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More Than Brides Alliance: Midline evaluation report

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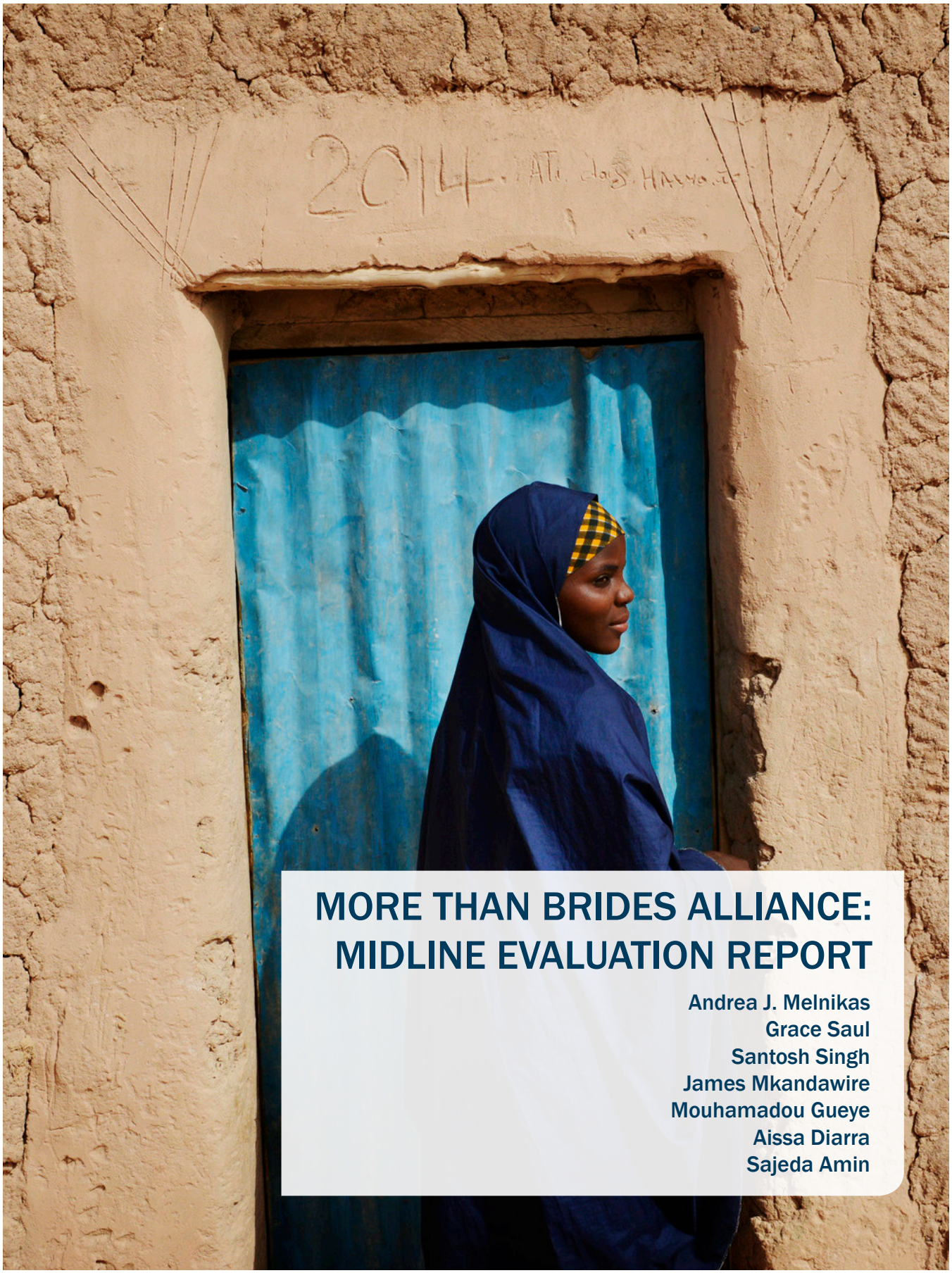
report



MORE THAN BRIDES ALLIANCE: MIDLINE EVALUATION REPORT

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MAY 2019

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Executive Summary

Despite declines in recent years, child marriage, or marriage before the age of 18, remains a significant issue. In response to the need for targeted community-level interventions to delay marriage and improve sexual and reproductive health for adolescent girls in India, Malawi, Mali, Niger, and Pakistan,[1] the More than Brides Alliance (MTBA) was formed, bringing together the strengths of a diverse team skilled in adolescent program implementation and research.

The research component of MTBA seeks to contribute evidence and knowledge on what works to delay child marriage through evaluating the MTBA intervention package and examining specific drivers of child marriage in each context. The MTBA intervention package includes a holistic community-level intervention that aims to: delay marriage; increase awareness of and access to sexual and reproductive health and rights (SRHR) services; enroll and keep girls in school; build girls' confidence and empower them to advocate for their own rights; increase access to economic opportunities for girls; and promote legal and policy environments protective of girls' and women's rights. Drawing on the skills of local implementation partners, the MTBA approach varies from one country to the next, but includes activities related to the core outcome areas as described in this report.

The goal of this research is to promote an evidence-based programmatic approach to delaying marriage by gathering detailed quantitative and qualitative information from the program areas over time to examine the impact of the present intervention and inform future strategies. One component of this research is the midline survey which collects data on a set of outcomes approximately midway through the MTBA intervention and compares them with the same indicators that were collected before the interventions began (at baseline). The changes observed in intervention areas from baseline to midline are then compared to changes observed in a comparable area where there was no program (the counterfactual) over the same period of time. The difference-in-differences (DID) of these two measures is our measure of program impact.

In this midline report we use data from repeated cross-sectional surveys of girls aged 12–19 in selected communities to assess program impact. Communities were selected to receive the MTBA program either randomly (cluster randomized design in India and Malawi) or were selected by program teams and matched with comparable villages not receiving the program (Mali and Niger). In the interest of measuring the effect of the program on girls in the community, we selected a new random sample of girls in each community at the time of each survey (rather than following the same girls prospectively). We analyzed data using DID to examine the change in the intervention areas compared to the change in the comparison areas over the same period. Analyses are adjusted for clustering (all countries) and for compositional differences that may influence key outcomes (Mali and Niger).

At midline, we found that the proportion of girls aged 12–19 ever married had declined in all samples. We observed declines ranging from 29% to 47% across countries (representing declines of 3–11 percentage points overall). Although these trends are observed in both intervention and comparison areas and thus cannot be entirely attributed to the MTBA program, they nevertheless reflect progress toward MTBA's overall objective.

In general, we find that knowledge related to child marriage and SRHR is improving in intervention areas. For example, in Niger and Malawi, we saw large increases in modern contraceptive knowledge in intervention areas (by 33% in Niger and by 29% in Malawi) while in comparison areas, contraceptive knowledge increased only slightly (by 3% in Malawi) or even declined (by 3% in Niger). As another example, we also found that knowledge of legal age at marriage improved in both intervention and comparison areas in Malawi and three Indian states (Bihar, Jharkhand, and Rajasthan), but was only attributable to the program in one state in India (Odisha), where increases were observed in intervention areas but not in comparison areas.

[1] Although the MTBA includes five countries (India, Malawi, Mali, Niger and Pakistan) research in Pakistan is carried out by Oxfam Novib, whereas the Population Council conducts the research in India, Malawi, Mali, and Niger.

A key component of the MTBA approach is expanding alternate pathways to marriage for girls in these communities through education and livelihoods. In terms of education, we observe some potential impact of the MTBA intervention with respect to girls' school enrollment. We see that the proportion of girls reporting ever having attended school did not increase in intervention areas in Malawi or Mali since baseline. However, the proportions of girls enrolled in school in comparison villages declined significantly over this same period, leading to a significant difference between the changes observed in intervention and comparison areas. Thus, in both Malawi and Mali, the MTBA intervention may have had a protective effect on girls' school enrollment. The MTBA intervention may also have had an impact on school retention in Malawi and Mali, where the mean number of years of education increased significantly in intervention areas and declined significantly in comparison areas over the same period.

Our findings are limited in part as a result of program design and implementation issues. In Mali and Niger, difficulty in finding appropriate matched comparison villages limits our ability to assess impact, as programs areas were different from non-program areas from the outset of the project (in part because of previous programs active in these areas before the arrival of MTBA). These areas were different from comparison areas on a number of key outcomes at baseline, which limits our ability to detect improvements attributable to the program. In Malawi, a program implementation issue arose where areas initially designated as comparison villages ended up receiving the intervention, thus limiting our ability to assess impact following our research design. To account for this issue, we have included two different analyses for Malawi; more detail may be found in Annex 2: Methods.

Despite these limitations, this midline analysis offers the opportunity to see how communities exposed to the MTBA approach have fared on aggregate measures of adolescent girl well-being related to marriage, pregnancy, education, livelihoods, and gender-equitable attitudes. The midline findings provide both validation that some MTBA approaches are working to improve outcomes for girls in these communities, as well as direction for areas requiring more attention and focus over the last years of the intervention.

In this report, we aim to assess the successes of the program to-date, to contextualize findings in light of larger social trends that may explain changes on some indicators (such as increased political pressure to end child marriage), and to consider programmatic strategies that may be suitable for adaptation based on midline findings. As we take stock of the program at its midpoint, we look to the data to provide insights into possible programmatic adaptations that could help MTBA achieve desired outcomes by endline in 2020.

List of Abbreviations

CM	Child Marriage
DHS	Demographic and Health Surveys
DID	Difference-in-Differences
EA	Enumeration Area
FGD	Focus Group Discussion
FGD	Focus Group Discussion
GHV	Group Head Village
GP	Gram Panchayats
IDI	In-Depth Interview
IDI	In-Depth Interview
MEAL	Monitoring Evaluation and Learning
MTBA	More than Brides Alliance
NFHS	National Family Health Survey
PSU	Primary Sampling Unit
SRHR	Sexual and Reproductive Health and Rights
TA	Traditional Authority
TOC	Theory of Change

Chapter 1. Introduction

The More than Brides Alliance (MTBA) is a consortium funded by the Ministry of Foreign Affairs, Netherlands to respond to a need to address child marriage and adolescent sexual and reproductive health in select countries. The MTBA brings together program implementation partners (Save the Children Netherlands, Simavi, and Oxfam Novib) along with a research partner (Population Council) to compose an alliance with the capability of carrying out and evaluating the effectiveness of a holistic intervention to delay child marriage. The MTBA implements the Marriage: No Child's Play intervention in five countries: India, Malawi, Mali, Niger, and Pakistan. The approach is primarily focused on the community level and implements programs to address seven key outcome areas as shown in the theory of change (Annex 1).

The theory of change is operationalized into key outcome areas including:

1. Empowering at-risk and already married adolescents, girls in particular, with life-skills education, SRHR information, and peer support groups.
2. Enhancing access to education opportunities and improving retention in school for girls.
3. Enhancing access to economic and income-generating opportunities for girls and their families.
4. Enhancing access to improved child protection systems.
5. Increasing access to quality, youth-friendly SRHR services.
6. Contributing to changing social norms that perpetuate the practice of child marriage.
7. Influencing legal and policy frameworks.

In each country, implementation focuses on addressing the key outcome areas, with slight differences to address needs in specific contexts and to acknowledge the different skills of each local implementing partner. As the research partner, the Population Council assesses the impact of the overall MTBA package in areas selected for the intervention compared to non-intervention areas. The Council conducts this research in four of the five MTBA countries: India, Malawi, Mali and Niger. Oxfam Novib leads the research and evaluation of the MTBA program in Pakistan.

Research Design

The research design and analysis include several key steps, which are explained below and in Annex 2. These steps include: 1) randomization (India and Malawi) or matching (Mali and Niger) to select appropriate comparison areas; 2) assessing comparability between intervention and comparison villages at baseline; 3) measuring program impact at the girl level using baseline and midline surveys; and 4) assessing program impact at the community level by aggregating survey data and comparing intervention and comparison areas on key indicators.

Country Selection

In order to understand the research design, some background on country selection is necessary. In late 2015, key MTBA partners met to decide which countries to include in the MTBA intervention. Countries were selected largely based on need, as the MTBA aimed to work in areas with high prevalence of child marriage. Additional considerations included:

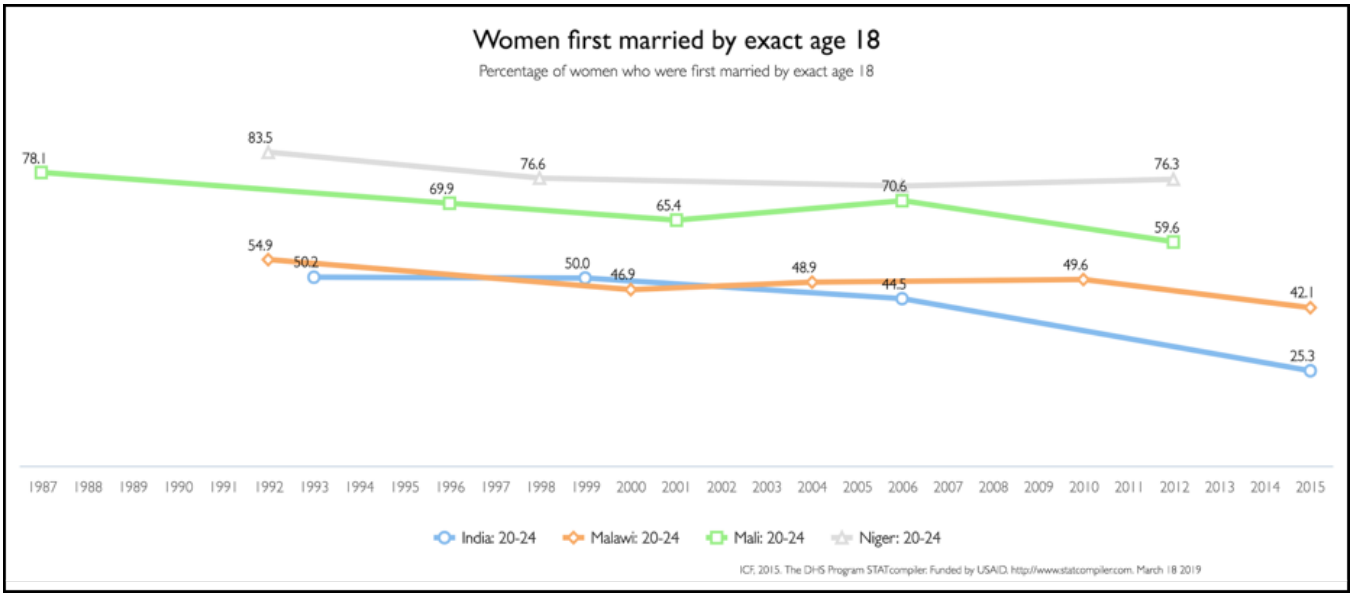
- Partners' geographic expertise and office presence;
- Complementarity or countries where more than one partner was located or had experience working;
- Momentum or the desire to build on inroads made during an initial funding commitment from the Ministry that began in early 2015 (in Mali and Niger); and
- Security concerns.

The Alliance ultimately selected India, Malawi, Mali, Niger, and Pakistan as locations for the MTBA to implement this program and began the process of selecting local partners and within-country geographic focus areas. At that time, it was decided that the Population Council would serve as research partner in all countries except Pakistan; Oxfam Novib would conduct the evaluation in Pakistan (findings available on morethanbrides.org).

India and Malawi

Child marriage rates are persistently high in both Malawi—where approximately half of all girls are married by age 18—and in India, where approximately 1 in 4 girls are married

Figure 1.1. Trends in proportion married by age 18



by age 18. The two countries present an opportunity for comparative testing of intervention approaches between a high child marriage setting where much is already documented about child marriage (India) and an area where little research has been done on child marriage and a high prevalence of HIV presents additional challenges (Malawi).

In India and Malawi, the MTBA program was not designed to build from an existing intervention (as in Mali and Niger), and thus the research team was able to randomize implementation of the MTBA intervention. A cluster randomized cross-sectional design was used because treatment occurs at the community-level and includes multiple focus areas; this design allows for a comparison of the full MTBA intervention with the absence of the intervention. In mid-2016, clusters (gram panchayats in India; group head villages in Malawi) were randomly assigned to either intervention or comparison groups, with an equal number of clusters designated in each group. Partly as a result of budget limitations, the study does not include additional arms. Thus, we are able to examine the impact of the MTBA approach as a package of different types of activities but are unable to compare different elements of the intervention to one another.[2]

In Malawi, the number of clusters was influenced by implementing partners' geographical presence and the existence of a similar livelihoods program in one of the planned study areas. In Mchinji, the existence of a large livelihoods program was deemed too big a threat to our ability to assess impact and was therefore dropped from the research, though it remains an MTBA intervention area.

In India, we have a larger sample compared to the other countries and are thus able to provide state-level comparisons. In India, we randomly assigned gram panchayats (GP) as either intervention or comparison areas. Although some activities occur at the district or block level and may influence GPs designated as comparison, any activities occurring at lower geographic levels were implemented only in designated intervention GPs.

Mali and Niger

While much research focuses on child marriage in South Asia, many West African countries also have high proportions of girls married by age 18 but have not received the same attention. Niger has the highest rate of child marriage globally with more than three-quarters of the girls married by age 18 (DHS data) and just over 30% by age 15. Niger also has low school enrollment rates, with 80% of women

[2] Please note that while the same research design was planned for all MTBA countries, program intervention did not adhere to this design in Malawi, resulting in some loss of the benefits of randomization. See more detail on how this was handled during the analysis phase of the study in Chapter 3 and in the detailed methods annex (Annex 2).

Table 1.1. Midline data collection details

	Geographic areas	Adolescent survey sample size (Baseline)	Adolescent survey sample size (Midline)	Midline timing
India	Bihar, Jharkhand, Rajasthan, Odisha	2982	2801	July–September 2018
Malawi	Mangochi, Nkhata Bay	1020	1029	October–November 2018
Mali	Sikasso, Ségou	855	829	September–October 2018
Niger	Maradi, Tillaberi	600	599	November–December 2018

15–49 reporting no formal education. In Mali, while marriage before age 18 is still common (59.6% of women 20–24 report being married by age 18 according to the most recent DHS), the practice has been on a consistent decline over the past few decades (Figure 1.1). Mali also struggles with school enrollment rates for girls but has slightly better education outcomes than Niger.

