

# Critical Steps for Enrollment, Participation, and Success in a Nutrition-Sensitive Agriculture Intervention in Rural Ghana

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# Context

## Upper Manya Krobo District

- Underserved mainly rural (>80%)
- 100 km from the capital

Ghana Statistical Service (2014). *2010 Population and housing census.*



# Nutrition Links 12-mo cRCT design



n=287



n=213



# Nutrition Links intervention arm



n=287



Enrolled (n=287)



Received chickens



Yes  
(n=233)

No  
(n=54)

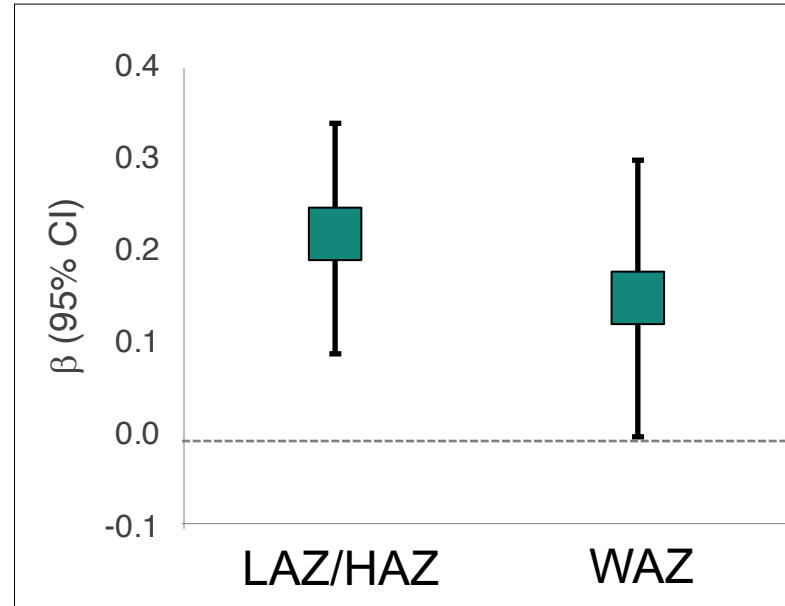
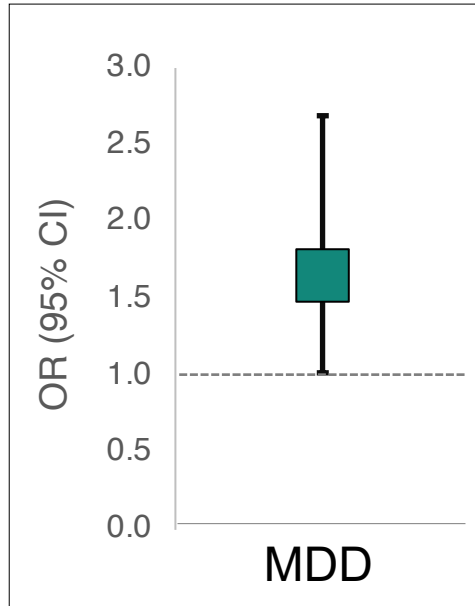


Participants

Non-participants



# Nutrition Links impact on child outcomes



**Reference:** Control

**MDD:** Minimum Diverse Diet; **LAZ/HAZ:** length-for-age /height-for-age z-scores; **WAZ:** weight-for-age z-scores

# This qualitative study

## Objective:

To understand barriers and facilitators to enroll, participate, and succeed in Nutrition Links (NL)



