

Systematic Review of Social Behavior Change Strategies used in Nutrition Sensitive Agriculture Interventions

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EMORY

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Background

- Nutrition sensitive agriculture (NSA) interventions improve maternal and child diets in low- and middle-income countries
- Social behavior change (SBC) is a critically important component of NSA interventions
- There is limited research on what specific behavior change techniques (BCT) projects are using and which are associated with effective interventions

Objectives

01

Describe SBC
design and
implementation in
the context of NSA

02

Examine the BCTs
used in NSA
interventions

03

Quantify
associations
between BCTs and
improvements in
maternal and child
diet diversity

Methods

Overview of Methods

- Searched PubMed, Embase, Web of Science for peer reviewed literature
- Searched Agricola and IFPRI repository for grey literature
- Double-screened titles, abstracts, and full text for final selection of interventions
- Contacted authors and searched project websites for additional information

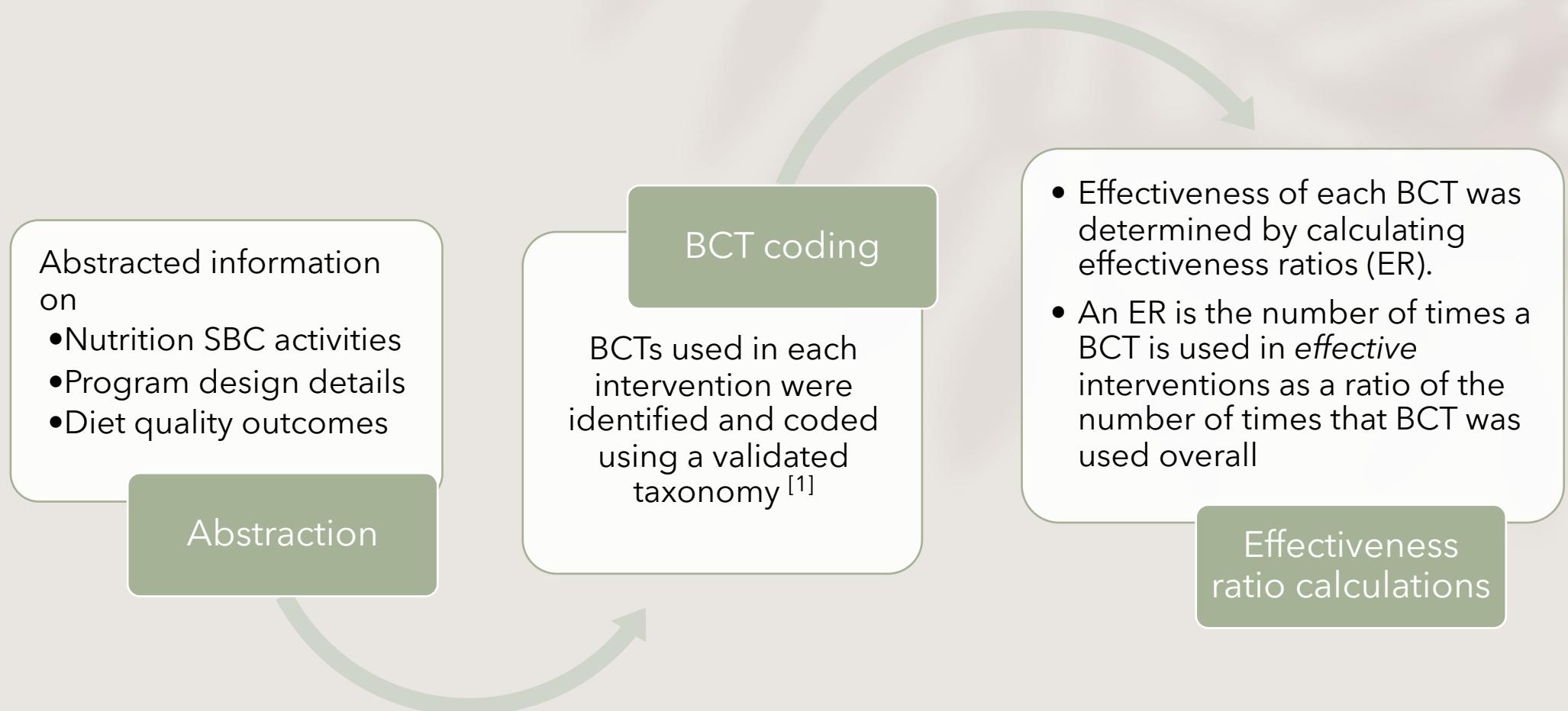
Inclusion Criteria

Published between
2000-2021

Nutrition sensitive
agriculture
interventions with
nutrition-focused
SBC activities

