



Sisters of Success: Measuring the impact of mentoring and girls groups in supporting girls’ transition into adolescence and adulthood, in Liberia
BASELINE SURVEY FULL-LENGTH REPORT

This report summarizes the findings from a baseline survey conducted between October 2013 and January 2014 for the impact evaluation of the Sisters of Success (SOS) program in Monrovia, Liberia. Data was collected during the baseline from 2,884 girls and one guardian for each girl.

This report’s primary focus is describing the lives of these girls, prior to the start of the SOS program, with focuses on schooling, sexuality, and self-esteem and self-efficacy. Additionally we describe girls’ households' composition and financial situations, including parental involvement and support; girls’ time use; girls’ income generating activities; histories of domestic and sexual abuse; and girls’ mentors and role models prior to the SOS program.

The extent to which the results of our study can reasonably represent the results one would expect for other girls in Greater Monrovia depends on how similar the girls and households in our study are to a representative sample of girls in Greater Monrovia. Analysis suggests that they are in fact quite similar.

A separate two-page long executive summary style report on findings from the baseline survey is also available.

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1 About the Sisters of Success Program

The Sisters of Success (SOS) program was designed by the International Rescue Committee (IRC) to support girls' transition into adolescence and adulthood, and took place in Liberia's capital city, Monrovia. As girls pass through adolescence, a number of factors influence whether they complete secondary school, avoid teenage pregnancy, and develop the life skills, attitudes, behaviors and relationships that will set them on a path to a healthy and productive adulthood. The SOS program's primary goals are to reduce in-school girls' likelihood of dropping out of school; to increase out-of-school girls' likelihood of returning to school; and to reduce girls' risky sexual behavior and likelihood of becoming pregnant as a minor. More broadly, the SOS program aims to help girls adopt healthy behaviors; build confidence and self-esteem; learn and practice their rights; begin to develop savings and financial literacy habits; increase their community participation and involvement; and work towards their own personal development goals.

In October and November 2013, the SOS program recruited girls interested in participating¹. The only eligibility criteria, apart from residing in the targeted communities, were that the girl be between the ages of 12 and 15, and that a guardian consent to the girl's participation in the program. Sisters of Success then matched girls with mentors. Mentors are women from the community that are 18 or older, secondary school graduates, and volunteered to become mentors. Each mentor was randomly matched with approximately ten mentees of the same age group, either 12-13 years old or 14-15 years old, from the same area within the same community². Starting in February 2014, SOS mentors and mentees met twice a month over the course of 15 months. The mentors follow a precise curriculum targeting the various aspects of girls' development listed above. The program also includes extracurricular activities in which larger groups of mentors and mentees do activities together. SOS mentors are intended to serve as trusted individuals, friends, advisors, coaches, guides, teachers, and role models for the mentees.

The SOS program is coordinated by the International Rescue Committee (IRC), and implemented in partnership with two local organizations: EDUCARE and the Planned Parenthood Association of Liberia (PPAL). The mentors, who are drawn from the same communities as the girls they mentor, are unpaid volunteers.

The SOS program continued as scheduled throughout the duration of the ebola epidemic, following a group decision taken by the mentors and implementing partners, with the exception of a brief interruption in West Point. The program was also modified slightly to include information on ebola, and safety measures such as hand washing with bleach water, and no touching. And though girls' participation rates did drop some during the height of the epidemic, they stayed fairly high.

2 Research Design and Data

Liberia's capital city, Monrovia, is inside Montserrado County. Montserrado County has a population of 1.1 million³. Montserrado County is sub-divided in four districts, one of which is Greater Monrovia District⁴. Greater Monrovia has a population of 970,000⁵. The recruitment of girls interested in the SOS program, who would also be part of the research, was carried out during October and November 2013, across Greater Monrovia, in 16 urban and 2 peri-urban communities.

¹ SOS recruited twice the number they actually needed, so that this number could be placed in the study. Recruited girls filled out an "expression of interest" form for the SOS program, and agreed to be contacted by the study team for the baseline survey.

² Each community was sub-divided into "zones" with a walking radius of 20 minutes maximum, so as to ensure girls would not have to travel too far to reach their mentoring sessions.

³ Per the 2008 Population and Housing Census.

⁴ The other three districts cover the more rural parts of Montserrado County, and include Careysburg, Saint Paul River, and Todee.

⁵ Per the 2008 Population and Housing Census.

These 18 communities jointly have a population of 264,000⁶. We estimate that these 18 zones jointly have a total of 11,000 girls aged 12-15.⁷ In total, 3,060 eligible girls registered as interested in the SOS program. Recruitment targets were set by community, in line with each community's population, and recruitment within each community was closed once that community's target was met.

The research team carried out a baseline survey between October 2013 and January 2014, and successfully interviewed 2,884 of these girls as well as one guardian for each girl.⁸ These 2,884 girls thus became the "study sample.", and they were then randomly assigned by the research team to either a "treatment group" that will receive the SOS program (1420 girls), or a "control group" that will not (1464 girls)⁹. Randomization to treatment or control was done in January 2014 at the individual-girl level, and stratified by zone, age of girl, and the girl's schooling status. Also, close friends, sisters, and girls who live together were randomized jointly to treatment or control. Approximately half of the girls were assigned to the treatment group, and half to the control group.

