report

MORE THAN BRIDES ALLIANCE: BASELINE REPORT, MALI

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The **More Than Brides Alliance** Baseline Reports are available for India, Malawi, Mali, Niger.

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Executive Summary

We conducted baseline surveys of adolescents in select areas of two regions in Mali (Sikasso and Segou) as part of an evaluation of interventions to delay marriage. The goals of the baseline were to: 1) provide a benchmark against which changes resulting from the intervention may be measured at the midline and endline periods; 2) provide information about the current situation and context for adolescent girls in select areas in Mali in order to inform the intervention to delay child marriage; and 3) identify themes in need of further exploration through qualitative research. The baseline survey was carried out in partnership with a local research group based in Bamako (Centre d'Etude et de Recherche sur l'Information en Population et en Santé) (CERIPS). Baseline data collection included a household listing (n=2,831) that included data on females aged 10–21 living in the household and baseline surveys with female adolescents and young women aged 12–19 (n=855) to collect information on marital status and history, education, sexual and reproductive health knowledge and experience, learning outcomes, migration history, livelihoods, and social connections. Surveys were carried out in intervention villages (n=20) and comparison villages (n=20) that were chosen based on the same selection criteria.

Our sample included 300 girls in Sikasso and 555 in Segou, with a mean age of 15.1 years (Sikasso) and 15.3 years (Segou). The proportion of girls ever married was slightly higher in Sikasso (15.4%) compared to Segou (13.9%). Among respondents 15–19 years old, 25.2% reported ever being married, with a higher proportion in Sikasso (27.9%) compared to Segou (23.8%).

Overall, 59.6% of respondents were not enrolled in school, with a higher proportion not enrolled in Segou (64.1%) compared to Sikasso (51.3%). Among respondents, 62.7% reported ever going to school, with 6.3 mean number of years of schooling completed among those ever attending school. We conducted literacy assessments and found that despite almost two-thirds of girls having ever attended school, only 19.0% (Sikasso) and 16.3% (Segou) could successfully complete a two-sentence reading assessment in French.

We examined livelihoods opportunities to understand what alternatives exist for girls outside of early marriage. We found that overall, almost half of respondents (48.6%) 12–19 reported ever working to earn money. Among older respondents (15–19) the proportion was 57.0%. About one-fifth of respondents (20.6%) were currently working for income at the time of the survey. We also looked at social life and gender equitable attitudes to understand the situation of girls in these communities. In both regions, social norms around women's roles and position were troubling: 98.8% of girls agreed or strongly agreed that a woman should always obey her husband and 93.9% agreed or strongly agreed that a woman should tolerate violence to keep her family together.

The More Than Brides Alliance seeks to improve the lives of adolescent girls and includes activities across multiple domains (reproductive health, education, gender norms, and livelihoods, to name a few). Our findings suggest that girls in these communities have a demonstrated need for interventions to address these vulnerabilities. For example, we found that enrollment in school is low and many respondents cannot read or write, and cultural practices that influence early marriage, such as polygamy, are common. Our research also suggests that early childbearing is a significant problem that, combined with poor access to and knowledge of sexual and reproductive health, needs to be specifically addressed by adolescent programs. On the other hand, we found that a considerable number of girls report livelihoods opportunities providing an alternative trajectory, which may contribute to the overall decline in early marriage evident in the latest DHS reports. Additional data collection will help explore some of these topics in greater depth and provide a more nuanced understanding of the situation of adolescent girls in these communities. Findings from the baseline study will be used both to evaluate changes over time that may be attributable to the MTBA intervention and to inform programmatic staff seeking to understand the populations they are serving.

List of Abbreviations

CERIPS	Centre d'Etude et de Recherche sur l'Information en Population et en Santé
CSE	Comprehensive Sexuality Education
DHS	Demographic and Health Survey
INSTAT	National Institute of Statistics
LSE	Life Skills Education
MTBA	More Than Brides Alliance
SRHR	Sexual and Reproductive Health and Rights

Background

With over 59% of women aged 20–24 reporting being married by the age of 18, Mali has the sixth highest prevalence of child marriage in the world and the third highest prevalence in West Africa, after Niger and Guinea (DHS 2013). Child marriage (defined as marriage under age 18) has negative consequences for females: girls married early often enter marriage with low education levels and limited skills (UNICEF 2011). Girls married early also tend to have large age differences with their husbands, which may compromise their ability to make decisions about family planning and childbearing (Mensch, Bruce, and Greene 1998). The total fertility rate in Mali (6.1) is among the highest globally (DHS 2013) suggesting that strategies to address population growth may consider delaying first marriage as a strategy.

There are some regional differences as shown in Figure 1: Sikasso has the highest proportion of women aged 20–24 reporting marriage by age 15 (27.1%), while Kayes has the highest proportion of women aged 20-24 reporting marriage by age 18 (70.9%). The mean age at marriage among Malian women (aged 20–24), is 16.1 years, with the mean dipping below 16 years of age in Kayes and Sikasso. Bamako, the most urban of the regions, has the highest mean age at first marriage (16.7 years) (Table 1). Child marriage is lowest in the most urbanized region around Bamako. There are significant differences in marriage age between urban and rural areas in Mali, with young women in rural areas more likely to experience early marriage. Over one-quarter of women aged 20–24 residing in rural areas report being

The More Than Brides Alliance implements and evaluates the effectiveness of a range of interventions to delay child marriage, including education, economic opportunities, child promotion, SRHR services, community engagement, and others. In Mali and Niger, the Council is conducting a quasi-experimental matched study, and in India and Malawi a cluster randomized trial to evaluate whether and to what extent these child marriage interventions improve young people's ability to decide when to marry and pursue their sexual and reproductive health rights in a supportive environment.

FIGURE 1. Percent married by age 15 and 18, women aged 20–24 (DHS 2012/13)