The selection of Mali and Niger was an important decision with regard to the research design since in those countries, MTBA program implementers intended to build on a previous program that had already begun working in select communities. The program *My Rights My Voice* was implemented in approximately 20 communities in Mali and 15 communities in Niger and focused on building community support to delay marriage. Because of the existence of *My Rights My Voice* and experience selecting and working with local partners in Mali and Niger, the MTBA program decided to build upon those programs and implement the intervention in those same communities. As a result, a quasi-experimental matched design was implemented for this cross-sectional study. Comparison communities were selected based on their similarities to communities that had implemented *My Rights My Voice*. Where possible, we tried to select matches that met the following criteria:

- May have been selected as an intervention community for *My Rights My Voice* based on village's accessibility;
- Had a similar number of schools;
- Had a similar number of health centers; and
- Was similar in population size.

As Mali and Niger built on existing programs already being implemented in select communities, MTBA implementation was limited to those select areas, including 50 villages in Mali and 42 villages in Niger. Consequently, sample size was limited; we were unable to randomly assign the intervention and thus needed to find suitable matches to the selected intervention villages. Our sample sizes were limited to 40 clusters in Mali (20 intervention and 20 matched comparisons) and to 30 clusters in Niger (15 intervention and 15 comparison). Sample size calculations may be found in baseline reports available at https://morethanbrides.org.

Data Collection

To evaluate the effects of a community-level intervention on key indicators related to child marriage and adolescent well-being, we conducted repeated cross-sectional surveys of girls ages 12--19 in a sample of intervention and comparison communities. At both baseline and midline, participants were randomly selected from a household listing of girls ages 10-21 from all households within the selected geographic area (enumeration area [EA] or Primary Sampling Unit [PSU]). Baseline surveys were conducted in late 2016 (Mali, India, and Malawi) and early 2017 (Niger). Baseline reports are available at www.morethanbrides.org. Midline surveys were collected from July to December 2018 (Table 1.1), using the same data collection forms used at baseline and drawing upon new household listings conducted in select enumeration areas (EAs) or PSUs. A research and evaluation timeline is shown in Figure 1.2.

Adolescent surveys were designed to collect data on key domains related to adolescent health and well-being and to collect context-specific information that may inform child marriage in that context. Survey domains include education, marriage, sexual and reproductive health, social assets, mobility, livelihoods, and gender-equitable attitudes. At midline, we also added questions to address exposure to the MTBA program, knowledge and understanding of child protection committees, migration behaviors, remittances, environmental security, and food security.

Figure 1.2. Research and evaluation timeline

Overall, survey domains attempt to track outcomes of interest for the MTBA intervention and common elements of adolescent well-being (e.g., ever married, ever pregnant, years of school attained) in order to assess impact and provide some comparability between MTBA's approach and that of other programs.

Throughout this report, we integrate highlights from our qualitative work in India, Malawi, Mali, and Niger. Full findings from our qualitative work are available at morethanbrides.org. For further information on qualitative methodology, refer to Annex 2.

Data Analysis

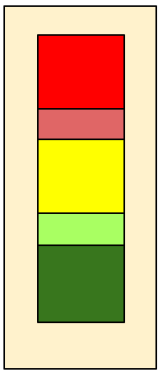
We assess impact by examining data from surveys with adolescent girls in both intervention (implementation) and comparison (non-implementation) communities. It is also important to note that study participants in intervention areas have not necessarily had direct interaction with the MTBA program. The repeated cross-sectional study design enables measurement of impact at the community level; we are interested in whether the MTBA program has had an impact on key indicators for an average girl in participating communities. Rather than follow girls prospectively, we select a representative sample of girls at each survey.

We conducted balance tests at baseline to understand how intervention and comparison samples may differ; where we find significant differences (Mali and Niger, due in part to matching rather than randomization) we control for these variables in the analysis. In the randomized designs (India and Malawi) we observe balance but follow best practices and do not control for differences in the analysis.

Data analysis focused on assessing the impact of the intervention on key outcomes, including marriage, pregnancy, access to SRHR services, schooling, experience working for an income, and gender-equitable attitudes. Our preferred approach is an intent-to-treat analysis where assignment of intervention and comparison areas in analysis remains as it was at initial randomization and/or matching and we compare those areas assuming that treatment occurred as designed. In Malawi we include additional analyses that deviate from intent-to-treat to account for contamination issues that came to light in early 2018. That analysis, "as-implemented," is presented alongside the intent-to-treat analysis in Chapter 3 on Malawi. Additional detail on contamination in Malawi may be found in Annex 2.

We conduct analyses using difference-in-differences (DID) to compare the change in the intervention group to the change

Figure 1.3. Results table color coding key



Note that positive means results follow hypothesized direction (e.g., marriage in intervention declined) and negative means results were contrary to hypothesized direction (e.g., marriage in intervention increased).

in the comparison group to determine whether change in the intervention group is attributable to the presence of MTBA in those communities. In some settings, and specifically in Mali and Niger where the design was not randomized, we control for known factors that may have influenced select outcomes. More specifics regarding the analysis are provided in Annex 2.

Because we examine the programs' influence on a community by selecting a random sample of girls at each survey, some girls included in the research may have had little program exposure. In Annex 3, we provide more detail on program exposure among girls included in the research.

Interpreting Results

So that results are easily accessible and comparable across MTBA countries, we present key findings in a color-coded fashion throughout this report (see Figure 1.3). Results highlighted in red require closer examination as they suggest that the indicator is moving in the wrong direction based on our hypotheses. Similarly, results highlighted in green do not necessarily indicate that activities related to that indicator do not have room for improvement but rather that results are trending in the hypothesized direction and that efforts to influence that indicator should continue.

- Results shaded in **dark green** indicate significantly positive results that may be attributable to the MTBA intervention. In other words, change in the intervention group from baseline to midline was significantly different (in the hypothesized direction) than the change observed in the comparison group. For example, if the indicator "knows about HIV" is green, this means that knowledge of HIV increased significantly among girls in the intervention group from baseline to midline and that this change was significantly greater than any change observed among girls in the comparison group. This suggests that the program may have influenced the observed change in the intervention areas.

- Results shaded in **light green** represent significant positive trends from baseline to midline that can not necessarily be attributed to the program. These may include indicators for which significant improvements were observed in both intervention and comparison villages or indicators for which improvements in intervention areas were observed but were not significantly greater than changes observed in comparison villages. For example, if "knows about HIV" is light green it may mean that knowledge improved significantly in intervention and comparison areas, but since comparison areas improved we do not attribute this change fully to the MTBA program at this time.

- Results shaded in **yellow** are nonsignificant. No significant changes were detected in intervention villages from baseline to midline. This could mean for an indicator like "knows about HIV" that proportions change from baseline to midline, but those changes were not statistically significant. Note that sample size influences ability to detect significance so for indicators that draw from a subset of participants (e.g., married girls) significant changes may be harder to detect.

- Results shaded in **light red** represent significant negative trends from baseline to midline that cannot necessarily be attributed to the program. These may include indicators for which significant declines were observed in both intervention and comparison villages or indicators for which declines in intervention areas were observed but were not significantly larger than those observed in comparison villages. For example, if "knows about HIV" is light red it may mean that knowledge declined significantly in both intervention and comparison areas, but since comparison areas also declined we do not attribute this change fully to the MTBA program at this time.

- Results shaded in **dark red** are results that were significantly negative. Changes observed from baseline to midline occurred in the opposite of the hypothesized direction. For example, for the indicator "knows about

HIV," dark red would indicate that girls in intervention areas had significantly lower knowledge of HIV at midline (decline from baseline to midline) while girls in comparison areas did not and this change is attributable to the program.

- A "notes" column provides detail about significant trends observed in intervention (INT) and comparison (COM) areas. Upward-facing arrows (↑) indicate increasing proportions of the indicator in question, downward-facing arrows (↓) indicate decreasing proportions, and horizontal lines (--) represent no significant change.

- In a few cases, + symbols are used to indicate that although the indicator may be moving in the direction opposite of our hypothesis, results may not necessarily be reflective of a "negative" change, for example, while the percentage of girls reporting having experienced harassment has increased from baseline to midline, this may indicate that girls have become better able to recognize harassing behavior and more comfortable reporting it rather than that harassment itself has increased.

Structure of the Report

We structure this report with country-specific chapters that include context-specific information, highlight key findings, discuss significant effects, and consider what about each country-specific context might explain the findings. Following the country chapters, we provide a comparative look at the findings and discuss what the findings mean for programs. More detailed information regarding methods and additional tables of results are provided in annexes.

Annexes

Annexes provide supplemental information useful for a deeper understanding of the MTBA approach and the results presented here. The following Annexes are included:

1. MTBA Theory of Change
2. Methods
3. Program Description and Exposure
4. Detailed Tables

Chapter 2. India

Background

Despite declines in recent years, child marriage remains a significant issue in India and South Asia more broadly. Globally, the highest number of girls married by age 18—more than 285 million–are found in South Asia. In India, an estimated 47% of girls are married before age 18, with some geographic variation. Data from national surveys in 2005–06 show that among 15–19-year-old females, 27.1% nationally were married or in union (32.6% of rural 15–19-year-old females compared to 14.5% of urban females). The regions with the highest percentage of adolescent females 15–19 currently married or in union were Bihar (45%) and Jharkhand (44.8%), followed by West Bengal (38.5%). We see declines in child marriage in data from the National Family Health Surveys from 2005–06 and 2015–16: Bihar saw a decline in marriage by age 18 among those aged 20–24 from 69.0% to 42.5%. In Rajasthan, marriage before age 18 declined from 65.2% to 35.4% and in Jharkhand from 63.2% to 37.9%. In Odisha, declines were less steep: 37.2% of women 20–24 reported being married by age 18 in 2005–06 and that declined to 21.3% by 2015–16. These declines, whether real or reflective of a change in willingness to report marriage before age 18, may be partly in response to policies and programs to address child marriage including the Prohibition of Child Marriage Act 2006 and the Right of Children to Free and Compulsory Education Act 2009. Large downward trends are an encouraging development in India, and an important consideration in assessing the impact of programs such as MTBA on delaying marriage.

Key Findings from Baseline

In MTBA baseline surveys (2016) we found that overall, about 1 in 4 girls ages 12–19 in Jharkhand (26%), 1 in 6 in Bihar (17%), and 1 in 13 in Odisha and Rajasthan (8%) were married and living with their husband at the time of the interview. Looking only at older girls ages 15–19, however, we found much higher proportions: 48.7% in Jharkhand, 26.9% in Bihar, 12.9% in Rajasthan, and 12.6% in Odisha were married at baseline. We also found variation in the average age at marriage within these four study states: average age at marriage in Odisha was 17, compared to 15 in Bihar and Jharkhand, and only 13 in Rajasthan.

At baseline, we found that some formal schooling was nearly universal among girls in our study, except in Bihar where about 12 percent of adolescent girls reported no years of educational attainment. Among all girls ages 12–19, the median years of school attained (highest standard/class successfully completed) was only six years in Bihar and eight years in the other three states. School retention was an issue: only about three-fifths (55%–63%) of the adolescent girls aged 12–19 were in school at the time of the interview.

Qualitative findings from India highlighted the barriers to education and livelihoods opportunities for girls, including concerns regarding safety when traveling to and from secondary schools and financial concerns with regard to paying school fees.

Samples

At the time of the midline survey, we conducted an updated household listing in each PSU and drew a new sample of girls from these households for participation in the individual interviews. In Tables 2.1. and 2.2. we compare those samples on age, religion, and caste, as well as key outcome variables to understand how compositional differences in the samples may influence the results.

In addition to assessing balance through Tables 2.1 and 2.2, in Table 2.3 we examine baseline and midline samples by state, looking at key outcomes. This allows us to see compositional differences at both baseline and midline that may influence our ability to detect impact in the difference-in-differences (DID) models (e.g., at baseline, enrollment in school was significantly different between intervention and comparison areas), but also lets us observe larger trends that may be masked by the DID models (e.g., decline in marriage in Bihar across intervention and comparison areas).

Table 2.1. Age distribution of adolescent girls by intervention and comparison areas

	Intervention		Comparison	
	Baseline	Midline	Baseline	Midline
12	13.3	14.1	14.6	13.9
13	16.3	14.5	15.6	17.1
14	15.0	16.6	16.0	16.8
15	11.9	14.3*	13.2	13.3
16	12.6	9.8**	12.7	13.0
17	10.5	11.7	11.0	10.2
18	13.1	12.6	9.2	8.9
19	7.4	6.5	7.7	6.8
Number of respondents	1,484	1,377	1,498	1,424

*** p<0.01; ** p<0.05; * and p<0.1 indicate that baseline and midline samples are significantly different from one another.

Table 2.2. Religion and caste distribution of adolescent girls by intervention and comparison areas

	Intervention		Comparison	
	Baseline	Midline	Baseline	Midline
Religion				
Hindu	86.7	87.2	93.8	94.4
Muslim	10.4	8.8*	4.1	4.0
Others	3.0	4.0*	2.1	1.6
Caste				
Scheduled caste	23.0	18.5***	21.3	19.7
Scheduled tribe	14.2	17.7**	14.5	18.2***
Other backward caste	48.0	52.6**	46.9	49.2
General caste	12.4	11.2	15.1	12.9*
Number of respondents	1,484	1,377	1,498	1,424

*** p<0.01; ** p<0.05; * p<0.1

Table 2.3. Comparison of baseline and midline samples by intervention status

	Baseline		Midline	
	Intervention	Comparison	Intervention	Comparison
Bihar				
Currently married	16.0	11.0**	6.2+++	4.5+++
Not enrolled in school	42.8	31.1***	34.0++	27.8*
Ever pregnant (among ever married)	68.9	62.5	43.5++	(11.8)+++**
Jharkand				
Currently married	26.9	25.9	18.6++	19.8+
Not enrolled in school	48.7	42.5*	39.7++	39.9
Ever pregnant (among ever married)	58.1	58.0	58.9	53.7
Odisha				
Currently married	8.9	6.0	7.8	7.1
Not enrolled in school	39.2	45.3	42.3	43.3
Ever pregnant (among ever married)	(51.5)	(57.1)	(28.6)+	(48.0)
Rajasthan				
Currently married	8.4	6.5	7.2	4.2*
Not enrolled in school	38.9	37.9	28.5+++	28.6+++
Ever pregnant (among ever married)	(30.3)	(44.0)	(12.5)	(13.3)++

*** p<.01 difference between comparison and intervention; **p<.05 difference between comparison and intervention; p<.10 difference between comparison and intervention.

-- {i.e., samples (INT and COMP) are different from each other at the time of the survey}.

+++ p<.01 difference between baseline and midline ; ++ p<.05 difference between baseline and midline; + p<.10 difference between baseline and midline.

--{i.e. samples (baseline and midline) are significantly different from each other within their intervention status}.

() based on fewer than 25 cases.

Table 2.4. India Summary Results, By State

Note: See page 8 for information on how to interpret results presented in this table			
		Baseline-Midline Comparison	**Notes**
Marriage			
Can correctly identify legal age at marriage	Bihar		INT ↑ COM ↑
	Jharkhand		INT ↑ COM ↑
	Rajasthan		INT ↑ COM ↑
	Odisha		INT ↑ COM --
Currently married (all)	Bihar		INT ↓ COM ↓
	Jharkhand		INT ↓ COM ↓
	Rajasthan		
	Odisha		
Currently married (15-19)	Bihar		INT ↓ COM ↓
	Jharkhand		INT ↓ COM --
	Rajasthan		
	Odisha		
Mean age difference with partner	Bihar		
	Jharkhand		
	Rajasthan		INT ↓ COM --
	Odisha		
Ideal age at marriage	Bihar		
	Jharkhand		
	Rajasthan		
	Odisha		
Can name at least three adverse effects of child marriage	Bihar		INT ↑ COM ↑
	Jharkhand		INT ↑ COM ↑
	Rajasthan		INT ↑ COM ↑
	Odisha		INT ↓ COM ↓

Health			
Ever pregnant (among ever married)	Bihar		INT ↓ COM ↓
	Jharkhand		
	Rajasthan		
	Odisha		INT ↓ COM--
Knows about HIV	Bihar		INT ↑ COM ↑
	Jharkhand		INT ↑ COM --
	Rajasthan		INT ↑ COM --
	Odisha		INT ↓ COM ↓
Comprehensive HIV knowledge*	Bihar		INT ↑ COM ↑
	Jharkhand		INT ↑ COM --
	Rajasthan		INT ↑ COM --
	Odisha		
Reports that their community has a youth-friendly health center	Bihar		
	Jharkhand		INT ↑ COM --
	Rajasthan		
	Odisha		

Livelihoods			
Has ever worked for income	Bihar		INT ↓ COM --
	Jharkhand		INT ↓ COM ↓
	Rajasthan		INT ↓ COM ↓
	Odisha		INT ↓ COM ↓
Is currently working for income	Bihar		INT ↑ COM ↑
	Jharkhand		
	Rajasthan		
	Odisha		
Reports saving money for the future	Bihar		INT ↓ COM --
	Jharkhand		
	Rajasthan		
	Odisha		
Education			
Currently enrolled in school (among ever enrolled)	Bihar		INT↑ COM --
	Jharkhand		INT↑ COM --
	Rajasthan		INT ↑ COM ↑
	Odisha		INT ↑ COM ↑
Ever attended school	Bihar		
	Jharkhand		INT ↑ COM--
	Rajasthan		
	Odisha		

Highest grade level completed	Bihar		
	Jharkhand		
	Rajasthan		
	Odisha		INT ↑ COM--
Literacy (can read at least one sentence)	Bihar		INT ↑ COM--
	Jharkhand		
	Rajasthan		
	Odisha		
Gender-equitable attitudes			
Agree that a woman should always obey her husband	Bihar		INT ↓ COM ↓
	Jharkhand		INT ↓ COM ↓
	Rajasthan		INT ↓ COM ↓
	Odisha		
Agree that a woman should tolerate violence to keep her family together	Bihar		INT ↓ COM ↓
	Jharkhand		INT ↓ COM ↓
	Rajasthan		INT ↓ COM --
	Odisha		INT ↓ COM ↓
Agree that boys have the right to refuse an arranged marriage	Bihar		INT ↑ COM ↑
	Jharkhand		INT ↑ COM ↑
	Rajasthan		
	Odisha		