The study has included two data collection rounds: a baseline survey after enrollment but before randomization into treatment and control; and an endline survey that began in December 2015, approximately nine months after the conclusion of the SOS program.¹⁰ Survey data is collected from all girls in the study sample, as well as a guardian for each. The impact of the program will be captured by comparing the endline data for the treatment girls to the endline data for the control girls. Qualitative data is also collected to help better establish the mechanisms through which the program is impacting the girls as well as their life experiences during this life juncture. This will be gathered through in-depth qualitative interviews carried out one-on-one by trained researchers with a panel of girls, who are a randomly selected sub-set of study sample girls. A first round of interviews were done a few months after the program's start.

The key research questions that the impact evaluation is trying to answer are: does having a mentor and being part of a girls' group (i) Reduce girls' likelihood of dropping out of school; (ii) Reduce girls' risky sexual behavior and likelihood of becoming pregnant as a minor; (iii) Increase girls' voice and influence?; (iv) Change girls' occupational choice, earnings, and savings? And if any of these impacts are seen, which channels of impact are the one's driving them: (i) Change in norms/aspirations?; (ii) Change in resources (time, money, social support)?; (iii) Change in knowledge?; (iv) Change in life skills (soft skills)?; (v) Change in peer influences and role models?; (vi) Change in self-efficacy, self-confidence, or self-esteem? The quantitative surveys and qualitative work are designed to capture the data needed to answer these research questions.

The lead investigators on this study are Tricia Koroknay-Palicz and Joao Montalvao of the World Bank's Africa Region Gender Innovation Lab, and Juliette Seban of the International Rescue Committee. The World Bank Task Team Leader is Shubha Chakravarty. The Qualitative Researchers are Rachael Pierotti and Michelle Poulin. Research Assistance was provided by Cecile Fanton D'Andon, Dackermue Dolo, and Bong Sun Seo. Data collection is being carried out by Innovations for Poverty Action. Financial support for the study is being provided by DFID, via the World Bank's Umbrella Fund for

⁶ This number was calculated by (a) Using National Electoral Commission maps of Montserrado County, which report on the number of registered voters per voting center for the 2011 election, (b) Using the total population of Montserrado County plus total number of registered voters to calculate turnout (55%), (c) Assuming turnout was evenly distributed across voting centers.

http://www.necliberia.org/admin/pg_img/Montserrado_Electoral_Districts_Updated_Details.pdf

⁷ LISGIS provided us with totals by community of total number of girls aged 7-10 during the 2008 population and housing census

⁸ The study design intended for girls' household heads to be interviewed at baseline. However, analysis suggests that this did not always happen: sometimes an adult household member other than the household head was interviewed instead. Please see appendix 1 for more details.

⁹ The original plan had been to have the same exact number in the treatment and control groups. But given the guidelines to match no more than 11 girls to one mentor, and to have all girls paired with a given mentor coming from within the same zone, the randomization that did the assignment to treatment and control, pairing of girls to mentors, and placing girls in groups, in order to abide by these guidelines, placed a slightly higher number of girls in the control group than the treatment group.

¹⁰ A second, longer-term endline survey may be carried out later on, conditional on availability of funding.

Gender Equality. Throughout this report we make comparisons to the 2013 Liberian Demographic and health survey (DHS). It is a nationally-representative household survey of 48219 Liberian citizens, providing a wide range of indicators in the area of health, wealth, education, and household characteristics on each participants. The DHS data for “Greater Monrovia” is representative for Greater Monrovia. Throughout this report, we make comparisons to the DHS Greater Monrovia sample, as well as a sub-sample including only households with 12-15 year old girls. This sub-sample is not representative.

3 Demographics

3.1 Age:

While we did not have specific recruitment targets by age group, of the study sample girls, 30% are 12 years old, 26% 13 years old, 21% 14 years old and 22% 15 years old.

3.2 Where do these girls live, and where are they from?

At the time of the baseline survey, in accordance with the SOS program’s recruitment strategy, study girls were living in the following communities in the greater Monrovia area.

Figure 1 : Distribution of the girls by community

Community ¹¹	Percentage of total sample (and number of girls)	Community	Percentage of total sample (and number of girls)
Bassa Community	1% (41)	Duport Road : Zubah Town	8% (220)
Battery Factory	3% (80)	LoganTown	3% (80)
Bentol	2% (60)	Morris Farm	7% (201)
Brewerville	11% (321)	New Kru Town	3% (80)
Chicken Soup Factory	11% (320)	Old Road : Gaye Town	6% (160)
Clara Town	6% (160)	Pipeline	10% (280)
Congo Town : Peace Island	2% (60)	Redlight : Soul Clinic	8% (221)
Doe Community : Freeport	3% (80)	Redlight : Wood Camp	8% (220)
Duport Road : Voka Mission	6% (180)	West Point	4% (120)
Total across all communities	100% (2884)		

We asked the girls “How long have you been living in the place where you live now¹²” On average, girls had been living in the same place for 5 years and 10 months.