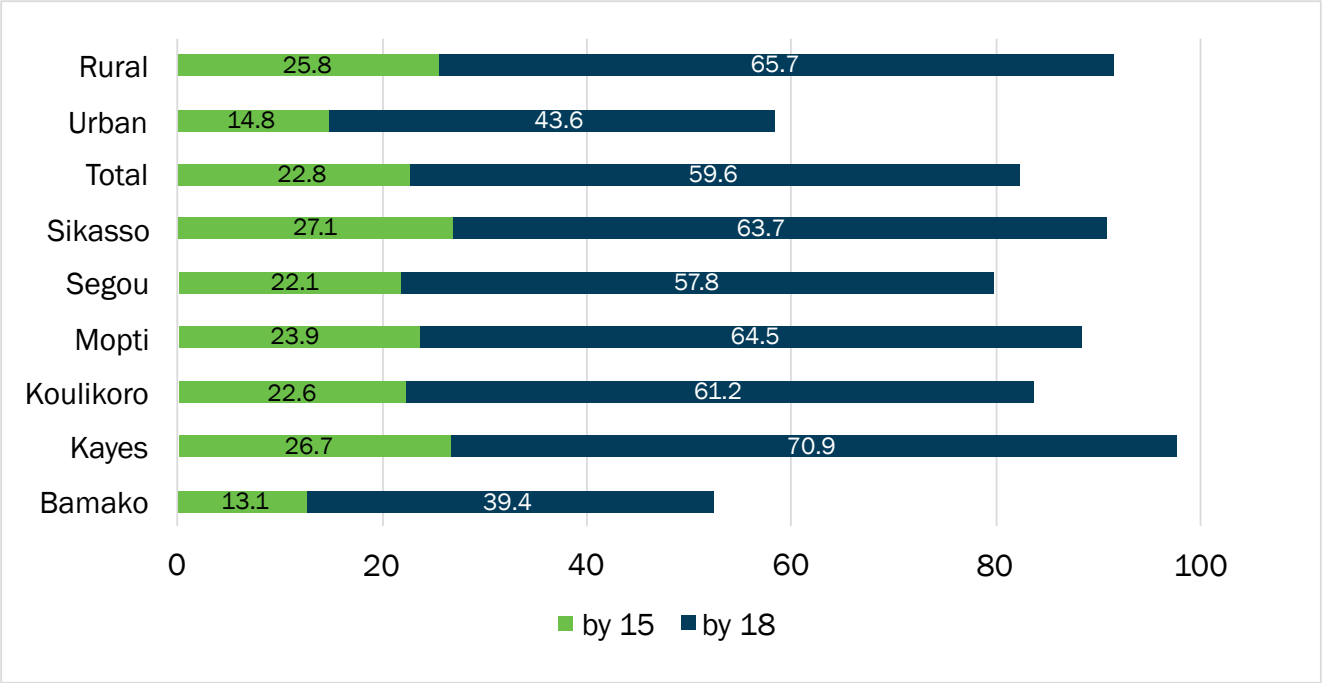


TABLE 1. Mean (median) age at first marriage, women aged 20–24 (DHS 2012/13)

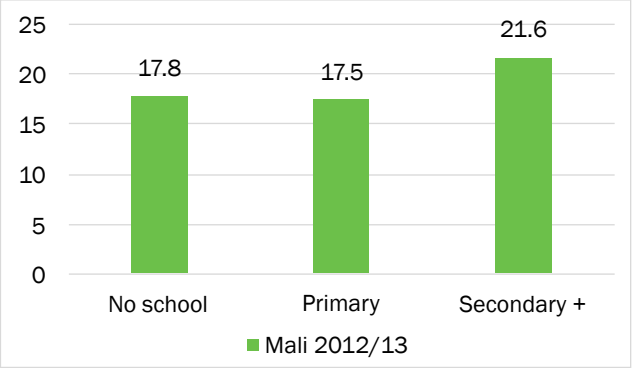
Region	Mean (Median)
Bamako	16.7 (17)
Kayes	15.5 (16)
Koulikoro	16.2 (16)
Mopti	16.0 (16)
Segou	16.3 (16)
Sikasso	15.9 (16)
Total	16.1 (16)

married by the age of 15 (25.8%), as compared with 14.8% of women in urban areas. This gap doubles when considering women married by age 18: 65.7% of women aged 20–24 residing in rural areas report being married by age 18, compared to 43.6% in urban areas.

Polygamy and bride price are important marriage practices in Mali and may have important implications for early marriage. According to DHS data, 35% of all married women report being in polygamous unions (DHS 2012/13). Some data suggest that women married earlier are more likely to be in polygamous unions, as they may be married as "additional" wives. An International Center for Research on Women (ICRW) report from 2015 found that 36.2% of Malian women married before the age of 18 were in polygamous unions, compared with 25.7% who were married after age 18. There is some urban/rural and regional variation in the prevalence of polygamous unions: polygamy is more common in rural areas (38% of women report being in polygamous unions) than in urban areas (22%) and is most common in Sikasso (44%), Mopti (38%), and Kayes (37%) where the mean age at first marriage is lowest (DHS 2013).

School enrollment among adolescents as measured by primary school completion rates is among the lowest in the world (UNESCO 2014) in Mali, and school dropout for both genders occurs early. Among 10–14- year-olds the percentage of females not in school is 57.8% nationally and higher in rural areas (66.1%). Among males nationally, these numbers are also high (49.1% of those 10–14 are not in school). Among those 15–19, the numbers are much worse: three-quarters of all females 15–19 are not in school (75.4%) and 84.8% of girls 15–19 in rural areas are not in school. In some regions, more than 90% of 15–19-year-old females have already left school (DHS 2006, data not shown).

FIGURE 2. Median age at first marriage (all women), by level of school (DHS 2012/13)



The association between girls' schooling and delayed marriage is well documented in Mali, and female education is widely considered to be a protective factor against child marriage. As Figure 2 shows, the median age at marriage increases as the level of schooling increases. Among women with reported education levels of secondary or higher, the median age at first marriage was 21.6 years, compared to 17.5 years for those with primary school and 17.8 years with no school.

Intervention

The More Than Brides Alliance (MTBA) is a program implemented by Save the Children Netherlands, Oxfam Novib, and Simavi that aims to improve outcomes for adolescent girls in five countries: India, Malawi, Mali, Niger, and Pakistan. Broadly, the MTBA programs have defined five key result areas:

- Empowering at-risk and already-married adolescents, girls in particular, with life skills education (LSE), comprehensive sexuality education (CSE), and sexual and reproductive health and rights (SRHR) information;
- Providing alternatives to child marriage and mitigating the impact on married girls, through enhancing access to education, economic opportunities, and child protection systems for girls and their families;
- Increasing access to SRHR services for young people;
- Changing social norms;
- Influencing legal and policy frameworks.

In Mali, the MTBA is being implemented in Sikasso and Segou regions by Save the Children and Oxfam Novib, respectively, in cooperation with local NGOs. As the research

and learning agenda partner of the MTBA, the Population Council is evaluating interventions in India, Malawi, Mali, and Niger.

Study Aims

The aims of this baseline study were to: 1) provide a benchmark against which changes resulting from the MTBA intervention may be measured at the midline and endline periods; 2) provide information about the current situation and context for adolescent girls in select areas in Mali to inform the MTBA intervention; and 3) identify themes in need of further exploration through qualitative research.

Methods

The baseline 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.
- Baseline survey of females aged 12–19 in select intervention and comparison communities. Categories of questions included:
    - Background Characteristics
    - Migration
    - Education and Schooling Experience including Literacy and Numeracy Evaluation
    - Reproductive Health Knowledge
    - Marriage and Dowry
    - Sexual Experience
    - Mobility
    - Social Context
    - Gender Equality
    - Livelihoods

The MTBA seeks to improve the lives of adolescent girls, including increasing school enrollment and educational attainment, improving reproductive health outcomes, and empowering girls to have more agency in decisions about their lives, including marriage. 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 are less direct but still influence the pathway (e.g., migration may make girls more or less vulnerable to negative outcomes depending on the circumstances surrounding the migration). We collect data on indicators that help us measure program impact and help us better understand the context and constraints around key outcomes in order to inform program design and delivery.

The study was implemented in Segou and Sikasso regions of Mali by the Centre d'Etude et de Recherche sur l'Information en Population et en Santé (CERIPS) based in Bamako. Figure 3 shows the locations for baseline data collection.

Ethical review: Ethical and research clearance for this study was issued by the Institutional Review Board of the Population Council and by the Comite d'Ethique de L'INRSP of the Ministry of Health and Public Hygiene in Bamako.

Sample size: We conducted sample size estimations using Optimal Design, assuming that half of data collection areas would be designated as comparison areas. Calculations and our assumptions are included in Appendix 1. We estimated that we would reach 80% power with 40 clusters (enumeration areas) and 20 girls per cluster for a total sample size of 800 females aged 12–19.

Trial design: We used a quasi-experimental[1] design selecting intervention and comparison areas on key indicators as provided by implementing partners. Due to program implementation plans, we were not able to conduct a cluster randomized design.

