

Early Childhood Development and Nutrition Programming




Jennifer Burns
Senior Development Nutritionist
International Medical Corps

KEY MESSAGES

- While scientific evidence is limited at this time, theoretical, empirical, and logistical evidence does confirm the feasibility and effectiveness of integrating child development and nutritional interventions. *Black, M., and Dewey, K., (2014).*
- Combining nutritional and child development activities are likely to have additional benefits for young children

Definitions

Mother-Child
Interaction=
Talking, showing love,
playing



Infant Stimulation- activities that stimulate infant's senses and improve their attention span, memory and development.

Growth: the change in weight, height, and circumference of head

Child Development: the process of change in which a child comes to master more and more complex levels of physical activity, thinking, feeling, communicating and interactions with people and objects. This is sometimes expressed as physical, cognitive, emotional and social development

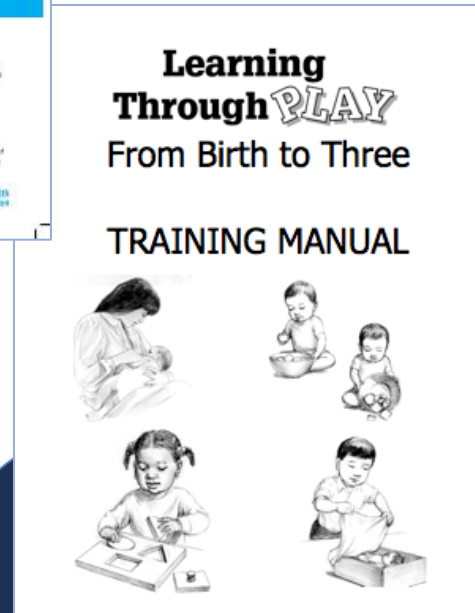
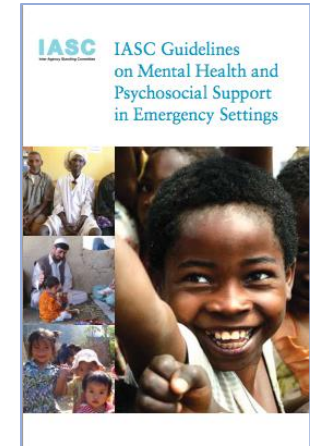
Early childhood: the period between birth and eight years of age. In this document the focus is on children attending emergency feeding programmes, the majority of whom are three or under but who may be up to five years old

Responsiveness: parenting that is prompt and appropriate to the child's immediate behaviour, needs and developmental state

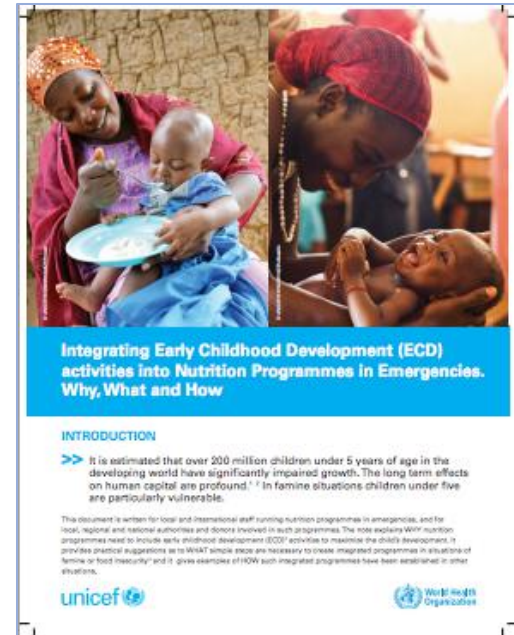
Care: attention to body, health, nutrition, emotional, social, language and intellectual development

Guidelines & Resources

- UNICEF/WHO. Guidance Note for Integrating Early Childhood Development Activities into Nutrition Programs in Emergencies
- IASC MHPSS Guidelines in Emergency Settings (development)
- Hincks Del-Crest (HDC), Learning Through Play (LTP)



The World Health Organization (WHO) advocates the implementation of combined psychosocial and nutritional programming in food shortage situations.



Learning Through PLAY

In My Own Way!
Birth to Six Years



The
Hincks-
Bellcrest
Centre

Stage 1



Sense of Self



"You can't spoil me by holding me close. It helps me to feel secure."

Stage 1



Physical
Small Muscle



"My eyes are learning how to follow slow movement. I can focus on objects up to 30 cm (1 foot) away."

