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## Findings from a mixed methods evaluation of an integrated social and behavior change approach to improve health outcomes in Niger

Breakthrough RESEARCH

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# Findings from a Mixed Methods Evaluation of the RISE II Integrated Social and Behavior Change Approach to Improve Health Outcomes in Niger

This brief summarizes findings from a mixed methods evaluation of an integrated social and behavior change (SBC) approach implemented in the Maradi and Zinder regions of Niger. It is intended to inform the Resilience in the Sahel Enhanced (RISE) II program implemented by the United States Agency for International Development (USAID) funded Resilience Food Security Activities (RFSA) to further improve reproductive, maternal, and child health outcomes. This brief provides an overview of the integrated SBC approach and evaluation methods and then guided by the program theory of change, describes the mechanisms through which the intervention contributed to change in health behaviors by considering programmatic exposure, behavioral determinants, and contextual factors. The brief then presents findings on the effectiveness of integrated SBC programming on family planning (FP), maternal health outcomes, nutrition and water, sanitation, and hygiene (WASH) behaviors. The brief concludes with recommendations to improve implementation to achieve improved health outcomes.

## Background

Niger faces a myriad of health challenges and development efforts are complicated by persistent poverty, high population growth rates, and climate change. In Niger, a high proportion of children are stunted (44%<sup>1</sup>) and under-five mortality rates are high (84 per 1,000).<sup>2</sup> The maternal mortality ratio was 509 per 100,000 live births in 2017<sup>3</sup> and, according to the most recent *Demographic*

## KEY POINTS

Exposure to health messages and participation in women's groups were positively associated with modern contraceptive use and presence of handwashing stations.

Improvements at endline were observed for most behavioral determinants such as knowledge, attitudes, and self-efficacy.

Male engagement activities contributed to increased dialogue among families about health behaviors and helped foster a supportive environment for practicing healthy behaviors.

Increases in male partner out-migration was negatively associated with health outcomes in this climate-stressed setting.

*and Health Survey*, the total fertility rate was 7.6 in Niger in 2012.<sup>1</sup> Pro-natalist cultural norms coupled with a lack of decision-making power by women for health and fertility matters further challenge efforts to improve health outcomes. While there is some evidence that integrated SBC approaches are effective in changing behaviors, there is a lack of rigorous evidence on how these approaches can be used to improve health outcomes.

## RISE II program

The RISE II program targets chronically vulnerable populations through integrated programming to improve priority

behaviors and health outcomes in FP, maternal health, nutrition, and WASH. The program is implemented at the community and facility levels through the RFSAs in select zones in Niger. The RFSAs partners in Niger include Hamzari (led by Care), Girma (led by Catholic Relief Services), and Wadata (led by Save the Children). RFSAs partners are implementing integrated SBC approaches such as community engagement and interpersonal communication (IPC) through care group activities and radio. Under RISE II, RFSAs partners have expanded their care groups to cover other influential demographic subgroups such as grandmothers and husbands and serve as a “hub” for interrelated community-wide activities, including male engagement and couple’s communication, and savings and loan groups. Breakthrough ACTION is a project funded by USAID that provides technical assistance to ministries of health and development partners to improve the coordination and effectiveness of SBC interventions. Given the complexity of and interactions between the underlying determinants and norms of the RISE II priority health outcomes, Breakthrough ACTION is supporting the RISE II RFSAs in Niger to develop integrated SBC strategies based on the segmentation of audiences, prioritization of desired behaviors, analysis of barriers, and effective SBC approaches.

