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Implementation Research, Practice & Partnerships: Informing a Multisectoral Approach for ECD

Aisha K. Yousafzai, PhD

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ARNEC Conference,
Nepal





Child development in developing countries 1

Developmental potential in the first 5 years for children in developing countries

**Sally Grantham-McGregor, *Yin Bun Cheung, Santiago Cueto, Paul Glewwe, Linda Richter, Barbara Strupp, and the International Child Development Steering Group†*

Lancet 2007; 369: 60–70

See Comment page 8

*Lead authors

†Steering group listed at end of the paper

This is the first in a Series of three articles about child development in developing countries

Centre for International Child Health, Institute of

Many children younger than 5 years in developing countries are exposed to multiple risks, including poverty, malnutrition, poor health, and unstimulating home environments, which detrimentally affect their cognitive, motor, and social-emotional development. There are few national statistics on the development of young children in developing countries. We therefore identified two factors with available worldwide data—the prevalence of early childhood stunting and the number of people living in absolute poverty—to use as indicators of poor development. We show that both indicators are closely associated with poverty. 200 million children under 5 years live in absolute poverty in Asia and sub-Saharan Africa. Low incomes, high fertility, and lack of poverty.

250 Million children not meeting their developmental potential (Grantham-McGregor et al., Lancet, 2007)



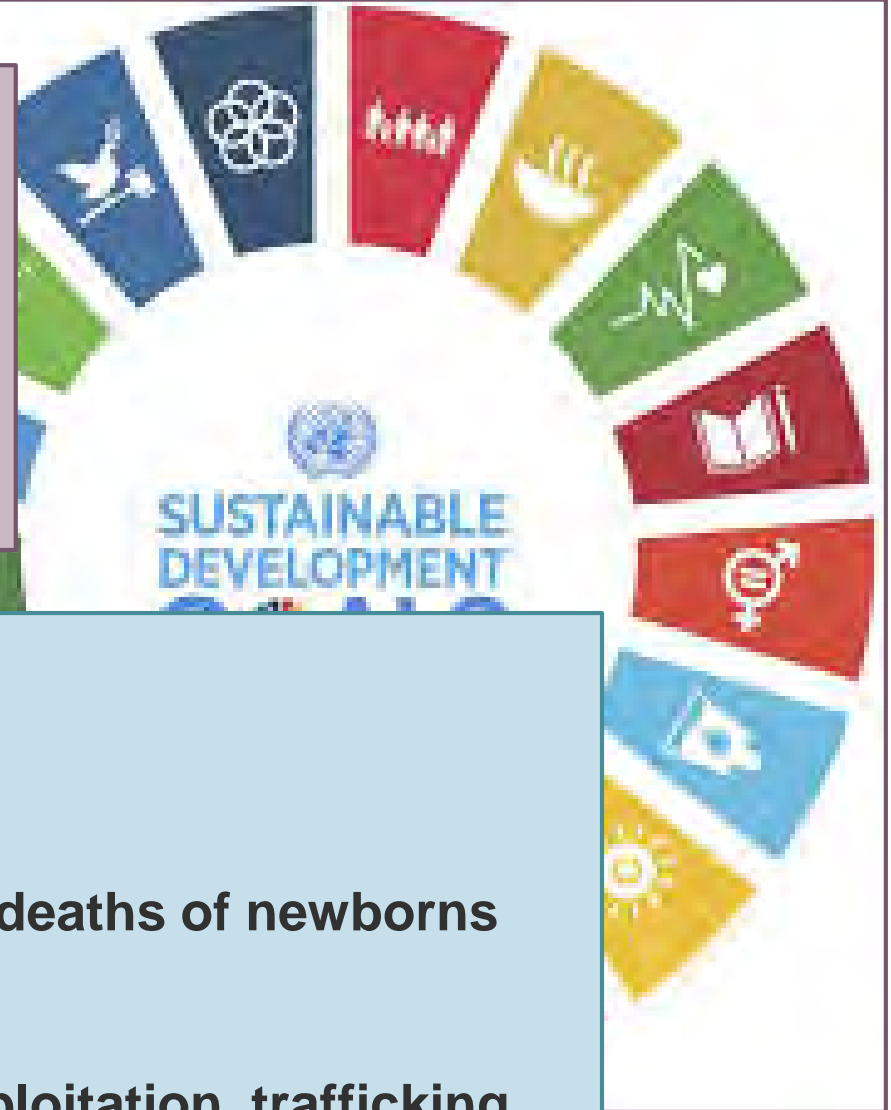
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By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education

Goal 2, Target 2.2.: End hunger

Goal 16, Target 16.2: End abuse, exploitation, trafficking and all forms of violence against and torture of children.



Overview

- The Nurturing Care Framework: A Road Map for Multisectoral Approaches for ECD
- Evidence-Based Principles for Creating Nurturing Care Interventions for ECD
- Addressing Challenges and Opportunities in Implementing Multisectoral Approaches through Research & Practice
- Strong Partnerships



The Nurturing Care Framework: A Road Map for Multisectoral Approaches for ECD



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Nurturing Care Framework



- All sectors have a responsibility to provide services to meet the needs of young children.



- **Promote new interventions in current programmes:**
 - E.g. Integrate early learning advice in health services.
- **Work differently with caregivers so they are empowered with the knowledge, skills, competencies and resources to:**
 - Meet the physical and emotional needs of children
 - Protect children from harm
 - Provide early learning opportunities for children
 - Interact in responsive, emotionally supportive and cognitively stimulating ways with children.
- **Strengthen cross-sector partnerships.**
 - Plan and invest in cross-sector national plans to support young children.
 - Share expertise.
 - Co-ordinate services.



