



MONASH
University



Grand Challenges Canada®
Grands Défis Canada



PORTICUS



HÀNH TRÌNH ĐẦU ĐỜI
EARLY JOURNEY OF LIFE

EARLY JOURNEY OF LIFE

**Community Impact and Research-Based Evidence of An
Early Childhood Development Innovation in Vietnam**

Prof. Jane Fisher – Monash University
Tran Thi Thu Ha – RTCCD Vietnam



Presentation Outline



Early Childhood Development: Global Evidence and Recommendations.



Early Journey of Life and Research Application for Evidence.



Impact of EJOL on Child Development and Parent Behavior Changes.

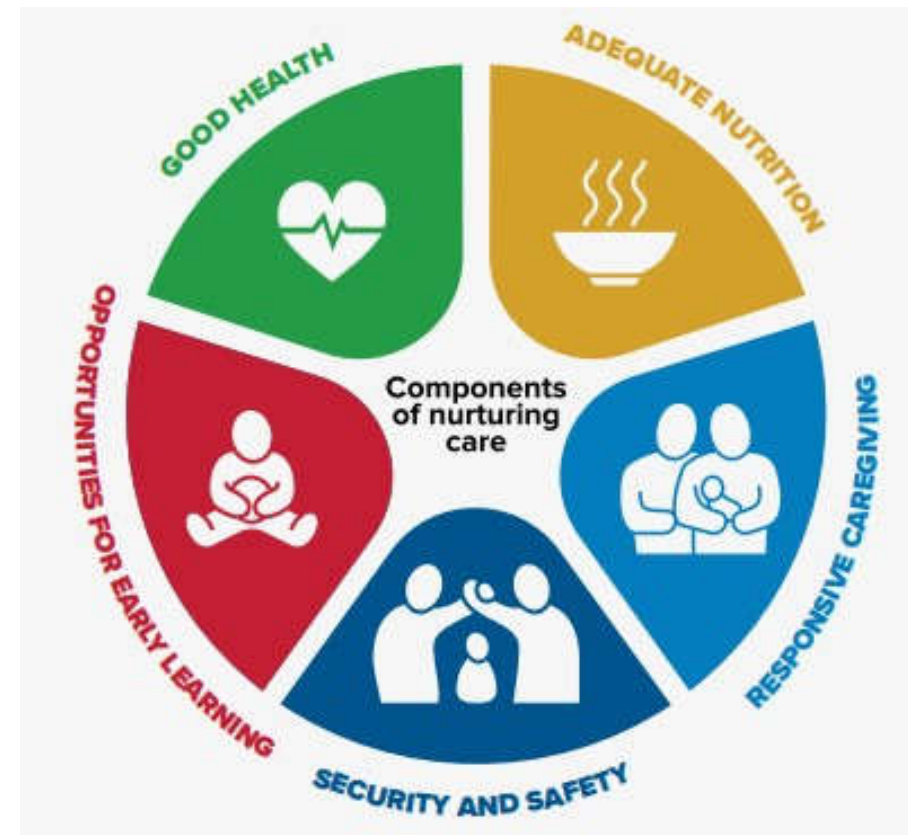
1. Early Childhood Development: Global Evidence and Recommendations

- Early Childhood Development (ECD) covers children from 0 – 8 years old.
- The period from pregnancy to age 3 is the most critical phase when the brain grows faster than at any other time; **80% of a baby's brain is formed by this age** (Lagercrantz H. Infant brain development: Formation of the mind and the emergence of consciousness. Switzerland: Springer International Publishing; 2016)
- Over the last three decades, scientific findings from a range of disciplines have converged. They prove that, during pregnancy and the first three years after birth, we lay down critical elements of our health, well-being and productivity, which will last throughout childhood, adolescence and adulthood.



WHO's Nurturing Care Framework

- In LMICs, extreme poverty means an estimated 250 million under-5s (43% of all under-5s in these countries) are at risk of suboptimal development and stunted growth. (Black MM, Walker SP, Fernald LCH, et al. Early childhood development coming of age: science through the life course. Lancet. 2017;389(10064):77–90.)
- In 76 countries, an estimated 30% of young children are at risk of poor learning, inadequate education and reduced adult earnings. (World Health Organization. (2018). Nurturing care for early childhood development: a framework for helping children survive and thrive to transform health and human potential.)
- To reach their full potential, children need the five components of nurturing care.