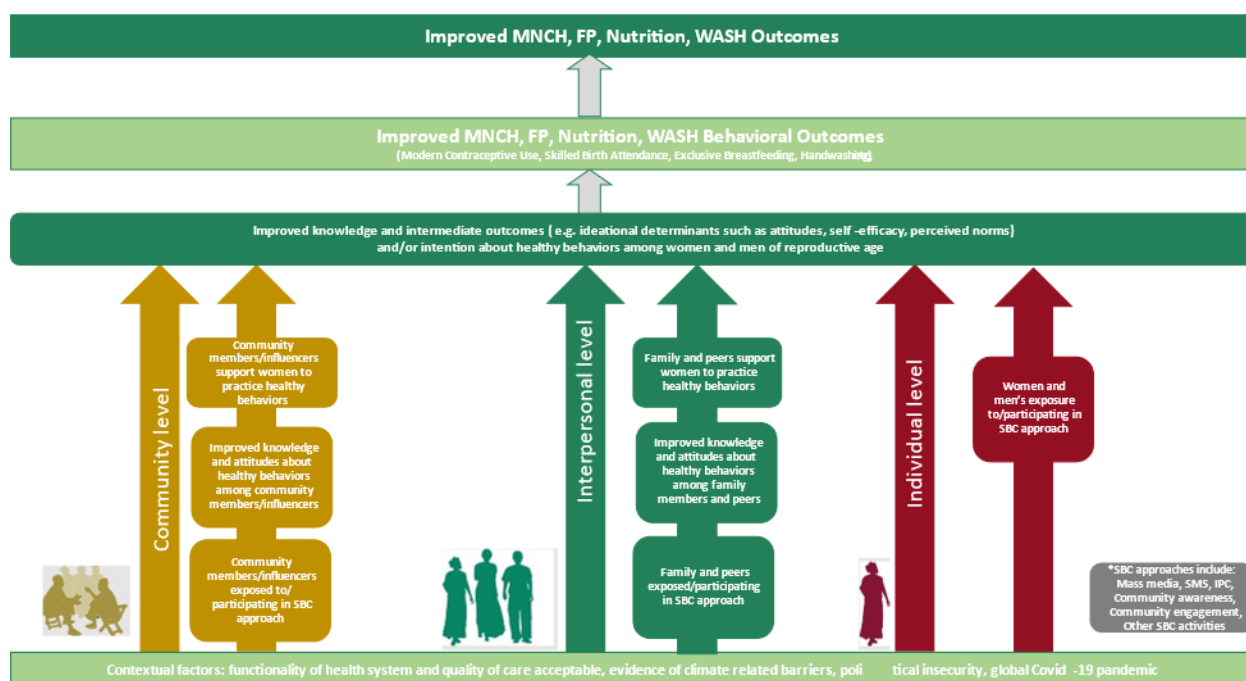
Figure 1 describes the RISE II Integrated SBC Program Theory of Change. The theory of change is guided by the socio-ecological model,<sup>4</sup> which recognizes the influence of factors operating at five levels: 1) individual, 2)

interpersonal, 3) community, 4) health service delivery, and 5) policy. The RFSAs SBC strategies address factors operating at these various levels to improve knowledge, and intermediate outcomes (e.g., ideational determinants such as attitudes, perceived behavioral control, and norms) with the aim of improving health outcomes. The RISE II service delivery partner, the Kulawa activity, contributes to improved health service delivery but this level is not assessed directly in this component of the evaluation.

## Study Methods

The USAID-supported Breakthrough RESEARCH project conducted a mixed methods evaluation from April 2021 through February 2023. The quantitative component of the study was a pre-post quasi-experimental survey. The intervention group included two communes from each RFSAs while the comparison group included two neighboring communes with similar sociodemographic characteristics. The baseline household survey was conducted from April to May 2021 in the Maradi and Zinder regions of Niger—where the RISE II program has been supporting interventions to improve health outcomes since March/April 2020. Quantitative interviews were conducted with 2,709 married women aged 15–49 at baseline. An online survey was conducted in February 2023 and interviewed 2,727 married women aged 15–49. Table 1 provides a description of the study sample. We conducted a bivariate analysis of behavioral determinants by study group (e.g., pooled intervention communes and comparison