We also asked the girls “What county where you born in?” and the answers were the following: While 37% of the girls were born in Montserrado, most of the sample was not.

¹¹ Communities are demarcated precisely on the maps of the National Electoral Commission, http://www.necliberia.org/admin/pg_img/Montserrado_Electoral_Districts_Updated_Details.pdf. A bigger picture view can be gained from <http://cluster3.lib.berkeley.edu/EART/maps/monrovia.jpg>, though Redlight is not on here (it would be in the bottom right corner). This map includes Redlight, which is in Paynesville: http://www.pureone.com/products/pc/Liberia/Population/LIB043_Population_density_by_Community_for_Greater_Monrovia_04-10-03.pdf.

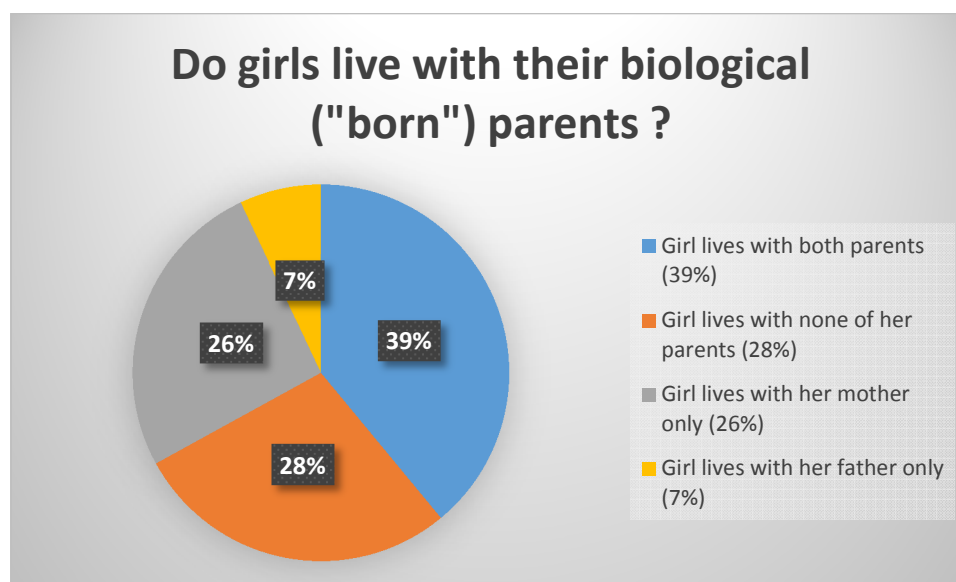
¹² This was written, and we think understood, to mean “the same house”.

Figure 2 : Distribution of the girls by county of birth

County of Birth ¹³	Percentage of the total sample	County of Birth	Percentage of the total sample
Bomi	3%	Margibi	3%
Bong	11%	Maryland	3%
Gbarpolu	2%	Montserrado	37%
Grand Bassa	8%	Nimba	11%
Grand Cape Mt	4%	River Cess	1%
Grand Kru	1%	Sinoe	2%
Grand Gedeh	1%	River-Gee	1%
Lofa	9%	Foreign country	5%
Total	100%		

3.3 Are girls' biological ("born") parents in the picture?

Figure 3 : Do girls live with their biological ("born") parents ?



At baseline, 89% of girls had both of their biological parents still alive, 10% only one biological parent still alive and less than 1% of the girls had neither biological parent still alive. As shown by the graph above, while 39% of the girls in our sample lived with both biological parents, 33% of them lived with only one of their biological parents (26% with their mother, and 7% with their father) and 28% with neither of their biological parents.

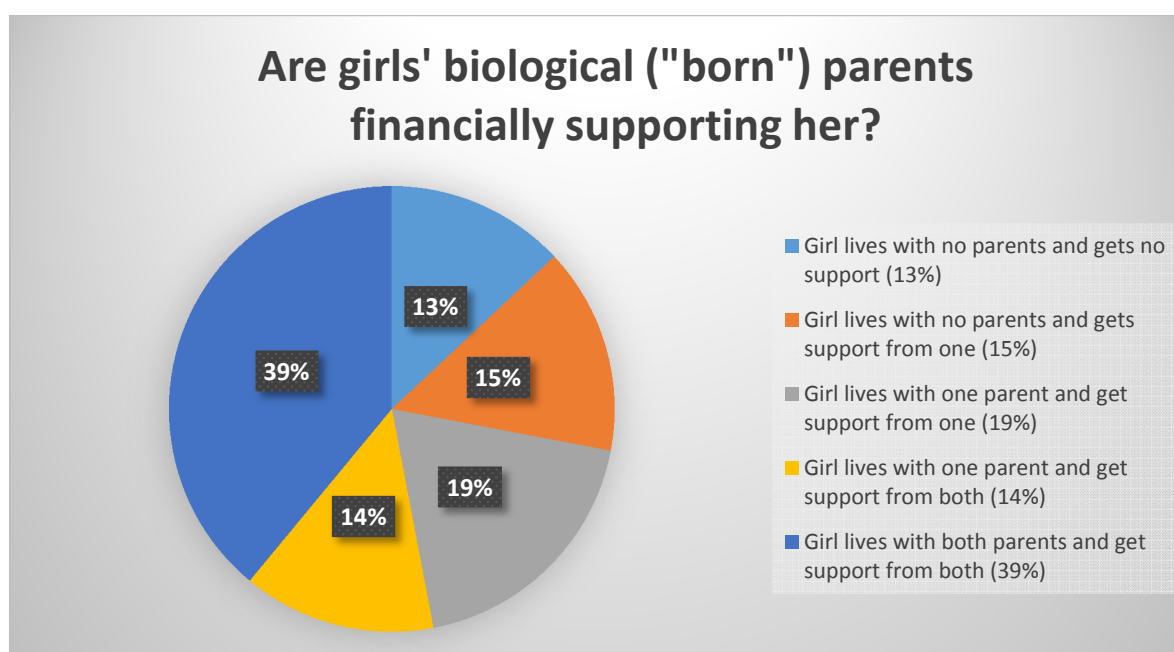
In addition to asking the girls directly whether their born mother and father are still alive, live with the girl, and are sending money for her support, we collected a household roster of all household members from the guardian, including what was the girl's relationship to the guardian. For the 28% of girls who were living with neither of their biological parents, the