NURTURING CARE FOR EARLY CHILDHOOD DEVELOPMENT

A FRAMEWORK FOR HELPING CHILDREN SURVIVE AND
THRIVE TO TRANSFORM THE WAY WE CARE FOR THEM



Care for Child Development

Improving the care of young children

World Health Organization
unicef

2. Early Journey of Life and Research Application for Evidence

A parenting education program which focuses on the first 1000 days of the child's life in Vietnam.

Partnership with Ministry of Health, Vietnam General Confederation of Labour.

A structured program combining perinatal stage-specific information, practiced-based learning activities and social support.

Positive impacts have been tested by Cluster Randomized Controlled Trial.

9 TOPICS OF CONTENTS

Pregnancy Care	Child Injury Prevention	Breastfeeding and Supplementary Feeding
Childbirth Preparation	Integrated Management of Child Illness	Prenatal Mental Health Promotion
Newborn Care	Child-Caregiver Interaction and Stimulation	Gender Empowerment

EJOL Overview: 3 models

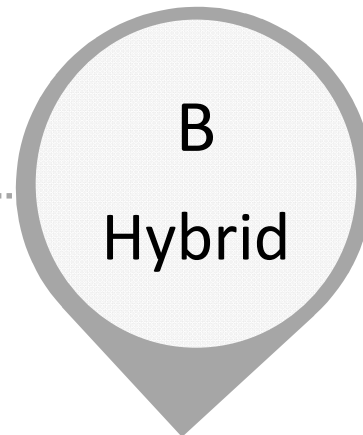


5 modules

- Early and mid-pregnancy.
- Late pregnancy and newborn care.
- Promoting child development 2-6 months.
- Promoting child development 7-12 months.
- Promoting child development 1-2 years.

19 live sessions+1 home visit

Practice at commune health station.



3 e-modules

- Pregnancy care.
- Promoting child development 0-1 year.
- Promoting child development 1-2 years.

3 live sessions

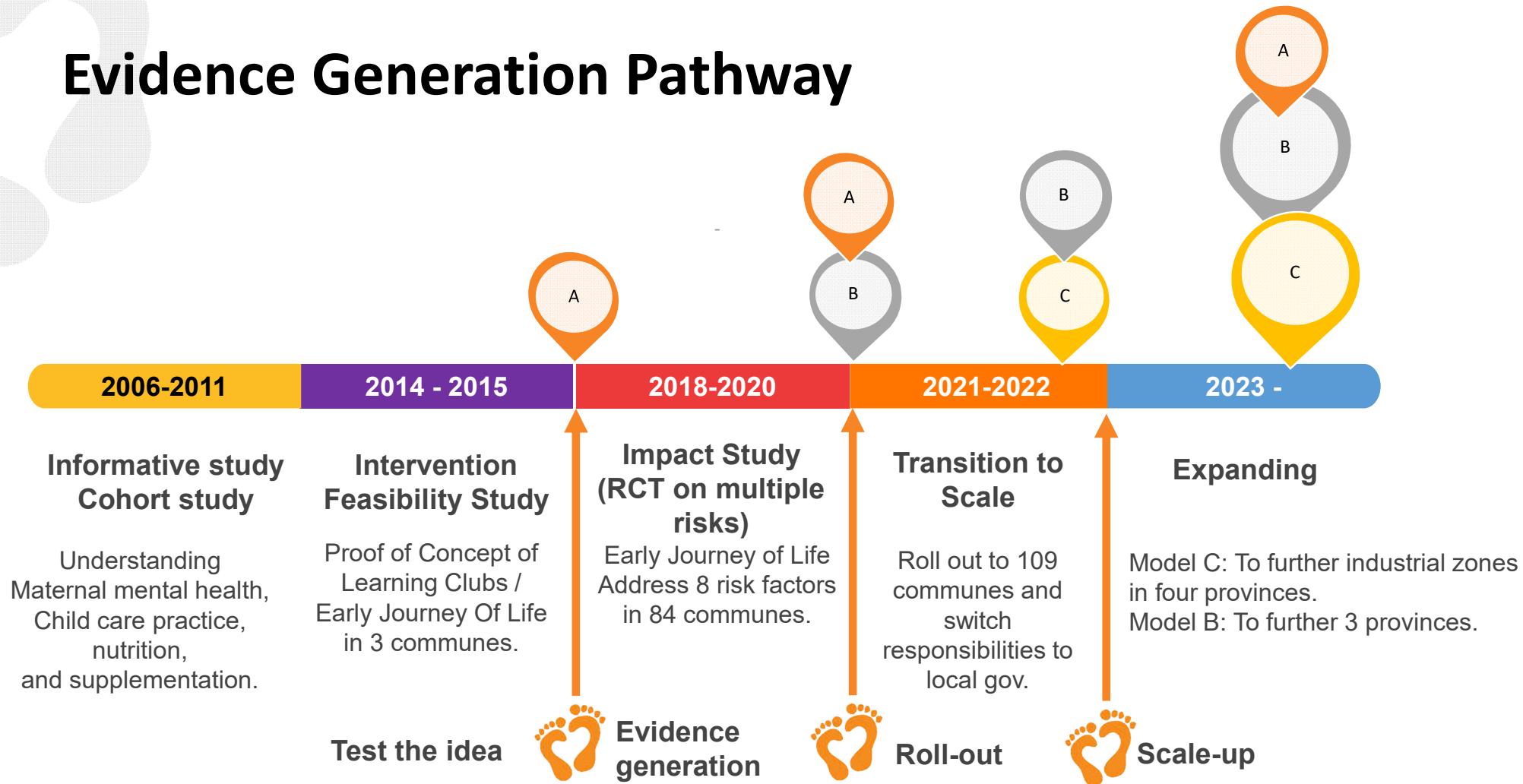
Practice at commune health station.