Agree that girls have the right to refuse an arranged marriage	Bihar		INT ↑ COM ↑
	Jharkhand		INT ↑ COM ↑
	Rajasthan		INT ↑ COM ↑
	Odisha		
Agree that there are times when a woman deserves to be beaten	Bihar		INT ↓ COM ↓
	Jharkhand		INT ↓ COM ↓
	Rajasthan		INT ↓ COM --
	Odisha		INT ↓ COM ↓
Agree that a woman has a right to divorce	Bihar		
	Jharkhand		
	Rajasthan		INT ↑ COM --
	Odisha		
Agree that she can disagree with her parents (parents in law) about decisions affecting her	Bihar		INT ↑ COM --
	Jharkhand		INT ↑ COM ↑
	Rajasthan		
	Odisha		INT ↓ COM ↓ *(decline in INT < decline in COM)*

Social life			
Report being part of a club or group	Bihar		INT ↑ COM ↓
	Jharkhand		INT ↑ COM --
	Rajasthan		INT ↑ COM --
	Odisha		INT ↑ COM --
Report ever being harassed in school (among those reporting ever being harassed and ever attending school)	Bihar		
	Jharkhand		INT ↓ COM ↓
	Rajasthan		INT ↓ COM ↓
	Odisha		INT ↓ COM ↓
Report ever being harassed (overall)	Bihar		
	Jharkhand		INT ↓ COM ↓
	Rajasthan		INT ↓ COM ↓
	Odisha		INT ↓ COM ↓

** Comprehensive awareness of HIV/AIDS for 15 to 19 year-old adolescents includes: (1) identifying two major ways of preventing HIV (using condoms always and limiting sex to one partner); (2) rejecting three common misconceptions about HIV transmission (that HIV can be transmitted through mosquito bites, sharing food with a person who has HIV and hugging someone who has HIV); and (3) knowing that a healthy looking person can be HIV positive. Comprehensive awareness of HIV/AIDS for 10 to 14 year-olds adolescents includes: (1) rejecting three common misconceptions about HIV transmission (that HIV can be transmitted through mosquito bites, sharing food with a person who has HIV and hugging someone who has HIV); and (2) knowing that a healthy-looking person can be HIV-positive.*

Discussion of Findings

Midline results show that child marriage has greatly declined in Bihar and Jharkhand, where the proportions of married girls in the samples were highest at baseline. In Jharkhand, the proportion married has declined from about 1 in 4 to 1 in 5 and in Bihar, the proportion has more than halved, from about 1 in 6 to almost 1 in 20. In Jharkhand and Bihar, both intervention and comparison villages saw significant declines in the proportion of ever-married girls, suggesting that factors beyond the MTBA program are contributing to the observed decline in child marriage. These findings are consistent with the data from national surveys (NFHS) presented previously, which showed that proportions of women 20–24 reporting marriage by age 18 were already declining significantly from 2005–06 to 2015–16. Proportions of girls ever married in Odisha and Rajasthan also declined from baseline to midline, however, these changes were not found to be statistically significant (it is important to note that the proportion ever married in these states was much lower than in Bihar and Jharkhand at both baseline and midline).

Downward trends in child marriage across both intervention and comparison areas may be due in part to large-scale efforts such as national-level advocacy and policy initiatives against child marriage that were ongoing during the period between baseline and midline. The MTBA India intervention has included state-level strategies, such as working with government and other civil society actors to push for the drafting and adoption of state strategies and action plans for ending child marriage. These initiatives, along with MTBA investment in reinvigorating and/or establishing child protection committees at the block and GP level appears to have succeeded in raising the visibility of the issue such that in some cases, child marriage is now a standing agenda point in monthly meetings of the District Magistrate with the district-level line department officials. While such initiatives are in line with the MTBA program's overall objectives, they complicate efforts to measure differential impacts of the MTBA program in intervention and comparison villages, as it is impossible for us to determine whether block, GP, and national-level activities are reaching community members in intervention and/or comparison areas.

Midline results show significant increases in knowledge of child marriage laws and in recognition of the adverse effects of child marriage at the population level. In Odisha, there was a significant increase in the proportion of girls in intervention villages who knew that 18 is the legal minimum age at marriage for girls (53.8% at baseline to 63.2% at midline); there was no significant increase in the comparison villages, which suggests that in Odisha, the MTBA program is likely responsible for the significant increases observed. Alternatively, in the other three states, results on this indicator show significant increases in awareness of marriage age laws both in intervention and comparison areas, which makes it difficult to attribute these positive results exclusively to the MTBA program. However, this does suggest that the MTBA's district-level initiatives in these three states appear to have been successful in increasing awareness of child marriage laws over this period. Indeed, program partners noted that information related to child marriage was disseminated during GP-level meetings as well as by school and health workers (who serve both intervention and comparison areas), which likely accounts for the lack of differentiated results observed between the two samples.

Significant improvements were observed in the proportion of girls who were able to identify at least three adverse effects of child marriage in Bihar, Jharkhand, and Rajasthan. In Bihar, significant increases in this proportion were observed in both intervention and comparison villages, however, the increase was significantly greater in intervention villages, indicating the program likely had a positive impact on this indicator. In Jharkhand and Rajasthan, it is more difficult to directly credit the MTBA intervention for the positive changes observed, as improvements occurred in both intervention and comparison villages. Program implementers note, however, that since intensive work is being done with schools, government departments, and government service providers in these states, knowledge related to child marriage may be shared throughout both samples. Unexpectedly, we observed a decline in the proportion of girls able to identify three adverse effects of child marriage in Odisha (even as prevalence of child marriage was lowest and knowledge of the adverse effects of child marriage was relatively high in the Odisha sample at baseline).

In Table A4.7 of Annex 4, we include detailed tables showing which adverse effects are commonly reported. In Annex 4, we also examine some of the key demographic characteristics of married girls to shed light on how program initiatives might better target girls who are most at risk of child marriage.

While we did not detect any significant changes in the reported ideal age at marriage in the sample from baseline to midline, it is important to note that at both moments, the mean response to this question was 19 or 20 years across all samples.

Looking at key health indicators, we found significant declines in the proportion of ever-married girls who reported ever being pregnant in intervention communities in Bihar (from 68.9% to 43.5%) and in Odisha (51.5% to 28.6%). However, small sample sizes in Odisha make it difficult to generalize these findings in the state. No significant changes were found in the proportion of married girls who reported ever being pregnant in Jharkhand or Rajasthan.

Midline results indicate that the community-level MTBA intervention helped to increase awareness of HIV in Jharkhand and Rajasthan. In these two states, the proportion of girls reporting knowing of HIV increased significantly in intervention villages (from 6.2% to 26.6% in Jharkhand and from 16.3% to 28.8% in Rajasthan), while remaining unchanged in comparison villages. In Bihar, knowledge of HIV increased significantly in both intervention and comparison villages, suggesting that the community-level MTBA program was not the only influence in this state over this period. Observed changes may be due in part to state- or national-level MTBA activities or to external forces such as other programs operating in those areas. When looking at more-detailed indicators of HIV knowledge (related to transmission and prevention), we observed significant improvements in intervention villages in Bihar, Jharkhand, and Rajasthan. In Bihar, comparison communities also saw significant increases, however DID analyses did not detect significant differences between changes observed in intervention and comparison areas. This will be an interesting indicator to follow from midline to endline. In Odisha, significantly fewer people had heard of HIV at midline compared to baseline in both intervention and comparison areas, and no significant changes were observed in comprehensive HIV knowledge in intervention areas at midline. One thing to note about these results in Odisha, is that Odisha already started with higher HIV knowledge than the other states, so although knowledge may have declined, it remains higher in Odisha than in the other MTBA areas.

> *R2-Yes, some girls sew and some girls work and some girls do farming.*
>
> *R3-They cook chapatti and vegetables. They wash clothes and they clean the house.*
>
> *R4-What other work, we only have this work. There is not any other work to do.*
>
> –Focus group of mothers, Rajasthan

In Jharkhand, the proportion of girls reporting that their community had a youth-friendly health center[3] was nearly five times higher at midline than at baseline in intervention communities, whereas no change was observed in comparison villages. Program partners in Jharkhand conducted frequent and continuous activities on this outcome area at the provider level, including exposure visits and capacity-building activities, in addition to leading advocacy efforts at the block, district, and state levels. It appears that the MTBA intervention contributed to this impressive gain by focusing its efforts both on improving the accessibility of health centers for youth and on increasing the visibility and acceptability of youth-friendly health services in the community.

In all areas, regardless of intervention status, we observed significant declines in the proportion of girls in the sample reporting ever having worked for income (with the exception of Bihar, where a significant decline was observed in intervention villages and not in comparison villages, but the DID was insignificant). Also, with the exception of Bihar (where there the proportion increased), no changes were observed in the proportion of girls reporting ever having worked for income. While these findings suggest that the MTBA program did not have a significant impact in increasing girls' engagement in income-generating activities over this period, it is important to note that, as implementing partners have focused their efforts largely on retaining girls in school, the observed declines in paid work in this sample may be considered a positive change. Declining proportions of girls involved in paid work may be reflective of an increased interest from girls and parents in keeping girls in school. Declines in paid work may also be related to overall economic

[3] English question text: "Does your community have a youth-friendly health service/adolescent health clinic that you can attend?

realities; indeed, we found in qualitative data collection that there were few options for paid work for adolescent girls in some of these communities.

Midline results showed overall improvements in current rates of school enrollment in the four states, however, improvements in intervention villages (an overall increase from 57.7% to 63.8%) were not significantly greater than those in comparison villages (overall increase from 61.0% to 65.2%). While presence of the MTBA program in intervention villages thus cannot be said to explain the changes observed over time, certain initiatives at the state or national level advocating for girls' retention in school, including MTBA's involvement in the education department's enrollment drive, may have contributed to creating an environment more supportive of girls' education in both intervention and comparison areas. In Jharkhand, we found a significant increase in the proportion of girls reporting ever having attended school at midline, while at the same time, found no change in this indicator in comparison villages. This suggests that the MTBA program's education-focused activities conducted in intervention villages in Jharkhand (including meetings with Parent Teacher Associations, Child Parliaments, and Child Protection Committees) may have had a positive impact on girls' enrollment in school in this state. In Bihar, we did not observe significant changes in educational attainment attributable to the intervention. However, in intervention villages in Bihar, we observed a significant improvement in literacy (from 35.0% to 43.3%).

Findings on gender equitable attitudes were generally positive, but not entirely attributable to village-level MTBA efforts, as improvements were seen across both intervention and comparison areas. In all states, we found significant declines in the proportion of girls who agreed that a woman should tolerate violence in order to keep her family together, but found no significant difference between the changes that occurred in intervention villages (where the proportion dropped from 61.5% to 34.4%) and those that occurred in comparison villages (where the proportion dropped from 57.8% to 35.7%). Similarly, we found significant decreases in the proportion of girls who agreed that a woman should always obey her husband and an increase in the proportion who agreed that girls have the right to refuse an arranged marriage across both intervention and comparison villages in all states excluding Odisha (where no significant changes were observed at midline). Significant declines in the proportion of girls who agreed there are times when a woman deserves to be beaten were observed in both intervention and comparison villages in Bihar, Jharkhand, and Odisha; in Rajasthan, a decline was observed in intervention villages and not in comparison villages, but this change was not statistically significant in DID models.

A concerning finding is that in Odisha, midline results show declines in the proportion of girls who reported being able to disagree with their parents or in-laws about decisions affecting them. This decline is found in both intervention and comparison areas, with significant differences in DID analyses. However, the declines in comparison villages were steeper than those in intervention villages, suggesting that the MTBA program may have had some protective effects. Programs may consider specifically addressing this indicator in implementation going forward.

One of the clearest results attributable to the MTBA India intervention was observed in girls' engagement in groups, clubs, or associations. In Jharkhand, the proportion of girls who reported being part of a club or group increased from 0.8% at baseline to 29.5% at midline while no significant changes were observed on this indicator in the comparison samples. Similarly, the proportion of girls reporting involvement in a club, group, or association increased from 1% to 26.4% in intervention communities in Rajasthan and from 3.2% to 18.7% in intervention communities in Odisha, while no changes were observed in the comparison samples. In Bihar, the proportion doubled from baseline to midline (from 6.1% to 13.7%) in intervention villages and halved (from 6.6% to 3.4%) in comparison villages. A key component of the MTBA approach in India is the formation of girls' clubs and ensuring that the MTBA intervention reaches the girl level. In India, as of July 2018, MTBA partners had reached more than 42,000 girls through girls' groups. These groups are led by older girls who are trained to lead life-skills education sessions and to provide SRHR information. The groups create support networks for girls and help girls to build self-esteem and confidence. They inform adolescents about their rights, discuss gender issues and discrimination, and create a safe space for adolescents to start to question societal norms and practices and to become more articulate and vocal. Across both intervention and comparison areas, members of a club had more knowledge of HIV (41.5% of club members were aware of HIV) compared to nonmembers (20.5%). Members of clubs also had higher knowledge of legal age at marriage (82.8%) compared to nonmembers (70.9%).

In all states except for Bihar, significantly fewer girls reported ever having been harassed at midline compared with baseline in both intervention and comparison villages. In Bihar, we found a significant increase in this proportion in comparison villages and no change in intervention villages, however the difference between midline results in both samples was insignificant. Although some argue that programs should aim to increase reporting of harassment, as that can signal girls' ability to recognize harassment and speak out against it, fewer reports may also be due to less experience of harassment. Program partners remarked that internal meetings conducted by the Education Department and youth clubs (including representatives from both implementation and comparison villages) may include the objective of reducing harassment and providing girls and women with equal space in society. Program partners in Odisha additionally noted that they have worked to strengthen child protection mechanisms and have conducted awareness-raising activities on existing acts and laws related to child abuse and harassment at the block and district level. Such higher-level activities may have led to some contamination between intervention and comparison areas on harassment indicators, if girls in both areas were exposed to the same messaging. To better understand what factors are driving changes in these indicators would require deeper examination of the geographic reach of program activities, of different reporting mechanisms in place, and of reports of harassment over this period.

Chapter 3. Malawi

Background

Although often seen as a significant issue in West Africa and South Asia, child marriage is common in Malawi as well, with Malawi having the 12th highest rate of child marriage globally. Results from national surveys suggest that nearly half of all women age 20–24 (49.6%) report being married by age 18, with Southern Malawi having the highest proportion of women married as children (55.5% of 20–24-year-olds married by age 18). It is notable that recent years have seen major legislative changes related to child marriage in Malawi, including the passage of the controversial Marriage, Divorce and Family Relations Bill of 2015 (signed into law by the president in 2017), which amended the constitution to set the minimum age of marriage to 18 years (eliminating a previous provision which had allowed exceptions for those between the ages of 15 and 18 years to marry with parental consent) and changed the legal definition of children from "persons under the age of 16 years" to "persons under the age of 18 years." Since 2017, a 10-year imprisonment penalty has been instated for those violating this law. Despite the passing of this law our baseline data suggest that marriage before age 18 is still practiced.

In addition to early marriage, sexual initiation also begins early in Malawi, where 59.7% of women 20–24 report having had sex by age 18, and 16.6% by age 15. Unlike in some other contexts, where child marriage is high and sexual activity outside of marriage is reportedly low (e.g.. Niger, India) in Malawi, premarital sex is reportedly not uncommon. Biddlecom and colleagues (2008) found that among girls ages 18–19 who completed primary school, 48.1% reported ever having sex and 27.0% reported having premarital sex while still in school. Our baseline data showed that 31.0% of adolescents ages 15–19 were ever married, with a median age at marriage of 16.4 years in Mangochi and 17.2 years in Nkhata Bay. We also found that about 1 in 5 married girls in our sample (21.6%) reported entering into marriage following pregnancy.

Key Findings from Baseline

In baseline findings from 2016, we found that more girls were currently married in Mangochi (15.6%) than in Nkhata Bay (9.1%) and more reported ever being pregnant (25.1% compared to 19.9%). We also found that 64% of girls were currently in school, with more girls in school in Nkhata Bay (77.8%) compared to Mangochi (56.7%), which may be partly because of higher rates of early marriage and pregnancy in the southern region. Overall, some never-married respondents (7.5%) reported ever being pregnant and 60.0% of never-married respondents who reported having a boyfriend reported ever having sex (32.8% of respondents 15–19, reported ever having sex). Among ever-married respondents, 49.4% reported having at least one child. Sexual and reproductive health knowledge was high in both districts: Overall, 82.2% of girls had heard of HIV and 78.6% had heard of at least one family planning method, but contraceptive knowledge was lower among never-married girls than ever-married girls and just 4.1% of participants reported having a youth-friendly health facility in their community. We found that livelihood opportunities were very limited—only 4.4% of girls reported they were currently working for income, with about 1 in 4 girls reporting ever having participated in income-generating work (25.4%).

> *Premarital sex contributes to marriage because when young people are practicing this habit they get used [to it]. As a result, they get married while they are still young or have an early pregnancy and this also can force them to get married at an early stage.*
>
> –Unmarried adolescent female, Mangochi

Samples

In order to assess compositional differences between baseline and midline samples, we compared the samples on key indicators as presented in Table 3.1. As noted previously in the Introduction of this report, due to contamination issues, we present results in Malawi slightly differently from those of the other countries. The study in Malawi had numerous implementation challenges, including a communication error that led to some areas receiving no intervention activities for more than one year into implementation, and some comparison areas receiving an intensive package of interventions, including direct engagement with girls through girls' groups. While withdrawing the intervention from

Table 3.1. Comparison of baseline and midline samples by intervention status

	Baseline		Midline			
	Intervention	Comparison	Intervention (planned)	Intervention (implemented)	Comparison (planned)	Comparison (implemented)
Ever married	17.2	14.2	11.5++	8.5+++	8.5+++	10.9+++
Never attended school	4.3	1.7	4.6	3.8	3.4	4.7+++
Not enrolled in school	35.1	32.3	32.5	33.2	31.2	29.2
Cannot read or write	31.6	25.7	22.4+++	23.7+++	21.4	18.5
Is non-Muslim	38.6	35.0	41.6	36.8	33.5***	40.2
Has always lived in the same village	79.7	78.1	79.7	81.6	83.1	80.5
Ever pregnant	24.0	22.7	26.3	25.4	24.9	26.2

*** p<.01 difference between comparison and intervention; **p<.05 difference between comparison and intervention
-- {i.e., samples (INT and COMP) are different from each other at the time of the survey}.