**FIGURE 1 RISE II INTEGRATED SOCIAL AND BEHAVIOR CHANGE PROGRAM THEORY OF CHANGE**



**TABLE 1 DESCRIPTION OF QUANTITATIVE STUDY SAMPLE**

	Baseline		Endline	
	Intervention	Comparison	Intervention	Comparison
<b>Wealth</b>				
Poorest	33.8	33.7	31.9	39.7
Middle	34.7	31.3	31.2	30.5
Wealthiest	31.6	35.1	36.9	29.8
<b>Experienced a drought in the last 12 months</b>	50.9	46.4	8.9	7.7
<b>Husband lives away</b>	6.1	5.9	8.5	14.0
<b>Age group in years</b>				
15-24	13.8	19.3	25.4	27.9
25-34	51.8	48.1	50.1	49.7
35-49	34.4	32.6	24.5	22.4
<b>Some formal education</b>	13.2	15.9	20.0	15.4
<b>Watch television once a week</b>	7.2	7.1	4.8	3.2
<b>Listen to radio once a week</b>	31.0	35.0	25.5	16.5
<b>Attends woman's group</b>	32.0	26.5	19.6	16.0

The research team conducted 42 in-depth interviews (IDIs) with male and female program participants. Seven women and seven men were selected from each RFS partner. Data were collected in June 2022. Qualitative coding was based on the theory of change and study questions. Additional codes were developed by applying open coding to identify emerging themes from the transcripts.

## Key Results

Guided by the program theory of change, our study aimed to describe the mechanisms through which the intervention contributed to change in health behaviors by considering programmatic exposure, behavioral determinants, and contextual factors. The study also assessed the effectiveness of integrated SBC programming on FP use, maternal health outcomes, nutrition, and WASH behaviors.

communes) and time period. Figure 2 provides a description of the behavioral determinants used in the analysis. We estimated logistic regression models for each health outcome controlling for sociodemographic and contextual factors, intermediate behavioral outcomes, and exposure to intervention.

## Individual level of the Theory of Change

Figure 3 (page 4) shows levels of exposure of individuals to health messages by type of health message in the three months preceding the survey. While there have been declines in exposure across all health areas from baseline

**FIGURE 2 BEHAVIORAL DETERMINANTS**



- Knows that a woman should give birth in a health facility
- Has heard of at least 3 different FP methods
- Knows it is healthy to give only breastmilk for the first 6 months
- Knows 3 critical times to wash hands



- Agree it is important for a woman to discuss her pregnancy with her husband to make decisions together
- Agree it is acceptable for a couple to limit the number of children they have
- Agree baby that is exclusively breastfed for 6 months is less likely to get sick
- Disagree washing hands with soap will ruin the taste of food

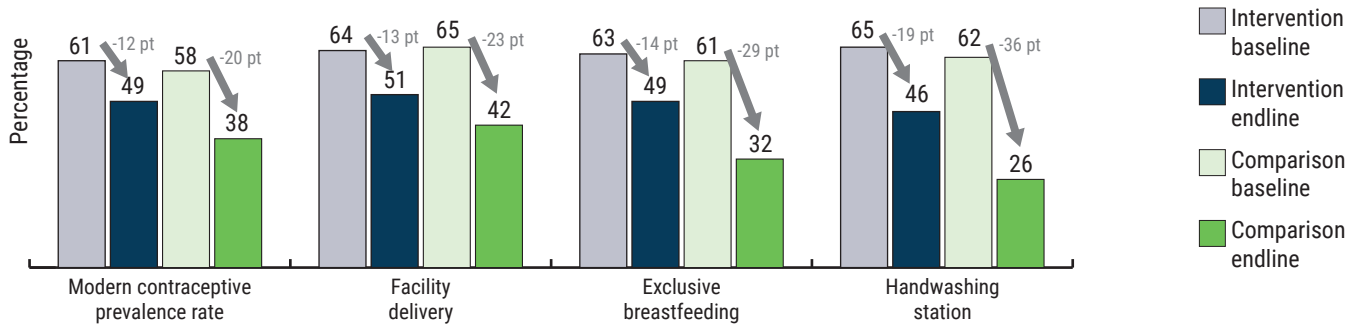


- Agree most women in this community deliver in a health facility
- Agree that religious leaders support a woman's use of FP
- Agree people in the community think it is healthy for a woman to give the baby only breastmilk for the first six months
- Agree people in the community wash their hands after defecating



- Agree not at all difficult to go to a health facility to give birth
- Agree they are comfortable discussing FP with their partner
- Agree giving breastmilk to the baby for the first six months is not difficult at all
- Agree washing hands with soap after defecating is not difficult at all

**FIGURE 3 INDIVIDUAL LEVEL EXPOSURE TO MESSAGES IN THE PAST 3 MONTHS AMONG MARRIED WOMEN AGES 15–49 AT BASELINE AND ENDLINE**



to endline, these declines were greater in the comparison areas when compared to the intervention area.