Evidence-Based Principles for Creating Nurturing Care Interventions for ECD



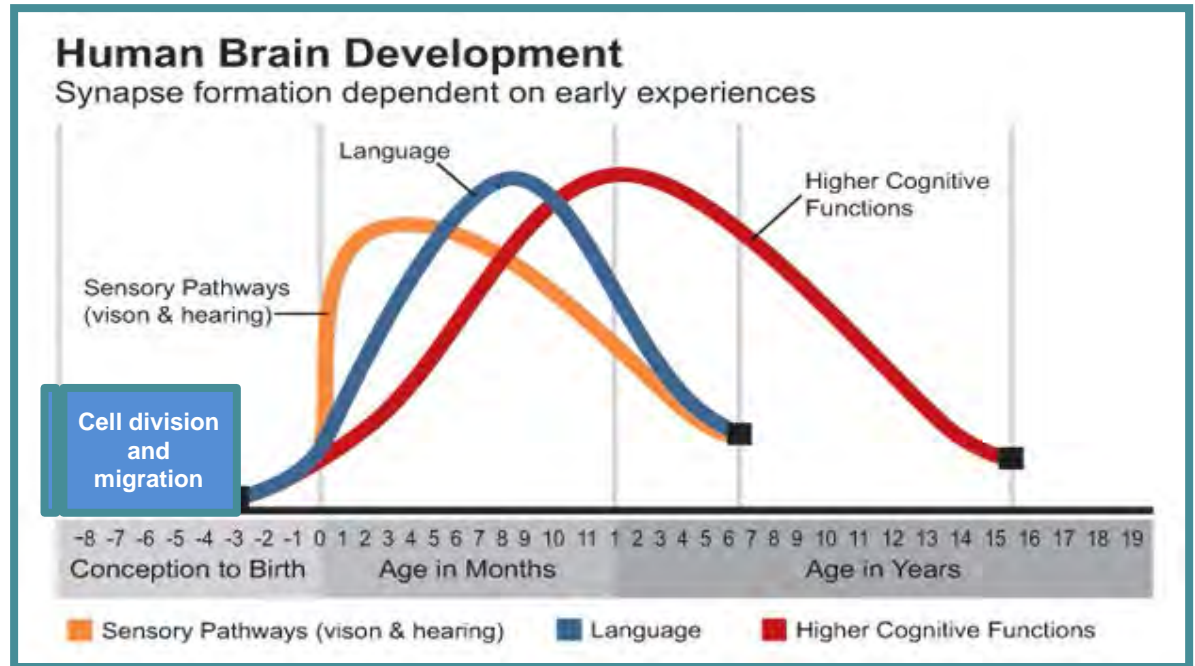
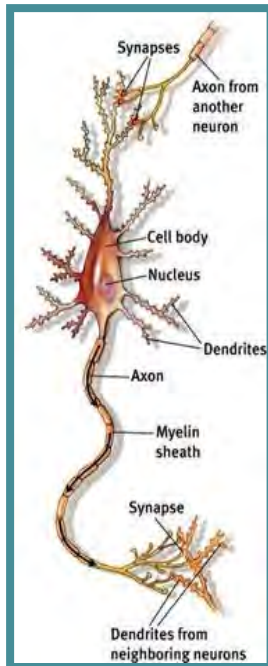
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Evidence-Based Principles for Creating Packages of Nurturing Care Interventions for ECD

- **Start early**
- Provide multiple protective inputs to promote nurturing care and mitigate risks
- Support child and parents/caregivers
- Boost development in the life course

Sensitive Periods and the Developing Brain



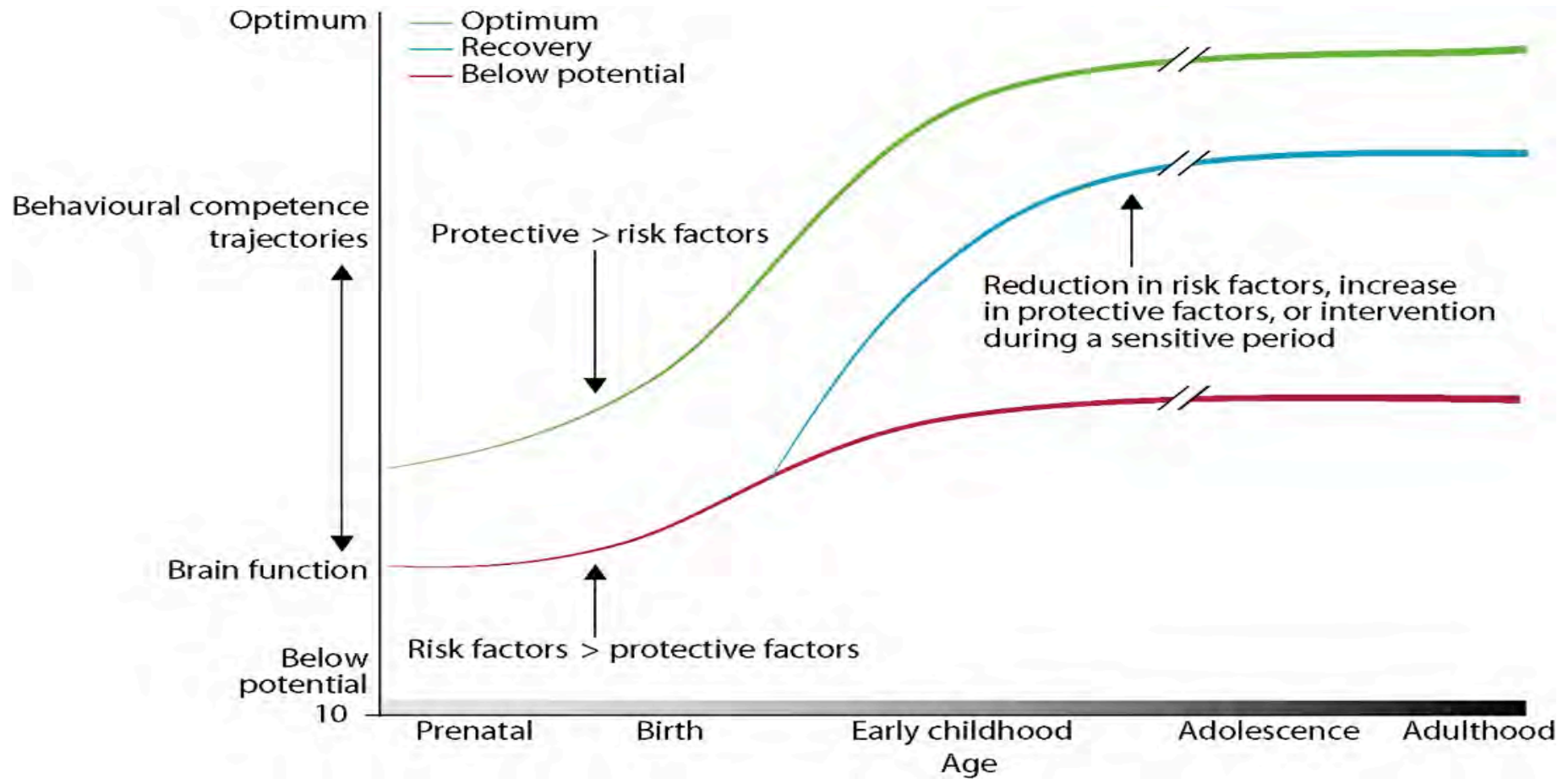
[Thompson & Nelson, 2000]



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Starting Early to Reduce Inequalities



[Walker et al., 2011]



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Recommendations for Care for Child Development

**NEWBORN,
BIRTH UP TO 1 WEEK**

**1 WEEK UP
TO 6 MONTHS**

**6 MONTHS
UP TO 9 MONTHS**

**Your baby learns
from birth**



PLAY Provide ways for your baby to see, hear, move arms and legs freely, and



PLAY Provide ways for your child to see, hear, feel, move freely, and touch



PLAY Give your child clean, safe household things to handle

Promote Opportunities for Early Learning:

10-41% of households in low- and middle-income countries (LMIC) provided stimulation materials. [Source: UNICEF MICS]

Support Responsive Caregiving:

11-33% of parents involved in play with children. Play is a good context to guide parents to understand their child's cues. [Source: UNICEF MICS]

it. Play peek-a-boo.