+++ p<.01 difference between baseline and midline; ++ p<.05 difference between baseline and midline; + p<.10 difference between baseline and midline
--{i.e., samples (baseline and midline) are significantly different from each other within their intervention status}.

designated comparison areas would have been preferable to maintain the original randomization, in this case, villages that were randomized to a comparison group but received the intervention in error were reassigned as intervention villages and those originally randomized as implementation areas but did not receive the intervention were reassigned as comparison villages. This decision was made in order to avoid the unethical withdrawal of the intervention from villages already directly benefiting from its presence.

In Malawi we include results for both the as-planned and as-implemented samples to assess program impact. For details about as-planned and as-implemented sampling, see Annex 2. Overall the samples were comparable on key indicators. Samples differed significantly in literacy levels (the comparison group was significantly lower than the intervention group on the as-implemented sample) and religion. The comparison-as-planned had fewer Muslims than the intervention-as-planned but did not differ in the as-implemented sample.

Table 3.2. Malawi Summary Table of Results

Note: See page 8 for information on how to interpret results presented in this table			
	Significant changes from baseline to midline (as-planned)	**Significant changes from baseline to midline (as-implemented)**	**Notes (as-implemented)**
Marriage			
Ever married			INT ↓ COM ↓
Ever married or in union (includes engaged)			INT ↓ COM ↓
Can name three adverse effects of early marriage			INT ↑ COM ↑
Can correctly identify legal age at marriage			INT ↑ COM ↑
Mean age difference with partner			INT -- COM ↓
Ideal age at first marriage			
Mean age at first marriage			
Health			
Ever pregnant			
Knows about HIV			INT ↑ COM ↓
Knows that using a condom protects against HIV			INT ↑ COM --
Reports that their community has a youth-friendly health center			
Contraceptive knowledge scale (modern methods)			INT ↑ COM ↑
Livelihoods			
Has ever worked for income			
Is currently working for income			
Reports saving money for the future			INT-- COM ↓

Education			
Currently enrolled in school (among ever enrolled)			
Ever attended school			INT-- COM ↓
Mean number of years of education completed			INT ↑ COM ↓
Cannot read or write			INT ↓ COM --
Gender-equitable attitudes			
Agree or strongly agree that a woman should always obey her husband			
Agree or strongly agree that a woman should tolerate violence to keep her family together			INT↓ COM --
Agree that boys have the right to refuse an arranged marriage			INT↑ COM --
Agree that girls have the right to refuse an arranged marriage			
Agree that there are times when a woman deserves to be beaten			INT↓ COM --
Agree that women have a right to divorce			INT↓ COM↓
Agree that she can disagree with her parents (or husband if married) about decisions affecting her			INT ↑ COM ↑
Social life			
Report being part of a club or group			
Report ever being harassed (overall)		+	INT ↑ COM↓
Report ever being harassed in school (among those reporting ever being harassed and ever attending school)	+	+	INT↑ COM --

Discussion of Findings

In order to address the contamination issues faced in Malawi, we examined key indicators for both intervention "as-planned" and intervention "as-implemented" samples. We found more significant results in the "as-implemented" sample, where program activities took place. While the summary table above presents results for both randomization schemes, we focus our analysis on the "as-implemented" sample, which serves as a better reflection of true program impact (as it counts villages that received the MTBA program as "intervention villages" and those that did not as "comparison villages").

> *Do girls get married early in your community?*
>
> *Yes they do. Because when some girls get pregnant at a young age, they are told to go and live with the man that has impregnated them. So they do not have a choice, some are sixteen and some seventeen. It sure happens. But they start with an affair and when they get impregnated they are pushed into marriage; later they conduct a wedding.*
>
> –Key informant, Mangochi

Overall, we found that marriage declined in all samples from baseline to midline: the proportion of girls who were ever married decreased from 17.2% to 8.5% in the (as-implemented) intervention sample and from 14.2% to 10.9% in the (as-implemented) comparison sample. The proportion of girls who knew about the legal age of marriage and the proportion who could name at least three adverse effects of child marriage also increased everywhere.[4] These results suggest that the MTBA intervention is raising awareness of the risks associated with child marriage within a wider context of increased political pressure (with the 2017 passage of the Marriage, Divorce and Family Relations Bill) and likely increased social pressure against child marriage.[5]

There was an unexpected result from baseline to midline in the mean age difference between married girls and their husbands: we note a significant decline in mean age difference between spouses in comparison areas and a slight increase in age difference in intervention areas. DID analyses were significant. Given the significant declines in child marriage since baseline, it is important to note that midline means were based on smaller sample sizes of married girls and outliers, thus have a stronger influence. These findings therefore should not be a cause for alarm; nevertheless, age differences between spouses may be something that the MTBA intervention wants to monitor, as this indicator is not trending in the desired direction over time.

Although the proportion of married girls in the samples is declining everywhere, we did not detect any significant changes in the mean age at first marriage of married girls (which remained at around 16.5 years everywhere) or in the reported ideal age at first marriage among all girls (which remained at an average of around 19 years old everywhere). Mean age of marriage may be influenced by sample age, as those who marry later (after age 19, for example) are not captured in our samples but would be represented in larger samples such as the DHS. Findings that reported mean ideal age at marriage is higher than age 18 are encouraging, although this indicator has not increased from baseline to midline.

To date, the MTBA intervention does not appear to have had an impact on reducing rates of adolescent pregnancy, which are much higher in Malawi than in other MTBA countries. In Malawi, we found no significant changes in the proportion of girls reporting ever being pregnant from baseline to midline. At baseline, the proportion of girls reporting a past or current pregnancy were 24.0% and 22.7% in intervention and

[4] Although at baseline (prior to the Marriage, Divorce and Family Relations Bill being signed into law), the legal age at marriage in Malawi was 15 years, thus, the correct response to the survey question on knowledge of marriage laws at the time was 15. At baseline, fewer than 2% of respondents cited age 15. We therefore used age 18 as the "legal" age of marriage at both baseline and midline for the purposes of comparing proportions over time.

[5] Program partners in Malawi note that by-laws formulated by the community and traditional leaders often prove to be more effective than national laws in affecting behavior change, as community members feel more ownership over such agreements and can more easily police/monitor one another rather than relying on the government machinery. MTBA Malawi has thus focused most interventions on the community level in an attempt to change perspectives on child marriage from the bottom up in targeted communities.

comparison samples, respectively. At midline, these figures remained relatively unchanged, at 25.4% in intervention villages and at 26.2% in comparison villages (increases are not statistically significant). Qualitative findings support the conclusion that pregnancy is a relatively common experience among adolescents in Malawi, a key transition on the pathway to marriage, and helps shed light on context-specific drivers that could inform programming to delay pregnancy and marriage.

While the MTBA program appears to have had an effect in increasing SRHR knowledge in Malawi, midline findings suggest that there is more work to be done in increasing access to youth-friendly health services. In as-implemented intervention areas, we found significantly greater increases in knowledge of modern contraceptive methods than we found in comparison villages, suggesting that the MTBA program had an impact on increasing FP knowledge. We also saw a significant increase in HIV knowledge in the as-implemented intervention sample from baseline to midline, while knowledge significantly decreased in the comparison sample over this same period. MTBA program efforts to disseminate SRHR information thus appear to have been successful. As knowledge of contraception and HIV increase, we are interested in knowing whether access also increases and what specific barriers may persist for adolescents seeking contraceptive services. Participants in the MTBA qualitative research study explained that contraceptives were seen as useful both for spacing births and for enabling girls to "have sex freely." Qualitative responses also indicated that there remains work to be done in decreasing stigma associated with contraceptive use among adolescent girls.

We did not observe significant increases in the proportion of girls reporting the presence of youth-friendly health centers in their communities. At midline, only 6.6% of girls in intervention communities reported knowledge of a youth-friendly health center in their community (up from 4.6% at baseline, but persistently low). It is unclear as to why this figure remains so low. The question is asked in such a way that it could be interpreted as referring to a number of different types of facilities that serve adolescents,[6] not clinics that serve youth exclusively. Given the low proportion reporting knowledge of youth-friendly health centers at midline, strengthening capacity of health centers to provide care to adolescents and increasing awareness of adolescent-friendly health services are potentially fruitful areas of focus for the final years of the MTBA intervention.

> *Girls use family planning method like Norplant just to prevent them from getting unwanted pregnancies, other girls use injection so they should be able to sleep with every man, as many as they want, while others use contraceptives in order to have limited (number of) children*
>
> –In-depth interview with adolescent girl, Mangochi

The proportion of girls who reported ever having worked for income remains relatively low in Malawi, and we did not detect significant changes in any sample from baseline to midline. We did note a significant difference in the proportion of girls who reported saving money for the future between intervention areas (6.7%) and comparison areas (5.6%) at midline, however this was due to a significant decline in the proportion saving in comparison areas, not to an increase in the proportion saving in intervention villages. This suggests that the MTBA program may have a protective effect on loss of savings. Results suggest that the MTBA program has not had a significant impact on expanding economic opportunities for adolescent girls to date. Program partners noted that because the livelihoods components of the MTBA intervention began in 2018, which was much later than was initially planned in Malawi, they did not expect to see improvements at the time of the midline survey, but they hope to see improvement on livelihoods indicators by endline.

Midline results suggest that girls' school enrollment rates remained unchanged across both intervention and comparison samples. We found that girls' mean number of years of education completed significantly increased in intervention areas while it declined in comparison areas, implying that the MTBA intervention seems to be having a positive effect on school retention. There was also a significant improvement in the proportion of girls who were able to read or write in intervention villages (and no change in comparison

[6] Question text in Malawi tool: "Does your community have a youth friendly health service/adolescent health clinic that you can attend?"

villages), however, as DID analysis did not show a significant difference between changes occurring in the intervention and comparison zones, we are unable to attribute the positive change observed in intervention villages to the MTBA program.

We observed a significant decrease in the proportion of girls who agreed that a woman should tolerate violence to keep her family together and also a significant decrease in the proportion of girls who agreed that there are times when a woman deserves to be beaten. While the DID analysis found that the difference observed from baseline to midline in intervention villages was not significantly greater than what was observed in comparison villages, over time, we expect that these trends might strengthen in intervention areas to reveal more significant changes attributable to the program at endline. The same is true of the proportion of girls who agreed that they could disagree with their parents (or husbands, if married) about decisions affecting them: significant increases were observed on this indicator in both intervention and comparison villages although the difference between the changes observed was not significant.

We did find a significant increase in the proportion of girls who agreed that boys have a right to refuse an arranged marriage in the intervention sample, but no significant change in the comparison sample, indicating that the MTBA program may have had an influence on this attitude. Although we would like to see corresponding improvement in girls' right to refuse an arranged marriage, findings with regard to boys may signal larger changes about attitudes related to arranged marriage and to agency in marital decision-making more broadly. On a positive note, we see that the proportion of girls who say that a girl can disagree with her parents or husband on decisions affecting her is moving in the desired direction, though DID analysis does not exclusively attribute this change to the program.

Surprisingly, we found that the proportion of girls who agree that women have the right to divorce appears to be trending in a negative direction in both implementation and comparison samples. From baseline to midline, the proportion of girls in our samples who agreed that women have a right to divorce declined. It is unclear whether this is due to the belief that divorce is not seen as an option for marriage dissolution or due to the belief that it is only acceptable for divorce to be male-initiated. The DID analysis did not show a significant difference between observed declines in intervention versus comparison villages, thus, the decrease in acceptance of women's right to divorce cannot be seen as a result of the MTBA intervention.

We looked at several key indicators related to girls' social well-being. From baseline to midline, we did not find any significant changes in the proportions of girls reporting being part of a club or association in intervention areas. It is important to note that, since only 6.5% of the sample in as-implemented intervention villages reported awareness of the MTBA intervention in their communities, low reported club participation in the intervention sample does not necessarily mean that girls were not engaged with the MTBA program in those villages (as the sample likely did not capture many MTBA program participants). Nevertheless, these midline findings suggest that the MTBA intervention may want to focus on increasing its visibility among girls at the village level and on deepening its direct engagement with adolescent girls in intervention villages.

From baseline to midline, we found a significant increase in the proportion of girls in intervention areas reporting ever having been harassed and a significant decrease in this proportion in comparison areas. While increased levels of harassment are certainly concerning, these results may in fact reflect girls' improved ability to identify and/or to call out harassment they face in their daily lives, which could in turn lead to higher levels of reporting, especially if awareness of protective mechanisms also increased since baseline (unfortunately, we do not have sufficient data to determine whether this was the case). Indeed, program implementers indicated that the program aimed to increase girls' confidence and ability to speak out about harassment and as such, expected that reported harassment should increase as a result of the program. We see that among girls who reported ever being harassed, reports of harassment in school seem to be increasing significantly in intervention areas (although the DID analysis does not suggest any program-attributable effects at present). Increased reports of harassment may reflect increased experience of harassment. Alternatively, these changes could represent girls' increased ability to identify issues of harassment or improved mechanisms for girls to report when they are harassed. Programs may need to examine reporting mechanisms and support systems for girls who experience harassment to ensure programs are set up to support girls' needs.

Chapter 4. Mali

Background

Child marriage is a common practice in Mali. Although a series of surveys conducted by the Demographic and Health Surveys between 1987 and 2012 suggests that the proportion of women who were married before the age of 18 has declined from 80.9% to 50.1% in Mali (Melnikas et al. 2017), Mali continues to rank among the top five countries with the highest rates of child marriage (UNICEF 2018). Mali also has one of the highest fertility rates in the world, with an average of 6.1 children per woman. Child marriage is more common among rural populations (>25% women 20–24 married before 15 and 65.7% by 18) compared with urban populations (25.8% women 20–24 married before 15 and 43.6% in urban areas). Although Mali has experienced increased rural–urban migration in part as a result of climate change and environmental degradation (Hummel 2016), the country is still predominantly rural with approximately 70% of the population living in rural areas. The MTBA intervention operates in the regions of Ségou and Sikasso.

Polygamy is a common practice in Mali, with 35% of women reporting being in polygamous unions (DHS 2012–13). Polygamy is related to child marriage in that there is evidence that girls in Mali who are married before 18 are more likely to be in polygamous unions than those who are married after age 18 (Fenn et al. 2015). Polygamy is associated with larger age differences between spouses, as men take on younger women as additional wives. Studies have shown that large age gaps between spouses may negatively impact women's influence in household decision-making (Mensch, Bruce, and Greene 1998). In Mali, polygamy is more common in rural areas (38%) than in urban areas (22%).

Key Findings From Baseline

Key findings from the MTBA baseline survey in 2016 demonstrate that premarital sex and pregnancy are more common in Mali than in some other West African contexts and are associated with early marriage. At baseline, a significant proportion of never-married girls in Mali reported ever being pregnant (9.3%). Past research (Gueye, Castle, and Konaté 2001) has found that, especially in rural areas, a substantial proportion of sexually initiated, unmarried adolescent girls cited a "promise of marriage" as reason for first intercourse. For some girls, sexual intercourse thus may serve as a stepping stone to marriage in this context. As premarital pregnancy appears to be a driver of early marriage in Mali, baseline findings on premarital sex and pregnancy are likely underestimates.

For married girls, pregnancy and childbirth follow soon after marriage. Among ever-married girls at baseline, 61.3% reported ever having been pregnant. Family planning use is quite low in this population, with only 17.5% of married girls over age 15 reporting current use.

In our baseline survey we also found that prevalence of child marriage among adolescents is lower in our sample than in data from nationally representative surveys. This may be due to some real decline in child marriage prevalence since 2012, but is also likely the result of the MTBA intervention selection criteria: areas selected for participation in the program tend to be better connected than others and have had more previous exposure to NGO programming.

Samples

In order to assess compositional differences between baseline and midline samples, we compared the samples on key indicators as presented in Table 4.1. Overall, the samples were comparable on key indicators, however there are some notable differences. We find that educational indicators differ across intervention and comparison areas with comparison areas generally worse than intervention areas on indicators including never attended school and cannot read or write.

Some differences in sample composition may be attributed to survey timing. Whereas baseline data were collected in January of 2016, the midline study took place in September of 2018. Seasonal migrations are common in Mali, especially in the region of Ségou. Unfortunately, the midline data collection period corresponded with the annual school vacation period as well as the agricultural season in Ségou, both of which influence adolescent migration patterns. In Ségou, it is common for in-school adolescent girls to migrate to urban areas and work to earn money during the vacation period, which extends until early October. September also

Table 4.1. Malawi Summary Table of Results

	Baseline		Midline	
	Intervention	Comparison	Intervention	Comparison
Mean age	15.2	15.3	15.1	14.9++
Ever married	11.9	16.9	6.6+++	8.9+++
Never attended school	32.7	40.8**	30.6	48.5***+
Not enrolled in school	55.9	63.2**	49.5+	61.8***
Cannot read or write	44.1	56.1	41.0	57.4***
Is non-Muslim	9.4	12.8	9.5	9.8
Has always lived in the same village	86.9	88.7	77.0+++	81.5+++
Ever pregnant	20.0	24.6	17.9	22.2

*** p<.01 difference between comparison and intervention; **p<.05 difference between comparison and intervention
-- {i.e., samples (INT and COMP) are different from each other at the time of the survey}.