Stage 1



Physical
Large Muscle



"Playing on my tummy and my back helps me to stretch and exercise my arms and legs in different ways."

Stage 1



Relationships



"I learn to trust and love when you respond to me quickly and gently."

Stage 1



Understanding
The World



"I am beginning to recognize the faces of the people who care for me."

Stage 1



Communication
Understanding
Messages



"I watch your face while you make sounds, sing and talk to me."

Stage 1



Communication
Giving
Messages



"I try to smile and make sounds when you show me things and talk about what I see."

5 Areas of Child Development

- Sense of self
 - “You can’t spoil me by holding me close. It helps me to feel secure.”
- Physical development (small and large muscle)
 - “My eyes are learning how to follow slow movement. I can focus on objects up to 30 cm (1 foot) away.”
 - “Playing on my tummy and my back helps me to stretch and exercise my arms and legs in different ways.”
- Relationships
 - “I learn to trust and love when you respond to me quickly and gently.”
- Understanding of the world
 - “I am beginning to recognize the faces of the people who care for me.”
- Communication (understanding and giving messages)
 - “I watch your face while you make sounds, sing and talk to me.”
 - “I try to smile and make sounds when you show me things and talk about what I see.”

IMC Experience

A Controlled Evaluation From Northern Uganda “Does Combining Infant Stimulation With Emergency Nutrition Improve Psychosocial Outcomes for Displaced Mothers and Babies?” Jones 2012. *American Journal of Orthopsychiatry* 2012, Vol. 82, No. 3, 349–357

Means and Comparison of Mean Changes Between Groups: Intent-to-Treat

| Outcome measures | Contrast group (CG) | | Intervention group (IG) | |
|-----------------------|------------------------|-------------------------|-------------------------|-------------------------|
| | Pre mean (<i>SD</i>) | Post mean (<i>SD</i>) | Pre mean (<i>SD</i>) | Post mean (<i>SD</i>) |
| Home subscales | | | | |
| Maternal involvement | 23.88 (2.69) | 24.10 (3.03) | 24.38 (2.65) | 26.27 (2.24) |
| Play materials | 8.35 (1.27) | 8.38 (1.31) | 9.28 (1.67) | 10.73 (2.05) |
| Maternal mood | | | | |
| Sadness/worry | 10.59 (3.65) | 10.56 (3.98) | 10.61 (3.55) | 8.42 (2.95) |

Integrated ECD Nutrition Counseling Tool

3 to 6 months

Early Childhood Development

1. Communication

Sing, read and talk to your baby so she can hear different words and sounds. The expressions on your face help her stay interested. Your baby will begin to recognize her name when you use it often.

2. Sense of Self

Your baby tries to comfort herself by putting her hand in her mouth, making sounds, looking at you, listening to familiar sounds and music and looking away when over excited. If she cannot comfort herself, pick her up and hold her close.

3. Physical Development

Provide daily "tummy time" for your baby to practice rolling, moving and lifting her head. This will help her prepare for sitting and crawling.

4. Relationships

Your baby is part of the family. She likes to see and hear what is going on around her. Change her position frequently and place her where she can see everything.

5. Understanding the World

Your baby needs to explore with her mouth. This is a good way for her to learn about her world. Keep her safe by giving her clean toys that are big enough, so she will not choke.

