Malnutrition and reduced psychosocial stimulation: implications for children's development and mental health

- The limited availability of food during a severe food shortage threatens the nutritional status of communities. This can cause malnutrition among affected populations including micronutrient deficiencies. Such deficiencies can inhibit intellectual and physical potential and cause lifelong disability.

- Many caregivers are unavailable or unable to provide psychosocial stimulation to their children during food crises due to their own poor health (physical or mental). A lack of psychosocial stimulation has adverse consequences for children's development (cognitive, motor, language) and their mental health.

- Infants and young children are at particular risk. The first two years are critical periods in which brain and physical growth is most active. Nutritional and psychosocial deficits during this time period can result in life long impairment and disability.

- The combination of malnutrition and a lack of psychosocial stimulation are particularly harmful. Improving both nutritional status and stimulation has an added impact on a child's development and recovery. Therefore it is crucial that nutritional and psychosocial interventions are integrated.

Micro-nutritional deficiencies and risks for poor child development

- **Lack of iron**: Iron is thought to play an important role in cognitive development. Iron deficiency during the first year of life when the brain growth is maximum could result in permanent harm to cognitive functioning (e.g. intellectual ability).

- **Lack of iodine**: Iodine is essential for cognitive development. Iodine deficient children and adults tend to be cognitively limited in relation to those who have sufficient iodine. Infants whose mothers are iodine deficient can be born with severe retardation of physical growth and psychological development. This is known as cretinism. Effects of the intrauterine iodine deficiency are irreversible.

- **Lack of essential fatty acids**: Essential fatty acids which are found in breast milk are believed to be vital for cognitive development. Children who are breastfed or who are fed infant formula containing essential fatty acids show better cognitive functioning than those who are not breastfed or receive formula without these essential acids.
Interventions to promote positive child development and to reduce the chance of mental health problems for mother and child

- Key public mental health and nutritional interventions must be instituted in situations of severe food shortages to prevent developmental delays and mental disorders. With proper prevention and intervention, these problems are largely preventable.
- Incorporating play activities and stimulation into nutritional rehabilitation has been shown to increase the speed of child recovery and improve child growth. It may also help to decrease maternal depression.

Prevention strategies:
- Information on appropriate feeding practices and the importance of psychosocial stimulation should be disseminated to key groups, such as healthcare providers, donors, and humanitarian aid workers.
- Breast milk is an ideal food for healthy growth and development. It protects against infection and is helpful for mother-child bonding. The distribution and use of breast-milk substitutes at emergency sites should be strictly controlled in an effort to promote breastfeeding. Breastfeeding women may need care, encouragement, and psychological support to continue breastfeeding.

<table>
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<tr>
<th>Children at greater risk for malnutrition/lack of adequate stimulation</th>
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<td>• Children living in custodial care arrangements (e.g., orphanages)</td>
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<td>• Children separated from caregivers</td>
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<td>• Children whose caregivers have a physical or mental disability</td>
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<td>• Children whose caregiver is alcohol or drug dependent</td>
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- Psychosocial support and education regarding appropriate feeding practices should be provided to caregivers. Caregivers with physical or mental health problems may need extra support to ensure that they are able to give care to their children. Improving maternal mental health may be one of the most important interventions in situations of severe good crisis for both the mother and child.
- Attempts should be made to ensure that all households should have adequate quantity and quality of food. In acute emergencies, where food requirements are initially unknown, a mean daily per capita intake of 2100Kcal and 46g of protein is recommended (UNICEF/UNHCR/WFP/WHO, 2004). It is important to ensure that rations cover micronutrients. In addition, efforts should be made to improve household access to food (e.g., seed distribution, income generation activities, etc.).
- Children who are moderately or severely malnourished should be referred for combination nutrition/stimulation programmes.

Combined nutrition/stimulation programmes:
- Combination stimulation/nutrition programmes emphasize appropriate feeding practices (nutrition and supplementation practices) and responsive parenting (e.g., proactive stimulation and appropriate responses). Combined programmes have a greater impact than either intervention alone. Indeed, nutrition programmes that contain a psychosocial component are more effective in promoting growth and positive child development than nutritional programmes without a psychosocial component.

