

- **Ten Questions Screening Instrument (TQSI):** pre-piloted in 10 LDCs, piloted and validated in 3 LDCs
- Over **30 publications** in peer reviewed journals
- Included in the **MICS2, UNICEF**; used in >30 countries
- **Not copyrighted**; easily available
- Unrecognized: **Mild** disabilities; in >80%
III. Disability Dynamics

*World Health Organization*

Normal

Disease: body structure and function *Reversible*

Impairment: temporary activity limitation

Disability: permanent activity limitation: *mild*, moderate, severe

Handicap (*poor* social participation) *Irreversible*
Preventable Risk Factors for Impairments/Disabilities

- Microcredit beneficiary
- Maternal Education
- Consanguinity
- Increasing gravidity and parity
- Fever in the 1st trimester
- Poor maternal nutrition
- Pregnancy related hypertension*
- Bleeding in the 3rd trimester
- Diabetes
“Educated mothers with low income status were most compliant, neurodevelopmental status of their children was better, but stress increased with increased numbers of visits”
Conclusion

• **Mild disabilities, impairments** preventable but unrecognized

• **Maternal education** is protective

• **Psychiatric morbidity** of mothers and **family stress** can be prevented

• if **services closer to homes** and with socioeconomic support
Focusing on younger children:
0-2 years
Rapid Neurodevelopmental Assessment

Inter Rater Reliability

•RNDA is a valid and reliable tool for early identification of impairments
•Professionals working in various fields of early child development can be trained to use it
•Community Health Workers are being evaluated
•Early intervention (general and by functional domain) to be linked with the assessment

Khan, Muslima et al. Pediatrics (to be submitted in Nov, 08)
‘No Survey Without Services’
Community Based Rehabilitation

Approach community
Forming CBR Association
Skills Transfer from Professionals to Community Workers
RCT of home vs. center based intervention of children with Cerebral Palsy

• CONCLUSIONS
• The active intervention programs had a beneficial effect on children’s developmental progress
• There was no advantage for the higher-cost mother-child stimulation (center based) group over the home based programme (except in increased maternal knowledge)

Conclusions on services

Negative?

• Best outcomes were time-bound
• at least one third of urban and rural mothers found **difficulty in attending sessions** (transport problems, family restrictions)
• Mothers were at high risk for **psychiatric morbidity**

**SERVICES CLOSER TO HOMES NEEDED**

Development of Counseling Services

Conversations with children with disabilities and their mothers

By Malaika Begum

Malaika Begum (MA, in English Language and Literature from Dhaka University) has been an employee of the Bangladesh Foundation for Mental Health. She has completed a Diploma degree in Special Education and a Master in Special Education from the Bangladesh National University, and has worked as a counsellor since 1999. She is also a bearer of Certified Transactional Therapist (CTT). Malaika Begum is involved in research, publications and providing training and workshops for professional development.

This paper from Bangladesh presents an overview of narratives approached to work with mothers and their children who have intellectual disabilities. In what can be traumatic contexts, this work is based on mothers’ experiences, issues, and connections. Through the course of both individual and group work, blame and stigma are externalized, and the love and care mothers have for their children – as well as their children’s ‘special abilities’ – are brought more to the fore. This paper also presents an alternative, non-pathologizing language, and explicit accounts of care and contact.

Keywords: disability, children, mothers, Bangladesh, stigma, inclusive practices

Nutrition and Childhood Disability

• Diet composition: 90% energy, 7% protein, 3% fat

• Significantly less low SES children not had eggs, pulses, fish, milk in past week
Re-structuring of the Services of Inclusive Schools in rural areas

- Mandatory introduction of school lunch for all rural schools
% nutritional status below -2sd **before** and **after** 13 months of providing school lunch