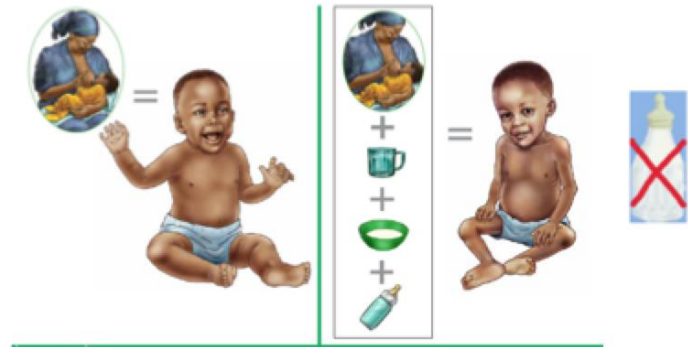
3 to 6 months

Early Childhood Development



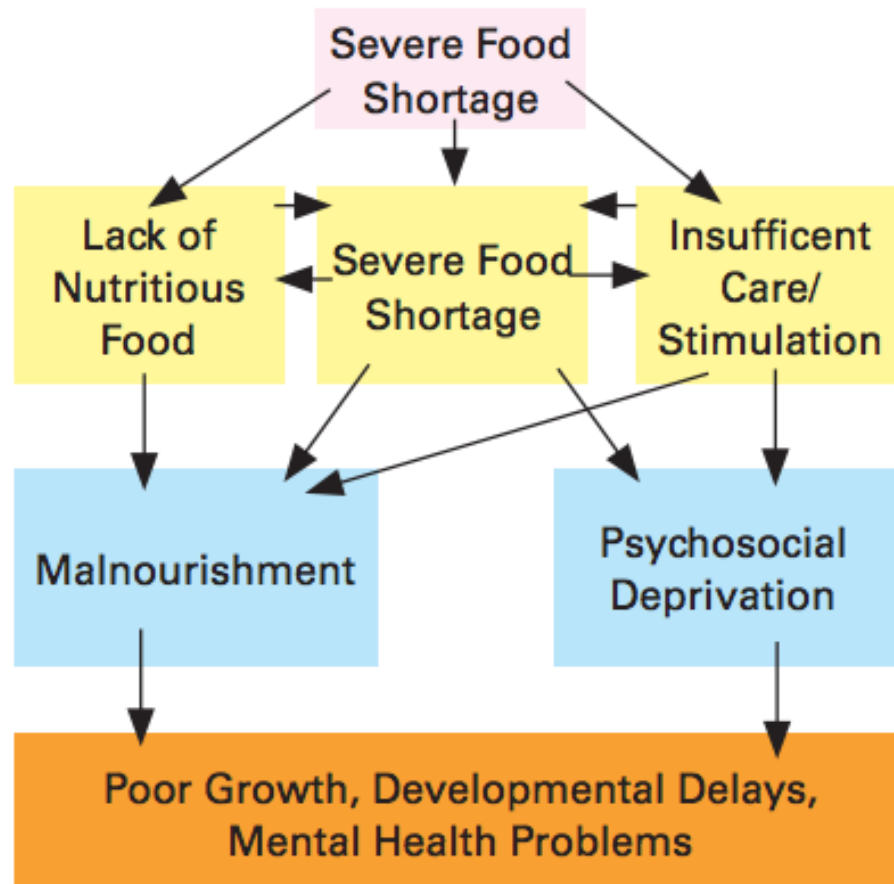
Nutrition

During the first 6 months



- Mixed liquid change pneumonia
- Never will c
- Breast prote
- Exclusively breastfeed on demand, at least 10 times day and night, to produce enough milk and provide your baby with enough food to grow healthy.
- Ensure proper positioning and attachment so your baby gets adequate breast milk and to avoid breast problems such as sore and cracked nipples.
- In the event of nipple and breast problems, seek immediate care from a Health Worker.
- Breastfeeding increases bonding between you and your child.
- Attend regular growth monitoring and promotion sessions to make sure your baby is gaining weight each month. If your baby is not gaining weight or is losing weight, the health staff will help diagnose and find a solution to the problem.

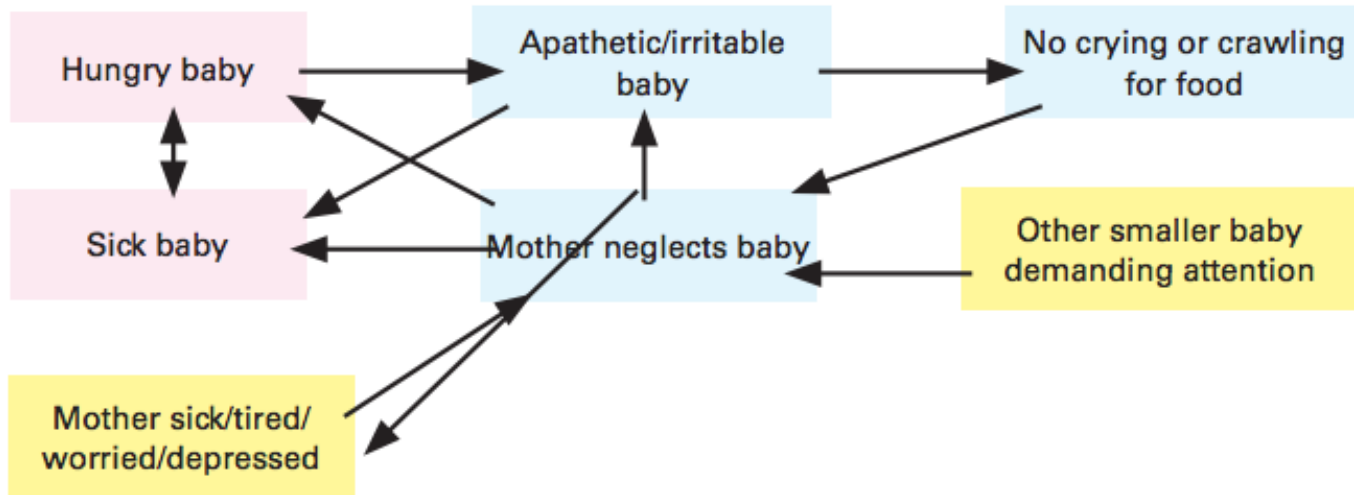
The interaction between lack of food and lack of stimulation