# Methods and participants of this study



Participants

n=33

12



Non-participants

n=21

10



Opinion Leaders

n=16

16

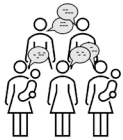


Field staff

n=6



In-depth Interviews



Focus Group Discussions

n=63

7



Selection criteria

Participation level<sup>1</sup>

Referral sampling

Representative of community

Provided weekly education

<sup>1</sup>Dallmann D et al. *Curr Dev Nutr* 2021;5:638

# Characteristics of women at baseline



Characteristics	Participants	Non-participants
Age (y)	27.8 ± 7.1	24.9 ± 6.7
Married/cohabiting	54 (78.3)	18 (85.7)
Education		
No school	14 (18.9)	7 (33.3)
Primary	52 (70.3)	11 (52.4)
Secondary or higher	8 (10.8)	3 (14.3)
Occupation*		
No occupation	<b>5 (6.8)</b>	<b>7 (33.3)</b>
Farmer	<b>43 (58.1)</b>	<b>5 (23.8)</b>
Trader	23 (31.1)	7 (33.3)
Others	3 (4.1)	2 (9.5)
<b>n</b>	<b>78</b>	<b>21</b>

Mean ± standard deviation or # (%) / \*p<0.01

# Methods

## Data analysis:

- Recorded interviews were translated verbatim and transcribed
- IDI coded in MaxQDA 2020; FGD in NVivo 12
- Thematic analysis
- Systematized using the socio-ecological model of behavior<sup>1</sup>

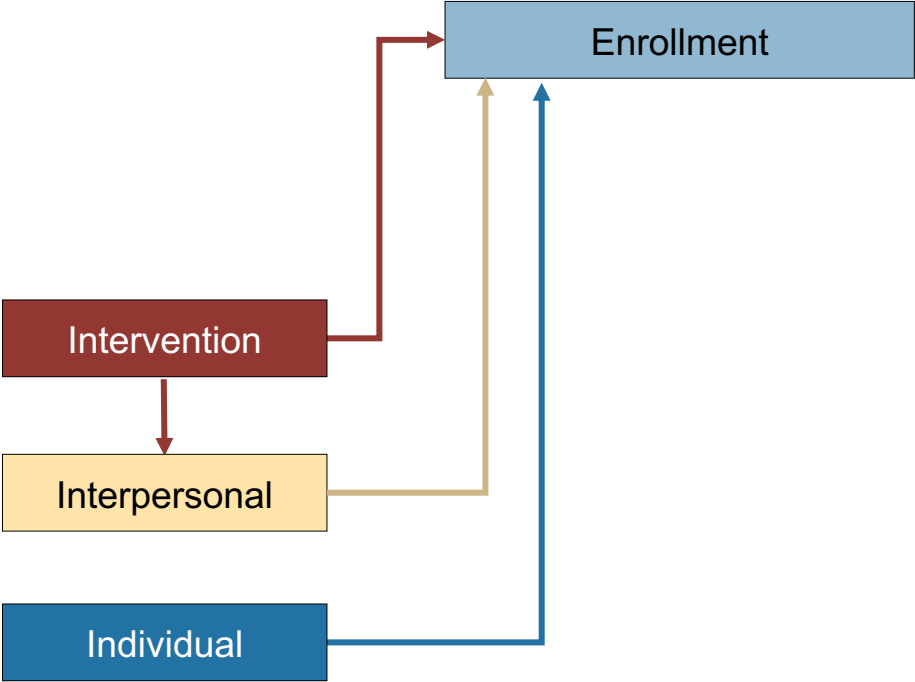
<sup>1</sup>Glanz K, Rimer BK, Viswanath K, eds. *Health behavior*. John Wiley & Sons, 2015