Data Collection

Site Selection

Intervention areas: Intervention villages for the MTBA program were selected by the implementing partners (Save the Children and Oxfam Novib). Selection criteria included:

1) Existence of school infrastructure (primary and secondary school);

2) Existence of health infrastructure (community health center, dispensary, maternity clinic, and pharmacy);

[1] In quasi-experimental designs treatment is not randomly assigned. By contrast, in experimental designs where treatment is randomized, it is assumed that intervention and comparison groups are similar at baseline.

3) Population size and estimated number of adolescents;[2]

4) Accessibility during all seasons of the year;

5) Previously implemented child marriage intervention that was a precursor to MTBA[3] and/or partnership on quality education and human rights and protection in Segou area;

6) Absence of other child marriage interventions.

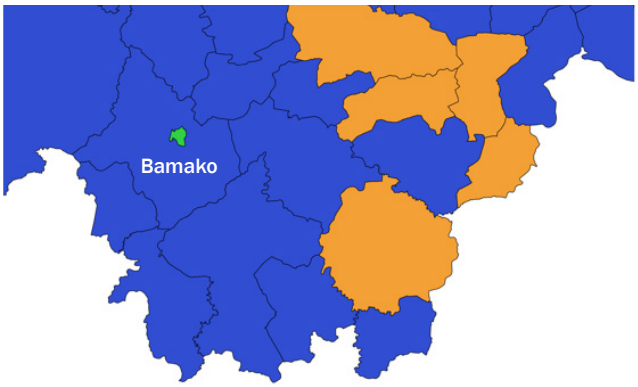
From the list of intervention villages selected for the MTBA program (n=43), we randomly selected 20 villages to serve as intervention villages for the baseline survey. Note that of the 43 intervention villages, 31 are served by Oxfam Novib and located in Segou and 12 are served by Save the Children and located in Sikasso.

Comparison areas: Because the selection of intervention villages was so specific, we aimed to select comparison areas that met as many of the intervention selection criteria as possible. We asked implementing partners to provide a list of villages within the same districts as the intervention villages that met the selection criteria for intervention villages. Note that not all selection criteria could be met; for example, we do not have comparison villages that previously implemented the child marriage intervention that was a precursor to MTBA. From the list of suitable comparison areas provided by the partners (n=245) we removed villages with populations too large or small to be comparable to intervention villages (n=54) based on the population size of intervention villages (between 1,100 and 12,000). We then randomly selected 20 villages to serve as comparison villages from the remaining villages (n=191).

Data Collection

Enumeration areas: Although we randomized at the village level, to standardize data collection we selected enumeration areas[4] to serve as the boundaries for the collection of the household listing data. Enumeration areas, including maps of these areas, were acquired from the National Institute of Statistics (INSTAT) in Bamako. For selected villages with more than one enumeration area, we randomly selected one enumeration area to be included in the baseline data collection. Once selected, all households within that enumeration area were visited and data on females aged 10–21 living in that household were collected from an adult household member.

FIGURE 3. Baseline data collection areas



Participants: All households within the selected enumeration area were eligible for inclusion in the study. If the household reported no adolescent females aged 10–21, the listing was quite short. From the household listing frame, we randomly selected households with females aged 12–19 years of age for participation in the baseline survey. Only one female per household was randomly selected to participate in the baseline survey.

Household Listing and Baseline Survey

In July and August 2016, the household listing and household survey data collection were carried out in select communities in Segou and Sikasso. Female enumerators were selected from a roster of enumerators with previous experience working with CERIPS. Fifteen female enumerators were selected for their experience working on surveys with adolescents and/or surveys with sensitive topics. Training took place in Bamako from July 11–16, 2016. Data collection enumerators participated in a 6-day training session that included background information about the project, study goals and objectives, the content of the household listing and baseline survey tools, data entry, and research ethics and participant protection. Pretesting of the tools was conducted during the training. Three survey teams were created with one supervisor and four enumerators each.

[2] Intervention areas had a population size of at least 1,100 but less than 12,000 persons.
[3] The program *My Rights My Voice* was implemented in multiple countries including Mali. More information is available here: http://policy-practice.oxfam.org.uk/our-work/youth/youth-participation/my-rights-my-voice
[4] Enumeration areas are geographic areas specified by the Census.

Enumerators trained by CERIPS conducted the data collection in tandem, first conducting the household listing in select enumeration areas (n=40; 20 intervention and 20 comparison) and then randomly selecting participants (n=22 per enumeration area) for the baseline survey from the household listing. All data from the household listing were captured electronically using mobile phones. The baseline survey was also completed electronically. A total of 2,831 households were listed and a total of 855 baseline questionnaires were completed.

Individual written informed consent was obtained from all participants prior to conducting the interviews. For adolescents under age 18, parental permission was first obtained before obtaining adolescent assent.

Data for key indicators (proportion married, proportion who had begun childbearing, proportion in school) were collected in both the household listing and baseline survey instruments. Data from the household listing were collected from the head of household or another adult about females aged 10–21 living in the household, thus data from the household listing may be subject to bias. Data from the baseline survey were collected directly from female respondents aged 12–19.

Data Analysis

Data were entered directly into SurveyCTO via a mobile app and uploaded to a secure server. Data were downloaded into STATA 14.1 for cleaning and analysis. Data analysis primarily focused on descriptive statistics for variables of interest. We use geographic comparisons in each section; however, we provide a table examining intervention and comparison areas in Appendix 2.

Demographic Characteristics

Table 2 shows key demographics for the sample, by region. We found that Sikasso and Segou were similar on most demographic variables of interest, but the proportion married was slightly higher in Sikasso (15.4%) compared to Segou (13.9%). There were notable differences in religion, with a much higher proportion of non-Muslim respondents in Sikasso (23.5%) than Segou (4.3%).

Figure 4 shows the age distribution of respondents in the baseline survey. The higher proportion of girls age 12, and lower proportion of girls age 19 is expected in a rapidly growing population where each birth cohort is larger than the previous. There is also evidence of age heaping due to digit preference for ages 12, 15, and 18 in a pattern that is well-documented for populations where age is not known and has to be estimated. Table 2 shows that overall the mean age of respondents was 15.1 in Sikasso and 15.3 in Segou. The percentage of adolescents married is slightly higher in Sikasso compared to Segou. Among those who are married, the mean age at marriage is similar in the two regions. Table 2 shows other important background characteristics: the overwhelming majority of adolescents have parents who have no education, with mothers less likely to be educated than fathers. About two-thirds of adolescents have a national ID card and the rate is similar in both regions. Sikasso has a higher proportion who are non-Muslim (23.5%) compared to Segou. Women in both regions have high fertility, with adolescents interviewed who have 5.3 and 5.0 siblings in Sikasso and Segou, respectively. The income distribution in the two regions is similar, with equal proportions in the lowest quintile. A question about whether the respondent has always lived in their current village of residence suggests that migration is higher in Segou.

Because ethnicity may influence early marriage, with some ethnic groups favoring early marriage practices or being more likely to practice polygamy, we examined ethnicity in the different regions. Overall, the most commonly reported ethnicities were Senoufo/Minianka (35.0%) and Bambara (33.1%), with Peulh (7.2%) and Bobo (7.3%) the next most common. In Sikasso, the majority of respondents were Senoufo/Minianka (73.3%), while in Segou about half were Bambara (47.6%), followed by Senoufo/Minianka (14.1%) and Peulh (9.2%) (see Table 3).