- **Nutritional deficiencies** limit the intellectual and physical development and growth of the child
 - » growth can be stunted
 - » child does poorly at school
- **Deficiencies in affection and psychosocial stimulation** stunt emotional, physical and intellectual development with long term effects
 - » limits potential in school
 - » poor employment chances
 - » lifelong disability
 - » mental problems
- **Nutritional and psychosocial deficiencies interact**

Figure 2: Adapted from WHO ⁹

The Vicious Circles



- **Poorly nourished babies may be:**
 - » timid or irritable and easily upset
 - » harder to feed
 - » less active
 - » less likely to play and communicate
 - » less able to get the attention of their mothers
- **Mothers less likely to feed, play or communicate with them**
- **Mothers who are very worried and**

- stressed by the problems of life may**
 - » not pay attention to babies or be too intrusive
 - » not communicate with them
 - » not play with them
- **Children become more apathetic or irritable in response and less likely to demand food when they need it**

Figure 4: How mother and infant problems in stressful environments may interact

How to improve the situation

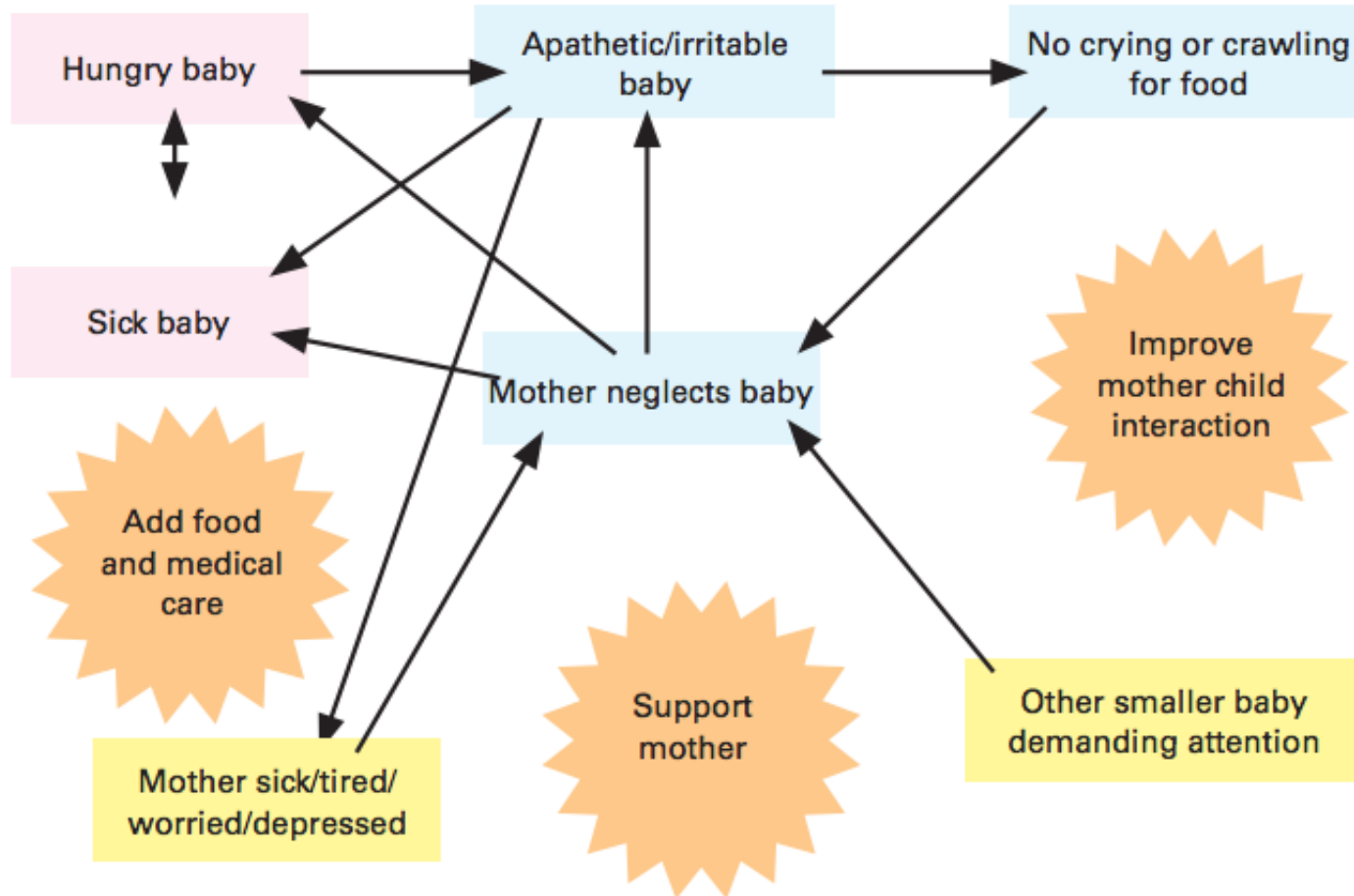


Figure 5: Intervention points

KEY POINT SUMMARY: WHY SHOULD EARLY CHILD DEVELOPMENT ACTIVITIES BE COMBINED WITH EMERGENCY FEEDING PROGRAMMES?

- In famines and food shortage situations, providing food alone is not enough
- Child growth and brain development depend on good nutrition AND stimulation and caretaker emotional responsiveness
- The brain is most responsive in the first three years of life. This is when it grows and develops fastest
- There is strong evidence that combined programmes improve growth and developmental outcomes in short and long term
- Early child development activities improve maternal mood if conducted using groups and home visits
- Regular mother and baby groups to do ECD activities build resilience and increase networks of social support. They provide a non-stigmatizing way of supporting vulnerable women and children exposed to violence
- Combined programmes are fun to do!

The Evidence Around Integration

1. Evidence from low resource settings shows that combined infant stimulation and nutrition programs have additive effects on children's growth and development outcomes in the long term. *Jamaica Study (2005)*
1. Research also shows that programs focusing on improving maternal-child interaction through mother-to-mother support groups and home visits improved maternal mood, enhanced maternal well-being and improved the child's nutritional status and growth outcomes. *Dybdahl, R., (2001)*