### Interpersonal level of the Theory of Change

RFSa activities engaged husbands and wives which facilitated communication between couples.

“The sensitization activity on the roles of husbands is the most useful for me... because the husband and wife discuss together the problems of the household and find solutions. You discuss together, even with the children, and each one gives his point of view.

—Man, Wadata

Several women reflected on the value of income-generating activities in enabling them to access health services without relying on their partner for financial support.

“And then with my business activity, I will rush to go to a health center whether it is me or my children, I will not rely on my partner....

—Woman, Hamzari

### Community level of the Theory of Change

An important element of the RFSa approach was the use of care groups, which relied on cascade training from paid promoters to volunteer leaders to neighborhood mothers to enable broad geographic coverage.

“Before, a pregnant woman did not go to the prenatal consultation, but with the arrival of the project things have changed. The project comes to target us to bring us to the training in town and when we come back, we sensitize the

others too. Now, everyone has understood that as soon as a woman becomes pregnant and has

reached three months of pregnancy, she must start going to the prenatal consultation ....

—Woman, Girma

Some women were resistant to engage with the volunteers on health messages because they felt they should receive something in exchange, but this was resolved through dialogue.

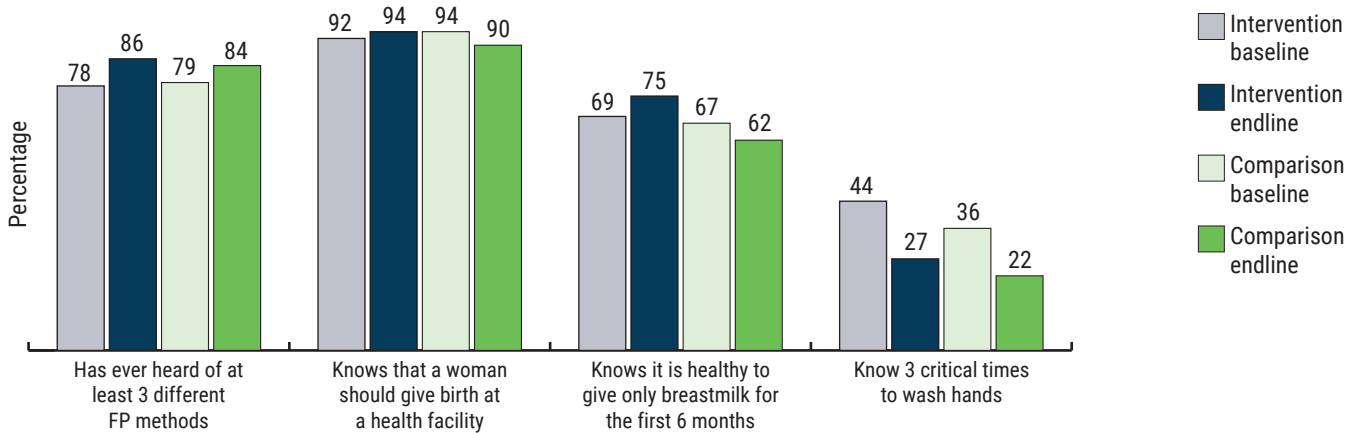
“When we were brought to the training, we went door to door to sensitize the women. There are 14 women under my care, I go back to sensitize them, and it happened that the women said that we don’t give them anything, we only come to discuss with us. that’s when we almost had a problem, that too now that they have understood, they have seen that it’s their health that we’re taking care of, it’s not something.....

