



Development and Dynamic Evaluation of an Integrated Mother / Baby WASH and IYCF Strategy to Address Child Stunting

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Research Aim

Develop a validated approach to improve infant nutrition via

1. improved maternal diet and infant feeding
2. reduced exposure to fecal pathogens
3. lower worm burden.

Can we deliver and measure changes to caregiver and baby WASH, infant and young child feeding, and deworming as part of an enhanced THRIVE II program?



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- 1. Conduct formative research** *Purpose: Identify suite of relevant behaviors and influencers*
- 2. Prioritize target behaviors** *Purpose: Focus scope*
- 3. Create problem trees with causal analysis** *Purpose: Articulate problem statements, identify strong and weak causal links, create hierarchical visual representations*
- 4. Develop solution trees & articulate assumptions, rationales for change** *Purpose: Translate identified behavioral problems into healthy goal statements or solutions*
- 5. Link solution trees to intervention functions** *Purpose: Link solution tree goal statements to behavioral domains, theoretical framework and intervention functions*
- 6. Develop the intervention plan** *Purpose: Identify potential behavior change techniques (BCT)*
- 7. Determine the intervention activities** *Purpose: Package behaviors thematically and develop intervention activities.*
- 8. Pilot, refine and test the intervention package** *Purpose: Arrive at a refined intervention package based on user testing and preliminary evaluation*

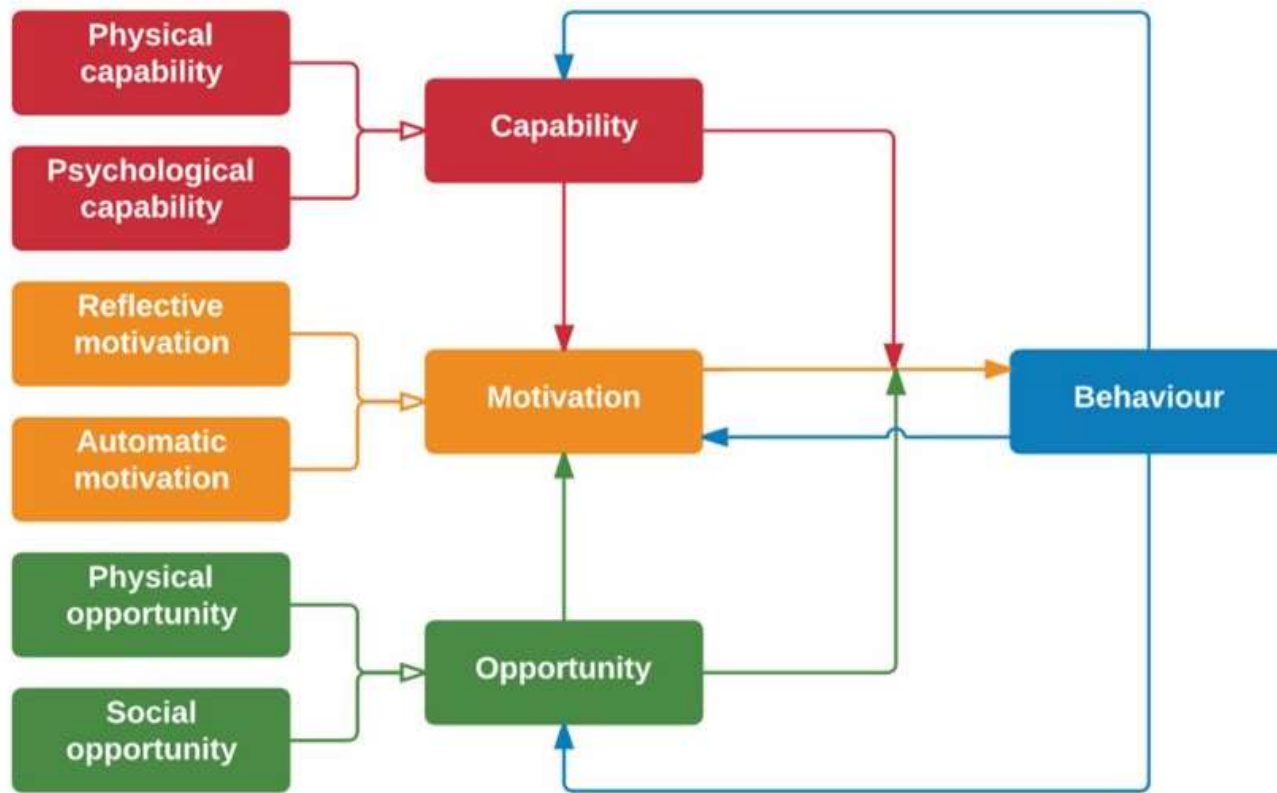


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Theoretical Foundations



Michie S, M van Stralen, West R (2011) The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implementation Science*, 6, 42..