COMMUNICATE

your child the names of things and people. Show your child how to use things with hands, like "bye-bye." Sample toy: doll's face.

out. Sample toys: Nesting and stacking objects, container and clothes clips.



COMMUNICATE

Ask your child simple questions. Respond to your child's attempts to talk. Show and talk about nature, pictures and things.

for your child. Sample toys: Objects of different colours and shapes to sort, stick or chalk board, puzzle.



COMMUNICATE

Encourage your child to talk and answer your child's questions. Teach your child stories, songs and games. Talk about pictures or books. Sample toy: book with pictures

- Give your child affection and show your love
- Be aware of your child's interests and respond to them
- Praise your child for trying to learn new skills

2 года и больше

- Кормите ребенка 3 раза в день одной семейной столой (основные приемы пищи). В каждое кормление давайте 350 мл пищи (почти 2 стакана).
- Между основными приемами пищи 2 раза в день (второй завтрак (пото 11 часов) и полдник (пото 17 часов)) давайте ребенку дополнительно:
 - кофеи, йогурт, молоко;
 - хлеб с маслом, колбасу или паштет;
 - творог, сыр, брынзу;

- плаценты, бутерброды, блинчики;



- ♦ Позвольте ребенку сравнивать предметы и соотносить их. Сделайте простые игрушки для вашего малыша. Участвуйте в его играх.

- Общайтесь:**
- ♦ Поговорите ребенка к разговору. Отвечайте на его вопросы. Учите ребенка рассказывать истории, петь и играть. Читайте вместе сказки.

КАЛЕНДАРЬ ПРИВИВОК В РЕСПУБЛИКЕ МОЛДОВА
(Сведения о дозах вакцин, которые уже получил ваш ребенок. Спросите семейного врача, когда нужно для следующей прививки)

[illegible]

ПАМ'ЯТКА МАТЕРИ

- ### Предупреждение травм
- Нежно не оставлять ребенка без присмотра родителей.
 - Удалить острые предметы из места, недоступного для детей.
 - Убедиться, что ребенок не имеет доступа к проводам, розеткам, электроплите, нагревателям и другим электроприборам.
 - Убедиться, что ребенок не имеет доступа к хозяйственным средствам (косилки, мотокосы, трактора и т.д.).
 - Своевременно заменять резину в местах его игр.
 - Учить ребенка аккуратно вести себя с кошками, быть осторожным.
 - Не оставлять ребенка одного возле бассейна, других взрослых.
 - Ребенок может застрять в нежелательной ситуации.
 - В зимнее время защитить его от переохлаждения, защитить от насекомых.
 - Во время автомобильной прогулки использовать автокресло для ребенка — единственное средство.
 - Избегать ранней близости.
- ### Предупреждение пожаров и ожогов
- Не допускать приближения ребенка к включенным газовым плитам, работающим приборам (горячим чайникам, обогревателям, кастрюлям, утюгам и т.д.).
 - Не оставлять на виду детей сигареты, зажигалки, лампы, телевизоры и спайки.
 - Отвлекать ребенка от приближения ребенка к спичкам.
 - Не оставлять ребенка вблизи (воздух, чаша, бочка и т.д.) в местах, доступных для ребенка.

Предупреждение удушья

- Не позволяйте малышу играть с пластиковыми пакетами, воздушными шарами или иными предметами, способными закрыть нос и рот.
- Не давайте ребенку пуговицы, монеты, шарик и другие маленькие и твердые предметы, которые он может проглотить.
- Не засыпайте во время кормления ребенка грудью — существует опасность асфиксии (удушья).

Предупреждение отравления

- Храните токсичные растворы и порошки, используемые в хозяйстве, в местах, недоступных для ребенка.
- Не оставляйте на виду у детей медикаменты. Храните их в запечатом шкафу.
- Давайте лекарства в строгом соответствии с предписанием врача.
- Витамины на ульях отыскать легко — они могут быть съедены птицей.



Не забудьте взять с собой памятку, когда идете к врачу

Фамилия и имя ребенка _____
 Дата рождения _____
 Фамилия медицинского работника _____
 Телефон медицинского учреждения _____
 Телефон медицинского работника по месту жительства _____

Для большого ребенка

Кормите грудью чаще и дольше. Если ребенка кормят не только грудью, следует увеличить объем мажорской давки меду:

- соевый суп;
- биологический простокваша; кефир;
- расквашенный творог или йогурт.

Для ребенка с жидким стулом



- давать больше питья
 - водно-солевые растворы для оральной регидратации (ОРС, РЕГИДРОН)
 - 1 чайная ложка в 1 литре кипяченой и охлажденной воды
 - другие жидкости, если не возмущают желудок:
 - овощной сок,
 - кефир,
 - биолог,
 - просто вода,
 - рисовый отвар (5 столовых ложек риса в 1 литр воды, кипятить час, затем развести кипяченой водой, доведя до исходного уровня)
 - кипяченую воду
 - чаще пригласить ребенка к груди и кормить его более длительные время
- Последствия:* обезвоживание, рвота, диарея, тошнота, слабость, сонливость, раздражительность

- Если ребенок отказывается глотать, кормите его чаще и дольше, чем раньше.
 - Если ребенок получает другие виды молока (коровье, козье):
 - заменяйте их грудным, причем кормите чаще и дольше, ИЛИ
 - заменяйте их ферментированными молочными продуктами, такими, как йогурт, биогат, кефир, кислое молоко (простокваша), ИЛИ
 - заменяйте их высококачественными адаптированными смесями, ИЛИ
 - заменяйте полужидкую овушку молока полужидкой пищей, богатой питательными веществами.
 - давайте ребенку больше жидкости (рисовый отвар, чай из трав).
- В отношении других продуктов следуйте рекомендациям с учетом состояния ребенка.

Well Baby Visits in Primary Health Care Services In the Caribbean

- Stimulation and care advice was promoted for children aged 18 months in 5 routine well-baby visits in primary health care facilities (Chang et al. Pediatrics, 2015)
- **Intervention:**
 - While parents and children were in the waiting room, community health aides showed a short video on stimulation and demonstrated activities parents could try with their child.
 - In the health visit, nurses re-enforced the advice and provided parents with recommendation cards and some playthings to take home.
- **Benefits:**
 - Significant benefits in children's cognition, language and vocabulary, and hand-eye coordination.