—Woman, Girma

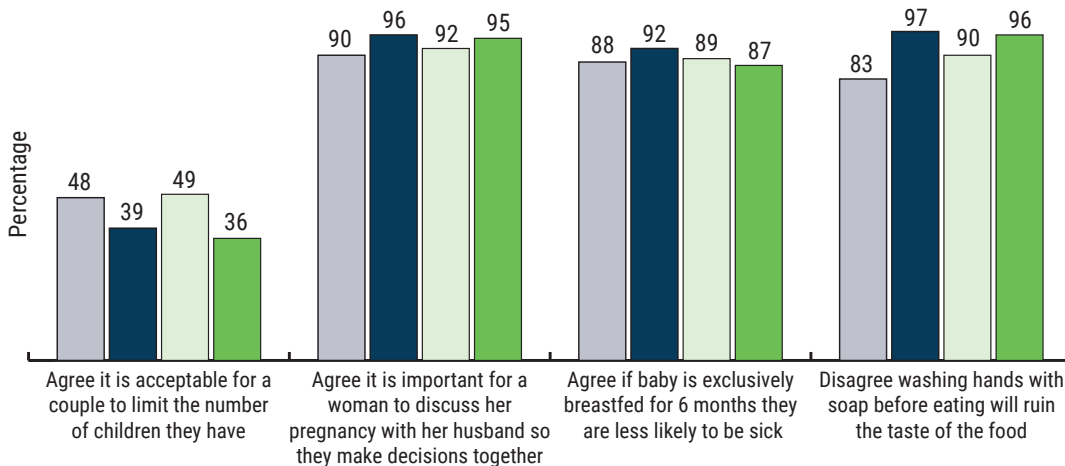
### RISE II behavioral determinants

Figure 4 presents levels of knowledge by health area at baseline and endline. Over time, there were increases in knowledge across FP, maternal health, and nutrition behaviors in the intervention areas while there were observed declines in knowledge in maternal health, breastfeeding, and handwashing in the comparison areas. Changes in attitudes and perceived norms varied by health area and study group as shown in Figures 5 and 6. While there were improved attitudes in the intervention areas for both maternal health and breastfeeding, the reverse is true for FP and WASH attitudes. Similarly in Figure 6, there were improved norms for FP and breastfeeding but declines in norms related to maternal health and WASH in

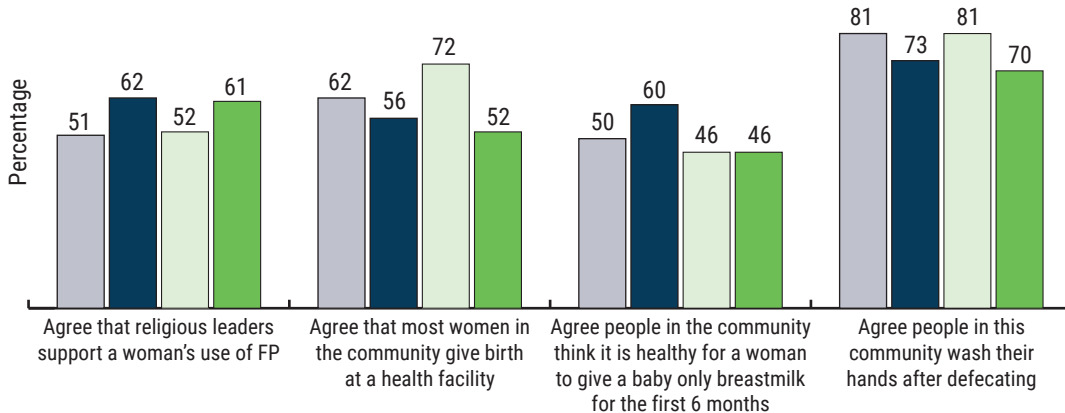
**FIGURE 4 KNOWLEDGE RELATED TO HEALTH OUTCOMES AT BASELINE AND ENDLINE**



**FIGURE 5 ATTITUDES RELATED TO HEALTH OUTCOMES AT BASELINE AND ENDLINE**



**FIGURE 6 PERCEIVED NORMS RELATED TO HEALTH OUTCOMES AT BASELINE AND ENDLINE**



the intervention areas. Figure 7 (page 6) shows improvements in self-efficacy in the intervention areas for FP and WASH behaviors but not for modern contraceptive use and facility delivery.