FIGURE 4. Number of respondents, by age

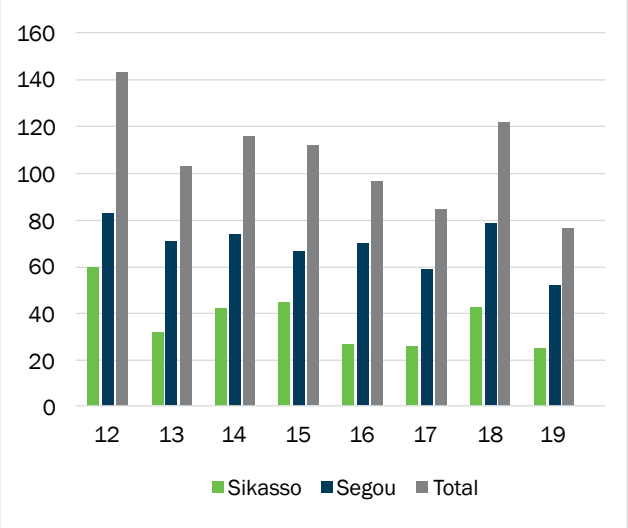


TABLE 2. Key demographic indicators (n=855)

	Sikasso N=300	Segou N=555
Age (mean)	15.1	15.3
Respondents who were currently married (%)	15.4	13.9
Respondents who were ever married (%)	15.4	14.2
Age at marriage (mean)	16.1	16.1
Parental education		
Mother has no formal schooling (%)	91.1	85.3
Father has no formal schooling (%)	79.2	75.6
Has a national ID card	63.0	60.3
Is non-Muslim (%)	23.5	4.3
Number of siblings (mean)	5.3	5.0
Lowest wealth quintile (%)	19.0	20.5
Has always lived in that village (%)	91.0	86.1

TABLE 3. Ethnicity, by state (n=852)

	Sikasso N=300	Segou N=552	Total N=852
Bambara	6.3	47.6	33.1
Bobo	6.7	7.6	7.3
Dogon	1.3	1.3	1.3
Malinke	0.3	2.9	2.0
Peulh	3.3	9.2	7.2
Sarakole/Soninke	0.3	5.8	3.9
Senoufo/Minianka	73.3	14.1	35.0
Sonrai	0.0	2.5	1.6
Tamachek/Bella	0.0	1.1	0.7
Other	8.3	7.8	8.0

Note: Numbers may not add to 100.0 due to rounding. Three respondents declined to answer.

Early Marriage

Overall, 25.2% of females aged 15–19 in our sample reported ever being married. In Sikasso, 27.9% of females aged 15–19 reported ever being married and in Segou it was slightly lower at 23.8%. Among the entire sample (females aged 12–19), 15.4% of females in Sikasso were ever married compared to 14.2% in Segou. Only one respondent younger than 15 reported being married. Very early marriage (before age 15) was low: 9.0% of females aged 15–19 in Sikasso reported being married by age 15 and in Segou it was only 7.0%. Figure 5 shows proportions married by age overall and by region, suggesting that the proportion of girls married begins to accelerate after age 16 and by age 19 nearly 70% of girls in Sikasso and half the girls in Segou report being ever married.

In Table 4, we examine key characteristics of early marriage such as proportion in polygamous unions (30.4% in Sikasso and 23.0% in Segou) and mean age difference with spouse: among those who are married, the mean age difference between partners was 10.4 years, with 59.3% reporting husband's age as 10 or more years older, 31.4% between 5 and 10 years older, and 9.3% fewer than 5 years older or the same age. There were slight differences between the regions, with the mean age differences 11.6 years in Sikasso and 9.8 years in Segou. Divorce and widowhood is uncommon and the proportion of those who are currently married and ever married is similar. The survey suggests that early marriage is normalized in these contexts. Girls are not aware of the adverse effects of child marriage (only 11.5% of girls can name three or more adverse effects of early marriage for girls) or about the minimum provisions about age at marriage in the law (only 7.1% could correctly identify 16 as the legal age at marriage for girls in Mali). These may be important entry points in terms of initiating community conversations about child marriage. Programs need to assess the extent to which the issue of child marriage is problematized in the local context before undertaking program initiatives toward ending the practice.

KEY FINDING

25.2% Proportion of girls aged 15–19 ever married (full sample)

FIGURE 5. Proportion ever married, by age

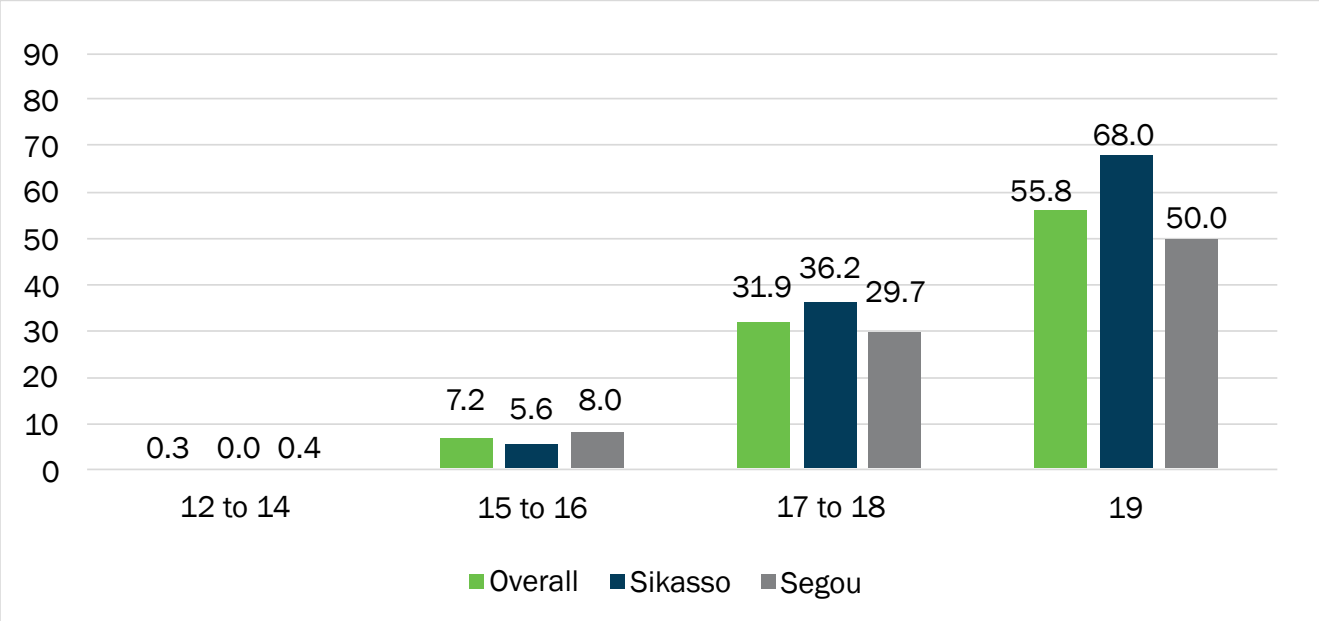


TABLE 4. Key indicators related to marriage, girls aged 12–19, by region

	Sikasso N=300	Segou N=555
Currently married (%)	15.4	13.9
Ever married (%)	15.4	14.2
In polygamous union (among married) (%)	30.4	23.0
Mean age difference w/spouse (among married) (years)	11.6	9.8
Know age 16 is legal age at marriage for girls	8.5	6.3
Can name at least three adverse effects of early marriage for girls	6.7	14.0

7.1%: Girls can correctly identify the legal age of marriage for girls in Mali (16).