# Results

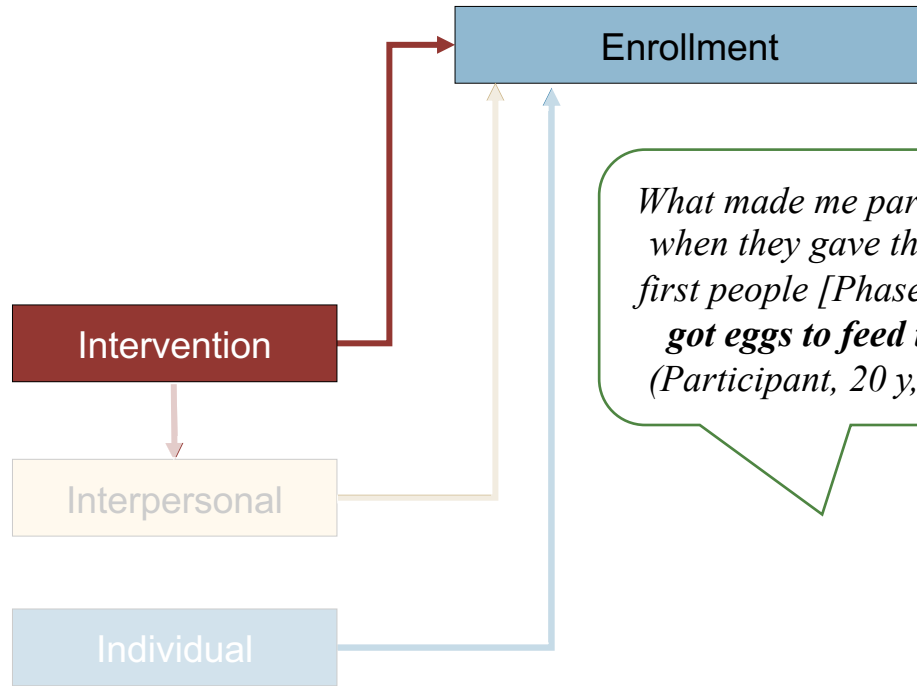
**The poultry component was central to women's participation**