+++ p<.01 difference between baseline and midline; ++ p<.05 difference between baseline and midline; + p<.10 difference between baseline and midline
--{i.e., samples (baseline and midline) are significantly different from each other within their intervention status}.

corresponds with the beginning of the agricultural period, when many out-of-school girls temporarily relocate to work in the fields. For both in-school or out-of-school girls, temporary migration for the purpose of earning money to build a "trousseau" is also common. Midway through the household listing activity, the local research partner signaled the problem of a high number of missing girls in villages, and the midline sampling strategy was subsequently revised in response. Several questions were added to the listing tool so that the presence/absence of each girl, the reason for each absence, and the duration of each absence was recorded during the collection team's first visit to the village (during which the household listing was conducted). These questions were asked in 26 of the 40 villages in the sample (those for which the household listing activity had not already been completed) and the resulting data showed that 18% of girls in Ségou (and 5% in Sikasso) were absent from their village at the time of the survey. To respond to this sampling challenge, eight additional girls were randomly selected for each village (and numbered 1–8) so if enumerators did not find the first selected girl at the time of the interview, they would have a clear protocol to follow for participant replacement (by substituting the first missing girl with the first girl on the replacement list, the second with the second, and so forth).

In models for Mali, we adjust for school status and migration status to try to address compositional differences between the samples and their influence on key outcomes like marriage, pregnancy, educational attainment, attitudes, knowledge, and attitudes about contraception and gender equity.

Table 4.2. Mali Summary Table of Results

Note: See page 8 for information on how to interpret results presented in this table		
	Significant changes from baseline to midline	**Notes**
Marriage		
Ever married		INT↓ COM↓
Ever married or in union (includes engaged)		INT↓ COM↓
Can name three adverse effects of early marriage		INT ↑ COM ↑
Can correctly identify legal age at marriage		
Mean age difference with partner		
Mean age at marriage		INT ↑ COM–
Health		
Ever pregnant		
Knows about HIV		
Knows that using a condom protects against HIV		
Reports that their community has a youth-friendly health center		INT ↑ COM↑
Contraceptive knowledge scale (modern methods)		
Livelihoods		
Has ever worked for income		
Is currently working for income		
Reports saving money for the future		INT↓ COM↓

Education		
Currently enrolled in school (among ever enrolled)		INT ↑ COM --
Ever attended school		INT -- COM↓
Mean number of years of education completed		INT ↑ COM↓
Cannot read or write		
Gender-equitable attitudes		
Agree that a woman should always obey her husband		INT↓ COM↓
Agree that a woman should tolerate violence to keep her family together		INT↓ COM--
Agree that boys do not have the right to refuse an arranged marriage		
Agree that girls do not have the right to refuse an arranged marriage		INT↓ COM↓ *Larger decline in proportion agreeing in COMP*
Agree that there are times when a woman deserves to be beaten		INT↓ COM↓
Agree or strongly agree that a woman has a right to divorce		
Agree that she can disagree with her parents (or husband if married) about decisions affecting her		INT - COM ↓
Social life		
Report being part of a club or group		
Report ever being harassed in school (among those reporting ever being harassed and ever attending school)		
Report ever being harassed (overall)		
*Models include controls for urban/rural, ethnicity, in-school (non-education indicators), and migration (whether R has always lived in the village) and are adjusted for clustering.		

Discussion of Findings

Interestingly, midline results show dramatic changes on several key indicators from baseline to midline in both intervention and comparison areas in Mali. For example, the proportion of girls who reported ever being married decreased by 47% in both intervention and comparison areas. Awareness of the adverse effects of child marriage also appears to be increasing across both intervention and comparison areas: in intervention areas, the proportion of girls who could name at least three adverse effects rose to 22.0% from 13.6% and in comparison areas it rose from 9.5% to 16.7%. Risks to the mother, risks to the baby, and depression were the most common adverse effects reported. There was a slight increase in reports of depression as an adverse effect in both intervention and comparison areas (29% to 34% in intervention; 24% to 34% in comparison). In intervention areas, more girls reported risks to the mother (41% to 49%) than in comparison areas (35 to 38%). Similarly, more girls in intervention areas reported risks to the baby (increase from 19% to 28%) than in comparison areas (increase from 17 to 22%). We also found that among married girls, the mean reported age at marriage increased significantly in intervention areas and declined slightly in comparison areas (decline of 0.5 years, but not significant in part because of small numbers).

While these overall outcomes are positive, results showing improvements in child marriage across intervention and comparison areas suggest that these changes occurring in Mali are likely the result of wider influencing factors beyond the scope of MTBA program participation and not directly attributable to the MTBA program alone. That said, the midline study did detect a few more conclusive, program-attributable results on several indicators related to health services and education attainment.

In intervention villages, the proportion of girls reporting that their community had a youth-friendly health center[7] more than doubled (from 8% at baseline to about 20% at midline), whereas in comparison villages, the observed increase was much more modest (from 8% at baseline to 12% at midline). The significant change observed in intervention communities is likely attributable to MTBA efforts in training providers and clinic staff and/or to efforts to encourage discussion between adolescent girls and their families about SRHR and accessing SRHR services. Such program efforts may have influenced this change by helping service providers to become more responsive to the unique needs of adolescents, by increasing the visibility of existing youth-friendly health services among adolescents, and/or by reducing stigma around SRHR and encouraging service-seeking behavior in this segment of the population. No significant change in the proportion of girls who reported having ever been pregnant among ever married girls was found between baseline and midline. This suggests that the MTBA program has not yet had an impact on delaying first birth.

Encouraging results were also found with respect to adolescent girls' education in intervention areas. The reported mean number of years of schooling increased among girls in intervention areas (4.2 to 4.3) while declining in comparison villages (3.6 to 3.2). The proportion of girls reporting ever having attended school did not increase significantly in intervention villages from baseline to midline but did decrease significantly in comparison villages in the same time period. On both variables, DID analyses found a significant difference between intervention and comparison villages, indicating that the MTBA program likely influenced these outcomes, providing a protective effect against school drop-out compared to non-intervention areas. It is possible that the desired impact of enabling girls to stay in school longer is positively influenced by the introduction of new extracurricular activities, such as MTBA partnerships with schools for the organization of interscholastic competitions whereby schools compete to have the highest levels of girls' retention.

We did not find significant program-attributable results for key gender attitude indicators. However, the proportion who agreed that there are times when a woman deserves to be beaten (35.1 to 22 in intervention; 37.9 to 25.6 in comparison) and the proportion who agreed that a woman should always obey her husband, declined from baseline to midline in both intervention (99.0 to 96.9) and comparison areas (98.7 to 97.0). While the proportions of girls agreeing that a woman should always obey her husband were persistently high at midline, suggesting much work to be done in promoting more equitable gender norms, it is nevertheless

[7] Question text in Mali tool: « *Existe-t-il dans votre communauté un centre de santé pour adolescents/un endroit offrant des services de santé adaptés aux jeunes ?* »

encouraging that these results are trending in the desired direction and worth noting that higher-level MTBA dissemination activities may have played a role in influencing these changes. We also saw in intervention villages a significant decline in the proportion of girls who agreed that a woman should tolerate violence in order to keep her family together (although similarly, this change cannot be attributed to the program, as DID analysis did not show a significant difference between intervention and comparison areas on this indicator). Little change was noted on other key gender-attitude indicators including agreement that a woman has a right to divorce and disagreement that boys do not have a right to refuse an arranged marriage. Results on attitudes toward girls refusing an arranged marriage were mixed. At baseline, 66.4% of respondents in intervention areas and 76.2% in comparison areas agreed with the statement that girls do not have the right to refuse an arranged marriage. At midline, we found that these proportions had declined in both areas (indicating improvement), to 60.3% in intervention villages and to 59.7% in comparison villages. In Table 4.2, this result is represented in dark red only because the decline observed in the comparison sample was statistically greater than the decline observed in the intervention sample (DID was significant).

Midline results indicate that the intervention does not appear to have had a significant community-level impact on key indicators related to SRHR knowledge over its first two years of implementation. At baseline and midline, approximately 80% of all girls in both intervention and comparison samples reported knowledge of HIV, and around half of these girls in both samples knew that condoms can be used to protect against HIV. No significant changes were observed in either sample from baseline to midline. This suggests that MTBA activities seeking to raise awareness about HIV may not be reaching the 20% of girls who do not already have some knowledge about the disease. However, we do find that girls in intervention areas had, on average, higher contraceptive knowledge on a scale measuring knowledge of modern methods (mean scores of 2.1 [baseline] and 2.2 [midline] in intervention areas compared to 1.9 [baseline] and 1.8 [midline] in comparison areas). Regarding specific methods, knowledge of injections significantly increased in the intervention areas compared to comparison areas in DID analyses (decline from 41% to 36% in comparison areas and increase from 41% to 45% in intervention areas), suggesting that the program had an influence on increasing knowledge of this specific method.

Examining livelihoods indicators, we did not find a significant difference between the proportion of girls who reported ever working for income in intervention and comparison areas at midline. The proportion of girls in intervention villages who reported ever having worked did not change significantly from baseline to midline, however, in comparison villages we observed a significant decline (from 46% to 37%). When interpreting these results, it is important to note the potential selection bias introduced by the fact that midline data were not collected at the same time of year as baseline data; the midline study was conducted in the month of September, when many adolescent girls are known to migrate to more urban areas in search of work. Seasonal labor migration during midline collection may have thus led to an undercapturing of the true proportion of girls in these communities with experience working for income. The effect of migration may be suppressing an observed increase in the proportion of intervention villages from baseline to midline. That is, the decline in the proportion of girls reporting work experience in comparison villages, but no change in intervention villages, suggests that there may be more girls in intervention villages who are working compared to the proportion at baseline.

Unfortunately, we found no significant differences in the proportion of girls reporting being part of a club or group between intervention and comparison villages or within intervention villages from baseline to midline. Club membership declined from 28% to 21% in intervention areas and from 26% to 21% in comparison areas, suggesting a need to improve targeted efforts to recruit and engage girls in structured social interactions. Program implementers in certain zones of Mali cited retention of girls in girls' groups as a major programmatic challenge.

Chapter 5. Niger

Background

Niger currently has the highest rate of child marriage worldwide, with 76% of women 20–24 reported being married by age 18 and 28% by age 15 (DHS 2012), as well as the world's fastest growing population (at a rate of 3.3%). Niger is additionally characterized by high total fertility (an average of 7.6 births per woman), high rates of adolescent childbearing (209 births per 1,000 females aged 15–19), high maternal mortality rates (630 deaths per 100,000 live births), and high infant mortality rates (59.9 per 1,000 live births) (World Bank 2017). Over the past several decades, Niger's high child marriage rates have remained relatively stagnant compared with neighboring countries in West Africa (Fenn et al. 2015); according to UNICEF, the prevalence of child marriage in Niger in 1998 was 77%. The significant gap in child marriage rates between urban and rural zones in Niger has additionally remained intractable (WiLDAF 2017). The current legal age at marriage for girls in Niger is 15. While legislation has been proposed to raise the minimum age at marriage for girls to 18 years, this has not been adopted; public debate on questions of gender equality broadly, especially child marriage, remain extremely sensitive.

Poverty, extremely limited educational opportunities, and deeply entrenched social norms supporting early marriage and childbearing are significant drivers of child marriage in Niger. Child marriage is most common among girls living in rural areas, girls who have little to no schooling, and girls from the poorest families. One report notes that while religion is often brought to the forefront during discussions about the drivers of child marriage in Niger, Islamic scholars have noted that their religious texts do not in fact contain any reference to a specific age at which girls should be married. Rather, the emphasis is on the need for a girl to demonstrate "maturity" (Rushd), which is understood as the ability for a girl to manage her affairs, those of her husband and household, and to raise their children. Nevertheless, in Niger's conservative climate, tradition carries great weight and there are specific Islamic practices that give parents significant rights in arranging marriage for their young daughters (WiLDAF 2017). Polygamy is also a common practice in Niger, with 36% of currently married women and 23.5% of currently married men in polygamous unions (DHS 2012). Research has shown that polygamy is associated with child marriage and larger age differences between spouses and may negatively impact women's decision-making power within households (Mensch, Bruce, and Greene 1998).

In Niger, marriage is nearly universal, with only 1% of women ages 25-49 reporting never having been married (DHS 2012) and childbearing occurs almost exclusively in the context of marriage. Niger is a pronatalist society; according to the 2012 Demographic and Health Surveys, the mean reported ideal number of children for women in Niger was 9.2 children.

Key Findings from Baseline

In Niger, the MTBA program is being implemented in the regions of Maradi and Tillaberi. At baseline, we found that more than half of females aged 15–19 in our sample (52.4%) reported ever being married, with a higher proportion ever married in Maradi (77.9%) than in Tillaberi (41.0%). We found very low levels of schooling among adolescent girls in both MTBA regions: the proportion of girls 12–19 who had never attended school was 24.7% in Tillaberi and 64.8% in Maradi. Access to secondary schools is a significant issue in Niger, particularly in Maradi, where only 3.7% of girls were still enrolled in school by age 15, compared with 38.3% in Tillaberi. We found that school enrollment begins to decline around age 14 in MTBA regions in Niger. In Maradi, more than 84% of girls were out of school by age 14.

On several key indicators at baseline, lower results were found among girls in Maradi relative to girls in Tillaberi. Girls in Maradi were married earlier (mean age at marriage was 14.7 years compared to 15.1 in Tillaberi), were less likely to be enrolled in school (14.6% compared to 51.4%), had lower literacy levels (92.5% could not read either sentence compared to 60.1% in Tillaberi), were less likely to have ever worked for income (15.7% in Tillaberi and 16.1% in Maradi) and were less likely to be currently working for income (25.0% compared to 58.7%). Low economic engagement and low school enrollment suggest that few options exist outside of early marriage for adolescent girls in these regions.

Table 5.1. Comparison of baseline and midline samples by intervention status

	Baseline		Midline	
	Intervention	Comparison	Intervention	Comparison
Ever married	25.7	37.7	18.2++	26.3***+++
Never attended school	29.7	46.5***	25.0	45.5***
Not enrolled in school	49.0	73.0***	47.0	74.1***
Cannot read or write	45.0	64.0***	44.7	63.5***
Is non-Muslim	12.3	4.3***	15.3	4.0***
Has always lived in the same village	75.7	77.0	69.7+	67.9++
Ever pregnant (among ever married)	14.6	12.8	10.7	20.3**+

*** p<.01 difference between comparison and intervention; **p<.05 difference between comparison and intervention
-- {i.e., samples (INT and COMP) are different from each other at the time of the survey}.

+++ p<.01 difference between baseline and midline ; ++ p<.05 difference between baseline and midline; + p<.10 difference between baseline and midline
--{i.e., samples (baseline and midline) are significantly different from each other within their intervention status}.

Samples

Similar to Mali, and perhaps as a result of the same issues that arise when developing matched comparisons, we find some notable differences between intervention and comparison samples both at baseline and at midline. At baseline, comparison areas were worse off on a number of key indicators directly related to our outcomes of interest including marital status, school enrollment status, and literacy rates. These differences may be partly the result of program placement: as the Niger program was built off of existing programs and inroads made in 2015, intervention areas were already better off at baseline than other villages in surrounding areas, complicating efforts to find similar villages for the comparison sample. Also notable are the compositional differences in the sample with respect to religion (at both baseline and midline, intervention areas included more than three times the proportion of non-Muslim respondents in comparison samples).

Discussion of Findings

Looking at key marriage indicators, we observe significant downward trends in child marriage and the reported mean age difference between spouses in both intervention and comparison samples from baseline to midline. These are likely reflections of larger social trends which extend beyond the scope of the MTBA program, or may also be the result of program influence spilling over into comparison areas. For example, where program efforts have focused on lobbying and advocacy initiatives beyond the community level, knowledge shared from platforms with a wider geographic reach may influence all communities in that area and not just designated MTBA intervention communities.

Although declines in child marriage may not be entirely attributable to program implementation, we do find that the MTBA program appears to have had a positive influence on several indicators related to marriage. The program seems to have had an impact on increasing awareness of the disadvantages of child marriage: the proportion of girls who were able to name at least three adverse effects of early marriage increased significantly in intervention areas (from 15% at baseline to 30% at midline) while remaining constant (at 19%) in comparison villages. Among married girls in the sample, the program additionally appears to have had an impact on increasing marriage age in intervention areas: from baseline to midline, the average reported age at marriage of married girls in intervention villages increased by 0.5 years (from 14.5 to 15 years), while the average age was seen to actually decrease by .25 years in comparison villages over this same period (from 14.5 to 14.25). Although this increase in marriage age is a program accomplishment, the persistently low mean age at marriage suggests that much work remains in increasing age at marriage in these communities.

Related to sexual and reproductive health, we find that the program seems to have had an impact on increasing knowledge of modern contraceptive methods. From baseline to

Table 5.2. Niger Summary Table of Results

Note: See page 8 for information on how to interpret results presented in this table		
	Significant changes from baseline to midline	**Notes**
Marriage		
Ever married		INT ↓ COM ↓
Ever married or in union (includes engaged)		
Can name three adverse effects of early marriage		INT ↑ COM --
Can correctly identify legal age at marriage		
Mean age difference with partner		
Mean age at marriage		INT ↑ COM --
Ideal age at marriage		
Health		
Ever pregnant		
Knows about HIV		
Knows that using a condom protects against HIV		INT ↑ COM --
Reports that their community has a youth-friendly health center		INT ↑ COM ↑
Contraceptive knowledge scale (modern methods)		INT ↑ COM --
Livelihoods		
Has ever worked for income		
Is currently working for income		INT ↑ COM ↓
Reports saving money for the future		
Education		
Currently enrolled in school (among ever enrolled)		
Ever attended school		
Mean number of years of education completed		
Cannot read or write		
Gender-equitable attitudes		
Agree or strongly agree that a woman should always obey her husband		INT ↓ COM --
Agree or strongly agree that a woman should tolerate violence to keep her family together		INT ↓ COM ↑

Agree that boys have the right to refuse an arranged marriage		
Agree that girls have the right to refuse an arranged marriage		
Agree or strongly agree that there are times when a woman deserves to be beaten		
Agree or strongly agree that a woman has a right to divorce		INT ↑ COM --
Agree that she can disagree with her parents (or husband if married) about decisions affecting her		
Social life		
Report being part of a club or group		
Report ever being harassed in school (among those reporting ever being harassed and ever attending school)		
Report ever being harassed (overall)		

*Models include controls for ethnicity, religion, state (because Maradi and Tillaberi differ significantly in infrastructure), school status (non-education variables) and are adjusted for clustering.

midline, girls' scores on a contraceptive knowledge scale increased significantly in intervention areas, while no significant changes were observed in comparison areas. Unfortunately, knowledge of HIV did not increase significantly in intervention villages from baseline to midline. This could be partly because of the low prevalence of HIV in Niger (prevalence rate of 0.3 per 1000 adults 15-49; UNAIDS) meaning that other SRHR topics are more immediately relevant to adolescents and program implementers. Among those with reported knowledge of HIV, sample sizes were too small to detect significant changes in DID analyses in the proportion who knew that condoms could be used to prevent HIV transmission, although we did find that those in the intervention were on a significant positive trend of improved knowledge (light green in the table). Also notable are the significant increases in the proportion of girls in both intervention and comparison villages who reported at midline that their communities had youth-friendly health services[8] (it is unclear whether this is because girls became newly aware of these services or because these services became newly available to girls).