11.5%: Girls can name at least three adverse effects of early marriage for girls.

10.4 years: Mean age difference between partners (among married girls).

Adolescent Childbearing

In West Africa, it is generally assumed that childbearing only occurs within marriage and there is little or no premarital childbearing or sexual activity (only 4–6% of pregnancies occur out of wedlock) (Center for Reproductive Law and Policy 1999). However, some studies have found that premarital sex and childbearing outside of marriage are on the rise in Mali, particularly in urban areas (Gueye, Castle, and Konaté 2001). We asked respondents aged 15 and older (n=493) about their pregnancy experiences. We found that 9.3% of never-married girls (n=365) reported ever being pregnant (n=34) with 23.5% (n=8) of those girls currently pregnant at the time of the interview. The mean age of never-married girls who reported ever being pregnant was 17.6 years. Among ever-married girls, 61.3% reported ever being pregnant.

The high proportion of married girls who have begun childbearing may be due in part to lack of access to reproductive health knowledge and access to services and contraceptives. Among married girls, there is limited use of family planning (17.5% of married girls over age 15 report using family planning). Knowledge of family planning is mixed: among all respondents over age 15, most know about condoms (72.3%) and the pill (67.4%) but 43.4% did not know that condoms should only be used once and 73.1% did not know how frequently pills needed to be taken to be effective. Table 5 shows key reproductive health indicators, by state. Among ever-married girls, we looked at use of family planning and agency to make decisions about family planning. Among those ever married and not pregnant at the time of the survey (n=89), only 16.8% were currently using family planning. Among those using family planning, we asked about whether her husband knew about the use of family planning, and 60% reported that he did, though an important caveat is that this number was based on a very small number of cases (n=10). Among ever-married non-pregnant respondents, 21.0% reported that their husbands had ever refused to use a method or tried to prevent them from using a method.

43.6%: Girls know about HIV and know that using a condom every time they have sex can reduce their risk of acquiring HIV.

8.3%: Girls report their community has a youth-friendly health clinic.

9.3%: Never married girls who were ever pregnant.

Low usage of family planning may be due in part to lack of access to youth-friendly health facilities.[5] Among respondents over age 15, only 8.3% (n=41) reported that their community had a youth-friendly health facility and only 29.3% (n=12) of those (2.4% of all respondents over age 15) reported ever visiting a youth-friendly health facility in their community.

[5] This was asked as "Does your community have an adolescent health center/youth-friendly health facility?" If the respondent answered "yes," she was then asked "Have you ever visited the adolescent health center/youth health center"?

TABLE 5. Key reproductive health indicators, by state

	Sikasso	Segou	Total
Ever pregnant, among ever married (%)	58.7	62.8	61.3
Ever pregnant, among never married (%)	9.3	9.3	9.3
Use family planning, among ever married	(9.1)	(21.9)	17.5
Have heard of condoms (%)	67.9	74.5	72.3
Do not know that condoms should only be used once to be effective (%)	37.5	46.1	43.4
Have heard of the pill (%)	60.0	71.2	67.4
Do not know that the pill must be taken daily to be effective (%)	68.7	74.6	73.1
Know about HIV and know that using a condom every time reduces their risk (%)	38.0	46.7	43.6
Report their community has a youth-friendly health facility (%)	9.1	8.0	8.3

Figures in parentheses are based on fewer than 10 cases.

Education

Increasing access to and engagement in formal education is an important component of the MTBA program. We examined both enrollment in school, number of years of education completed, and assessed literacy and numeracy. Figure 6 shows the proportion of girls not enrolled in school, by age, suggesting that enrollment rates are already quite low by age 12 (54.2% of 12-year-olds not enrolled in school) and proportions enrolled drop around age 15 and decrease steadily as girls age, culminating in 74.0% of 19-year-olds not enrolled in school). Examining these data by region, we find that the proportion not enrolled in school is consistently higher in Segou compared to Sikasso (overall 64.1% of those in Segou are not in school compared to 51.3% in Sikasso).

We also looked at years of school completed among those ever enrolled, comparing regions. In Sikasso, the mean number of years of education completed was 6.2, while in Segou it was 6.3 years. Table 6 shows key education variables by region.

Table 7 examines key education variables by marital history. Married adolescents were less likely to have ever attended school than adolescents who were currently unmarried. Marriage effectively ends formal schooling, with 91.2% not attending school compared to 54.5% among girls never married. Married adolescents are also less likely to be able to read or write (65.6% compared to 45.6%) despite having more years of schooling on average. Among those currently attending school, 4.8% in Sikasso and 8.6% in Segou report not being able to read or write.

In addition to experience with schooling, we also examined literacy by asking respondents whether they could read, write, do both, or do neither (self-assessment) and by administering a short assessment of reading skills

40.4%: Girls 12–19 currently enrolled in school.

9.9%: Girls ever harassed in school.

6.3: Mean years of education completed (among ever-attended school).

FIGURE 6. Proportion not enrolled in school, by age (n=855)

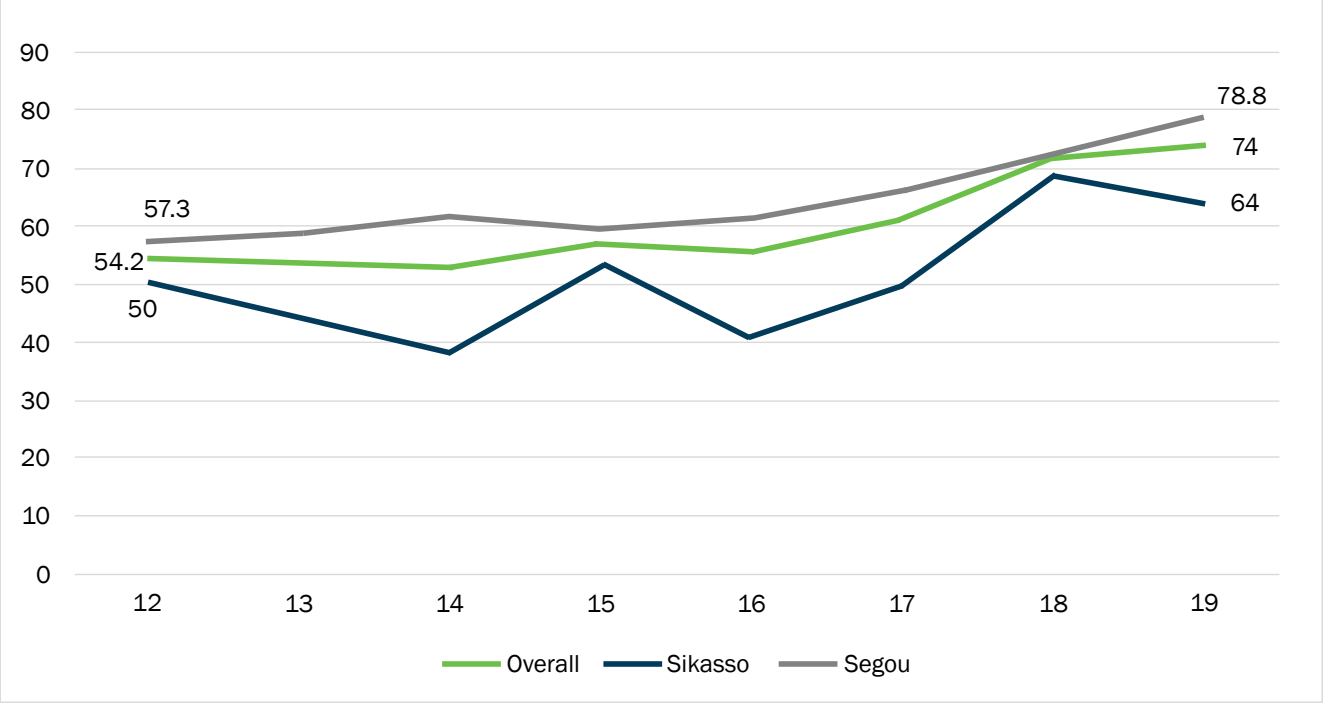


TABLE 6. Key education variables, girls aged 12–19 (n=855)