¹³ A nice map of Liberia's counties can be found here:

http://en.wikipedia.org/wiki/Administrative_divisions_of_Liberia#mediaviewer/File:Un-liberia.png.

guardian – who was in most cases the household head or his spouse, see discussion in appendix 1 – was almost always a relative of the girl: 27.5% self-identified as the girl’s mother or father; 16.5% as a grandparent; 17% as an aunt or uncle; 15.5% as a sibling; 18% as “other relative” of the girl; and just 5% as a non-relative of the girl. Note, in Liberia, the term mother and father are used somewhat freely – for example, if people take in a child and raise him or her, they may consider themselves, and that child may consider that person, as the child’s mother or father. The terms “born mother” and “born father” denote biological mother or father.

Figure 4: Are girls’ biological (“born”) parents financially supporting her?



There could be several explanation to explain figures 3 & 4 ,

1. *Biological parents don't live close enough to a school:* One reason for not living with parents can be that parents don't live close enough a school, and once the girl reaches secondary school, the family sends her to live with a relative who lives closer to a school, so that she can attend. As we can see in figure 4, in 15% of the cases, the girl doesn't live with her biological parents but get support from at least one of them. This is in line with the idea that parents sends the girl away for schooling, but keep supporting her. Of the 28% of girls who do not live with neither of their biological parents: 93% are enrolled in school.¹⁴
2. *Biological parents cannot afford to take care of all their kids:* It can also be the case that the girl's parent cannot afford to take care of all their kids, and send one kid to a richer relative, for this relative to support the girl financially. In our sample, 13% of the girls live without their biological parents, and get no support from them. Note that this is the case for 12% of girls aged 12-13, while this is the case for 15% of the girls aged 14-15. The older the girls get, the higher the probability of living without the parents, and with no support.
3. *Biological rather or mother working in another locality:* It is also often the case that the family relies on a member, usually a man, who works and lives in another county or another part of town, and supports the household

¹⁴ 3.5% are recently dropped out; 3% dropped out more than 12 months ago; and 1% have never been enrolled in school.

expenses. For the 14% of girls who live with one biological parent but get support from both, it may be that one parent is working away from home and sends money to support the household.

Among the 19% of girls in our sample who live only with one biological parent and get only support from one, 82% live only with their mother, and 18% live only with their father. Among those who live only with their mother, only 20% receive money from their father.¹⁵

Note that the girls were asked whether the parents were alive and live with them, and whether, if they didn't live with her, they sent money for their support. Similar questions were asked to the guardian "does the girl's father/mother contribute to girl's expenses?" 20% of the girls' answers regarding the participation of the father, and 18% regarding the participation of the mother didn't match with the answer provided by the guardian. We used the answers of the guardian, as guardians more often stated that support was being received than girls, and we assume that this is because the girl may not be well aware of the actual transfer of money around her.

3.4 Girls' Relationship to Guardian, and Girls' Households' Composition

Baseline survey data was collected from each girl in the study sample, as well as one guardian per girl. The study design had originally intended for the girl and her household heads to be interviewed at baseline. However, analysis suggests that this did not always happen: sometimes an adult household member other than the household head was interviewed instead. Appendix 1 provides more details on the extent to which these guardians are also the girl's household head, and how this was determined.

In our sample, 70% of the guardians are female, and 30% male. Some of these are also the household head of the household that the girl lives in, and some are not.

We estimate that incidence of female headed households within the study sample at the time of the baseline survey was between 35% and 59%¹⁶. In comparison, representative data for Greater Monrovia from 2013 puts the percentage of households headed by a female at 42%.