Set in low- or middle-
income countries

Coding and Analysis



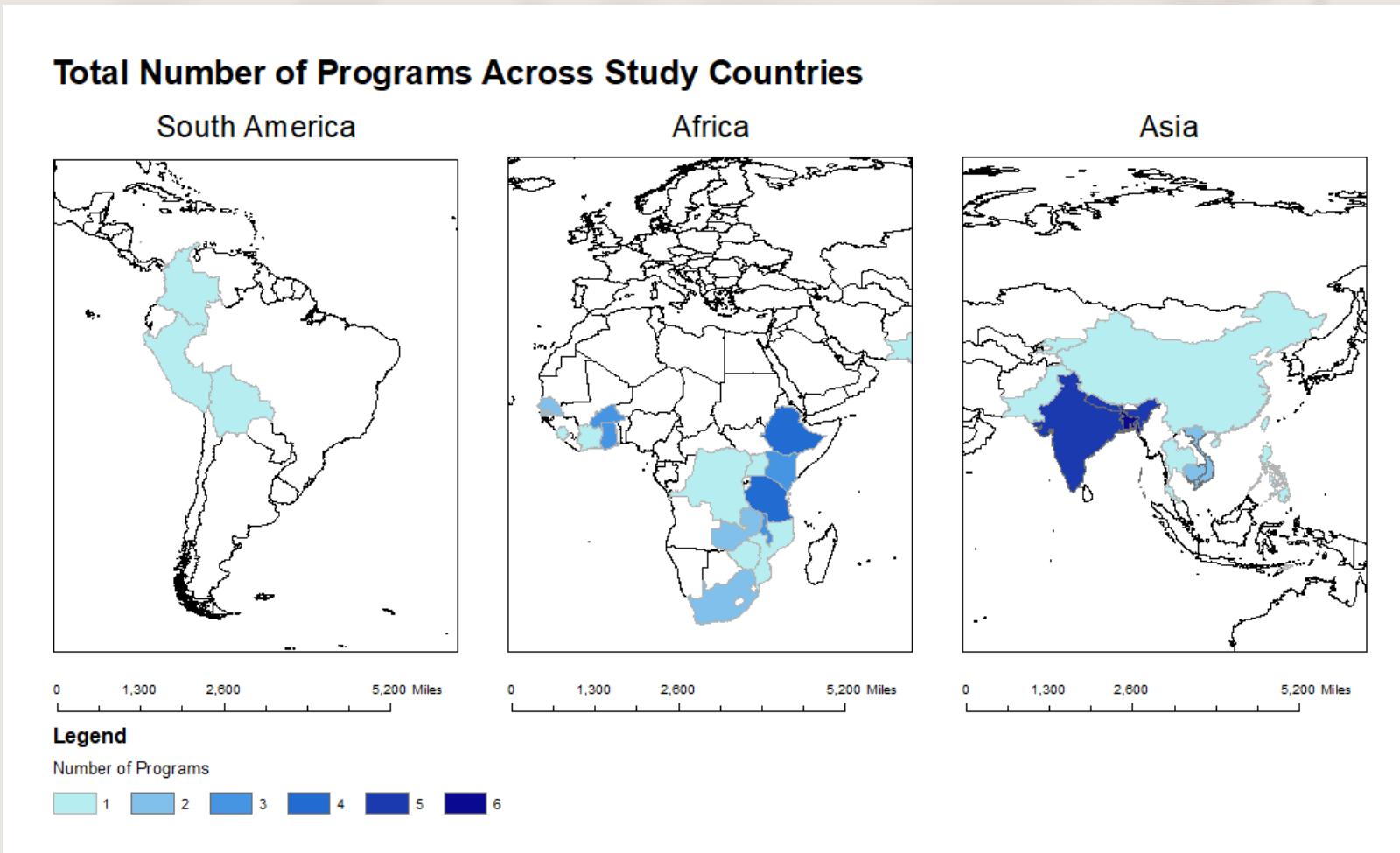
Effectiveness Ratio Calculation

1. Determine whether an intervention is effective or not
 - Effective interventions are those that showed a significant positive impact ($p<0.05$) for at least one diet quality outcome
2. Calculate effectiveness ratio for each BCT
 - Count how many times a BCT was used in interventions included for assessment (a)
 - Count how many times it was used in *effective* interventions (b)
 - Create a ratio of a/b