	Sikasso N=300	Segou N=555	Overall N=855
Never attended school (%)	34.3	38.9	37.3
Not currently enrolled in school (%)	51.3	64.1	59.6
Cannot read or write (full sample) (%)	45.0	53.0	50.2
Cannot read or write (among currently attending school) (%)	4.8	8.6	7.0
Cannot read or write (among ever attended) (%)	16.7	25.4	22.2

TABLE 7. Key education variables, by marital history, girls aged 12–19 (n=854)

	Ever married N=125	Never married N=729
Ever attended school (%)	50.4	64.7
Not currently enrolled in school (%)	91.2	54.2
Years of school completed (among ever attended school) (mean)	6.5	6.2
Cannot read or write (%)	65.6	47.6
Age (mean)[a]	17.8	14.8

[a] Differences may be due in large part to age, as ever-married girls are, on average, three years older than never-married girls.

(Table 8). Self-reported literacy is higher in Sikasso compared to Segou. In Sikasso, 51.0% of respondents can read and write compared to 40.6% of those in Segou. We examined this by education level and found that among those currently enrolled in school, 90.4% in Sikasso and 85.8% in Segou report being able to read and write. Among those not currently enrolled in school, only 13.6% in Sikasso and 15.1% of those in Segou report being able to read and write. In addition to self-reported data, we also conducted a literacy assessment, asking respondents to read two sentences in French (the language of instruction). In Sikasso, 21.0% and 17.1% in Segou could read at least one of the sentences and 19.0% (Sikasso) and 16.3% (Segou) could read both. Among those enrolled in school, 35.6% in Sikasso and 37.6% in Segou could read both sentences. These findings suggest that school quality may be low. We also asked about education aspirations to explore what girls want in terms of educational opportunities. Among those who had ever gone to school (n=536) the most common response to the question of "how far would you like to continue school" was beyond baccalaureate/license (31.0%) with baccalaureate/license (18.3%) and professional school (11.2%) the next most common response.

KEY FINDING

50.3% **Proportion of girls who cannot read or write (overall sample)**

We also asked girls how far their parents would like them to go in school. The most common response was "to the level I want," at 24.4% with more than baccalaureate/license (23.1%) and baccalaureate/license (14.9%) also common. A substantial number of girls (n=97, 18.1%) did not know when asked how far their parents would like them to go in school.

TABLE 8. Self-reported and assessed literacy, by state and school status (n=852)

	Sikasso			Segou		
	Overall	By school status		Overall	By school status	
		Not enrolled	Enrolled		Not enrolled	Enrolled
Can read and write (self-reported)	51.0	13.6	90.4	40.6	15.1	85.8
Can read one (of two) sentences in French	21.0	7.1	35.6	17.1	7.4	34.5
Can read both sentences in French	19.0	3.2	35.6	16.3	4.6	37.6

Livelihoods

Research suggests that poverty and limited opportunities for income generation are key factors influencing early marriage in some settings (Malhotra et al. 2011). We asked respondents about their experience working for income and the kinds of work they have done. The data suggest that many girls are already engaged in income-generating activities: 48.6% of respondents aged 12–19 reported ever working to earn money. Among older respondents (15–19) the proportion was 57.0%. For those who reported ever working (n=413), we also asked about whether respondents were currently involved in income-generating activities and found that 42.6% were currently working, with a higher proportion in Sikasso currently working (51.5%) compared to Segou (38.4%).

Among those currently working, we asked about occupation, hours worked, and monthly income received. The most common occupations were trader (48.3%), farming/agricultural worker (26.1%), and housekeeper/domestic worker (15.9%). There were also regional differences: in Sikasso, farming/agricultural worker was the most common occupation (47.0%) followed by trader (41.2%), but in Segou the most common occupations were trader (52.8%) followed by housekeeper/domestic worker (23.1%). Among those working for income, the mean amount earned per month was 15,659 CFA (about US$26).

Overall, 25.2% of the baseline sample reported saving money for the future. Almost no participants (0.5%) reported saving in a bank. The majority reported keeping savings at their house (70.2%) or with a friend or relative (28.8%). The most common reasons for saving were for clothing/shoes or other personal items (46.0%), for marriage (26.5%), and for emergencies (18.1%).

Exploring data on livelihoods strategies adopted by adolescent girls living in Sikasso and Segou shows that girls engage in livelihoods activities from an early age and nearly half of all girls work to earn a living. The earnings reported by girls compared to the poverty line (an estimate of the level of income required to maintain a basic minimum standard of living) suggest that working girls may earn enough to support themselves. Reported rates of savings are also high and there are important differences between intervention and comparison areas. Despite these high propensities to save, the data indicate that access to safe savings institutions is limited and young people resort to informal ways of safeguarding their earnings by relying on family members and other relatives to store their money.

42.6%: **Girls currently involved in income-generating activities (among girls 12–19 who ever worked).**

25.2%: **Girls report saving money for the future.**

[6] According to the World Bank, in 2010 49.3% of people were living on less than $1.90 a day. http://povertydata.worldbank.org/poverty/country/MLI

TABLE 9. Key livelihoods indicators, by state

	Sikasso	Segou	Overall
Ever worked to earn money (12–19) (%)	44.1	51.0	51.4
Ever worked to earn money (15–19) (%)	54.2	58.5	57.0
Currently working to earn money (among ever worked) (%)	51.5	38.4	42.6
Report occupation as trader (among currently working) (%)	41.2	52.8	48.3
Report occupation as farming/agricultural (among currently working) (%)	47.0	13.0	26.1
Report occupation as domestic worker (among currently working) (%)	4.4	23.1	15.9
Mean income per month (among currently working) [CFA (USD)]	13,113 ($22.50)	17,223 ($29.62)	15,659 ($26.88)
Report saving for the future (%)	23.7	26.0	25.2

Adolescent Social Life

Interventions to address early marriage should aim to understand the social context in which girls live, including an understanding of the prevailing gender norms and attitudes toward women. To better understand the social context in these communities, we examined gender equitable attitudes, asking respondents questions related to girls' rights, girls' standing in their family compared to boys, attitudes toward violence against women, and notions of male masculinity. We examined responses to these questions by marital status, assuming that ever-married girls may have a different perspective than their nonmarried peers, as well as by region. Results are shown in Table 10. Across all categories shown, married and unmarried by region, responses uniformly reflected that respondents held highly gender-inequitable attitudes with regard to appropriate roles for women. The overwhelming majority thought women ought to be responsible for household chores and cooking; that it was the women's responsibility to take care of the household. We also found that respondents felt that women should obey their husbands and tolerate violence to keep their family together, though far fewer respondents agreed that there are times when a woman deserves to be beaten.