One notable finding that merits continued monitoring is that, from baseline to midline the proportion of ever-married girls who reported ever being pregnant declined from 14.6% to 10.7% in intervention villages while at the same time increasing from 12.8% to 20.3% in comparison villages. While this indicator only includes married girls, sample sizes were too small to detect a statistically significant decline in the intervention villages, but the trend is positive and may be due in part to MTBA influence.

Concerning livelihoods indicators, we found no significant changes from baseline to midline or between intervention (14% to 16%) and comparison groups (17% to 12%) in the proportion of girls reporting ever having worked for income. However, midline results show that the proportion of girls reporting currently working for income has significantly increased in intervention villages (23.8% to 45.8%) and significantly decreased in comparison villages (66.0% to 39.1%) from baseline to midline. The proportion of girls currently working is a subset of those who reported ever having worked, so numbers are small (n<100 girls reported working in each year), however results still indicate statistically significant changes. This finding suggests that although the

[8] Question text in Niger tool: « *Existe-t-il dans votre communauté un centre de santé pour adolescents/un endroit offrant des services de santé adaptés aux jeunes ?* »

program did not yet appear to have increased livelihoods opportunities for adolescent girls overall, it may have had the impact of encouraging girls with work experience to continue or sustain their engagement with income-generating activities between baseline and midline. Regarding savings, we did not see any significant differences.

In Niger, key educational indicators were low at baseline and did not see significant improvements at midline in either intervention or comparison samples. No significant changes were observed in the mean number of years of education girls completed or in the proportions of girls reporting ever having attended school, being enrolled in school currently, or being able to read or write. This may be due in part to the lack of educational infrastructure and the extremely low rates of school enrollment among adolescent girls in Niger. Strong and persistent gender norms prioritizing boys' education over girls' education likely also play a role. These findings suggest that influencing education indicators remains a significant challenge in Niger and may require more intensive and sustained interventions.

Midline findings on gender-equitable attitudes were mixed. We observed a significant decrease in the proportion of girls in intervention areas who agreed that a woman should tolerate violence in order to keep her family together. The MTBA intervention appears to have had an impact on this indicator, as the proportion of girls agreeing with this statement increased in comparison areas over the same period. Unfortunately, the MTBA program does not appear to have had a significant effect on other key measures of gender-equitable attitudes: in intervention areas, no significant changes were observed in the proportion of girls who agreed with the statements that there are times when a woman deserves to be beaten, that girls have the right to refuse an arranged marriage, or that boys have the right to refuse an arranged marriage. Trends in the proportion of girls in intervention areas who agreed with the statement that a woman has a right to divorce her husband were encouraging, in that girls increasingly agreed with this statement. However, DID modeling indicated that this increase was not significantly greater than the change observed in the comparison villages. The same was true for the observed decline in the proportion of girls in intervention villages who agreed with the statement that a woman should always obey her husband. While a significant decline was detected on this indicator in intervention villages, suggesting a positive trend, agreement remained above 93% at midline (and DID was not significant).

Midline results did not show any significant change in the proportion of girls who reported being part of a club or group. A key component of the MTBA approach is engagement with girls including the development of key community platforms for dissemination of information, including girls' clubs. This approach may be more challenging in settings where gender norms and early marriage restrict girls' mobility in their communities. Reported low club participation may also be partly the result of a lack of exposure to the MTBA program in the intervention village samples: in Niger, we found that only about 1 in 4 girls in intervention samples (25.3%) were aware of the MTBA program. These results indicate that more could be done to increase visibility of the MTBA program and to make clubs more accessible to adolescent girls, including married girls.

Chapter 6. Discussion

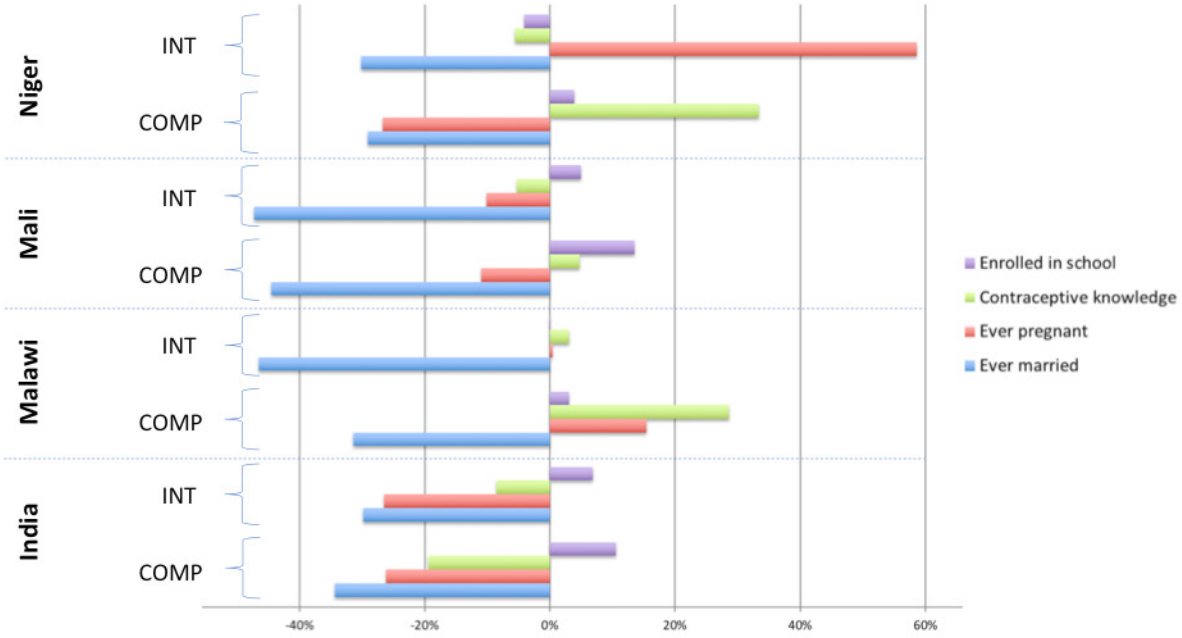
While so far we have examined results by country, there are some similarities worth considering as we examine the MTBA approach across all four countries. In Table 6.1 below, we summarize key indicators, looking at both the absolute change (difference) and the percent change for each. We additionally note whether the difference-in-differences between intervention and comparison villages from baseline to midline was significant for each country. The column labeled "Difference" shows the absolute percent increase or decrease (y) from baseline (x1) to midline (x2) while the column labeled "% change" shows the magnitude of the change by comparing the difference (y) to the original value for that indicator (y/x1). Examining percent changes allow us to more easily compare the changes occurring in a particular domain across implementation/comparison areas or between countries, even when baseline levels may differ.

In Table 6.1 (full version in Annex 4, Table 4.12), we see dramatic declines in marriage across all countries, in both intervention and comparison areas, while results on indicators related to pregnancy and schooling are mixed. The declines in the proportion of ever-married girls among

Table 6.1. Selected Summary of Key Results

		Baseline	Midline	Difference	% Change	DID sig?
Ever married						
India	Intervention	14.80%	9.70%	-5.10%	-34%	NS
	Comparison	12.40%	8.70%	-3.70%	-30%	
Malawi	Intervention	15.90%	10.90%	-5.00%	-31%	NS
	Comparison	15.90%	8.50%	-7.40%	-47%	
Mali	Intervention	11.90%	6.60%	-5.30%	-45%	NS
	Comparison	16.90%	8.90%	-8.00%	-47%	
Niger	Intervention	25.70%	18.20%	-7.50%	-29%	NS
	Comparison	37.70%	26.30%	-11.40%	-30%	
Ever Pregnant						
India (only asked of married)	Intervention	55.80%	41.20%	-14.60%	-26%	NS
	Comparison	57.00%	41.90%	-15.10%	-26%	
Malawi	Intervention	22.00%	25.40%	3.40%	15%	NS
	Comparison	26.10%	26.20%	0.10%	0%	
Mali	Intervention	20.10%	17.90%	-2.20%	-11%	NS
	Comparison	24.60%	22.10%	-2.50%	-10%	
Niger	Intervention	14.60%	10.70%	-3.90%	-27%	NS
	Comparison	12.80%	20.30%	7.50%	59%	
Ever attended school						
India	Intervention	93.30%	95.30%	2.00%	2%	NS
	Comparison	94.10%	94.60%	0.50%	1%	
Malawi	Intervention	95.90%	96.20%	0.30%	0%	p<.05
	Comparison	98.80%	95.30%	-3.50%	-4%	
Mali	Intervention	67.20%	69.40%	2.20%	3%	p<.05
	Comparison	59.20%	51.50%	-7.70%	-13%	
Niger	Intervention	70.30%	74.90%	4.60%	7%	NS
	Comparison	53.50%	54.80%	1.30%	2%	

Figure 6.1. Comparison of percent change on key indicators, baseline to midline



12–19-year-olds ranged from 29% to 47%, with Mali experiencing the greatest declines overall as well as the lowest overall marriage proportions at midline (6.6% in intervention areas and 8.9% in comparison areas, representing percent changes of 45% and 47%, respectively). Table 6.1, Figure 6.1, and the discussion below explain how marriage is changing in these areas. Large changes everywhere may be partly because of efforts to mobilize against child marriage that have been successful in bringing renewed attention and advocacy efforts aimed at delaying marriage until age 18.

Figure 6.1. provides a visual to compare the magnitude of change on key indicators across all MTBA countries from baseline to midline. We observe declines in marriage by 29% to 47% and declines in pregnancy in most areas in three of the four MTBA countries (excluding Malawi). This figure also shows some areas that stand out as different: for example, the proportion of girls reporting ever being pregnant remained constant in Malawi comparison areas while increasing in Malawi intervention areas, implying that program efforts to reduce adolescent pregnancy have not been effective to date. Similarly, Niger comparison areas saw an increase in pregnancy rates from baseline to midline while Niger intervention areas saw a decline in pregnancy rates over the same period.

Overall, the findings on changes in gender-equitable attitudes are mixed, reflecting how difficult it is to change deeply entrenched gender norms that may influence child marriage in these contexts. For example, in Malawi, in intervention areas there were improvements on agreement *that boys have a right to refuse an arranged marriage* but no significant changes on other gender-equitable attitudes. In Mali, we found that overall, more girls disagreed with the statement *girls do have a right to refuse an arranged marriage*, but that a smaller proportion of girls in intervention areas disagreed with this statement relative to girls in comparison areas. In Niger, girls in intervention areas were less likely to agree with the statement that *women should tolerate violence to keep their families together* than girls in comparison areas. Some other indicators in Niger were trending in the desired direction but not significant while others showed no change; whereas in India, many indicators were trending in the desired direction but were not significant. An important part of the enabling environment, within which the MTBA approach focuses, are gender-equitable attitudes and the perceived roles for women and girls in the communities where we work. Together these findings suggest there is more to do to make meaningful change regarding the status of girls and women in these communities, as we move into the final year of program implementation.

Our findings also highlight the challenge of assessing impact when the intervention in question engages directly with individuals and communities (e.g., girls' clubs and community theater events) while also including activities at higher geographic levels (district, state, regional, or national) such that spillover of the intervention's messaging into compari-

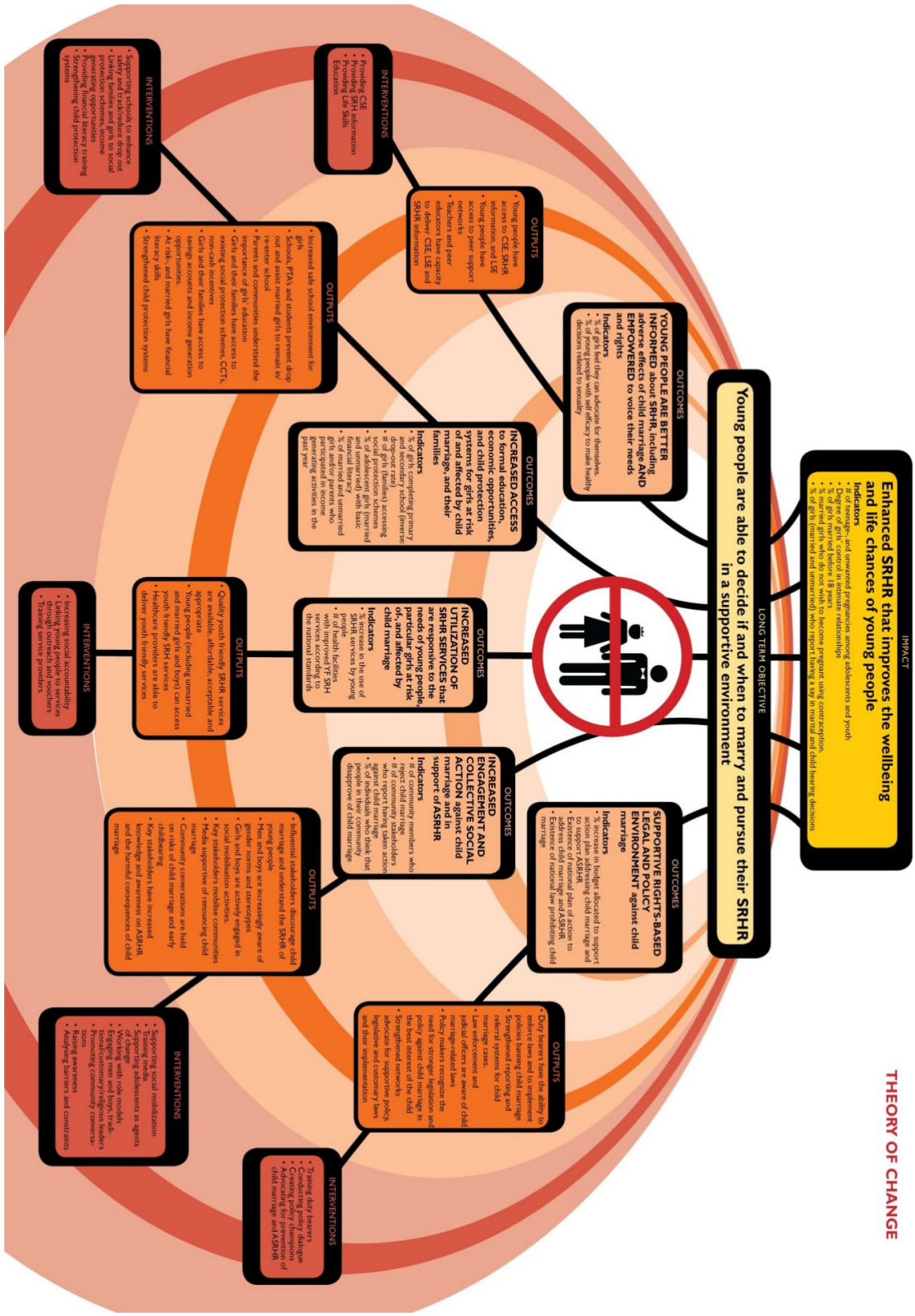
son areas is likely. While we treat the evaluation as comparing intervention communities against non-intervention communities, we recognize that some intervention activities likely spilled over into comparison areas. This makes it more difficult to attribute changes observed since baseline to the MTBA intervention, as comparison areas may also have been exposed to MTBA program initiatives.

This study has a few limitations that may influence our findings. As noted, selection of appropriate comparison villages in Mali and Niger was complicated by the requirement that the MTBA intervention be located in villages that had received a prior intervention. These villages have certain features that were difficult to match during comparison village selection, notably, intervention villages were characterized by the presence schools.

Additionally, baseline and midline data were collected from girls ages 12–19, who represent only a portion of the individuals who may have been influenced by the MTBA intervention in their communities. Certainly, also including perspectives from adolescent boys, parents, and key community members would present a more thorough picture of the MTBA program, as these groups were also involved in program activities in intervention communities.

Nevertheless, given that the MTBA intervention has only been ongoing for up to 18 months, we are encouraged by the positive trends observed at midline. This report contributes to a stronger evidence base on the impact of an intervention addressing child marriage and adolescent well-being across four different contexts. Its findings can be used to inform the final months of the intervention. Results from this impact evaluation may also contribute to the design of future child marriage programs and accompanying research. It is hoped that after an additional year of sustained MTBA intervention, positive trends observed on key indicators at midline will demonstrate impact at endline.

Annex 1. Theory of Change



Annex 2. Methods

This annex includes details about the midline research; detailed information about the baseline surveys are available in each baseline report found at www.morethanbrides.org.

Data collection components

The midline research included the following data collection components:

- Household listing of select intervention and comparison villages with collection of key outcome indicators for females aged 10–21, including marital status, school enrollment, childbearing status, and work status.
- Midline survey of females aged 12–19 in select intervention and comparison communities.
- Community assessment (1 per EA or PSU) that included community-level details about infrastructure and accessibility.
- Qualitative studies in each country (see details below).

The household listing served primarily as a sampling frame from which to select girls eligible to participate in the midline survey. Analyses presented in this report are based primarily on the midline survey of girls aged 12–19. Categories of questions included in the baseline and midline surveys included:

- Background characteristics
- Migration
- Education and schooling experience, including literacy and numeracy evaluation
- Reproductive health knowledge
- Marriage and dowry
- Sexual experience including pregnancy
- Mobility
- Social life including friendships
- Gender equality
- Livelihoods

The midline survey also added the following components:

- Expanded migration questions
- Program exposure, including emphasis on child protection committees
- Food insecurity

Primary Outcomes

Primary outcomes of interest include indicators such as proportion married before age 18, proportion pregnant before age 18, and proportion in school. Many of the domains included in the survey are directly related to these outcomes (e.g., questions about age at first marriage), while others provide information about possible risk factors (e.g., migration may make girls more or less vulnerable to negative outcomes depending on the circumstances surrounding the migration).