The Evidence Around Integration, Cont'd

3. A recent systematic review of studies that examined the effect of interventions combining a child development component with a nutrition one, shows that nutritional interventions usually benefit nutritional status and sometimes benefit child development.

Key Messages

- While scientific evidence is limited at this time, theoretical, empirical, and logistical evidence does confirm the feasibility and effectiveness of integrating child development and nutritional interventions. *Black, M., and Dewey, K., (2014).*
- Combining nutritional and child development activities are likely to have additional benefits for young children

Other Readings and Resources

3 article Lancet series: Early child development. Vol 378 October 8, 2011



Comment

Early childhood development—global action is overdue

In 2002, the Lancet declared that early childhood development was a global challenge of the greatest urgency. A decade later we have made progress, but still have far to go in making early childhood development the global priority it merits.

The importance of early childhood development remains profound. As the accompanying papers in this issue show us, early, the prenatal and postnatal periods are the most critical times in a child's development, laying the foundation for physical, emotional, and intellectual wellbeing. Dietary deficiencies, inadequate stimulation during the first 1000 days, and low levels of literacy in the home and community can increase the risk of poor school performance, especially when they are coupled with community-based nutrition and parenting programmes.

The two Lancet papers present new evidence on the causes and consequences of developmental inequalities in early childhood—the exceptional opportunity we have to address them. We must not ignore this evidence. Instead, we must act on it, working together to make safe and supportive early childhood development a reality for the world's poorest and most vulnerable children. Increased investment is needed in quality parenting programmes and organised early learning centres for the most disadvantaged children. These services should be better integrated into existing community-based programmes across a broad range of countries.

Global action is overdue

Child Development 1 Inequality in early childhood: risk and protective factors for early child development

Authors: Sawyer SM, Whalley D, Shahyouni M, et al.