In addition to examining attitudes, we were also interested in understanding the social life of girls in these communities. We asked girls about experiences of teasing or harassment, comparing respondents in Sikasso and Segou. Responses to key items are shown in Figure 8. In these communities, over one-third of respondents reported experiencing teasing or harassment. Among those who did, harassment was commonly experienced outside the home (73.7% and 72.7%, Sikasso and Segou, respectively) and less commonly experienced at school (24.6% and 27.7%, Sikasso and Segou, respectively).

We know from previous research that once girls get older their worlds shrink compared to their male peers (Hallman et al. 2015) and our findings suggest that girls in our research have limited mobility. Overall, 66.6% of respondents reported that they could not go out after sunset (no difference by region). We found that fewer girls aged 15 and older reported being able to go out after sunset unaccompanied (26.8%) compared to those under 15 (33.9%). Most respondents (91.2% in Sikasso and 90.3% in Segou) report that their parent or guardian worries about their safety.

40.1%: Girls report not being part of a club or group.

98.8%: Girls agree or strongly agree that a woman should always obey her husband.

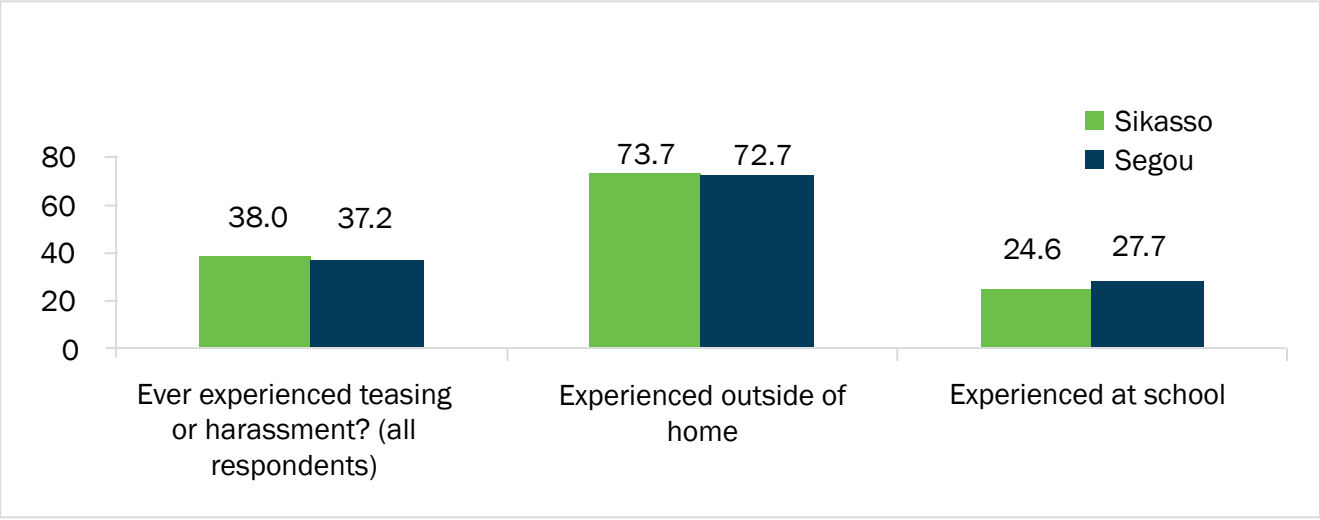
93.9%: Girls agree or strongly agree that a woman should tolerate violence to keep her family together.

The findings suggest that in these communities there are traditional gender norms around marriage and women's role within the family. Respondents noted that neither boys nor girls have a right to refuse an arranged marriage. In both Sikasso and Segou and among those married and unmarried, respondents agreed that a woman's role in the household was the most important, violence should be tolerated to keep a family together, and women should obey their husbands. Never-married girls were less likely than married girls to report fertility control as strictly the woman's responsibility, although more than half still agreed it was the woman's responsibility. Interventions to address early marriage in these communities should work to address prevailing gender norms that limit agency and opportunities for adolescent females.

TABLE 10. Gender-equitable attitudes, respondents aged 12–19

	Percent agree/strongly agree			
	Sikasso		Segou	
	Ever married	Never married	Ever married	Never married
	N=46	N=253	N=79	N=476
Marriage decisions				
Boys do not have the right to refuse an arranged marriage	93.5	94.1	987	96.2
Girls do not have the right to refuse an arranged marriage	93.5	94.8	98.7	97.4
Gender roles				
The most important role of a woman is to take care of the household and cooking for her family	93.5	94.1	91.1	91.4
It is the woman's responsibility to avoid getting pregnant	69.6	55.3	77.2	58.1**
If someone insults a man, he should defend his reputation, by force as necessary	65.2	72.1	79.7	72.8
A woman should always obey her husband	100.0	98.4	100.0	98.7
A woman should have the right to divorce her husband	26.1	32.1	38.5	35.0
Violence acceptance				
There are times when a woman deserves to be beaten	26.1	36.0	36.7	37.5
A woman should tolerate violence in order to keep her family together	95.6	89.6	97.5	95.4
A woman cannot refuse to have sex with her husband (asked to aged 15 and older)	67.4	24.3	62.0	30.1
When a woman is raped, it is usually her fault for being in that situation	34.8	15.5	45.6	18.1

FIGURE 8. Experience of teasing or harassment



Discussion

We examined the lives of adolescent girls, including reproductive health knowledge and experiences, education and learning outcomes, and experience with and perceptions of early marriage, with an eye toward areas where interventions could improve outcomes for girls in these communities. In surveying girls in select communities in Sikasso and Segou we have a more nuanced understanding of the lives of girls in these communities than available in surveys such as the DHS, while also providing a baseline measurement against which to measure program impact.

There are a number of interesting findings that lend themselves to further consideration as the MTBA program implementation gets underway, and we highlight a few here:

- We found that although girls in our sample are more likely to be educated than their parents, a significant proportion have still never attended school (37.3%) and among those who have ever attended school a significant proportion (16.7% in Sikasso and 25.4% in Segou) report not being able to read or write suggesting that school quality may be low. Interventions targeting in-school girls and/or interventions that rely on girls' ability to read will miss important subpopulations that may be particularly vulnerable to early marriage.
- Age differences between partners are quite large, with more than half of married girls reporting a partner at least 10 years older. The literature suggests that girls with much older partners are less likely to have the ability to make decisions, including those related to fertility, which may have important implications for interventions to address reproductive health access and uptake. Large age differences also imply the high likelihood that the husbands will pre-decease their wives, which means that girls who are younger than their husbands have a high probability of being widowed or single parents later in life.
- Regarding fertility and childbearing, we found that a significant proportion of never-married girls reported ever being pregnant (9.3%), and that among those married pregnancy soon follows. Among married girls, there is limited use of family planning (82.5% of married girls over age 15 report not using family planning) and 61.3% report ever being pregnant. These findings suggest that interventions may look for ways to improve access to and use of contraception in these communities and to raise awareness of family planning among husbands.
- We were interested to learn that among our sample a significant proportion of girls were engaged in income-generating activities (57.0% of those aged 15–19 reported ever working for money) with trader being a common income-generating activity. The economic activity among this group suggests that there is potential for harnessing girls' skills and motivations to participate in the economy and also perhaps a need to include financial literacy training into programs so girls learn to manage their incomes. These findings may also explain the lower than expected proportions of girls ever married compared to the DHS: girls with livelihoods opportunities as an alternative to early marriage may have agency in delaying their marriages.