Evidence-Based Principles for Creating Packages of Nurturing Care Interventions for ECD

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Multiple Risks Threaten Children's Early Development

Biological

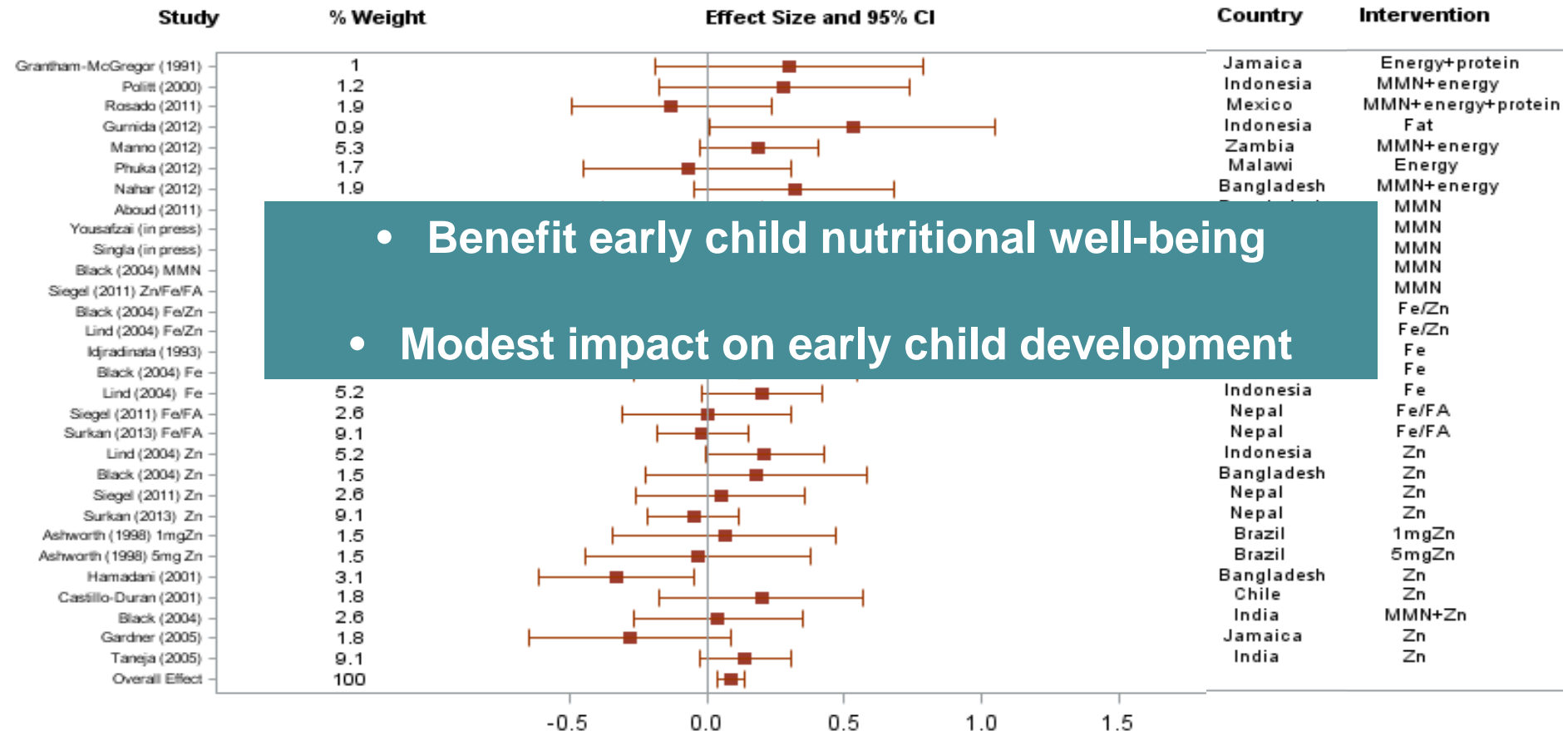
- Malnutrition
- Low Birth weight, Intra-uterine growth restriction
- Infectious illnesses
- Environmental pollutants

Psychosocial

- Inadequate stimulation and early learning opportunities
- Poor quality responsive caregiving
- Maternal depression
- Institutional care
- Exposure to violence



Postnatal Nutrition Interventions and Cognitive Development



- Benefit early child nutritional well-being
- Modest impact on early child development

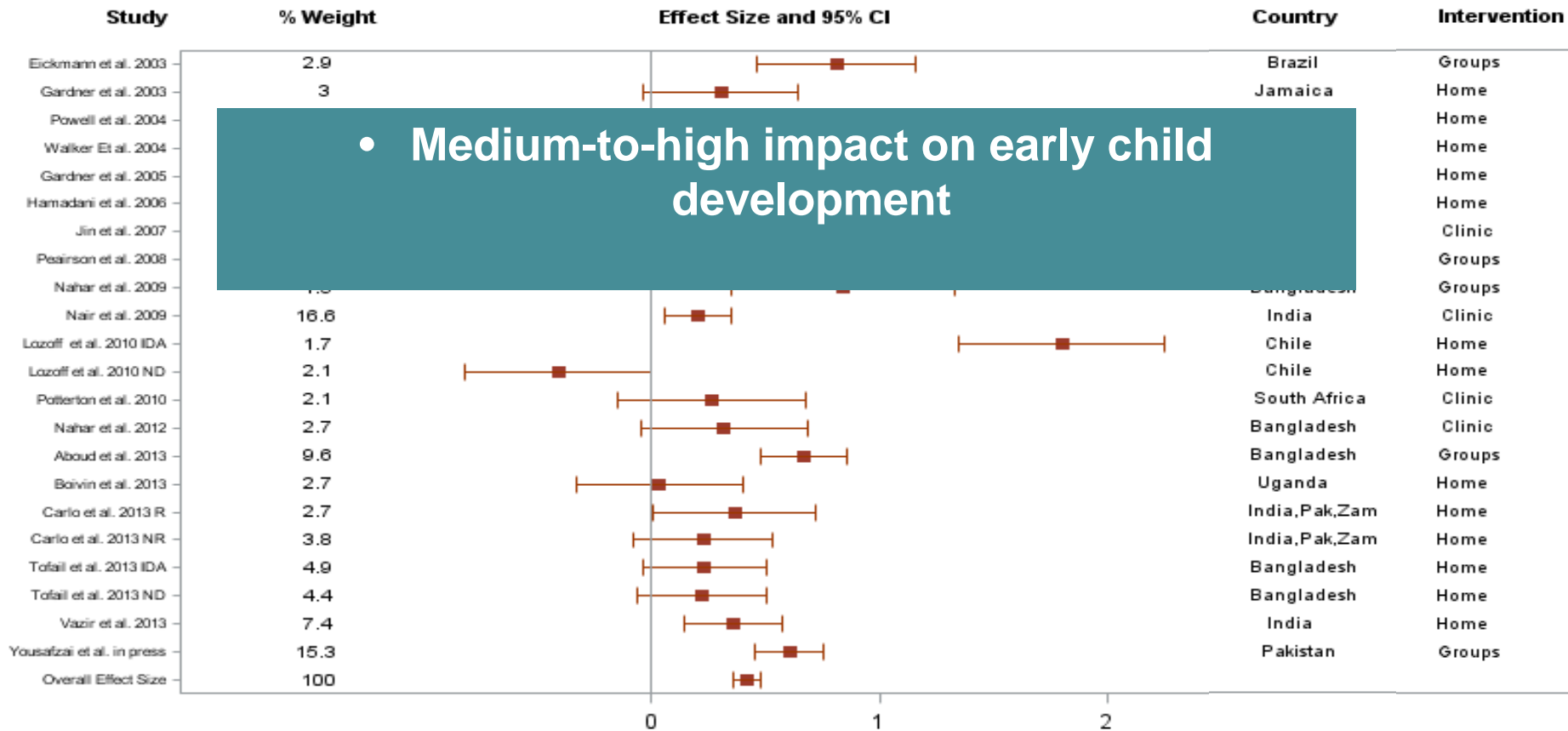
[Aboud & Yousafzai, Annual Review of Psychology, 2015]



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Stimulation Interventions and Cognitive Development



[Aboud & Yousafzai, Annual Review of Psychology, 2015]



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- *In other words* nutrition and stimulation implemented together benefit multiple child outcomes.
- The first 1000 days is a sensitive window of opportunity for both interventions.
- The parent/caregiver is provided advice that addresses her infant's physical and mental development.
- The health worker can integrate both messages.