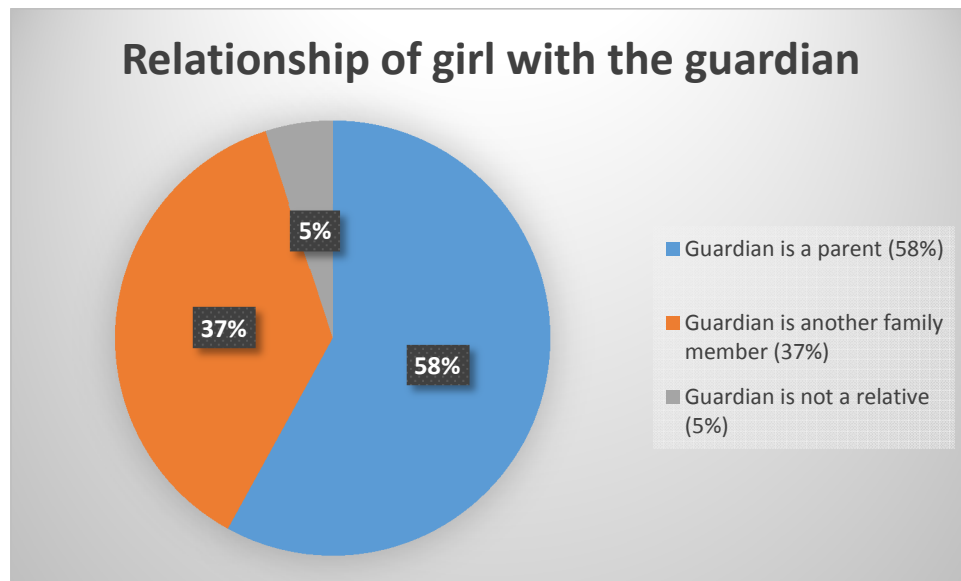
During the guardian interview, we asked : (a) Who is the main financial supporter of the household?; and (b) Who in this household takes decisions on how to spend the money? For 59% of girls, the guardian interviewed was also the person named in both (a) and (b). 84% of male guardians (674) and 50% of female guardians (1017) were named in both (a) and (b). Of the 50% of female guardians who were NOT named in both (a), and (b), half are married to the person named in both (a) and (b), and one-quarter are married to the person named in (a).

While interviewing the guardians, we asked what the girl's relationship was to the guardian. The answers are shown in the figure 5 below. In 58% of the households, the guardian is the father or the mother of the girl. For 37% of the girls, the guardian is not a parent but is a relative, and in less than 5% of the households, the guardian is not a relative of the girl.

¹⁵ That is: 17% of girls live with only one parent. Of these, 82% live only with their mother. And of these, only 1.7% receive money from their father. $17\% \times 82\% \times 20\% = 2.7\%$ of ALL girls in the sample who live with only their mother and receive money from their father.

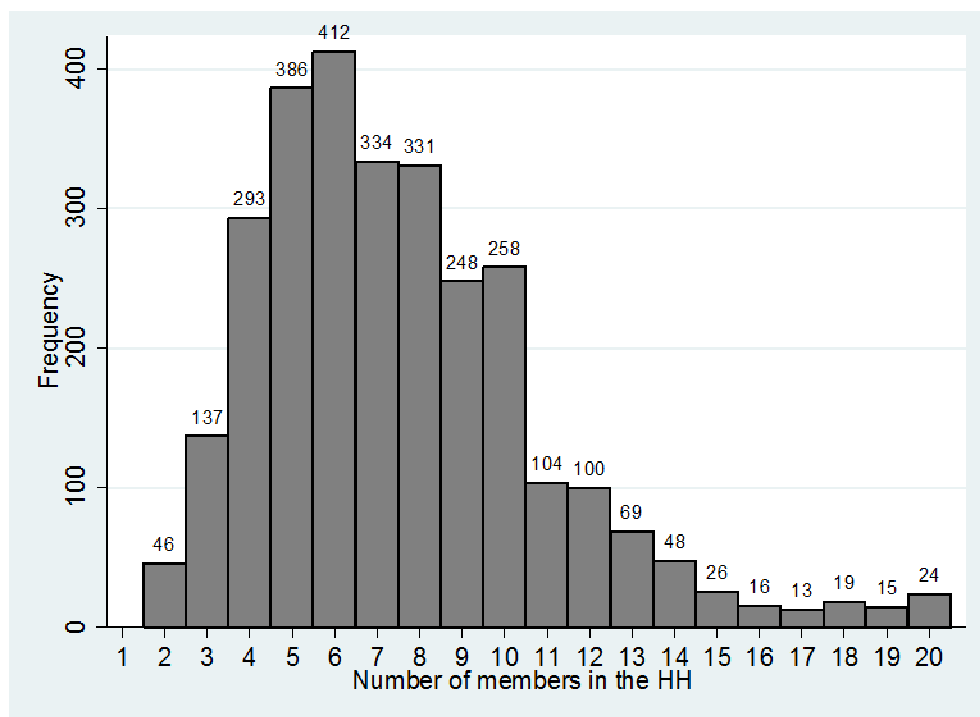
¹⁶ Please see Appendix 1 for details on how this estimate was made.