Ethical Review

All instruments as well as the research approach were reviewed by the appropriate oversight committees to ensure adherence to the highest ethical standards and provide protection for human subjects. Ethical and research clearance for this study was issued by the Institutional Review Board of the Population Council and by the National Committee on Research in the Social Sciences and Humanities (NCRSH) in Lilongwe (Malawi), the Institut National de Recherche en Santé Publique (INRSP) (Mali), and Comité d'Éthique pour la Recherche en Santé (Niger).

Sample Size

We conducted sample size estimations using Optimal Design, assuming that half of data collection areas would be designated as comparison areas. Our calculations and assumptions are included in Appendix 1 in each baseline report.

Study Design

We employed a cluster randomized design for implementation of the MTBA program in Malawi, using group head village (GHV) as the unit for randomization.

All households within the selected enumeration area were eligible for inclusion in the study. From the household listing frame, we randomly selected households with females 12–19 years of age for participation in the baseline survey. Only one female per household was included in the baseline survey. Randomization was done in Stata or R, depending on the country and in cooperation with Population Council and local research staff.

Design Issues

Survey timing and migration in Mali: Some differences in sample composition may be attributed to survey timing. Whereas baseline data were collected in January of 2016, the midline study took place in September of 2018. Seasonal migrations are common in Mali, especially in the region of Ségou. Unfortunately, the midline data collection period corresponded with the annual school vacation period as well as the agricultural season in Ségou, both of which influence adolescent migration patterns. In Ségou, it is common for in-school adolescent girls to migrate to urban areas and work to earn money during the vacation period, which extends until early October. September also corresponds with the beginning of the agricultural period, when many out-of-school girls temporarily relocate to work in the fields. For both in-school and out-of-school girls, temporary migration for the purpose of earning money to build a "trousseau" is also common. Midway through the household listing activity, the local research partner signaled the problem of a high number of missing girls in villages, and the midline sampling strategy was subsequently revised in response. Several questions were added to the listing tool so that the presence/absence of each girl, the reason for each absence, and the duration of each absence was recorded during the collection team's first visit to the village (during which the household listing was conducted). These questions were asked in 26 of the 40 villages in the sample (those for which the household listing activity had not already been completed) and the resulting data showed that 18% of girls in Ségou (and 5% in Sikasso) were absent from their village at the time of the survey. To respond to this sampling challenge, eight additional girls were randomly selected for each village and ordered so that enumerators who found a selected girl to be absent at the time of the interview would have a clear protocol to follow for participant replacement.

Program implementation in Malawi: Unfortunately, issues with staff turnover and poor communication led to contamination issues in Malawi, which complicate efforts to evaluate the impact of the intervention. Some clusters that had been assigned as comparison areas at baseline ended up receiving the intervention and one cluster that was planned as intervention had not received any activities by mid-2018. As a result of these issues and because the scale of the contamination was larger than we could absorb within our sample, we present two analyses in this report: as-planned and as-implemented.

A key consideration in the analysis of data from Malawi as-implemented versus as-planned are issues with sample size. Sample size calculations conducted in 2016 and presented in the baseline were based on assumptions including that 50% of clusters would be assigned to intervention and 50% to comparison. In part because of proximity issues at initial randomization, the as-planned scenario had 26 clusters (54%) assigned as implementation and 22 (46%) as comparison. In the as-implemented scenario, 32 clusters were re-assigned as implementation and 16 were re-assigned to comparison, resulting in 66% of clusters being implementation and 33% as comparison. With the reassignment and only 48 clusters, we do not have adequate statistical power to assess impact as originally estimated so results may be skewed. However, we felt it was important to present as-implemented results from a programmatic perspective: we want implementing partners to feel that the results reflect their efforts. A challenge from the research perspective is that the as-implemented design introduces selection bias the randomization was used to avoid: we assume as-implemented communities were selected for some reason that may make them differ meaningfully from the communities that remained as comparison communities.

Data Analysis

Given the research design with implementation at the community level (or higher) and repeat cross sectional surveys of girls 12–19, we aim to evaluate effects of the entire intervention package on key indicators measured at the girl level. We conduct difference-in-differences analysis in each country, examining changes in intervention areas where the More than Brides intervention was implemented against comparison areas where no intervention was completed. Difference-in-differences analysis compares the change in the intervention areas to the change in the comparison areas to see if the "difference between those differences" is significant. Our equation for evaluating the difference is as follows:

$Y = \beta 0 + \beta 1*[Time] + \beta 2*[Intervention] + \beta 3*[Time*Intervention] + \beta 4*[Covariates] + \varepsilon$

Where time is either baseline or midline survey; intervention is 0/1 and denotes whether that participant resides in an intervention or comparison area; and covariates may include religion, ethnicity, urban/rural status, migration status, and school status (in some analyses).

A requirement of DID analysis is that three assumptions must be true in order to accurately assess the causal effect of an intervention. These are 1) that the baseline measurements did not determine placement of the intervention; 2) that there are no compositional differences in samples (i.e., girls in baseline and midline surveys are not different from each other on key indicators that may influence the outcome); and 3) there are parallel trends in intervention and comparison groups (i.e., in the absence of the intervention both the comparison and intervention areas would have similar trends in key outcomes, like proportion married).

We conduct analysis in Stata adjusting for clusters at the village or EA level, depending on the country. For RCT analysis (India and Malawi) we followed acceptable practices for cluster randomized trials and did not add covariates to DID models. In quasi-experimental designs (Mali and Niger) we added covariates based on baseline balance tables and/or theoretical connection to the dependent variable of interest rather than include covariates based on their performance in simple regression models.

Limitations

As noted previously, issues of contamination in Malawi led us to include both as-planned and as-implemented analyses. Other contamination issues are more difficult to manage post-hoc. As shown in Annex 1, the theory of change includes work to address the enabling environment, including using advocacy efforts to influence enforcement of laws, for example. Other advocacy activities include working with key stakeholders at district, state, and national levels. These activities may have influenced both intervention and comparison areas as comparison areas were typically within the same district/state/Traditional Authority (TA) as intervention areas. When activities occurred at the district or state level there was no way for non-intervention communities to be shielded from the effects of those interventions so spillover likely occurred.

An additional limitation is the matching criteria used in Mali and Niger, which influenced both the selection of appropriate comparison areas and highlighted the challenge of placing interventions in villages that may already be "better" than other villages on outcomes of interest. As noted in Chapter 1, communities were selected based on criteria developed by the program for placing the intervention rather than other more rigorous matching methods. The MTBA intervention also built on an existing intervention, which

Table A.2.1 Summary of qualitative research activities

	India	Mali	Malawi	Niger
Dates	Nov–Dec 2016	Mar 2017	Apr–Aug, 2018	Oct–Nov, 2018
Activities	FGDs (14 with adolescent girls, 15 with parents); IDIs (peer mentors)	FGDs (15 with adolescent girls, 16 with parents); IDIs (married and unmarried adolescents)	FGDs (14 with adolescent girls, 6 with parents); IDIs (adolescent girls and key informants) ethnographic journals	FGDs (8 with adolescent girls and 8 with parents)
Topics	Knowledge of child marriage–related laws; influence of laws on behavior, education and livelihoods; parental expectations about marriage; girls' assets; girls' mobility	Migration, marital transactions, SRHR	Adolescent social life, pregnancy, transactional sex, marital processes, early marriage, education, livelihoods, consequences of legal enforcement of marriage age	Adolescent girls' perceptions of agency related to partner choice and marital timing, perceptions of social pressures related to marriage, sexual security, gender roles

presented challenges for fielding a baseline in intervention communities when those communities had already begun receiving some similar activities. As balance tables show, comparison villages were different from intervention villages on a number of indicators related to education, in part because of the selection of intervention communities as those that had a secondary school.

Other limitations relate to the challenges of conducting adolescent surveys. Although we put in place methods to address known challenges in surveys of youth, such as difficulty finding older girls who may be less likely to be home and reported ages being revised upward or downward due to perceived benefits associated with being a certain age, these issues may persist.

Qualitative Data

Throughout the report we reference qualitative data collected over the course of the MTBA project that provides additional context to the quantitative surveys. Qualitative data collection varied across countries; below we summarize what was done in each country. Specific details about qualitative results are available in forthcoming papers and reports.

Annex 3. Program Description and Exposure

Description

Here we provide a brief, but simplistic, overview of the MTBA intervention. Additional details of the intervention, including some ways in which the intervention varies across countries, is forthcoming and will be made available at morethanbrides.org.

The MTBA intervention is a holistic program that aims to address child marriage and improve adolescent sexual and reproductive health through multiple strategies, including: empowering girls through life skills, access to sexual and reproductive health services, livelihoods, education, community engagement to address social norms, and interventions to create a favorable legal and policy environment. The specific ways strategies are implemented at the country, district, and village level may vary slightly but the intervention shares key hallmarks including that it is:

1. Structured to work on multiple levels to expose girls and communities to alternatives to early marriage;
2. Works holistically to create an environment in which these alternate pathways emerge; and
3. Draws on the strengths of implementing partners and encourages learning across organizations to deliver a unified approach in very different contexts.

Exposure

By design, the MTBA program treats an entire community, reaching individuals, working with existing systems, and addressing structures like laws and policies that influence adolescent well-being. Within treatment communities, we expect that a proportion of girls will have been directly exposed to the program through girls clubs, events in schools, or community events like edutainment. In Table A3.1 below, we examine the proportion of girls in our survey (midline) in intervention communities that reported awareness of the MTBA program. We find striking differences between India, where more than half of girls reported awareness of the MTBA program, and Malawi where fewer than 1 in 10 did. We acknowledge that these discrepancies may be partly the result of awareness of local implementing organizations but not the MTBA program as a whole, as well as slight differences in program implementation across countries.

Table A3.1. Midline study participant exposure to MTBA program

	India	Malawi		Mali	Niger
		as-planned	as-implemented		
Aware of MTBA program (among intervention community sample) (%)	52.9	5.8	6.5	21.3	25.3
Contacted by MTBA in last 6 months (among those aware of MTBA program) (%)	61.9	6.2	6.8	39.7	32.9
Reports parent interacted with MTBA program in last 6 months (among those aware of MTBA program) (%)	36.3	(34.5)	(40.0)	73.2	65.3

() fewer than 10 cases.

Annex 4. Detailed Tables

In this Annex we provide some additional details that may help program implementers understand a) the effects of the intervention on other indicators and b) other key factors that may be influencing results. While there are undoubtedly numerous ways to examine the midline data that may be of interest, we have tried to strike a balance to present interesting data without overwhelming the report with too many tables.

Tables A4.1, A4.2, and A4.3 present geographic comparisons on key indicators for Malawi, Mali, and Niger. An important consideration in these tables is that unlike India, which has a much larger sample size, we are not powered to examine geographic differences in each of the African countries. However, we recognize that seeing geographic differences is helpful for program implementation as these areas may differ in meaningful ways, including program implementation teams and approaches.

In Table A4.4, we examine migration indicators for the African countries. We know from our qualitative data that migration plays an important role in the lives of adolescent girls, though not necessarily in the same way across countries. In Mali, we heard from girls that they may migrate to urban and peri-urban areas to gain livelihood experience, prepare for marriage, and seek higher education. In Malawi and Niger, few girls reported ever migrating themselves but responses indicated that the migration of males in their communities may influence the marriage market. We include the table below to compare migration indicators by marital status across these contexts. In Table A.4.5, we look at Mali by region as these areas have differing migration patterns.

Table A4.1. Geographic comparison of key indicators, Malawi

	Nkhata Bay (n=710)		Mangochi (n=1339)	
	Baseline (n=352)	Midline (n=358)	Baseline (n=668)	Midline (n=671)
Ever married	11.9	11.2	18.0	9.5
Ever pregnant	19.9	27.5	25.1	24.7
Currently in school	77.8	74.6	56.7	60.4
Contraceptive knowledge	3.4	3.9	2.8	3.3
Ever worked	22.4	15.9	27.0	30.3

Note: In this table we provide proportions without significance testing as we are not statistically powered to assess differences at the state level in Malawi.

Table A4.2. Geographic comparison of key indicators, Mali

	Sikasso		Ségou	
	Baseline (n=300)	Midline (n=295)	Baseline (n=555)	Midline (n=533)
Ever married	15.4	6.8	14.0	8.3
Ever pregnant	23.0	16.0	22.1	21.7
Currently in school	48.7	51.5	35.7	40.5
Contraceptive knowledge	1.6	1.4	2.2	3.4
Ever worked	44.1	28.5	51.0	50.0

Note: In this table we provide proportions without significance testing as we are not statistically powered to assess differences at the state level in Mali.

Table A4.3. Geographic comparison of key indicators, Niger

	Maradi		Tillaberi	
	Baseline (n=199)	Midline (n=200)	Baseline (n=401)	Midline (n=399)
Ever married	42.2	26.5	26.4	20.5
Ever pregnant (15+)	10.6	26.1	15.1	11.0
Currently in school	14.6	18.5	51.1	50.6
Contraceptive knowledge	2.2	1.9	1.6	2.1
Ever worked	16.1	15.5	15.7	13.3

Note: In this table we provide proportions without significance testing as we are not statistically powered to assess differences at the state level in Niger.

Table A4.4. Comparison of migration indicators, African countries

	Malawi			Mali			Niger		
	Overall	Ever married	Never married	Overall	Ever married	Never married	Overall	Ever married	Never married
Has always lived in this village	80.1%	70.9	81.5	83.6%	60.1	86.5	72.6%	64.0	75.8
Has ever moved away for three months or more	12.5%	20.4	11.6	43.0%	40.6	43.2	26.2%	24.4	26.8
Mean age when first left village for 3 months	12.2 years	14.0	11.8	12.1 years	13.7	11.9	11.0 years	12.6	10.6
Mean number of times have migrated for 3+ months	1.4 times	1.4	1.4	2.1 times	2.4	2.1	1.8 times	1.2	1.9

Table A4.5. Migration in Mali by state

	Overall	Sikasso	Ségou
Has always lived in this village	83.6%	84.7	83.0
Has ever moved away for 3+ months	43.0%	22.7	54.2
Mean age when first left village for 3 months	12.1 years	11.3	12.2
Mean number of times have migrated for 3+ months	2.1 times	1.8	2.2

Table A4.6. Breakdown of indicators by education levels

	Mali (n=1683)		Niger (n=1200)		Malawi (n=2049)		India (n=5783)	
	In school (n=712)	Out of school (n=971)	In school (n=473)	Out of school (n=726)	In school (n=1325)	Out of school (n=724)	In school (n=3578)*	Out of school (n=2205)*
Ever married	2.0	17.9	1.3	44.0	<1.0	35.7	2.0	26.8
Ever pregnant	8.1	29.2	2.8	19.0	2.5	40.3	25.3*	53.6*
Contraceptive knowledge	2.0	2.1	1.8	2.0	2.8	4.1	3.5*	3.2*
Ever worked	36.0	52.0	11.0	17.5	23.7	28.4	14.6	38.7

*Pregnancy questions only asked of girls 15+ in India; contraceptive knowledge questions only asked of girls 15+ in India

Based on feedback from partners, we present Tables A4.7, A4.8, A4.9, A4.10, and A4.11 that use data from our India sample.

Table A4.7. Most commonly reported adverse effects of early marriage for girls, India

	Percent of girls reporting each adverse effect		
	Overall (n=5783)	INT (n=2922)	COMP (n=2861)
Risk to child at birth	21.6	19.9	23.3
Risk to mother at delivery	31	28.9	33.1
Immature and incapable of raising children	23.1	22.2	24
Immature and incapable of running a household	34	34.3	33.8
Unable to complete education	31.9	32.6	31.2
Ill health/depression	38	37.5	38.5
Other	0.7	0.7	0.7
Don't know	23.4	23.3	23.5
No problem	0.3	0.3	0.3

Table A4.8. Characteristics of ever-married girls

	Currently married (n=663)	Never married (n=5120)
Mean age (years)	17.6	14.7
Currently in school (%)	10.9	68.5
Highest grade attained (year)	6.6	7.3
Ever worked (%)	30.6	22.9

Table A4.9. Percentage of adolescent girls who never attended school by reasons for never attending (all states)

Educational attainment (%)	All states			
	Intervention		Comparison	
	Baseline	Midline	Baseline	Midline
Economic reasons				
Required for work on farm/family business	11.0	21.9	7.9	11.7
Required for work for payment in cash/kind	8.0	12.5	6.7	11.7
Family could not afford it (cost too much)	10.0	15.6	9.0	13.0
At least one economic reason	26.0	40.6**	21.3	33.8*
Housework-related reasons				
Required for household work	39.0	37.5	31.5	42.9
Required for care of siblings	7.0	20.3	11.2	28.6
At least one housework-related reason	43.0	46.9	34.8	55.8***
Attitude and perception of parents and adolescents				
Not safe to send girls to school	0.0	4.7	3.4	10.4
Education not considered necessary (parents)	21.0	12.5	16.9	14.3
Respondents not interested in studies (including those citing failure as reason)	29.0	28.1	30.3	35.1
At least one attitude-/perception-related reason	50.0	43.7	48.3	48.1
School-related reasons				
School too far away/transport not available	12.0	21.9	9.0	9.1
Poor quality of education/teaching, lack of female teachers, and punishment by teachers	2.0	4.7	3.4	3.9
At least one school-related reason	14.0	25.0*	11.2	13.0
Health				
Respondent's illness	2.0	4.7	1.1	2.6
Illness or death of a family member	5.0	0.0	4.5	1.3
At least one health-related reasons	7.0	4.7	5.6	3.9
Got married/engaged	1.0	0.0	1.1	0.0
Number who never attended school	100	64	89	77

Note: *** p<0.01; ** p<0.05; * p<0.1, percentages not shown by state as base is very low.