Examples of Integrated Nutrition and Stimulation Interventions Across Different Platforms

	Attanasio et al., 2014	Morris et al., 2012	Yousafzai et al., 2014
Country	Colombia (rural)	Uganda (IDP)	Pakistan (rural)
Delivery Platform	Conditional cash transfer	Emergency feeding centres	Community Health Service
Delivery Agents	Volunteer Mother Leaders	Psychosocial Facilitator	Community Health Worker
Delivery Strategy	Weekly home visits over 18 months	Weekly group sessions and home visits over 6 weeks	Monthly home visits and monthly group sessions over 24 months
New Intervention Added	Stimulation, Nutrition	Stimulation	Stimulation, Enriched Nutrition
Benefits	Learning & Language	Care & Maternal Mental Health	Learning, Language & Motor Development, Child Health, Care Maternal Mental Health,



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- Start early
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- **Support child and parents/caregivers**
- Boost development in the life course



Parenting and Nurturing Care

- Caregiver knowledge, attitudes, practices, skills
- Caregiver's physical and emotional well-being
- Caregiver's access to resources to invest in children (e.g. conditional cash transfer, child care)
- Two-Generational Approaches: Skills Development for Parents (e.g. vocational training)
- Investment in frontline workforce (e.g. early childhood educators, child protection officers)



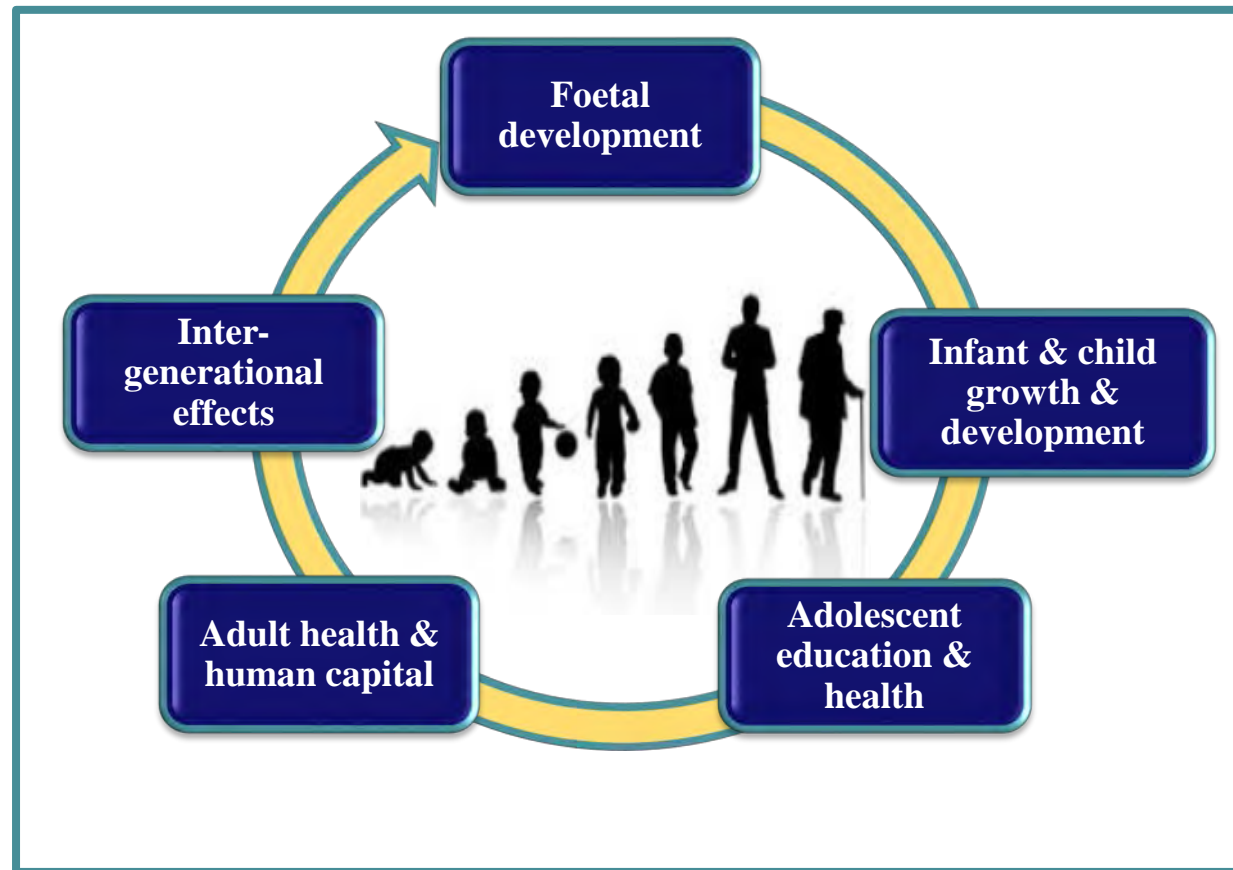
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Evidence-Based Principles for Creating Packages of Nurturing Care Interventions for ECD

- Start early
- Provide multiple protective inputs to promote nurturing care and mitigate risks
- Support child and parents/caregivers
- **Boost development in the life course**

Life-course approach



[Lancet Series on Child Development, 2017]



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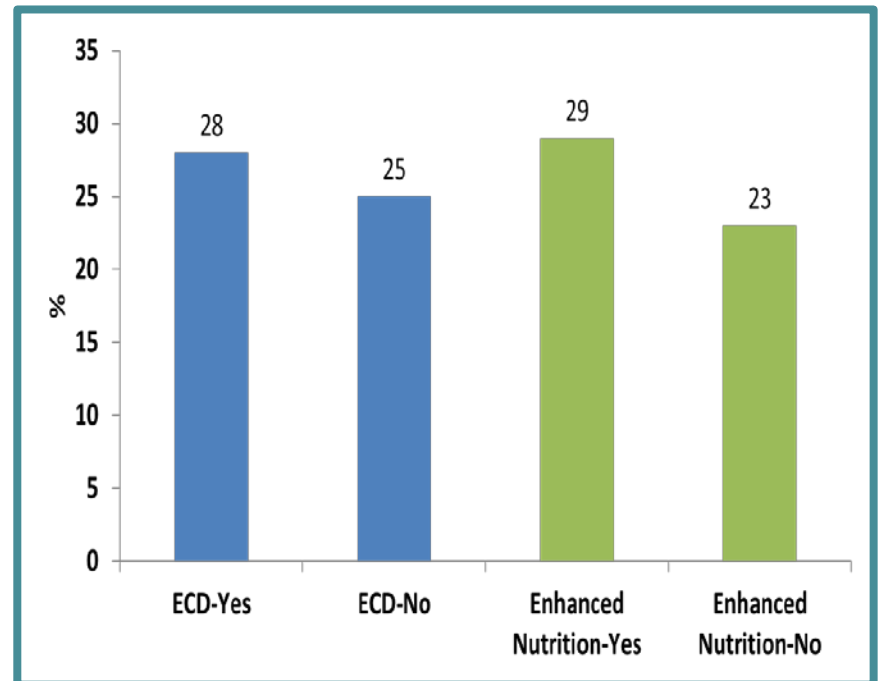
Lesson from Pakistan