Abstract: Inequality between and within populations has origins in adverse early experiences. Developmental inequalities in early childhood are associated with cognitive stimulation, learning, motor proficiency, and emotional regulation. These inequalities are associated with cognitive stimulation, learning, motor proficiency, and emotional regulation. These inequalities are associated with cognitive stimulation, learning, motor proficiency, and emotional regulation.

Child Development 2 Strategies for reducing inequalities and improving developmental outcomes for young children in low-income and middle-income countries


Authors: Hansen TG, Osofsky JM, et al.

Abstract: This report is the second in a series on early child development in low-income and middle-income countries and assesses the effectiveness of early child development interventions. The evidence reviewed suggests that early child development can be improved through these interventions with effects greater for programmes of higher quality and for the most vulnerable children. Other promising interventions for the promotion of early child development include children's educational media, interventions with children at high risk, and combined the provision of early child development with conditional cash transfer programmes. Effective investments in early child development have the potential to reduce inequalities perpetuated by poverty, poor nutrition, and restricted learning opportunities. A simulation model of the potential impact of economic effects of increasing preschool enrolment to 25% or 50% in every low-income and middle-income country showed a household-hourly rate saving from 0.4 to 0.7%, depending on preschool enrolment rate and discount rate.



Other Readings and Resources

- Nutrition and brain development in early life. Insight. A&T Technical Brief Issue 4, January 2012
- UNICEF: Inequities in Early Childhood Development: What the data say



alive&thrive
nourish culture grow

Insight

A&T Technical Brief
Issue 4, January 2012


Nutrition and brain development in early life

Elizabeth Prado and Kathryn Dewey

Summary of main points

- 1) Adequate nutrition during pregnancy and the first two years is necessary for normal brain development, laying the foundation for future cognitive and social ability, school success, and productivity.
- 2) Undernutrition may influence brain development both directly and indirectly.
 - Malnutrition adversely affects neurodevelopmental processes.
 - Undernutrition affects children's responses and behaviors, which in turn influence brain development.
- 3) Priority should be given to the prevention of severe acute malnutrition (very low weight-for-height), chronic malnutrition (as evidenced by stunted growth retardation and lower growth-velocity) or stunting, iron deficiency anemia, and iodine deficiency. There is strong evidence that they affect the developing brain and compromise long-term cognitive, motor, and socio-emotional development.
- 4) There is growing evidence that breastfeeding promotion, zinc and post-natal multiple micronutrient supplementation, zinc and post-natal supplementation with essential fatty acids, and fortified food supplements provided during pregnancy and to the child from 6 to 24 months of age can have beneficial effects on early child development. Few data exist on the long-term effects of these interventions.
- 5) An integrated approach is likely to be most effective for promoting optimal child development. It is recommended that combine optimized nutrition with other strategies such as enhancing the home environment and the quality of caregiver-child interaction.

Figure 1. Estimated percentage of children under 5 failing to fulfill their developmental potential by country in 2004. *Quantum-McGehee et al. (2007)*




Alive & Thrive • P.O. Box 1425 Connecticut Avenue, NW • Washington, DC 20009
Phone (202) 884-8734 • Fax (202) 884-3966 • aliveandthrive@biobei.org • www.aliveandthrive.org

Inequities in Early Childhood Development

What the data say

Evidence from the Multiple Indicator Cluster Surveys



unicef
for
children



International Medical Corps

Other Readings and Resources

- Walker, S., Chang, S., Powell, C., & Grantham-McGregor, S., (2005). Effects of early childhood psychosocial stimulation and nutritional supplementation on cognition and education in growth-stunted Jamaican children: prospective cohort study. *Lancet*, 366: 1804-1807.
- Dybdahl, R., (2001). Children and mothers in war: an outcome study of a psychosocial intervention program. *Child Development*, 72:1214-1230.
- Grantham-McGregor, S., Fernald L., Kagawa, R. and Walker, S., (2014) Effects of integrated child development and nutrition interventions on child/ development and nutritional status. *Ann. N.Y. Acad. Sci.*, 1308: 11–32.
- Black, M., and Dewey, K., (2014). Promoting equity through integrated early child development and nutrition interventions. *Ann. N.Y. Acad. Sci.*, 1308: 1–10.
- World Health Organization, (2001). Mental Health and Psychosocial well-being among children in Severe Food Shortage Situations.
- USAID. (2011). Essential Nutrition Actions Framework: Booklet on Key ENA Messages.



Thank you!

Zeinab Hijazi
Roving Mental Health and Psychosocial Officer
zhijazi@InternationalMedicalCorps.org