Figure 5 Relationship of the girl with the guardian



The mean household in our sample is composed of 8 persons, which is in line with the DHS data for 12-15 year old girls in Greater Monrovia and one member more than the mean of all households in Greater Monrovia. Household size varies from 2 to 20 people, as shown in figure 6.

Figure 6: Distribution of households by number of household members



The median household contains three working-age adults (aged 18-64) and four minors (aged 17 and below), of which one young adult (15-17) and three children (below 15), which is in line with the figure in the DHS data.

To calculate the dependency ratio for a household, in line with standard practices, we considered people aged 14 and under or 65 and older “dependents”, and those aged 15-64 non-dependents, meaning they can support the dependents. We divided the number of people in the household aged less than 15 or over 64 by the number of people aged 15-64, and multiplied it by 100. We thus found a dependency ratio of 117, meaning there are more dependents in the household than working-aged household members.¹⁷ Note, the overall dependency ratio for Liberia was 85 in 2013 – although this is calculated looking at the total population, rather than particular households within the population.¹⁸

Note, a totally different (and non-conventional) way to think about the dependency ratio is to look at the ratio of household members who make financial contributions to the household versus those who do not (see section 7.1 for a full discussion on household members’ financial contributions). Looking at this data, on average there are around three times more people who do not contribute financially to the household than people who do. In a place with such high unemployment as Liberia, this alternate way of looking at things may be worth consideration. Also note, 12% of the households have at least one senior (65+) at home. And 50% of these seniors are contributing to the household expenses.

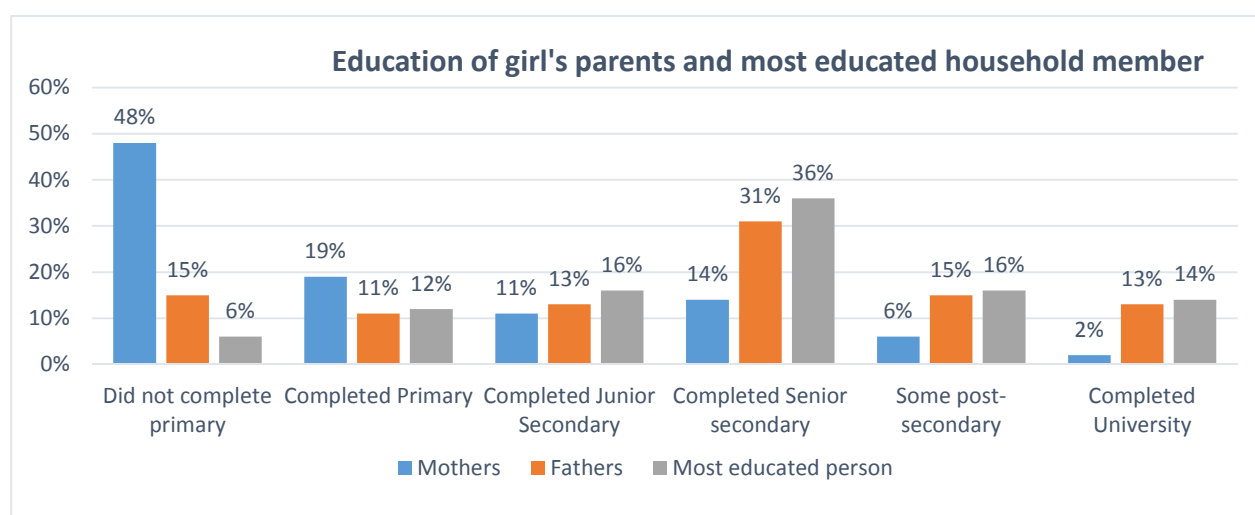
3.5 Education at Household and Parent Levels

In sample households, on average 82% of those aged under 18 are enrolled in school (against 65% in DHS data for Greater Monrovia), and 21% of those aged 18-60 (18% in DHS data for Greater Monrovia).

We also asked about household members who were “not currently enrolled in school, but expected to start again.” The percentage of household members that fit into this category was 11% of those aged 17 or under, and 28% of those aged 18-60. When asked “What will it take for ___ to start again?”, the guardian’s most common answers for those aged 17 or under were “financial condition” (51%), “permission from family member, household head, boyfriend” (25%), and “kid too young” (15%).

The average level of schooling completed by girls’ biological mothers, biological fathers, and the most educated person in girls’ household is as follows.

Figure 7 : Education of girls’ parents and most educated household member



¹⁷ Dependency ratio is commonly calculated this way, see <http://data.worldbank.org/indicator/SP.POP.DPND>

¹⁸ <http://data.worldbank.org/indicator/SP.POP.DPND>

When guardians were asked “Does it happen that the people whose school fees you are paying have to miss school because you are not able to cover their schooling expenses?”, 34% answered yes.

Also, on average, no more or less was spent on girl’s schooling than on the schooling of other boys and girls in the household who were also in school.

3.6 Decision-making

We asked guardians two questions about decision-making:

- Who in the household makes decisions regarding the girl’s schooling?; and
- Who in this household makes decisions about how to spend money?