Age 2 Years: Access to Parenting Programme

- Parenting interventions delivered by community health workers benefitted children's early development.

[Yousafzai et al., LGH, 2016; Lancet, 2014]

Age 4 Years: Limited Early Learning Opportunities



Evidence-Based Packages of Nurturing Care

Family Support & Strengthening Package

- Access to quality services, skills building, support

Multigenerational Nurturing Care Package

Care and protection of mothers' and fathers' physical and mental health and wellbeing, and their capacity to provide nurturing care

Early Learning & Protection Package

- Integrates support for young children with parental and caregivers' support to create a nurturing learning environment

[Britto et al., Lancet, 2017]



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Example of a Multisector Programme: *Chile Crece Contigo*

The Programme

- Provides health, early learning and social protection care prenatally-4 years.
- Led by Ministry of Social Development in partnership with the Ministries of Health and Education.
- Brings together government and non-government service providers.

Features of Success

- Science: Starts early, multiple inputs, addresses needs of caregivers and children.
- Addresses a gap in services.
- High level of leadership and good governance.
- Inter-sectoral coordination with good communication, defined roles & responsibilities, and trust.
- Partner engagement.



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Addressing Challenges and Opportunities in Implementing Multisectoral Approaches through Research & Practice



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Achieving Impact at Scale

- Many good programmes cannot demonstrate how they are good
- Many not-so-good programmes think they are good
- Many programmes in the middle need a roadmap for how to get better
- Therefore:
 - What do we need to learn to effectively transition programmes from ‘small to big?’
 - What do we need to learn to effectively transition programmes from ‘big to better?’
 - What do we need to do to reach all children?

Implementation Research and Practice

The study of methods to promote the integration of research findings and evidence into healthcare policy and practice. It seeks to understand the behaviour of healthcare professionals and other stakeholders as a key variable in the sustainable uptake, adoption and implementation of evidence-based interventions... Fogarty International Centre, NIH, US.

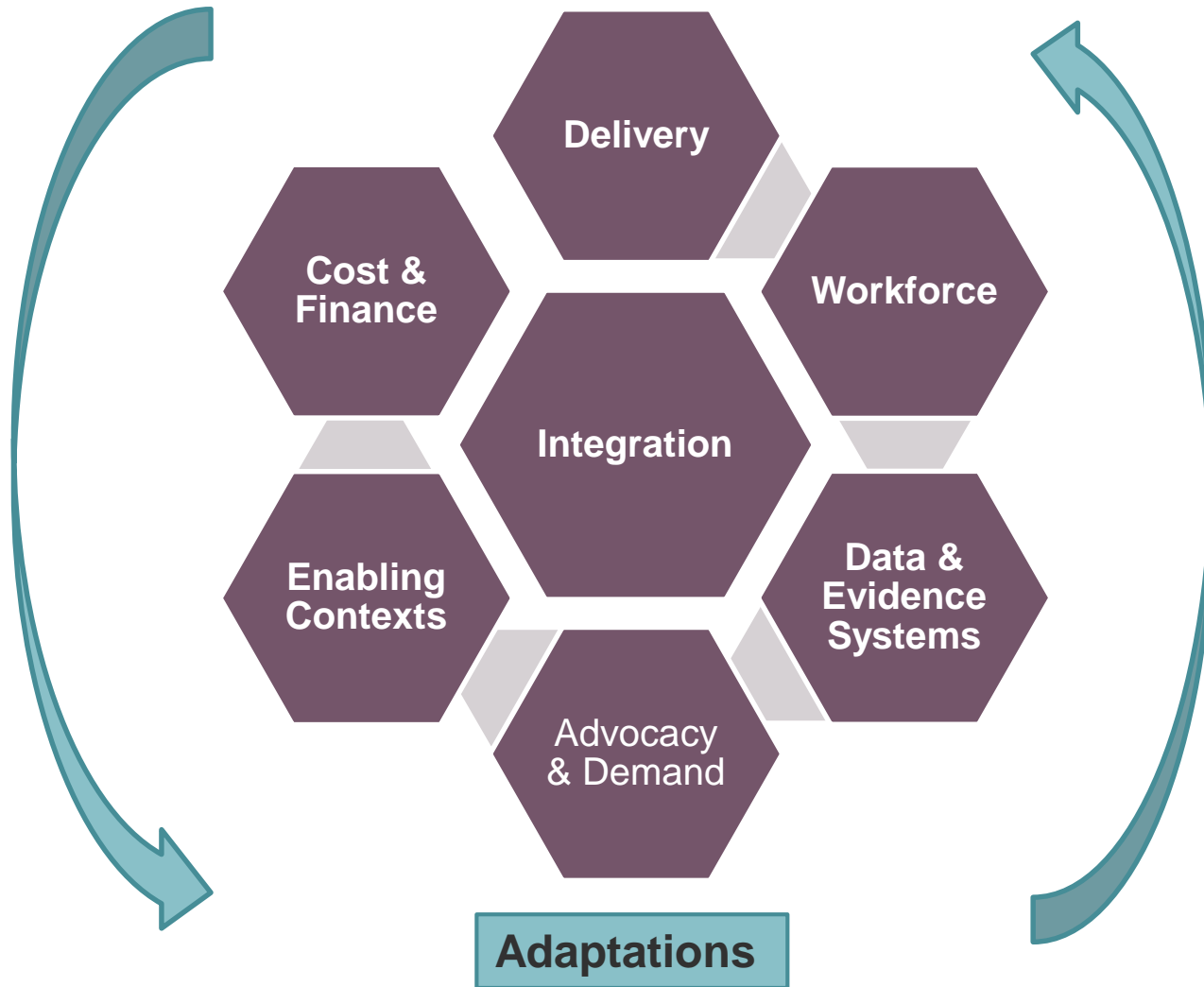


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**Respond to
Capacity Need**

Quality Improvements



[Britto et al., ANYAS, 2018]



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Lesson 1: Iterative and collaborative approach to designing scalable interventions



- Vertical approach to scale will not work.
- Design from the outset a scalable unit/prototype based on context.