**age range 6 m - 5.9 yrs**

*(n=238)*

*Figures in parenthesis indicate numbers of children*

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Before enrollment</th>
<th>After enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height for age (Stunting or chronic malnutrition)</td>
<td>63.0 (149)</td>
<td>50.4 (120)</td>
</tr>
<tr>
<td>Weight for height (Wasting or acute malnutrition)</td>
<td>17.7 (42)</td>
<td>15.1 (36)</td>
</tr>
<tr>
<td>Weight for age (Underweight or chronic malnutrition as well as malnutrition)</td>
<td>66.0 (156)</td>
<td>58.0 (138)</td>
</tr>
</tbody>
</table>

BPF Kalyani inclusive rural schools, 2008
Children with cerebral palsy

Mortality high due to malnutrition

Conclusion

• **School lunch is mandatory**: 
• Meals **improved nutritional status** and functional skills 
• Seating and Feeding Clinics in all programs **improved emotional state** 
• Dietician looking at **quality of food**

**FOOD FOR EDUCATION**
Inclusive Education in **Urban Underprivileged Populations**:
Sanjeevani Project, 2008

Cost of services. Who pays?

Fully dependant are provided home-based assistance
Stop Gap Center

CONCLUSION

- Food essential
- Subsidized rice for families
- Special needs addressed
- Some stopped begging
- Mainstreaming into local schools
- Cost: 1,00,000 per month
Human Resource Development:

Through a British Council Higher Education Link (HEL) Programme, 1999 to 2002; Development of Partnerships in Higher Education (DelPHE), 2006 to 2009

- 14 CDCs established
- Shishu Bikash Network in year 2000
- 60 Scientific Meetings, 30 Workshops
- 3 International congresses
- >120 multidisciplinary professionals
- Innovative: Generic therapists
- Training in the UK; trainers from the UK
Child Development Centers: MOHFW
Advocacy
Press Conference: Demanding Ban on Leaded Petrol

Deadly lead in city air disabling children

8 times the WHO limit found in blood samples

Govt decides to get rid of leaded fuel

By Shohab Ahmed and Shariar Khan

The government is 추진ing a Tk 115 crore project to make petroleum products lead-free in the wake of widespread public concern over lead pollution and its impact on humans, particularly children.

It has asked the Eastern Refinery Limited (ERL), the country's sole oil refinery, to readjust its lead specifications and install new equipment under the project, officials said.

The move, has been long wanted for a long time.

ERL refines only 43 per cent of national consumption and the rest is imported. The new rule to keep fuel lead-free would also be applicable to imports, the sources said.

The decision coincides with a World Bank approval of a US $177 million loan to deal with Dhaka's traffic congestion and air pollution under a joint programme of the government and the Dhaka City Corporation.

A WB announcement said, "Public exposure to air pollution in Dhaka is estimated to cause 13,000 premature deaths and several million cases of sickness every year." World Bank-sponsored studies, done by the Department of Environment and Atomic Energy Commission, have showed that the city's air is of certain areas has had high levels of lead pollution - as much as 460 micrograms per cubic metre, And 50 tonnes of lead are deposited in the city's air annually.

The sources said the ERL equipment to take lead off the fuel had been out of order for some time at the ageing refinery.

ERL has been recently chosen for maintenance and repair of the equipment including a tower.

The government decision also follows a vigorous campaign by environmentalists and health workers, backed by The Daily Star, for use of unleaded fuel.

Last week, a child nutritionist disclosed the findings of a study that showed presence of lead in blood samples of children eight times higher than the limit permitted by the World Health Organization (WHO).

Dr Shamsul Khan, the child nutritionist, conducted the survey on children reporting for behavioural and other mental disorders at Dhaka Shishu Hospital.

According to an earlier government decision, the petrol should have been refined or imported with small quantity of lead of 0.015 grams per litre. But there had been 0.45 grams of lead, in one litre of octane, the sources said.

The situation turned worse after the lead cleaning equipment began.
Cheapest drug with NO side effects:

SH Banu et al, 2007, *BMJ*
Conclusion

• **Advocacy** and **health activism** by professionals in LDCs **important for changing policies**, message dissemination

• Evidence-base, publications, provides **credibility**

• Provides a **voice** to the disenfranchised