Evidence from baseline suggests that while the prevalence of child marriage among adolescents is lower in our sample than data from nationally representative surveys, other correlates of child marriage are similar and common. These differences may be attributable to differences within the country or to trends over time. As we found in the inception report, early marriage has been on the decline in Mali and may be representative of an overall developmental trajectory.

There are a number of limitations to consider. First, our research design did not allow for random allocation of communities and the communities selected for inclusion in the MTBA program and research may be better off than typical communities in Sikasso and Segou due to the criteria used to select program sites. For example, girls in these communities may have higher levels of education since the presence of secondary schools in these communities was a prerequisite. Another limitation is the timing of the data collection. We conducted fieldwork during the rainy season in Mali, which may influence which girls were available to be selected for the survey. During the rainy season some in-country migrant girls may have returned to their communities to participate in agricultural activities or some girls

may not have been able to travel home due to inclement weather and road conditions. Another potential limitation is self-reporting bias. Our survey asks a number of sensitive questions, including questions about early marriage, which is considered illegal for girls under age 16. Girls may not have been willing to answer truthfully about early marriage and other sensitive topics, such as sexual activity.

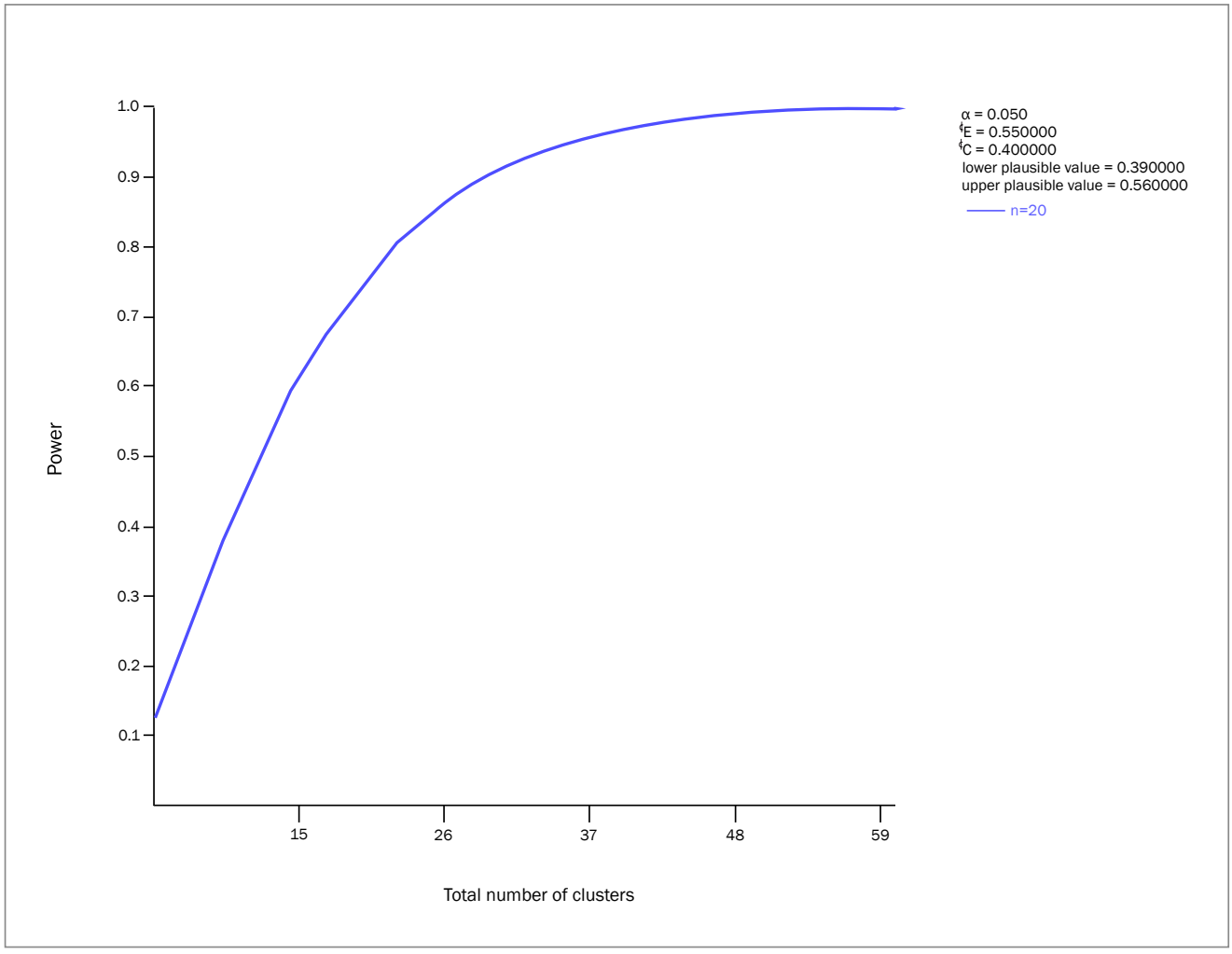
Despite these limitations, we believe this baseline survey provides rich information on the lived experience of girls in these communities and highlights a number of interesting findings that programs may consider as they design and implement interventions to improve the lives of adolescent girls in Sikasso and Segou. Additional data collection, including qualitative data and surveys at midline and endline will provide further information and will give us a sense of how the MTBA program influences the lives of adolescent girls in these communities.

Appendix 1

The MTBA intervention in Mali is implemented by Oxfam Novib and Save the Children and spread across 2 regions (Sikasso and Segou) with 2 districts in Sikasso (Sikasso, Yorosso) and 3 districts in Segou (Segou, San, Bla). We used a two arm matched comparison design in Mali using repeat cross sectional surveys. We selected both intervention and comparison areas (each representing 50% of the total sample) for the baseline survey based at the village (EA) level. Based on a target sample size of 800 girls (40 clusters of 20 girls each), we estimate a minimum detectable effect size of 15% for the outcome of proportion of females aged 12–19 married at endline.

Data from the 2012/13 DHS provide estimates of upper and lower plausible values for early marriage in Mali. From DHS data, we find that the proportion of females aged 15–19 currently married or in union varies from about 39% to 56%. Although the numbers for 12–19 will vary, we use these values and assume a total of 20 girls per village (EA) will be interviewed. We estimate with n=20 per village/EA we should have >80% power at 40 clusters (villages/EAs).

FIGURE 1. Power calculation for proposed sample size in Mali



Assumes cluster is the village (EA); upper and lower plausible values calculated from proportion 15–19 currently married (DHS data from 2012/13).

Appendix 2

TABLE 1. Key indicators, girls aged 12–19 in intervention and comparison areas

	Intervention	Comparison
	N=426	N=429
Currently married (%)	12.2	16.6
Ever married (%)	12.4	16.8
In polygamous union (among married) (%)	27.4	24.6
Mean age difference with spouse (among married) (years)	11.5	9.5*
Never attended school (%)	32.4	42.2
Not currently enrolled in school (%)	55.9	63.2
Cannot read or write (full sample) (%)	44.1	56.1
Cannot read or write (among currently attending school) (%)	6.4	7.6
Never attended school (%)	32.4	42.2

***p<.001, ** p<.01, *p<.05.

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