INDONESIA COUNTRY REPORT

Prevention of Intellectual Disabilities in Indonesia

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Abstract

Prevention is better than treatment.

Intellectual disabilities (ID) is characterized by significant deficit or intellectual functioning and adaptive behavior. The ability to learn and adapt to changing environments is limited, resulting in difficulty in activities of daily living and functioning in society.

Intellectual disabilities or mental retardation can be classified as: a) preventable intellectual disabilities and b) unpreventable intellectual disabilities. Intellectual disabilities can be caused by genetic, environmental and ecogenetic factors. The cause of ID can be divided also in a) prenatal; b) natal and c) postnatal factors. The important factors for preventions are detecting and screening both the cause and risk factors of ID. Risk factors of intellectual disabilities are a) genetic; b) environmental and c) manipulation or intervention factors.

This paper will describe prevention efforts of intellectual disabilities in Indonesia:

1. Primary prevention
   a. Iodine deficiency control program
   b. Wedding package education
   c. Prenatal and neonatal advocacy
   d. Mother and child friendly hospital
   e. Early childhood education program
   f. Teenagers health promotion / school health program

2. Secondary prevention
   a. Antenatal monitoring
   b. Neonatal screening
   c. Adequate delivery
   d. Exclusive breast feeding

3. Tertiary prevention
   a. Good newborn care
   b. Intensive vaccination program
   c. Adequate management for head trauma and infection
   d. Habilitation and rehabilitation
**Introduction**

Prevention always better than curative or therapy especially for intellectual disabilities.

The high cost of program for prevention as mass and national program needs high priority in health decision budget. Therefore not all country conducted high technology system in mass prevention program. For individual family program prevention for intellectual disability several times cheaper than treatment and rehabilitation.

Intellectual Disabilities (ID) have been suggested to replace the term of mental retardation which is used to characterize persons with cognitive and adaptive behavioral disabilities, in repeated efforts to minimize social stigma. Intellectual Disabilities a term that misleadingly implies delay and therefore the possibility that the child will catch up (Kinsbourne, M and Wood, FB 2000). The prevalence of ID is 6 to 20 per 1,000 live births. In Indonesia around 5 million children suffer from ID. Because of that prevention of ID program is important.

The cause of Intellectual Disabilities was classified in two categories such as a) preventable and b) unpreventable. The important factors for preventions are detecting and screening both the cause and risk factors of ID. Mental retardation or intellectual disabilities can be caused by genetic, environmental and ecogenetic factors. The cause of ID can be divided also in a) prenatal; b) natal and c) postnatal factors. Etiological factors may be primarily biological or primarily psychosocial, or some combination of both. In approximately 30-40% of individuals seen in clinical settings, no clear etiology for the mental retardation (ID) can be determined despite extensive evaluation efforts. The other important component to help the prevention program are risk or predisposing factors of ID which can be placed in groups a) intrinsic factors b) extrinsic factors.

<table>
<thead>
<tr>
<th>Table 1 Causes of Intellectual Disabilities</th>
<th>Percent</th>
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<tbody>
<tr>
<td>Chromosome abnormalities</td>
<td>4-28</td>
</tr>
<tr>
<td>Recognizable syndromes</td>
<td>3-9</td>
</tr>
<tr>
<td>Struktrual central nervous system malformation</td>
<td>3-17</td>
</tr>
<tr>
<td>Complications of prematurity</td>
<td>2-10</td>
</tr>
<tr>
<td>Perinatal conditions</td>
<td>8-13</td>
</tr>
<tr>
<td>Environmental / teratogenic causes</td>
<td>5-13</td>
</tr>
<tr>
<td>Cultural-familial mental retardation</td>
<td>3-12</td>
</tr>
<tr>
<td>Metabolic / endocrine causes</td>
<td>1-4</td>
</tr>
<tr>
<td>Unknown</td>
<td>30-50</td>
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</tbody>
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Table 2. Risk and Predisposing Factors of Intellectual Disabilities

The major predisposing factors include:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Percent</th>
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<tbody>
<tr>
<td>* Hereditary</td>
<td>5</td>
</tr>
<tr>
<td>* Early alterations of embryonic development</td>
<td>30</td>
</tr>
<tr>
<td>* Pregnancy and perinatal problems</td>
<td>10</td>
</tr>
<tr>
<td>* General Medical conditions acquired in infancy or childhood</td>
<td>5</td>
</tr>
<tr>
<td>* Environmental influences and other mental disorders</td>
<td>15-20</td>
</tr>
</tbody>
</table>

These factors include deprivation of nurturance and of social, linguistic and other stimulation and severe mental retardation.

The prevention programs of Intellectual Disabilities in Indonesia:
Not all of ID can be prevented by health technology. Only the group of preventable ID can be successfully prevented with many kinds of intervention from the simple methods to very complicated high tech.
In Indonesia there were national programs for preventing ID. These programs are more focused in mass prevention programs:
I. Primary prevention
   a) Iodine deficiency control program
      Iodine salt is used for daily mass program. Iodine oil is distributed to primary school students especially in the iodine deficient areas. Lipiodol injection is only used for pregnant women with low iodine intake
   b) “Wedding package” special program
      This program is specially prepared for the bride-to-be. At least three months before the happy day, vaccinations were done especially MMR, D and Hepatitis B vaccinations, general check up and health education
   c) Prenatal and natal advocacy
      Healthy life style
   d) Mother and Child Friendly Hospital especially exclusive breast feeding
   e) Early Childhood Education Program
   f) Teenagers health promotion and improvement of school health program especially in Senior High School
II. Secondary prevention
   a) Antenatal monitoring
      - Prevention of transmission of TORCH infection
      - Control of maternal diseases (hypertension, diabetes, etc)
      - Prevention of premature labor
b) Delivery in good hands and with good facilities
   - Prevention of lack of oxygen and of injury

c) Postnatal
   - Prevention of severe jaundice
   - Neonatal screening for congenital hypothyroidism
   - Early detection of intellectual disabilities and psychomotor
     developmental abnormalities

III. Tertiary prevention such as:
   a) early intervention and prompt treatment for any abnormality of
      pregnancy
   b) delivery in good hands and good facilities early detection and early
      intervention of abnormal conditioning neonates
   c) early detection, stimulation and early intervention of every abnormal
      condition in children
   d) adequate management of intracranial infection and head injury
      detection and good management of abnormal ID in school age children.

These programs were done with multidiscipline and synergism of many
institution in the government and communities. Empowerment of women as
a health cadres and other component in the population are very important.

**Conclusion**

The main prevention programs which gave high beneficial effect are primary
and secondary prevention of intellectual disabilities

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