# Framework of Enrollment in Nutrition Links

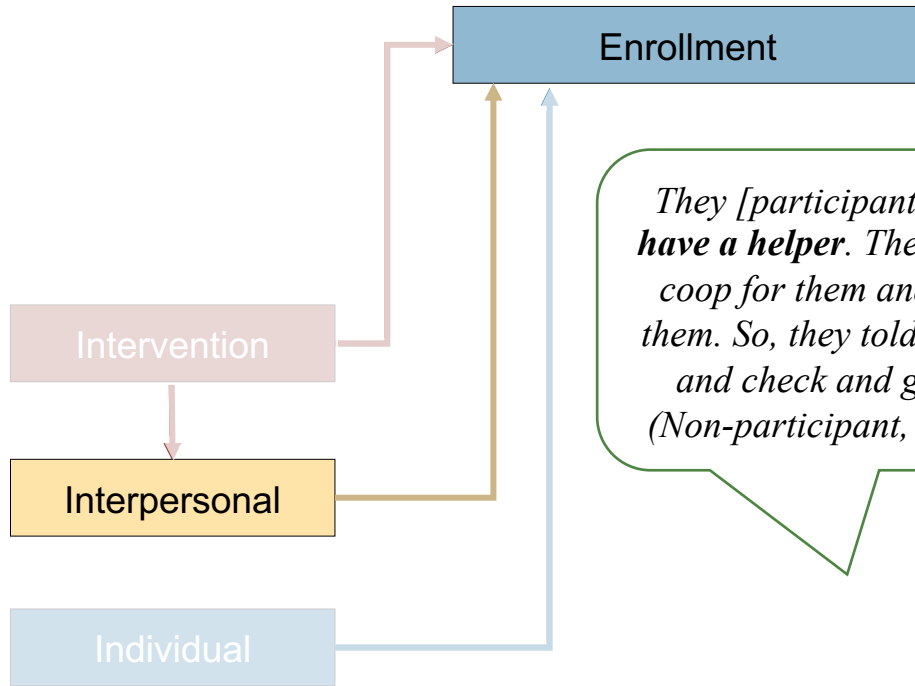






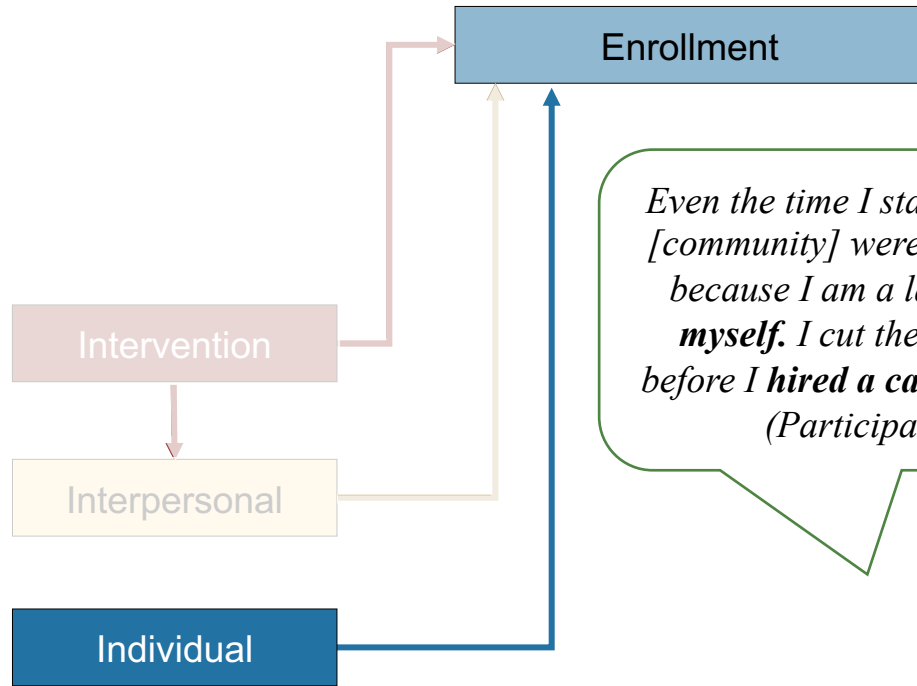
*What made me participate was that when they gave the chicken to the first people [Phase 2], they always got eggs to feed their children. (Participant, 20 y, no occupation)*





*They [participants] are serious. **They have a helper.** Their **husbands** built the coop for them and did the garden for them. So, they told the workers to come and check and give them the birds. (Non-participant, 20 y, no occupation)*