In response to each question, guardians could list one or two people, as applicable. Where only one person is listed, we call this “individual decision-making”, and where two people are listed, we call this “joint decision-making”. We match the people listed to the household roster, which provides information on each person’s gender, and their relationship to the girl¹⁹. Throughout this section, when we say parent we mean a parent of the girl, and this person may or may not be her biological parent.

Who in the household makes decisions regarding the girl’s schooling?

Joint or individual: 56% of households had individual decision-making, and 44% joint decision-making.

Gender: 38.6% of HHs have joint decision-making by a male and a female; 38% individual decision-making by a female; 18% individual decision-making by a male; 2.4% joint decision-making by two females; and 0.78% joint decision-making by two males.

Parent: 38% of HHs have individual decision-making by a parent; 5.3% joint decision-making where one of the decision-makers is a parent; 27.5% joint decision-making by two parents; and 26.3% joint or individual decision-making that involved no parent. 23% of HHs had decision-making involving no parent but rather another family member of the girl’s. 3% of HHs had decision-making by somebody who was not a family member of the girl. And for 0.5% of HHs, the girl herself was the only decision-maker.

Guardian: In 75% of households, the guardian was the individual decision-maker or one of the joint decision-makers.

Who in this household makes decisions about how to spend money?”

Joint or individual: 55% of households had individual decision-making, and 45% joint decision-making.

Gender: 40.4% of HHs have joint decision-making by a male and a female; 38% individual decision-making by a female; 17% individual decision-making by a male; 2.9% joint decision-making by two females; and 0.63% joint decision-making by two males.

¹⁹ In some cases, the gender information for one of the decision-maker was not provided in the household roster. For this reason, figures in this section to not always add up to 100%, although they come very close.

Parent: 37% of HHs have individual decision-making by a parent; 5.65% joint decision-making where one of the decision-makers is a parent; 27.9% joint decision-making by two parents; and 27.5% had joint or individual decision-making that involved no parent.

To what extent is the person who makes decisions regarding the girl's schooling also the one making decisions about how to spend household money?

- 55.5% of the guardians listed only one decision maker for schooling, 42.1% listed two decision makers for schooling, and 2.4% listed none.
- Out of those who listed one decision maker for schooling, the same decision maker was also listed as a decision maker of spending money 91% of the time.
- For those who listed two decision makers for schooling,
 - o Both decision makers were listed as decision makers for money 83% of the time.
 - o At least one of the schooling decision-makers is also listed as one of the money decision-makers 99% of the time.

4 Girl's Schooling

4.1 Schooling Status

At the time of the baseline survey, 95% of study girls were currently enrolled at school. 3% had recently dropped out; 1.5% had dropped out more than 12 months ago; and 0.5% were never enrolled (ever, in their entire life).²⁰

In the Liberian education system, there is an early childhood education system (with two years of nursery, and two years of kindergarten: K1 and K2), 6 years of primary ("P"), 3 of junior secondary ("JS"), and 3 of senior secondary ("SS"). Participation in early childhood education is not a firm requirement for entry into primary school, though it may increase preparedness. The Government of Liberia uses the term "at-age" to refer to students whose age is the official age for the grade level. In Liberia, the official age is 3 to 5 for early childhood education, 6 to 11 for grades 1 to 6 in primary school; and 12 to 17 for grades 7 to 12 in secondary school. A grade 1 student at the age of 6 is considered "at-age"; a student at the age of 5 is considered "underage". An "overage" student is one whose age is above the official level for the grade level. The "promotion rate" is the percentage of students from a cohort moving up a grade. The "repetition rate" measures the number of students repeating a grade. "Dropouts" refer to students who have withdrawn (for any reason) from the school system. The distinction between dropouts and repeaters is that repeaters remain in the system while dropouts do not. The dropout rate is calculated as follows: $100 - (\text{promotion rate} + \text{repetition rate})$ ²¹.

A girl may have attended more years of schooling than levels of schooling completed if she dropped out during a given term, or if she had to repeat a level because she did not pass.

Girls in our sample started school on average 6 months after their 6th birthday.²² And the 14-15 year old girls started school on average six months later than the 12-13 year old girls.

²⁰ The answer options on the survey to *What is your current educational status?* Were 1=currently enrolled, 2=recently dropped out (within last 12 months), 3=graduated, 4=Dropped out (more than 12 months ago), 5=never enrolled.

²¹ www.moe.gov.lr National statistical booklet 2013 "Education Statistics for the Republic of Liberia"

²² Girls were asked how old they were when they began schooling.

If we look at the mean level of schooling completed by age group, we can see that as we could expect, the older the girls are, the more levels of schooling completed. Yet the average differences between girls in levels of completed schooling is not fully proportional to differences in age, which means that as girls get older, the frequency of not successfully completing the subsequent year of schooling increases.

The median highest level of schooling completed by 12 years olds in our sample is 2 years of primary ("P2"); for 13 year olds it is P3; for 14 years olds P4; and for 15 year olds P5. Our understanding of what this means is that by age 12, an average of 6 years after starting school, girls have completed an average of two levels of primary school, which is four levels lower than what an "at-age" girl should be at. This could be explained by the girl starting K1 or K2 when she is 6 years old (rather than P1), or by the girl having to repeat a grade, or because of temporary drop-outs, or any combination of these.