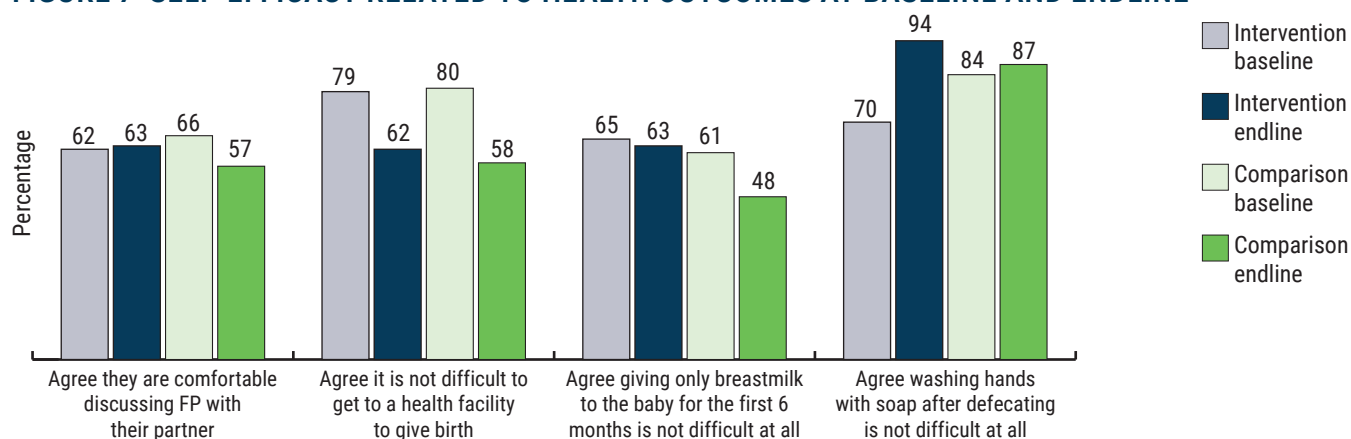
**RISE II health outcomes**

Figure 8 (page 6) displays the primary health outcomes over time for the intervention and comparison areas. From

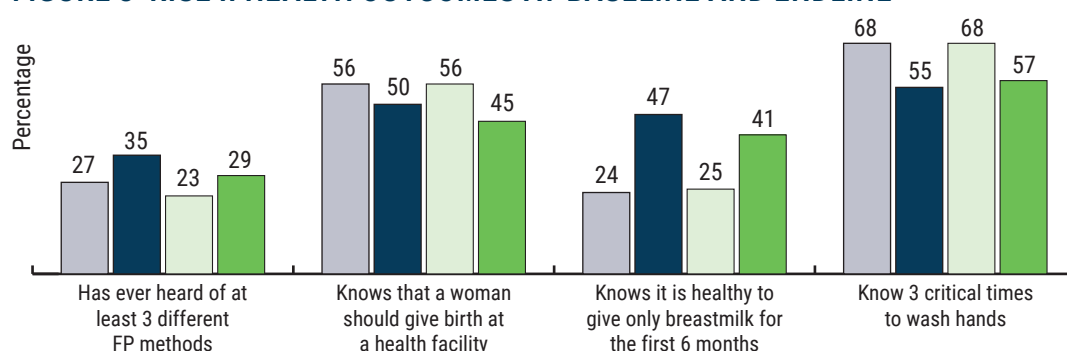
baseline to endline, there are improvements in the modern contraceptive prevalence rate and exclusive breastfeeding in the intervention areas but not facility delivery or the presence of a handwashing station.

Table 2 (page 6) displays results from the logistic regression analyses. We did not observe a statistically significant result in the interaction term (time\*group), which assesses the association of study time and group with