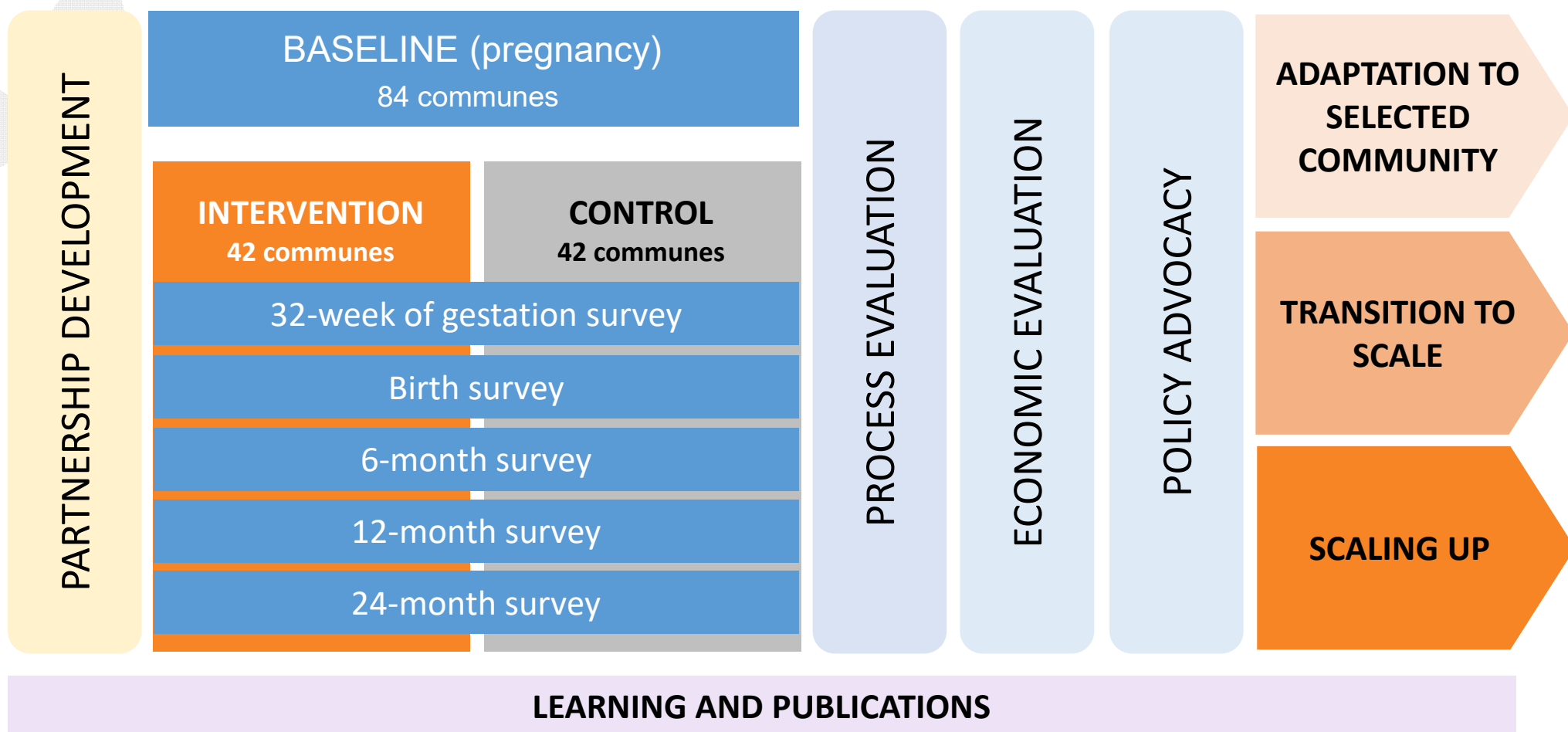
3 e-modules <https://ejol.vn>



Evidence Generation Pathway



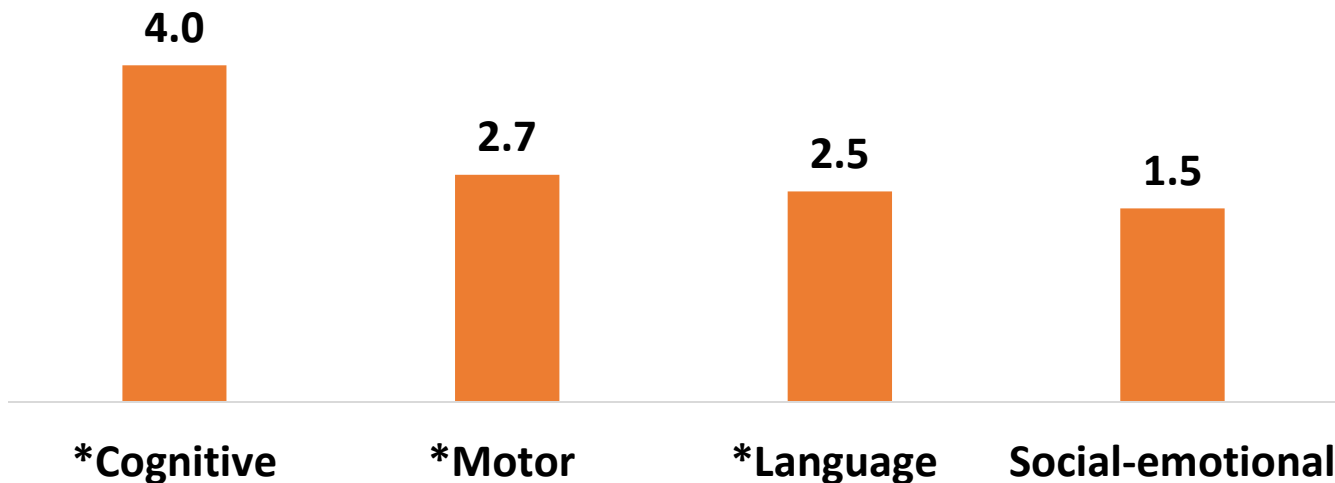
Evidence Generation: cRCT



3. Impact Of EJOL on Child Development and Parent Behavior Changes

Bayley Scales of Infant and Toddler Development (BSID) at 2 years old. Adjusted Mean difference score between intervention and control cohorts (N=1168).

*p-value <0.001



Articles ■
Lancet Child and Adolescent Health March 2023

Structured, multicomponent, community-based programme for women's health and infant health and development in rural Vietnam: a parallel-group cluster randomised controlled trial

Jane Fisher, Thach Tran, Ho Tran, Stanley Leckers, David B Aggarwal, Hoi Nguyen, Huy Tran, Sarah Hamer, Jade Anne Simpson, Beverly Ann Bagg, Tuan Tran

Summary

Background Interventions to improve early childhood development have previously addressed only one or a few risk factors. Learning Clubs is a structured, facilitated, multicomponent programme designed to address eight potentially modifiable risk factors, and offered from mid-pregnancy to 32 months post partum; we aimed to establish whether this programme could improve the cognitive development of children at 2 years of age.