Results

Overview of Included Projects

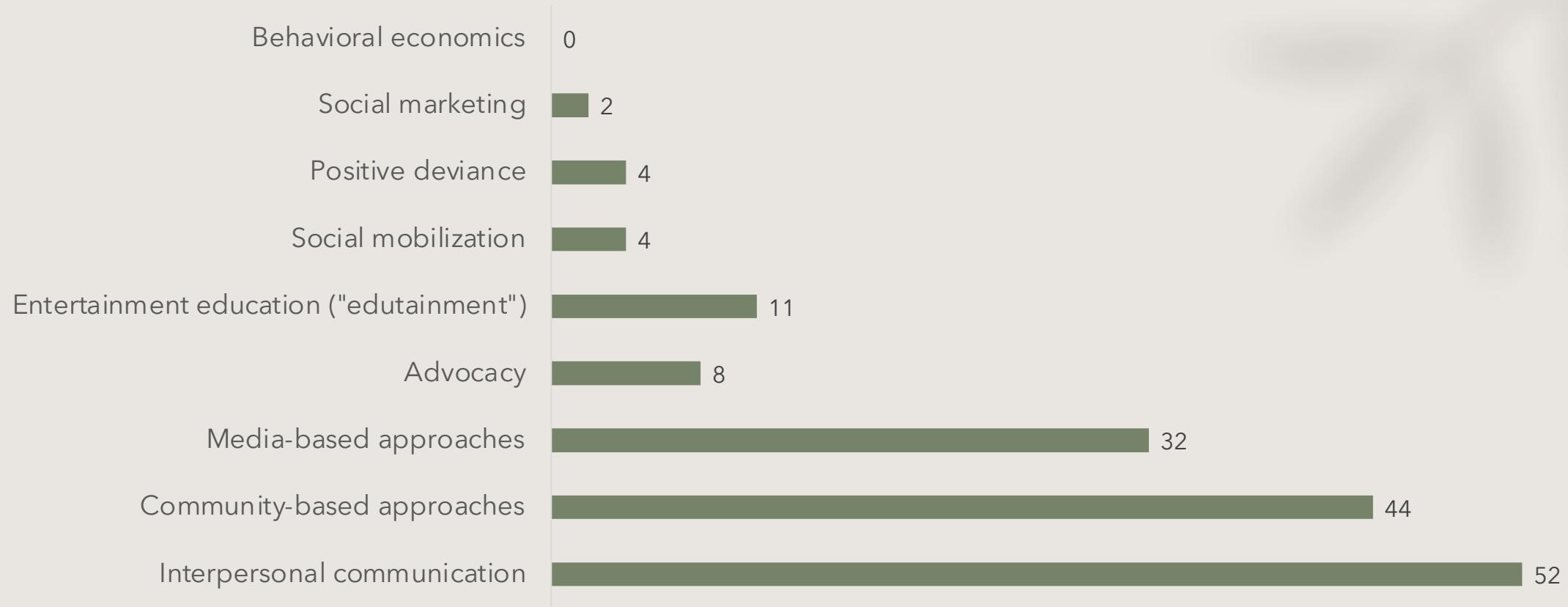
- **56 interventions** were included in review
- Most were located in sub-Saharan Africa (n=30) and South Asia (n=16)



SBC Design Characteristics of Included Projects

Characteristic	Frequency (n=56)
Based project design and implementation on behavioral theory	6
Used specific intervention design approach or framework	12
Conducted primary formative research only	8
Conducted secondary formative research only	8
Conducted both primary and secondary formative research	15