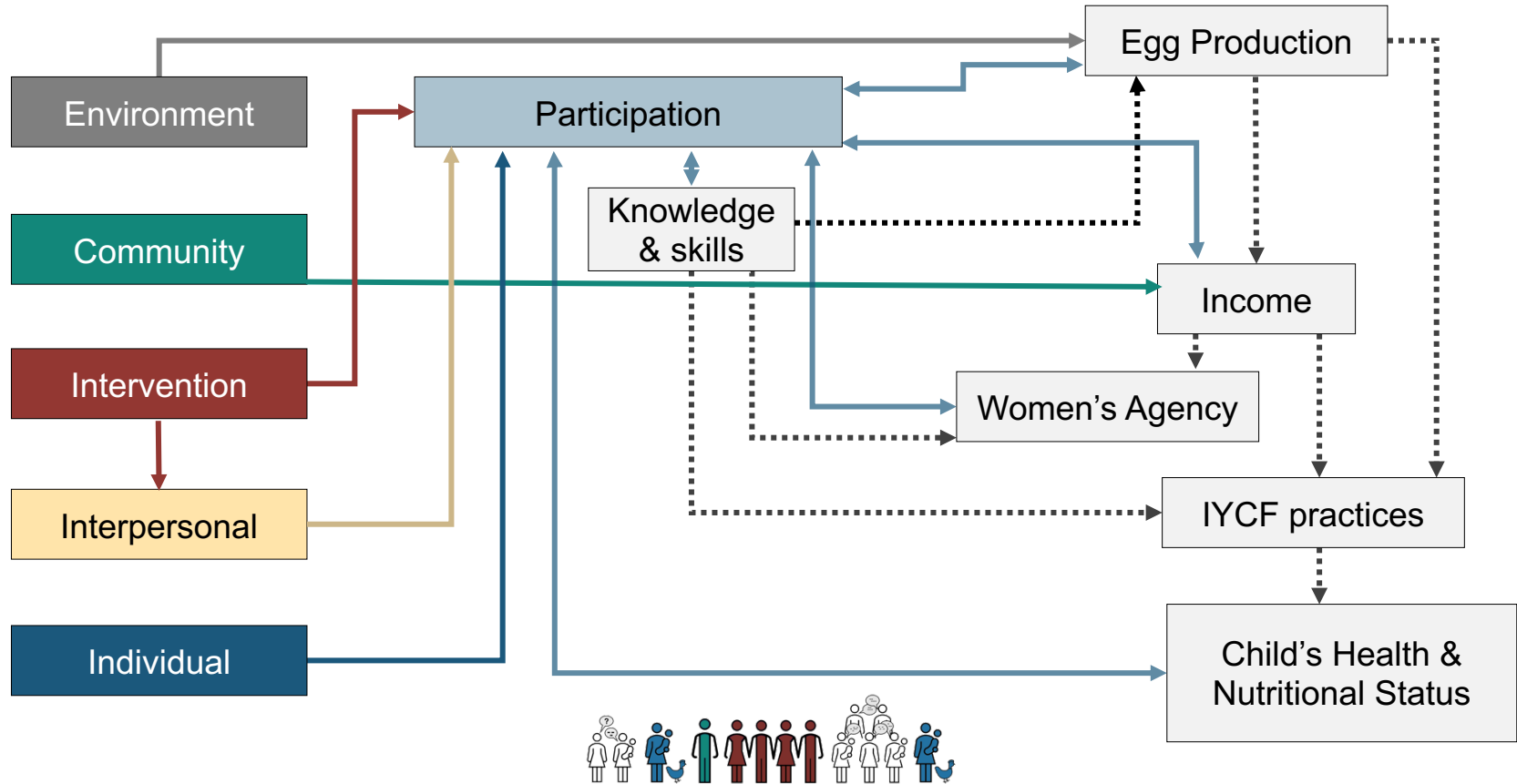




*Even the time I started with the coop; they [community] were saying that I can't do it because I am a lady, **but I did the coop myself**. I cut the sticks and everything before I **hired a carpenter** to nail it for me.  
(Participant, 38 y, farmer)*



# Framework of Participation in Nutrition Links

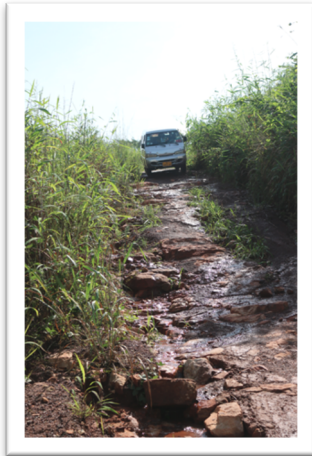


*you know the road is not good so as the car is bouncing up and down then they [eggs] have broken.  
(Participant, 30 y, farmer)*

Participation

Community

Income



*Buying the feed was a problem and that is why I asked them to come for the birds. **The feed is expensive, and the birds were not laying enough.***  
(Participant, 20 y, farmer)

Participation

Intervention

*It's about how they have been **bringing the feed into our village** for us, it's very good. They make sure that we always have feed for the birds.*  
(Participant, 21 y, farmer)





Participation

Interpersonal

*My siblings, parents, **everyone in the house** helped when my husband and I were not around. They gave them feed because I taught them [how], and they have also been collecting the eggs for me.  
(Participant, 22 y, farmer)*