Methods For this parallel-group cluster-randomised controlled trial, 84 of 116 communes (the clustering unit) in Ha Nam Province in rural Vietnam were randomly selected and randomly assigned to receive the Learning Clubs intervention (n=42) or usual care (n=42). Women aged at least 18 years who were pregnant (gestational age >20 weeks) were eligible for inclusion. Data sources were standardized, and study-specific questionnaires assessing risks and outcomes were completed to interviewees in mid-pregnancy (baseline), late pregnancy (after 32 weeks of gestation), at 6–12 months post partum, and at the end of the study period when children were 2 years of age. Mixed-effects models were used to estimate trial effects, adjusting for clustering. The primary outcome was the cognitive development of children at 2 years of age, assessed by the Bayley Scales of Infant and Toddler Development Third Edition (Bayley-III) cognitive score. This trial is registered with the Australian New Zealand Clinical Trials Registry (ACTRN12617006442303).

Findings Between April 28, 2018, and May 30, 2018, 1380 women were screened and 1245 were randomly assigned (669 to the intervention group and 576 to the control group). Data collection was completed on Jan 17, 2021. Data at the end of the study period were contributed by 616 (92%) of 669 women and their children in the intervention group, and by 544 (94%) of 576 women and their children in the control group. Children aged 2 years in the intervention group had significantly higher mean Bayley-III cognitive scores than those in the control group (9.4 [SD 9.7] vs 9.5–6 [9.4]; mean difference 4.00 [95% CI 2.56–5.43]; p=0.0001). At 2 years of age, 19 (3%) children in the intervention group had Bayley-III scores less than 1 SD, compared with 32 (6%) children in the control group, but this difference was not significant (odds ratio 0.55 [95% CI 0.26–1.17]; p=0.12). There were no significant differences between groups in maternal, fetal, newborn, or child deaths.

Interpretation A facilitated, structured, community-based, multicomponent group programme improved early childhood development to the standardised mean in rural Vietnam and could be implemented in other similarly resource-constrained settings.

Funding Australian National Health and Medical Research Council and Grand Challenges Canada Saving Brains Initiative.

Copyright © 2023 Published by Elsevier Ltd. All rights reserved.

Introduction Human growth and development are governed by interactions among psychosocial, environmental, and biological factors. The first 1000 days from conception to the age of 2 years are essential because physical growth and neurological development, reflected in cognitive, language, motor and social-emotional domains, are rapid and, if suboptimal, have lasting life-course effects.¹ High major risks to early childhood development are intrauterine growth restriction, stunting, iron deficiency anaemia, iodine deficiency, unresponsive caregiving, insufficient cognitive stimulation, maternal mental health problems, and family violence, all of which are worsened by poverty.² Women in low-income and middle-income countries (LMICs) who are pregnant face malnutrition, poverty, gender-based violence, mental health problems, and inadequate access to health and social care, at higher rates than women in high-income countries.³ These risks interact and lead to adverse pregnancy outcomes and, through direct and indirect mechanisms, compromised fetal and infant health and development.⁴



Lancet Child Adolesc Health 2023

Published Online
 March 15, 2023
[https://doi.org/10.1016/S2468-2667\(23\)00032-9](https://doi.org/10.1016/S2468-2667(23)00032-9)

See Online/Comment
[https://doi.org/10.1016/S2468-2667\(23\)00032-9](https://doi.org/10.1016/S2468-2667(23)00032-9)
 for the Web version translation of this article's text Online for eprints

Women and Child Health Unit, School of Public Health and Preventive Medicine, Monash University, Melbourne, VIC, Australia (Prof Jane Fisher),

U Nguyen Health Research and Training Centre for Community Development (ARTCD), Hanoi, Vietnam (Dr Jane Fisher), Tran Tran SA, Hanoi Health Equity Centre for Social Health and HIV AIDS Research (CHESA), Hanoi, Vietnam

(Prof S Leckers PhD) Liverpool School of Tropical Medicine, Liverpool, UK (Prof S Leckers), Department of Public Health and Primary Care, Ghent University, Ghent, Belgium (Prof S Leckers), UNCTF, New York, NY, USA

(Dr B Aggarwal PhD), Melbourne School of Population and Global Health, University of Melbourne, Melbourne, VIC, Australia (Dr B Aggarwal),