COM-B, Designing for Behavior Change Barrier, Analysis and Grandmother Project's Change Through Culture Approaches informed formative research methods.



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Formative Research Findings



Revising key behaviors

Focus on proven approaches, achievable behaviors to target

1. Hygienic infant and young child feeding
2. Household water treatment;
3. Mother and baby handwashing at key times;
4. Household toilets with handwashing station;
5. Safe disposal of infant and young child feces;
6. Protected hygienic play environment for children under age two; and
7. De-worming for control of soil-transmitted helminth infection



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Behaviour Packages	Focus
Food Hygiene	<ul style="list-style-type: none"> • Hand washing with soap • Food safety during preparation • Covered food storage
Meal times	<ul style="list-style-type: none"> • Food selection (diversity) • Food prioritization • Responsive feeding • Proper handwashing during meal- times • Adequate CF frequency, amount, consistency
Clean compound	<ul style="list-style-type: none"> • Hygienic play environment • Child faecal disposal • Handwashing with soap after child faecal disposal • Hand washing with soap after defecation

Sample Linkages from Behavioral Determinants to Intervention Activity					
Determinant (COM-B)	Interv function	TDF	Behavior Change Techniques	Intervention Activity	Desired Outcome
Reflective Motivation	Enablement	Behavioral regulation	Action planning, self-monitoring	Dietary Diversity Tracking Card	Increased consumption of diverse and appropriate CF; Increased household diet diversity
Reflective Motivation	Enablement	Intentions/ belief about capabilities	Behavioral contract, Action planning	Pledge Card	Households improve or adopt key mealtime behaviors selected during initial counseling.
Physical Opportunity	Env. restructuring	Env. context and resources	Adding objects to the environment, prompts/cues	Feeding bowl and slotted spoon; Diet Diversity Wheel	Increased CF diversity, frequency, consistency hygiene; Increased diet diversity for PLW; Increased responsive feeding
Psychol. Capability	Training	Skills	Behavioral practice/ rehearsal, demo the behavior	Community cooking/ feeding demonstration	Increased consumption of diverse and appropriate CF. Increased diet diversity for PLW; increased responsive feeding
Physical Opportunity	Env. restructuring	Env. context and resources	Prompts/cues restructuring physical environment	Handwashing station with soap delivery	Increased handwashing with soap of caregiver and CU2 before feeding / eating

Intervention design

Behavioral Packages



Hygienic Food Preparation and Storage

- Mesh food cover
- Food hygiene card
- Handwashing station with soap delivery system
- Pledge Card

Mealtime

- Dietary Diversity Wheel Tracker
- Feeding Bowl, slotted spoon, counseling Card
- Handwashing station with soap delivery system
- Community Cooking/Feeding Demos (*community event*)
- Pledge Card

Clean Compound

- Picture story book (shared in neighbor women group)
- Feces Scooper (made in HH with local materials)
- Handwashing station with soap delivery system
- Pledge Card



Aim for at least 5 each day



Intervention design



Community event-introduction

- Analogy of Children like a Maize Plant
- Introduction to Key Messages with Skits
- Group Activity – Family Member Roles
- Community Pledge

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Counseling Sessions

- Neighbor Women Group -- Introduction to key messages
- Household Visit by CGV
 - Assess current Household Practices
 - New Technologies
 - Review of Key Messages
 - Behavioral Pledges
- Supportive supervision of CGVs by social workers, CHVs, case managers ensured targets were being met

Behavioral trials (Trials of Improved Practices)

Analysis

- Mesh food covers, feeding bowls/ spoons well-liked and facilitated behavior change in safer food storage and CF practices
 - In high demand
- Pledges and facilitator follow-up/support was well received
- Moving handwashing station locations made handwashing more convenient/acted as a cue to action
- Food Hygiene cards were used and acceptable
- Households innovated feces scoopers and fashioned them out of different materials

NEXT STEPS: Implemented refined, integrated package in 21 randomly allocated care groups (21 controls); ongoing analysis of endline data



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Take home message!

Integration and the use of theory

1. Integration of WASH and nutritional programs are critical to maximize impact on stunting, and likely ECD
2. Theory-based behavior change techniques support movement away from ineffective “knowledge” focused messaging
3. Thematically coupling behaviors (e.g., meal time) may help support behavioral maintenance



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