**FIGURE 7 SELF-EFFICACY RELATED TO HEALTH OUTCOMES AT BASELINE AND ENDLINE**



**FIGURE 8 RISE II HEALTH OUTCOMES AT BASELINE AND ENDLINE**



**TABLE 2 ADJUSTED ODDS RATIOS AND CONFIDENCE INTERVALS BY HEALTH OUTCOME**

	Modern contraceptive prevalence rate	Facility delivery	Exclusive breastfeeding	Handwashing station
Group: intervention (Ref: comparison)	1.3 [1.0-1.7]*	1.2 [0.9-1.7]	1.0 [0.6-1.6]	1.0 [0.7-1.5]
Time: endline (Ref: baseline)	1.8 [1.4-2.4]***	1.6 [1.2-2.1]**	1.9 [1.2-3.2]**	0.5 [0.4-0.8]**
Interaction (time * group)	0.9 [0.6-1.2]	0.9 [0.5-1.4]	1.2 [0.6-2.1]	0.8 [0.5-1.3]
Women's group (Ref: no participation)	1.3 [1.0-1.6]*	1.1 [0.9-1.4]	1.1 [0.8-1.4]	0.6 [0.5-0.7]***
Exposure to message (Ref: no exposure)	1.7 [1.4-2.0]***	1.0 [0.8-1.3]	1.1 [0.8-1.4]	1.4 [1.1-1.6]**
Knowledge (see figure 2 definition)	1.9 [1.4-2.5]***	1.6 [1.1-2.3]*	1.3 [0.9-2.0]	2.4 [2.0-2.8]***
Attitude (see figure 2 definition)	1.2 [1.0-1.4]	1.1 [0.7-1.5]	0.8 [0.5-1.2]	0.4 [0.3-0.5]***
Self-efficacy (see figure 2 definition)	1.9 [1.6-2.5]***	9.2 [7.3-11.6]***	2.7 [2.0-3.6]***	0.7 [0.6-0.8]***
Norms (see figure 2 definition)	1.9 [1.6-2.2]***	3.1 [2.5-3.7]***	0.9 [0.7-1.2]	1.6 [1.2-2.0]***
Husband lives away	0.7 [0.6-0.9]**	0.7 [0.6-0.9]*	0.7 [0.4-1.1]	0.6 [0.5-0.8]***

Signif: \*p < 0.05; \*\*p < 0.01; \*\*\*p < 0.001

(Controlling for wealth, drought, age, educational attainment, marital status, listens to the radio, watches TV)

the health outcome, meaning that there was not statistically observable effect of the intervention on these four health outcomes. However, we did observe that exposure to messages and participation in a women's group was positively associated with health outcomes. Importantly, improvements in the behavioral determinants (knowledge, attitudes, self-efficacy, and norms) were also positively associated with the health outcomes, while male partner out-migration was negatively associated with the health outcomes.

## Contextual factors

Study participants reflected on how the health facility does not always provide timely, quality care.

**“Someone who brings a sick person, and the health workers stay in their sheds having their tea and look at you, the person accompanying the sick person has to talk to them, before anyone moves towards you.**

—Woman, Wadata

Changes in climate patterns led to poor crop yields and contributed to financial insecurity and male partner out-migration at times delaying access to health services.

**“Because if I have money on hand, I'll call a motorcycle cab to take her straight to the health center, preferably treating an illness before it gets out of hand because taking too long to treat will cause double treatment. But if you don't have the money, you have to go from house to house looking for a loan. But if [for example], the husband is absent, (i.e. gone into exodus), waiting for him to send the money for the treatment, the situation will get even worse.**

—Man, Girma

However, Covid-19 and political insecurity were not seen by program participants as having a significant impact on program activities and outcomes.

**“There haven't been any other illnesses, but this year we're a little bothered by Tininim [measles] disease among the children, even now.**

—Male Wadata

**“No, we don't have any problems of conflict or violence in our village. Our main problem is famine.**

—Female Wadata

## Programmatic Recommendations

- Declines in presence of a handwashing station may be attributed to waning programmatic emphasis three years after the onset of Covid-19, suggesting the need for renewed emphasis on hygiene behaviors.
- Given the increase in male partner out-migration, health-focused programs should increase access to income-generating activities for women as an intervention that can mitigate the effects of this trend and its negative association with health outcomes.
- Programs should continue to invest in health promotion efforts at the community level that include gender transformative interventions such as income-generating activities for women that support gender equality.

## Research, Monitoring, and Evaluation Recommendations

- Further research is needed to understand how women's agency and autonomy evolves as household composition changes through male out-migration.
- Given the challenges in measuring programmatic impact in complex environments facing multiple development challenges, the use of **complexity aware methods** can support interpretation of study findings.



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