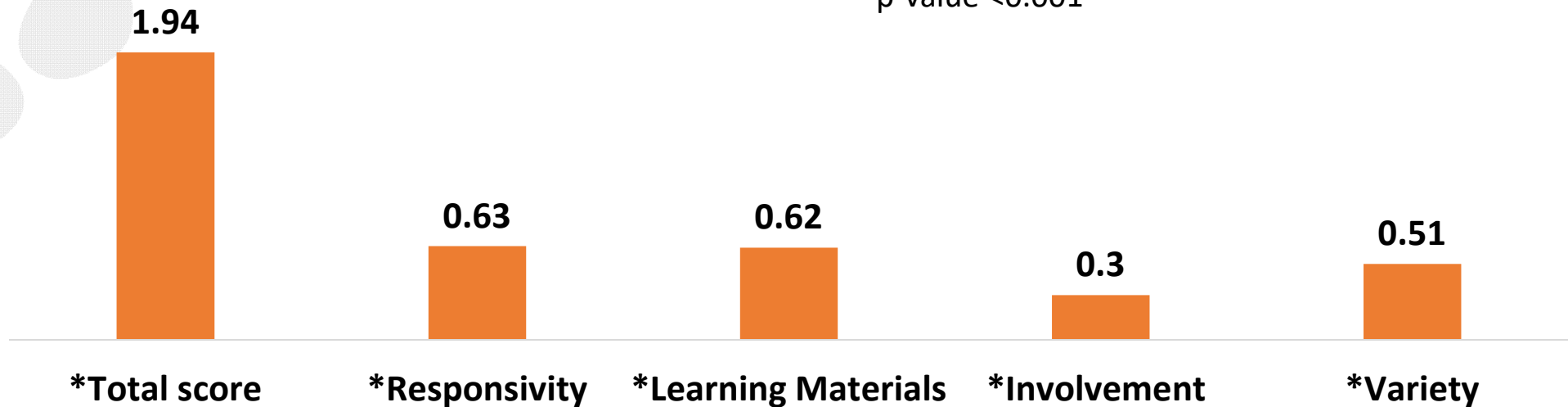
Utrecht, NL (Prof J A Simpson PhD), Department of Medicine and Victorian Infectious Diseases Centre at the University Institute, University of Melbourne, Melbourne, VIC, Australia (Prof J A Simpson)

Correspondence to: Jane Fisher, School of Public Health and Preventive Medicine, Monash University, Melbourne 3046, VIC, Australia (jane.fisher@monash.edu)

HOME Inventory Total Score at 2-year-old

Adjusted Mean difference score between intervention and control cohorts

*p-value <0.001



Responsivity

Extent of the parent's emotional and verbal responsiveness to the child.

Learning Materials

Presence of several types of toys and activities that are available to the child, age-appropriate, and directed towards intellectual development.