Context Mapping for Designing Effective Multisectoral Approaches

1. What are the socio-cultural caregiving practices pertaining to health, nutrition, safety, and development?
2. What platforms exist for integration of early childhood interventions? What is the readiness for integration? What are the structures and processes we need to consider for designing a scalable package?
3. What are the best practices to help caregivers navigate multiple services and programmes?
4. How can coordination for services be optimized (e.g., making referrals, ensuring continuity of services for children and their caregivers, sharing data)?
5. Is information provided to caregivers and children consistent across sectors?
6. Is there an enabling environment for sectors to work effectively together (e.g. share vision, policies, governance and accountability)?



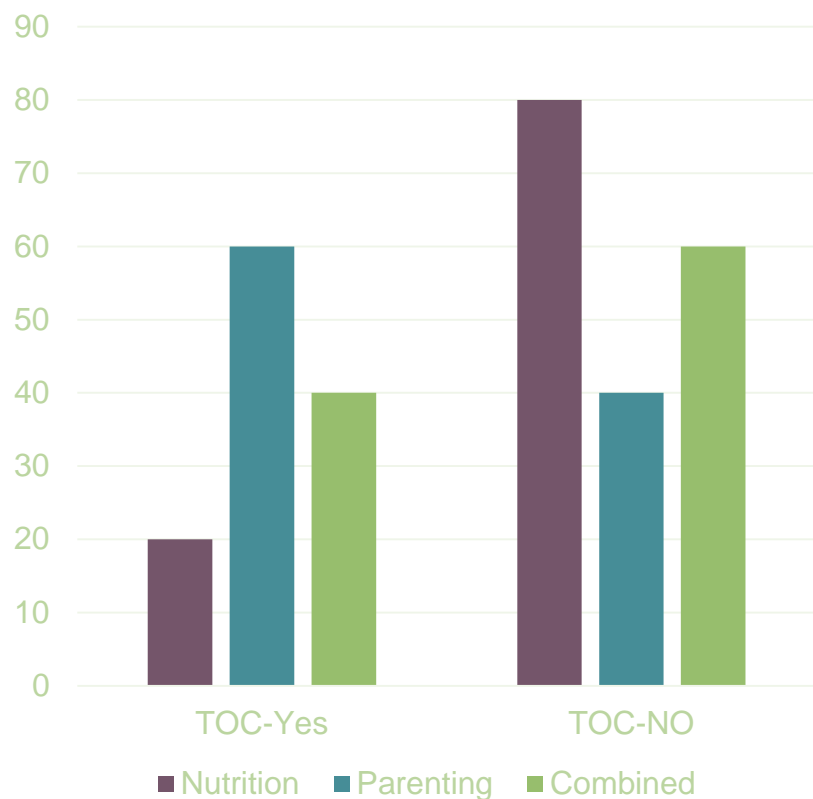


- Vertical approach to scale will not work.
- Design from the outset a scalable unit/prototype based on context
- **Theory of change**
- **Evidence-based on *what works for which outcomes.***
- **Adapted curriculum- aligned with existing service.**
- **Iterative testing and modifications in existing service.**



Theory of Change (TOC)

Studies reporting TOC (N=349)



- Programmes with a clear TOC associated with significantly improved child outcomes (Segal et al, Millbank Quarterly, 2012)
- In the TOC, objectives, components and measures of success align to needs of population.
- TOC understood by providers and beneficiaries.

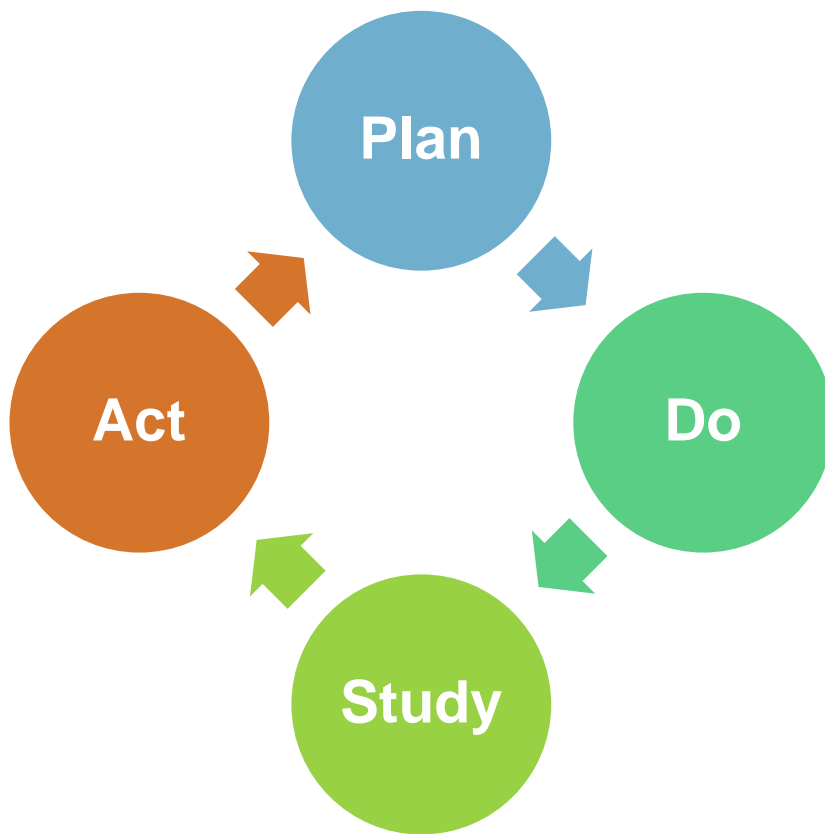
[Source: Yousafzai, Shankar et al., 2018]



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Test and Modify Interventions In Services




- Ghana (Twum-Danso et al. 2013)
- Quality improvement method for scaling-up early post-natal care.
- 30 teams from facility and community-based services.
- Learning Workshops every quarter.
- Improved access to early post-natal care in 48hrs from 15% to 71% in 10 months





Lesson 2: Integrate Behaviour Change Techniques that Encourage Uptake of Interventions

- 
- Small media ($R=0.51$)
 - Small posters, cards, brochures illustrating stimulation practices

- 
- Performance ($R=0.34$)
 - Demonstrations, engage caregivers, coaching and feedback

- 
- Problem-solving ($R=0.34$)
 - Discussion about how to overcome barriers to change