Community/home-based selective feeding/stimulation programmes:
- Whenever possible, community and home-based approaches to nutrition and psychosocial stimulation should be promoted. Children with severe malnutrition with no medical complications or oedema can be treated in their homes through community-based therapeutic feeding programmes. Please refer to the reference section for resources on (a) assessing and monitor nutritional deficiencies and (b) guidelines on supplementation and correcting micronutrient deficiencies.
- Guidelines to improve child-caregiver interaction and increase the physical stimulation provided by the environment appear in Table 1. These principles aim to help the caregiver feel positive about herself, feel positive about the child, and encourage them to have positive interactions with each other. Further information on psychosocial programmes is available in the reference section.
### Table 1-Psychosocial Stimulation: Principles and examples

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<tr>
<th>Type of stimulation</th>
<th>What to do</th>
<th>Examples</th>
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<td><strong>Emotional stimulation</strong>: Interventions to improve child-caregiver interactions are important in order to facilitate children’s emotional, social, and language development. This can be accomplished through educating caregivers on the importance of emotional communication.</td>
<td>Express warmth and affection to the child in a manner consistent with cultural norms</td>
<td>Encourage caregivers to look into the child’s eyes, smile at him or her, especially during breastfeeding. Express physical affection to the child (e.g., hold and cuddle the child).</td>
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<td>Encourage verbal and non-verbal communication between the child and caregiver</td>
<td>Communicate with the child as much as possible. Ask the child simple questions and respond to his or her attempts to talk. Try to get a conversation going with sounds and gestures (smiles, glances). Get the child to laugh and vocalize. Teach the child “action words” with activities. For example, say &quot;bye&quot; when waving goodbye.</td>
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<td>Respond to the needs of the child</td>
<td>Respond to the child’s sounds and interests. Be attentive to his or her needs as indicated by his or her verbal or non-verbal cues (e.g., crying, smiling).</td>
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<td>Show appreciation for what the child manages to do</td>
<td>Provide verbal praise for the child’s accomplishments. Also, show non-verbal signs of appreciation and approval (e.g., clapping, smiling).</td>
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<td><strong>Physical Stimulation</strong>: Children need a physically stimulating environment in order to develop their psychomotor and language skills and to enhance cognitive development.</td>
<td>Ensure that the environment provides adequate sensory experiences for the child</td>
<td>Provide ways for children to see, hear, and move. For example, place colourful objects around the child and encourage the child to reach or crawl to them. Sing local songs and play games involving fingers and toes.</td>
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<td>Provide play materials</td>
<td>Inexpensive and fun toys such as a puzzle and a rattle can be made out of cardboard boxes and plastic bottles. See reference section for examples.</td>
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<td>Provide meaning to the child's physical world</td>
<td>Help the child to name, count, and compare objects. For example, give the child plastic bottle caps and teach them to stack them. Older children can sort tops by colour and learn concepts such as &quot;high&quot; and &quot;low&quot;. Describe to the child what is happening around them.</td>
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<td>Provide opportunities to practice skills</td>
<td>It is important to play with each child individually at least 15-30 minutes per day, as well as to provide opportunities for play with other children.</td>
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- Children with medical complications (e.g., child is severely malnourished and has malaria) need treatment in a health facility/therapeutic feeding centre.
- Psychosocial considerations for health facilities/therapeutic feeding centres include the following:
  - Avoid sensory deprivation. Make sure that the child's face is not covered as the child must be able to see and hear what is happening around him or her. Children should never be wrapped or tied to prevent moving around in the bed.
  - Ensure that a caregiver is present in the feeding centre and encourage the caregiver to feed, hold and play with the child as much as possible. Make the environment as stimulating as possible with bright colours, home-made mobiles, and a radio for music if possible. Children should spend time with other children in informal play groups. In addition, one person a nurse or a volunteer should be responsible for developing a curriculum of play activities. Activities should be selected to develop motor skills and language skills. An example of a play-based curriculum and ideas on how to make toys using home-made materials is available in the reference section.
References/Source Used

Nutrition and feeding programme resources:


Mental health and psychosocial programmes resources