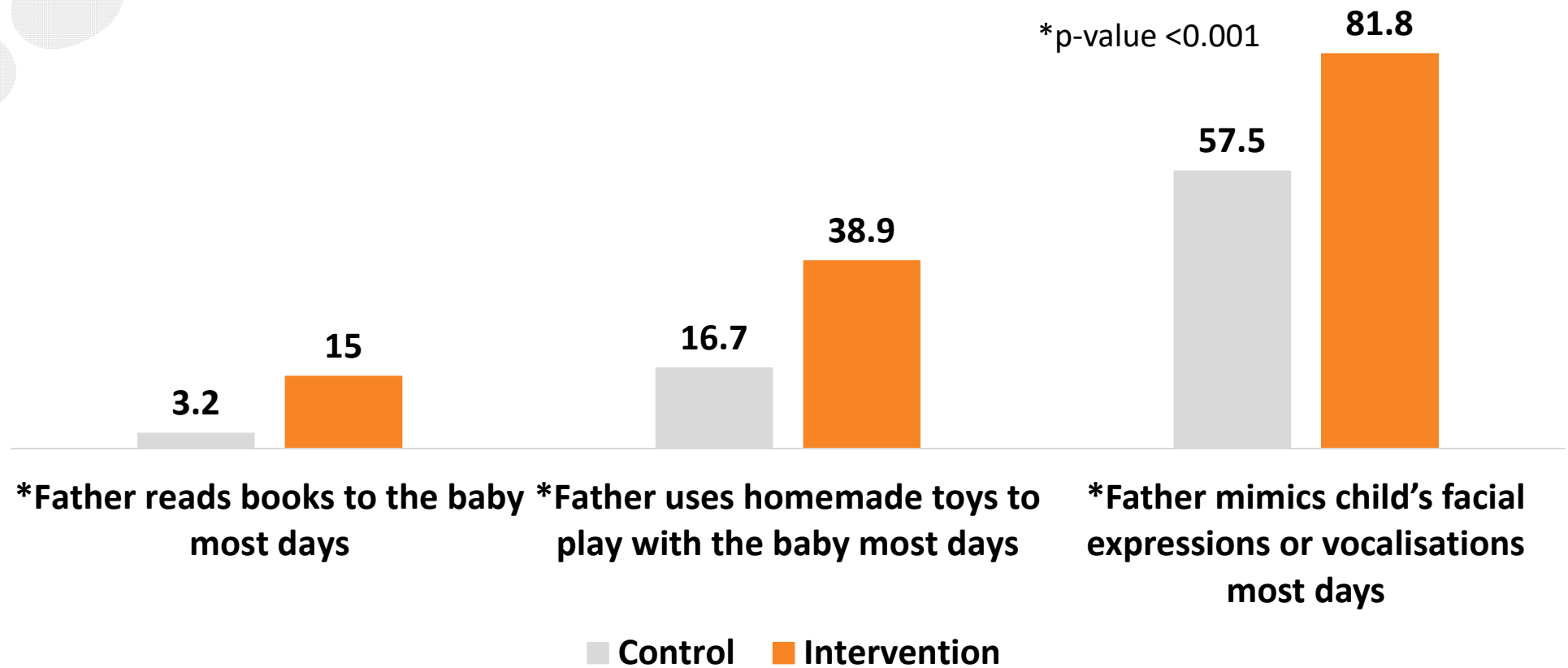
Involvement

Extent of parental involvement; how parent interacts physically with the child.

Variety

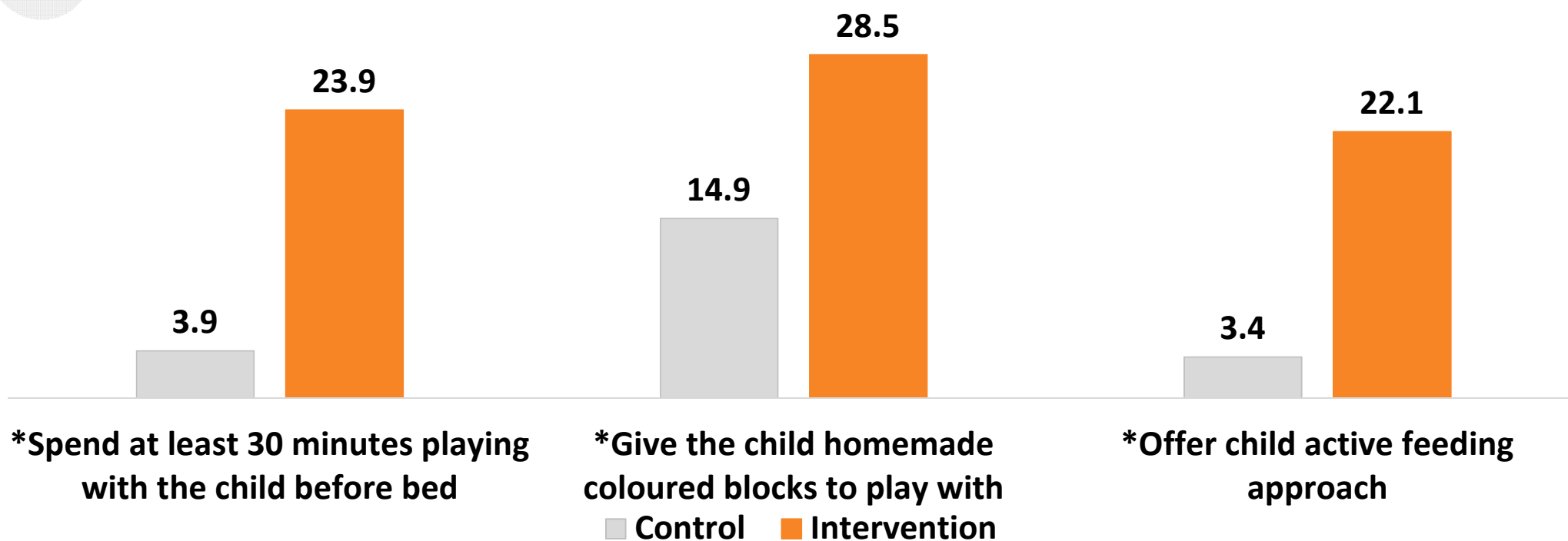
Amount and range of daily stimulation, particularly how daily routine is designed to incorporate social meetings with people other than the mother (e.g father, other family members).