Table A4.10. Percentage of adolescent girls who discontinued schooling by reasons for discontinuing, India (all states)

	Intervention		Comparison	
	Baseline	Midline	Baseline	Midline
Economic reasons				
Required for work on farm/family business	6.8	4.8	6.5	6
Required for work for payment in cash/kind	2.7	6.9	4.8	7.4
Family could not afford it (cost too much)	14.2	19.1	14.7	16.7
At least one economic reason	21.6	28.8**	24.4	27
Required for household work	22.7	21.7	25.5	29.2
Required for care of siblings	4	6	5.1	4.3
At least one housework-related reason	24.6	24.2	27.7	30.6
Attitude and perception of parents and adolescents				
Not safe to send girls to school	2.5	4.8	0.8	3.8
Education not considered necessary (parents)	21.4	25.1	19.2	22
Respondents not interested in studies (including those citing failure as reason)	26.7	28.3	24.4	30.9
At least one attitude-/perception-related reason	46.4	51.6	42.8	51.0**
School-related reasons				
School too far away/transport not available	15.7	17.3	18	16
Poor quality of education/teaching, lack of female teachers, and punishment by teachers	5.1	6.2	5.5	5.7
Problem in admission/paperwork related to admission	0	0.5	0	3.3
At least one school-related reason	20.3	24	23	24.9
Health				
Respondent's illness	4.5	4.1	5.9	3.8
Illness or death of a family member	7.8	7.1	11.7	7.9
At least one health-related reasons	12.3	11.3	17.4	11.7**
Got married/engaged	15.9	13.6	13.9	10.3
Number who discontinued schooling	528	434	495	418

Table A4.11. Percentage distribution of adolescents by years of schooling successfully completed, median years of schooling, and percentage currently in school and ever in school, India

Educational attainment (%)	Bihar				Jharkhand				Odisha				Rajasthan			
	INT		COMP		INT		COMP		INT		COMP		INT		COMP	
	BL	ML	BL	ML	BL	ML	BL	ML	BL	ML	BL	ML	BL	ML	BL	ML
<1 (including no schooling)	12.7	9.9	11.2	5.3	7.3	2.6	3.5	4.1	4.6	3.3	5.2	5.7	6.1	3.6	7.3	8.7
1-4	14.6	10.2	14.3	12.2	9	5.8	5.6	4.1	2.4	1.7	4.6	7.1	6.1	3.6	7	2
5-7	39.2	39.1	35.7	34.7	36.7	38.8	36.6	34.6	26.1	24	39.3	29.7	30.8	24.6	31.6	27.2
8-9	24.9	28.7	28.1	31.8	35.6	35.9	41.2	38.8	37.1	34.3	26.6	32.6	39.7	37.2	32.4	38.2
10-11	5.5	8.3	7.7	13	8.4	13.1	10.4	12.4	22.8	27.9	20.3	21.5	9.4	20.4	14.4	14
12 and above	3	3.8	3.1	2.9	3.1	3.8	2.7	5.9	7	8.9	4	3.4	7.9	10.5	7.3	9.8
Median years of schooling	6	7	7	7	7	8	7	8	8	9	7	8	8	8	7	8
Currently in school	57.2	66.0**	68.9	72.1	51.3	60.3**	57.5	60.1	60.8	57.7	54.7	56.7	61.1	71.5***	62.1	71.3***
Number of respondents	362	373	392	377	357	312	374	338	372	359	349	353	393	333	383	356

Note: Includes nonliterate and literate with no formal schooling, *** p<0.01; ** p<0.05; * p<0.1.

Table A4.12. Summary of key results

		Baseline	Midline	Difference	% Change	DID sig?
Ever married						
India	Intervention	14.80%	9.70%	-5.10%	-34%	NS
	Comparison	12.40%	8.70%	-3.70%	-30%	
Malawi	Intervention	15.90%	10.90%	-5.00%	-31%	NS
	Comparison	15.90%	8.50%	-7.40%	-47%	
Mali	Intervention	11.90%	6.60%	-5.30%	-45%	NS
	Comparison	16.90%	8.90%	-8.00%	-47%	
Niger	Intervention	25.70%	18.20%	-7.50%	-29%	NS
	Comparison	37.70%	26.30%	-11.40%	-30%	
Ever pregnant						
India (only asked of married)	Intervention	55.80%	41.20%	-14.60%	-26%	NS
	Comparison	57.00%	41.90%	-15.10%	-26%	
Malawi	Intervention	22.00%	25.40%	3.40%	15%	NS
	Comparison	26.10%	26.20%	0.10%	0%	
Mali	Intervention	20.10%	17.90%	-2.20%	-11%	NS
	Comparison	24.60%	22.10%	-2.50%	-10%	
Niger	Intervention	14.60%	10.70%	-3.90%	-27%	NS
	Comparison	12.80%	20.30%	7.50%	59%	
Contraceptive knowledge scale (mean score)						
India	Intervention	3.6	2.9	-0.7	-19%	NS
	Comparison	3.5	3.2	-0.3	-9%	
Malawi	Intervention	2.8	3.6	0.8	29%	p<.01
	Comparison	3.3	3.4	0.1	3%	
Mali	Intervention	2.1	2.2	0.1	5%	NS
	Comparison	1.9	1.8	-0.1	-5%	
Niger	Intervention	1.8	2.4	0.6	33%	p<.10
	Comparison	1.8	1.7	-0.1	-6%	
Ever worked						
India	Intervention	29.00%	19.60%	-9.40%	-32%	NS
	Comparison	26.70%	19.40%	-7.30%	-27%	
Malawi	Intervention	25.40%	26.70%	1.30%	5%	NS
	Comparison	25.40%	22.50%	-2.90%	-11%	
Mali	Intervention	50.80%	45.70%	-5.10%	-10%	NS
	Comparison	46.50%	37.40%	-9.10%	-20%	
Niger	Intervention	14.00%	16.00%	2.00%	14%	NS
	Comparison	17.70%	12.00%	-5.70%	-32%	
Ever attended school						
India	Intervention	93.30%	95.30%	2.00%	2%	NS
	Comparison	94.10%	94.60%	0.50%	1%	
Malawi	Intervention	95.90%	96.20%	0.30%	0%	p<.05
	Comparison	98.80%	95.30%	-3.50%	-4%	
Mali	Intervention	67.20%	69.40%	2.20%	3%	p<.05
	Comparison	59.20%	51.50%	-7.70%	-13%	
Niger	Intervention	70.30%	74.90%	4.60%	7%	NS
	Comparison	53.50%	54.80%	1.30%	2%	

Currently enrolled in school						
India	Intervention	57.70%	63.80%	6.10%	11%	NS
	Comparison	61.00%	65.20%	4.20%	7%	
Malawi	Intervention	62.30%	64.20%	1.90%	3%	NS
	Comparison	67.50%	67.40%	-0.10%	0%	
Mali	Intervention	44.50%	50.50%	6.00%	13%	NS
	Comparison	36.40%	38.20%	1.80%	5%	
Niger	Intervention	51.00%	53.00%	2.00%	4%	NS
	Comparison	27.00%	25.90%	-1.10%	-4%	
Literate						
India	Intervention	73.30%	75.60%	2.30%	3%	NS
	Comparison	75.20%	76.50%	1.30%	2%	
Malawi	Intervention	56.80%	66.10%	9.30%	16%	NS
	Comparison	67.00%	72.70%	5.70%	9%	
Mali	Intervention	44.30%	41.00%	-3.30%	-7%	NS
	Comparison	55.40%	57.40%	2.00%	4%	
Niger	Intervention	55.00%	55.30%	0.30%	1%	NS
	Comparison	36.00%	36.50%	0.50%	1%	
Agree that girls have the right to refuse an arranged marriage[9]						
India	Intervention	41.40%	55.90%	14.50%	35%	NS
	Comparison	38.20%	52.00%	13.80%	36%	
Malawi	Intervention	65.40%	63.40%	-2.00%	-3%	NS
	Comparison	67.00%	63.50%	-3.50%	-5%	
Mali	Intervention	33.60%	39.70%	6.10%	18%	p<.05
	Comparison	23.80%	40.30%	16.50%	69%	
Niger	Intervention	61.20%	57.60%	-3.60%	-6%	NS
	Comparison	58.20%	50.00%	-8.20%	-14%	
Agree that there are times when a woman deserves to be beaten						
India	Intervention	24.90%	12.90%	-12.00%	-48%	NS
	Comparison	24.80%	12.10%	-12.70%	-51%	
Malawi	Intervention	49.30%	42.10%	-7.20%	-15%	NS
	Comparison	45.20%	43.40%	-1.80%	-4%	
Mali	Intervention	35.10%	22.00%	-13.10%	-37%	NS
	Comparison	37.90%	25.60%	-12.30%	-32%	
Niger	Intervention	17.70%	17.70%	0.00%	0%	NS
	Comparison	25.00%	31.40%	6.40%	26%	
Report being part of a club						
India	Intervention	2.80%	21.60%	18.80%	671%	p<.01
	Comparison	4.50%	3.80%	-0.70%	-16%	
Malawi	Intervention	24.40%	23.00%	-1.40%	-6%	NS
	Comparison	27.10%	21.10%	-6.00%	-22%	

[9] In francophone countries we measured disagree that girls do not have a right to refuse an arranged marriage.

Mali	Intervention	28.50%	20.90%	-7.60%	-27%	NS
	Comparison	26.20%	21.20%	-5.00%	-19%	
Niger	Intervention	27.70%	29.00%	1.30%	5%	NS
	Comparison	20.70%	12.90%	-7.80%	-38%	
Report ever being harassed						
India	Intervention	25.40%	19.30%	-6.10%	-24%	NS
	Comparison	24.30%	17.60%	-6.70%	-28%	
Malawi	Intervention	37.10%	44.00%	6.90%	19%	p<.05
	Comparison	41.50%	38.10%	-3.40%	-8%	
Mali	Intervention	39.30%	41.80%	2.50%	6%	NS
	Comparison	36.50%	37.50%	1.00%	3%	
Niger	Intervention	19.60%	18.00%	-1.60%	-8%	NS
	Comparison	18.20%	16.70%	-1.50%	-8%	

Annex 5. Monitoring Evaluation and Learning (MEAL) Key Indicators

The following tables present indicators developed in partnership with the MTBA MEAL group that are of particular interest for program implementers.

Table A5.1 India

	INDICATOR	Baseline		Midline	
		COMP	INT	COMP	INT
IMPACT: Young people are able to decide if and when to marry and pursue their SRHR in a supportive environment	% of ever married girls who were married before age 15	59.6	56.1	42.2	42
	% of ever married girls who were married before age 18	96.3	94.9	94.5	92.9
OUTCOME 1: Young people are better informed about SRHR, including adverse effects of CM, and empowered to voice needs and rights	% of girls who started menstruating, with basic knowledge about menstruation	3.6	2.3	3.5	4.1
	% of girls by age category and marital status, with basic correct knowledge on SRHR	12.4	13.6	10.7	15.4
	% of girls who know and can tell the legal minimum age at marriage for girls	66.1	61.9	79.5	81
	% of girls who can name at least THREE adverse effects of marriage before [legal age of marriage]	23.5	24	35.4	39.9
	% of girls who feel empowered to voice their needs and rights re CM and SRHR	53.7	51.3	55.3	57.3
OUTCOME 2: Increased access to formal education	% of girls who ever attended school	94.1	93.3	94.6	95.3
	% of girls in school	61	57.7	65.2	63.8
	Among ever attended mean, number of years of schooling completed	7.5	7.5	7.8	8
	% of adolescent girls benefiting from social protection schemes or scholarships	2	1.5	<1	2.6
OUTCOME 3: Increased access to economic opportunities for girls at risk and affected by child marriage and their families	% of girls currently involved in income-generating activities (among ever worked)	26.7	29	19.4	19.6
OUTCOME 5: Increased utilization of SRHR services that are responsive to the needs of young people	% of girls who are aware of youth-friendly health services and who have accessed them when needed	<1	<1	<1	<1
OUTCOME 6: Increased engagement and collective action against CM and in support of ASRHR	% of girls who believe in gender-equitable values	9.5	10	20.9	22.4

Table A5.2 Malawi

	INDICATOR	AS PLANNED				AS IMPLEMENTED			
		Baseline		Midline		Baseline		Midline	
		COMP	INT	COMP	INT	COMP	INT	COMP	INT
IMPACT: Young people are able to decide if and when to marry and pursue their SRHR in a supportive environment	% of ever married girls who were married before age 15	22.9	18.5	19.5	17.6	22.2	19.4	20.7	16
	% of ever married girls who were married before age 18	91.4	95.6	87.8	89.7	90.7	95.4	86.2	90.7
OUTCOME 1: Young people are better informed about SRHR, including adverse effects of CM, and empowered to voice needs and rights	% of girls who started menstruating, with basic knowledge about menstruation	4.6	2.8	5.2	3.7	2.4	4.3	3.9	4.7
	% of girls with basic correct knowledge on SRHR	43.6	39	37.6	50.9	46.6	38.3	48.1	50.6
	% of girls who know and can tell the legal minimum age at marriage for girls	44.8	44.9	50.8	64.2	45.7	44.4	63.4	64.4
	% of girls who can name at least THREE adverse effects of marriage before [legal age of marriage]	6	9.5	9.7	12.2	5.6	9.1	11.1	12.9
	% of (ever-) married girls who say they did not want to marry	4.3	1.1	2.5	1.5	5.6	<1	0	2.7
	% of girls who feel empowered to voice their needs and rights re CM and SRHR	35.1	35.3	32.9	44.7	33	36.2	38.2	46.1
OUTCOME 2: Increased access to formal education	% of girls who ever attended school	98.3	95.7	96.6	95.3	98.8	95.9	95.3	96.2
	% of girls in school	66.1	62.3	66.5	64.4	67.5	62.3	67.5	64.2
	Among ever attended, mean number of years of schooling completed	4.5	3.9	4.4	4.3	4.6	3.9	4.5	4.4
	% of adolescent girls benefiting from social protection schemes or scholarships	1.3	1.1	0	<1	1.7	0.9	0	0.3

OUTCOME 3: Increased access to economic opportunities for girls at risk and affected by child marriage and their families	% of girls currently involved in income-generating activities (among ever worked)	15.8	12.1	11.6	20	14	13.8	10.8	18.6
OUTCOME 5: Increased utilization of SRHR services that are responsive to the needs of young people	% of girls who are aware of youth-friendly health services and who have accessed them when needed	0	0	12.5	9.1	0	0	9.1	11.5
OUTCOME 6: Increased engagement and collective action against CM and in support of ASRHR	% of girls who believe in gender-equitable values	5.6	5.2	5.8	7.2	5	5.6	7.3	7.1

Table A5.3 Mali

	INDICATOR	Baseline		Midline	
		COMP	INT	COMP	INT
IMPACT: Young people are able to decide if and when to marry and pursue their SRHR in a supportive environment	% of girls who were married before 15 (of married girls)	30.2	31.9	47.2	20.7
	% of girls who were married before 18 (of married girls)	92.1	97.9	94.4	79.3
OUTCOME 1: Young people are better informed about SRHR, including adverse effects of CM, and empowered to voice needs and rights	% of girls who started menstruating, with basic knowledge about menstruation	12.6	14.7	8.1	13.6
	% of girls with basic correct knowledge on SRHR	33.5	36.9	30.5	39.6
	% of girls who know and can tell the legal minimum age at marriage for girls	5.3	4.4	5.1	5.4
	% of girls who can name at least THREE adverse effects of marriage before [legal age of marriage]	9.5	13.6	16.7	22
	% (ever) married girls who say they did not want to marry	76.3	53.2	2.8	6.9
	% of girls who feel empowered to voice their needs and rights re CM and SRHR	26.9	26	19.7	22.1
OUTCOME 2: Increased access to formal education	% of girls who ever attended school	59.2	67.2	51.5	69.4
	% of girls in school	36.4	45	38.2	50.5
	Among ever attended, mean number of years of schooling completed	3.6	4.2	3.2	4.3
	% of adolescent girls benefiting from social protection schemes or scholarships	<1	<1	<1	<1
OUTCOME 3: Increased access to economic opportunities for girls at risk and affected by child marriage and their families	% of girls currently involved in income-generating activities	39.8	44.6	28.5	37.8
OUTCOME 5: Increased utilization of SRHR services that are responsive to the needs of young people	% of girls who are aware of youth-friendly health services and who have accessed them when needed	7.7	11.1	7.6	9.9
OUTCOME 6: Increased engagement and collective action against CM and in support of ASRHR	% of girls who believe in gender-equitable values	10.6	9.4	7.6	8.7

Table A5.4 Niger

	INDICATOR	Baseline		Midline	
		COMP	INT	COMP	INT
IMPACT: Young people are able to decide if and when to marry and pursue their SRHR in a supportive environment	% of girls who were married before 15 (of married girls)	77.9	74	81.5	68.5
	% of girls who were married before 18 (of married girls)	99.1	100	97.5	98.1
OUTCOME 1: Young people are better informed about SRHR, including adverse effects of CM, and empowered to voice needs and rights	% of girls who started menstruating, with basic knowledge about menstruation	4.3	5.5	7.8	7.5
	% of girls with basic correct knowledge on SRHR	16.7	17.7	8.4	17.7
	% of girls who know and can tell the legal minimum age at marriage for girls	40.6	18.9	29.3	19.1
	% of girls who can name at least THREE adverse effects of marriage before [legal age of marriage]	19.3	15	19.4	29.7
	% of (ever-) married girls who say they did not want to marry	31.9	22.1	28.4	13
	% of girls who feel empowered to voice their needs and rights re CM and SRHR	13.3	15.7	20.8	20.7
OUTCOME 2: Increased access to formal education	% of girls who ever attended school	53.3	70.3	54.8	74.7
	% of girls in school	27	51	26.8	53
	Mean number of years of schooling completed	2.4	3.7	2.3	3.8
	% of adolescent girls benefiting from social protection schemes or scholarships	1.3	<1	0	1.3
OUTCOME 3: Increased access to economic opportunities for girls at risk and affected by child marriage and their families	% of girls currently involved in income-generating activities	66	23.8	39.1	45.8

OUTCOME 5: Increased utilization of SRHR services that are responsive to the needs of young people	% of girls who are aware of youth-friendly health services and who have accessed them when needed	11	10	7.4	8.7
OUTCOME 6: Increased engagement and collective action against CM and in support of ASRHR	% of girls who believe in gender-equitable values	8	9.3	9.7	9.7

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