SBC approaches used to affect behavior change

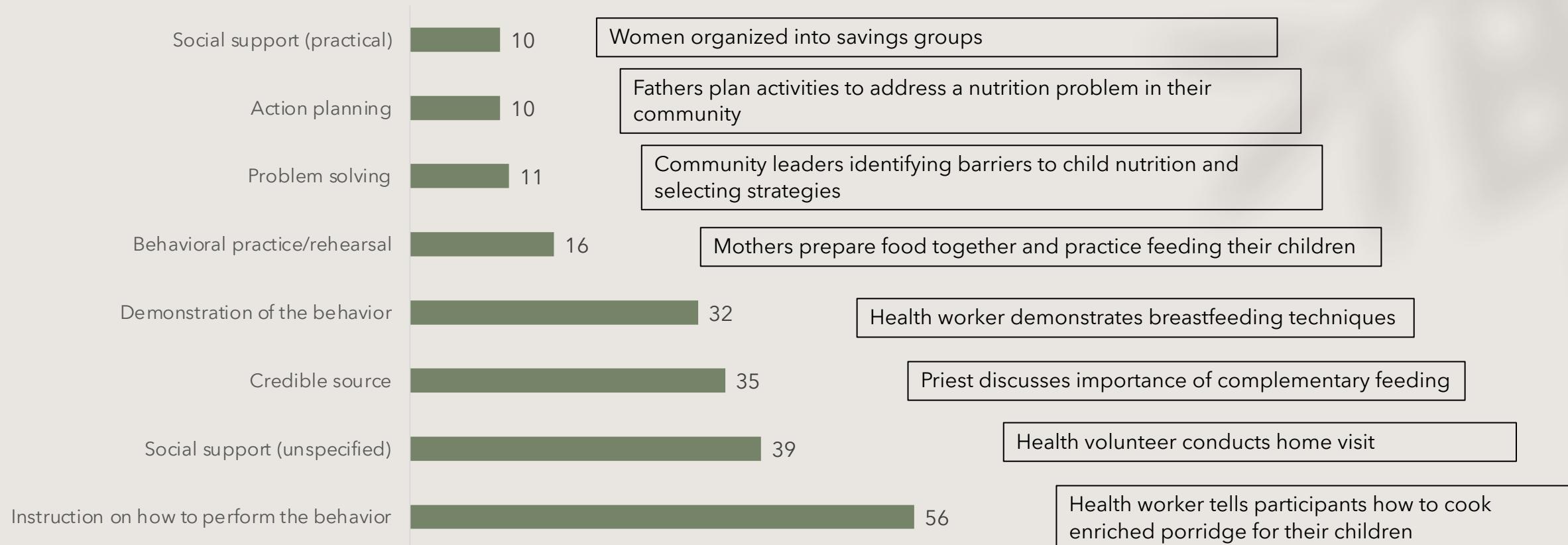


Frequency of SBC approaches used by included projects (n=56)

Agriculture to Nutrition Pathways



Behavior Change Techniques and Examples



Frequency of select BCTs used in included projects (n=56)

Project activity examples to illustrate corresponding BCTs

Effectiveness Ratios for Select BCTs

BCT Name [1]	Overall Effectiveness Ratios
Behavioral practice/rehearsal	1
Identification of self as a role model	0.86
Adding objects to the environment	0.86
Action planning	0.8
Credible source	0.8
Instructions on how to perform the behavior	0.74
Restructuring the social environment	0.7
Social support (unspecified)	0.7
Problem solving	0.6

Conclusions

- NSA interventions are adhering to some SBC best practices. However, there are gaps in applying behavioral theory in intervention design
- Interventions focused predominantly on the home production for home consumption agriculture to nutrition pathway. Although 34 interventions engaged women in activities, none explicitly focused on reducing women's time/labor burden
- Some underutilized BCTs have higher effectiveness ratios than more frequently used BCTs

References

- [1] Michie, S., Richardson, M., Johnston, M., Abraham, C., Francis, J., Hardeman, W., Eccles, M. P., Cane, J., & Wood, C. E. (2013). The behavior change technique taxonomy (v1) of 93 hierarchically clustered techniques: building an international consensus for the reporting of behavior change interventions. *Annals of behavioral medicine : a publication of the Society of Behavioral Medicine*, 46(1), 81-95. <https://doi.org/10.1007/s12160-013-9486-6>

Thank you!