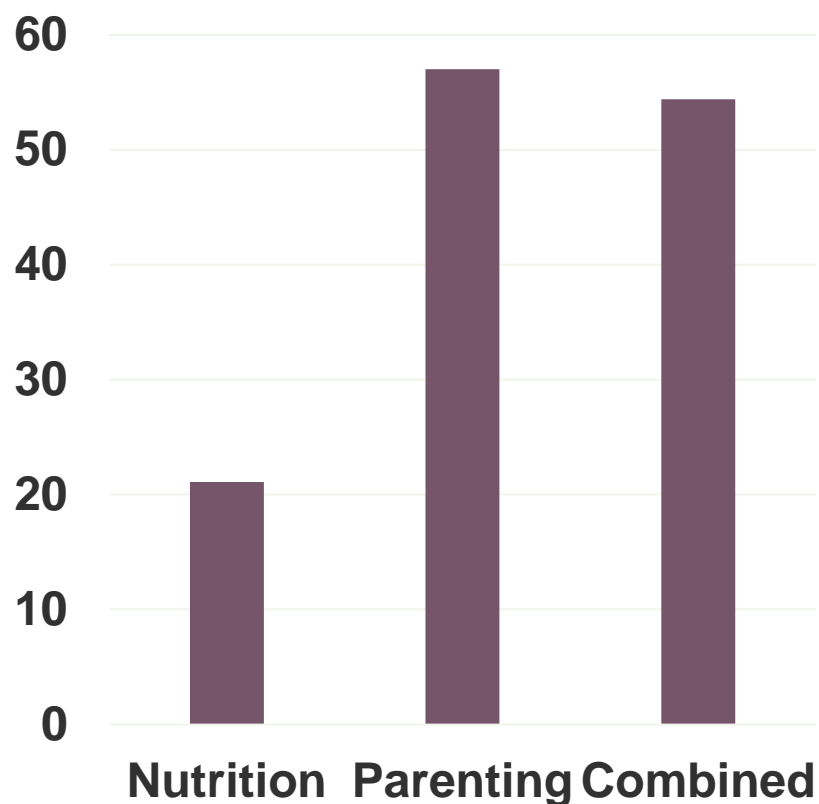
- 
- Social support (too infrequent to assess its value)
 - Motivating peers, family members, trusted figures to encourage parents

- 
- Provision of materials ($R=-0.23$)
 - Low-cost play materials and picture books

- 
- More techniques rather than fewer ($R=0.44$)

Lesson 3: Invest in a Skilled Workforce

Studies reporting supervision (N=349)



- Supportive supervision, with feedback, associated with successful outcomes (Tomlinson et al., ANYAS, 2018).
- Evidence suggests a minimum fortnightly contact (Yousafzai & Aboud, ANYAS, 2014)
- Aided by supervision tools; however few interventions report using tools:
 - 4.7% nutrition studies
 - 11.7% parenting
 - 12% combined

[Source: Yousafzai, Shankar et al., 2018]



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Supervision Contact with Lady Health Worker in Pakistan, 2011



[Source: PEDS Trial, Aga Khan University, 2011]

- Requires feedback loop: Fosters dialogue and empowers providers
- Upgrade skills of supervisors
- *There is a positive change within us, we have become more confident...Mothers listen and follow...Mothers also praise us and we feel happy [PEDS Trial, LHW]*
- *Now with LHW visiting more and advising more, there is a difference in the children and us, we have learned a lot which will help us do something good for our children [PEDS Trial, Mother]*



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Lesson 4: Promoting Demand



Dynamic, Interactive, Evolving



Awareness

Agency

Organizing a
Community of
Purpose

Opportunity
and Initiation
of Collective
Actions



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Program to Improve Private Early Education (PIPE), FSG



200,000+

Low income children having better learning outcomes annually



A system on its way to transformation

Demand

~1.2m

Parents
Assessing
conceptual
learning
(as opposed to
current rote
learning)



~3200

Affordable Private
Schools
using developmentally
appropriate pedagogy



Supply

6-8

High quality
companies
serving 1000s
of APSs
sustainably



Lesson 5: Measure Implementation and Impact

- **Implementation (Aboud & Prado, ANYAS, 2018):**
 - Fidelity (dose delivered, content delivered, approach to delivery)
 - Cost.
 - *Find out why something is working or not working?*
- **Impact (Aboud & Prado , ANYAS, 2018):**
 - Caregiving processes (learning resources in the home, interactions)
 - Caregiver outcomes (e.g., stress, access to services)
 - Child development, nutrition, health
- **Integrate:**
 - Early childhood programme indicators in health, education and protection systems.
 - *Find out what is the impact of integration on services?*

Service Received	ECD/ Nutrition	ECD	Enhanced Nutrition	Control
General Mother/ Child health counselling	76%	78%	46%	5%
Hand washing advice	76%	75%	46%	5%
Medicines received	77%	45%	51%	13%
Mother/Child received nutrition supplements	45%	48%	54%	5%
Advice on EBF	48%	61%	53%	61%
Advice on why mothers breast milk is sufficient 0-6m	48%	57%	49%	2%

[Yousafzai, Rasheed, Siyal, ANYAS, 2018]



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- **Tools to capture nurturing care strategies:**
 - Capture change over time
 - Capture quality of relationships
 - Assess at multiple time points
 - Ensure stakeholder participation, feedback and action
 - Utilize mixed methods
- **Use Data** (Nores et al., ANYAS, 2018)
 - Multiple levels: National, programme, provider
 - Continuous quality improvements in programmes
- **Disseminate Effectively** (Lombardi et al., ANYAS, 2018):
 - Timely manner
 - Place results in context of other programmes
 - Disaggregate data to learn who is benefitting and who is not benefitting.
 - Present to multiple stakeholders (i.e., policy, programme, community, implementers, researchers)



Strong Partnerships



HARVARD
T.H. CHAN

SCHOOL OF PUBLIC HEALTH
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Research-Practice Partnerships

- Creation of collaborative partnerships to prioritizing implementation questions, developing implementation strategies, assessing implementation and identifying solutions (Yarney, Implementation Science, 2012).
- Establish learning communities in programmes.
- Example: Home Visiting Research Network (HVRN), US



Fostering and Funding Research Practice Communities

1. Fund implementation evaluations
2. Strengthen research-practice learning networks responsive to the needs of the ECD community in the countries/regions where we work (e.g. including regional and global networks- ARNEC, AfECN, ARC, ECDAN)
3. Establish innovation funds that enable testing of quality improvements in programmes.
4. Improve access to research and programme evaluations.
5. Improve access to learning opportunities and technical workshops that foster applied research culture in programmes.



Summary

- The case for why invest in the early years is strong.
- The case for what to invest in and how to invest using a multisectoral approach requires greater implementation research and practice sharing.
- Business as usual will not help us to achieve a goal of all children thriving.
- Attention needs to be paid to strengthening early childhood systems for integration.



Coordination Within and Across Sectors

- Integrated intervention packages should ideally be informed by evidence:
 - Science (when will an intervention be more effective),
 - Feasibility (effective and efficient use of resources, avoid ‘overload’)
 - Strengthening existing platforms and services (alignment and complementarity between interventions and approaches to delivery)
- A multi-sector approach requires:
 - Authority to implement plan, budget, change and govern
 - Development of competencies across system
 - Consistency of messages
 - Mitigation of risks during transitions must be addressed (e.g. from home to school)

Thank you

ayousafzai@hsph.harvard.edu

**Access to Implementation Research and
Practice for ECD, Special Series, Annals of the
New York Academy of Sciences:
<http://nieer.org/publications/anyas-special-series>**



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T.H. CHAN**

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