Father's behaviors at child 6-month age (%)



Parent's behaviors at child 12-month age (%)

*p-value <0.001



Breastfeeding

	Control	Intervention	p-value
Breastmilk the first nutrition the baby received after birth	64.4%	69.5%	0.002
Breastfed within one hour of giving birth	56.6%	64.9%	0.001
Formula milk was first food baby received	33.7%	29.7%	0.004
Stop feeding infant with formula milk when arrived at home (1 week after birth survey)	59.5%	65.4%	0.096

- More than a third were given infant formula in hospital. Fewer babies were receiving any formula 1 week after birth, more babies were predominantly breastfed in the first 6 months post-partum.
- More babies were introduced to solid foods later in the intervention group (mean 160.7 days) than in the control group (155.5 days) [p-value<0.0001]



Things that did not change

MATERNAL MENTAL HEALTH

No differences between groups in **maternal mental health** as indicated by mean DASS-V 21 symptom scores 1-year post-partum.

STUNTING AND WASTING

No significant differences between the groups in the growth indicators of height and bodyweight or **stunting or wasting** when children were 1 or 2 years of age.

CHILDHOOD ILLNESS

No differences in the prevalence of **childhood illness** symptoms among infants aged 6 or 12 months, although women adhered to pregnancy nutrition recommendations about the quantity and variety of foods and use of micronutrient supplements.

CONCLUSIONS

- The EJOL had **substantial and meaningful population-level benefits** for early childhood development that were sustained to at least 24 months. It **contributed to the implementation of Decree 1437/2018/QĐ-TTg**.
- We found that **children aged 2 years** whose mothers had participated in the EJOL had **significantly better cognitive, language, and motor development** than children of mothers who had received usual care (the control group).
- The **impact of model A might be greater in resource-scarce settings** where local infrastructure and services are weaker and needs for caregiving knowledge and parenting skills are even higher than they were in HaNam Province.



CONCLUSIONS

- To **generate high-quality evidence** for policy advocacy, an innovation needs a **well-designed MEL plan** before intervention implementation. An **RCT to validate the innovation impact is strongly recommended.**
- A **research evidence generation pathway takes time**, human resources, and financial capacity to implement.
- **Policy context** is highly relevant to improvements in women's health and early childhood development and needs to be optimized and implemented effectively alongside evidence-informed, local programs.



Lessons Learned and Looking forward

- **Policy context and NGO intervention context** should be thoroughly monitored to understand factors influencing the differences between trial groups. Independently of the trial, implementation of these national policies had a beneficial impact on these aspects of population health.
- Although nutritional education improved parental knowledge, elimination of micronutrient deficiencies, **stunting, and wasting appear to require further intensive intervention and supplementation.**
- **Further research** is needed **to investigate which program components are the most effective**, what level of program intensity might be sufficient, and whether alternative methods of program delivery (e.g., online) would work.
- The **sustainability of the benefits of this program throughout childhood and adolescence can be examined with follow-up studies**, including of this well-characterized cohort.

ACKNOWLEDGEMENT

- Grand Challenges Canada
- The Porticus
- National Health Medical Research Council (NHMRC), Australia
- Australian Volunteers International – Impact Fund
- IOGT-NTO Movement
- Department of Maternal and Child Health, Ministry of Health
- Vietnam General Confederation of Labour
- Ha Nam Provincial Department of Health; Centre for Diseases Control; Women’s Union; Department of Education
- People’s Committee and Facilitators at 109 communes and 6 district teams
- 3000 families at 109 communes
- National trainer team and experts
- The coach team from True Point to support grantees
- Monash University, Australia
- Research and Training Community Development (RTCCD), Vietnam