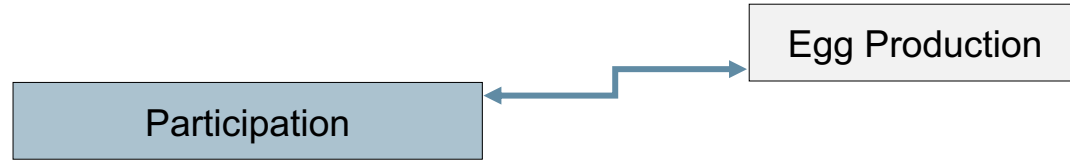


Participation

*Not following the normal routine or itinerary that they are supposed to. If they don't follow the procedures, at the end of it all it leads to a problem.  
(NL field staff)*

Individual





*When they have eggs then they feel proud; they will come to meetings so that they show what they have. **But if they don't**, you will see them say 'there's no need for me going, let me go to my farm'. Even, **they are hiding**.  
(NL field staff)*

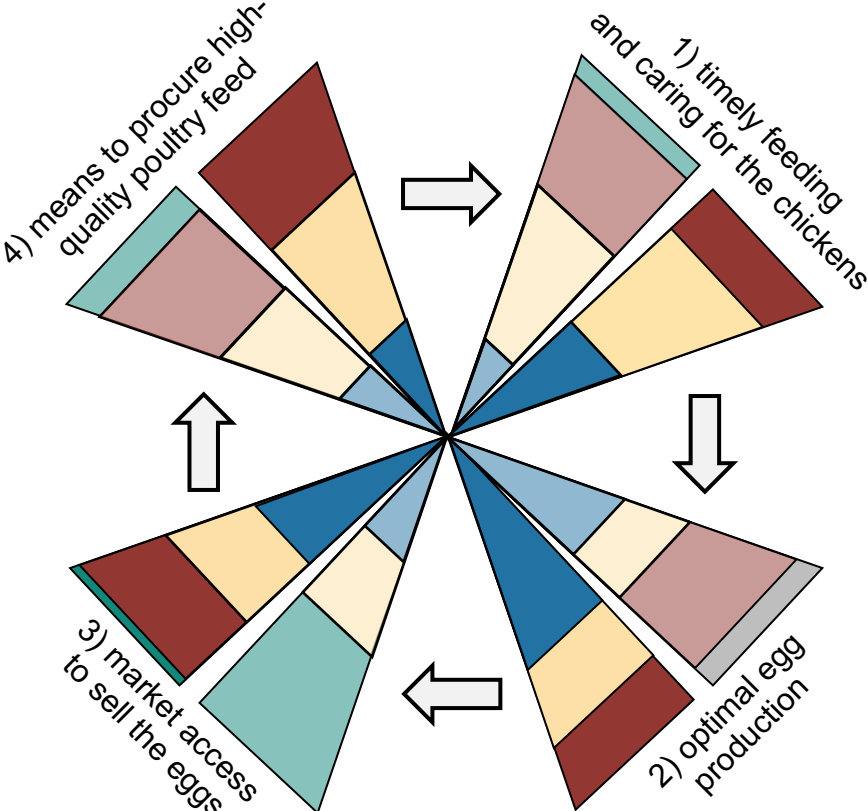












# Successful participants

- Invested \$
- Has **financial skills**
- Children looked **healthier** and went to **school**
- Women & their children **dressed better**
- Improved their **communication skills**
- **Respected** by the community



# Critical steps for success



Barriers	Facilitators	
    	    	<p>Environmental</p> <p>Community</p> <p>Intervention</p> <p>Interpersonal</p> <p>Individual</p>



# Conclusions

- Perceived and observed benefits increase the adoption of nutrition-sensitive agriculture (NSA) interventions.
- Environmental, physical conditions, and interpersonal relationships influence participation in NSA interventions.
- Programs need to understand and support the critical steps of participation in NSA to increase the likelihood of success.



# To remember:

NSA interventions need to address the evolving local barriers and facilitators experienced by rural households to support effective program participation that leads to participants' success.

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