Based on this, we generated a "behind" variable. If a girl has completed less than the median level of schooling for her age group in our sample, she can be thought of as "behind." 32% of the girls in our study sample are "behind," and they come from every age group evenly. This of course is a very different figure than a girl being "overage": the "behind" variable compares a girl to her peers; and "overage" variable compares a girl to the Ministry of Education's official guidelines on what is "at-age."

In the study sample, the percentage of girls who are "at-age," "overage," and "underage" is as follows:

Figure 8: Percentage of "at age," "overage," "underage" girls by age

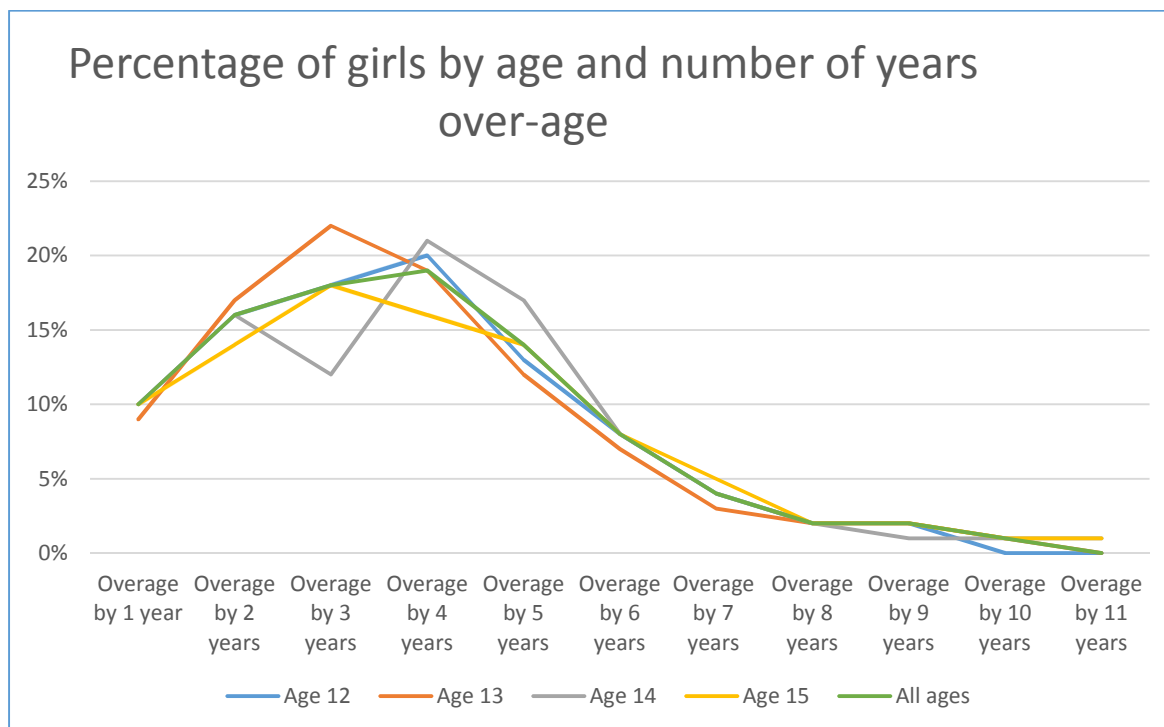
	Age 12	Age 13	Age 14	Age 15	All ages
Percent at-age	6%	4%	5%	5%	5%
Percent under-age	2%	2%	2%	3%	2%
Percent over-age	93%	94%	93%	92%	93%

This is in line with the Government of Liberia's statistics. Across Liberia, 92% of the girls in primary school and 94% of the girl in secondary school are overage, and in Montserrado County, 86% of girls in primary schools and 90% in secondary schools are over-age²³

In the study sample, the extent to which girls are over-age varies as follows. The below table presents the percentage of girls (as a percentage of the full sample of that age, not just as a percentage of over-age girls), who are over-age by number of years they are over-age. Across all four age groups, the median girl is over-age by four years.

²³ www.moe.gov.lr National statistical booklet 2013 "Education Statistics for the Republic of Liberia". Note, between 2013 and 2014 there was a slight decrease in all of these numbers.

Figure 9: Percentage of girls in each over-age group



4.2 Reasons for Dropping Out of School

Amongst the 4.5% of sample girls who were dropped out at the time of the baseline survey (137 girls), 29% were 12 years old or less, 19% were 13 years old, 19% were 14 years old and 32% were 15 years old or older. The main reason for dropping out is the household couldn't afford school (73%). The other reasons for dropping out were as follows: school is too far (7%); girl is or was pregnant (6%); sickness or calamity in the family (6%); institution did not admit girl (3%); girl did not way to study (2%); had to work at home (0.73%); had to work outside the house (0.73%); disability/illness of girl (0.73%); and social and religious pressure (0.73%).

Of the girls who were dropped out of school, we asked "Do you want to start/go back to school in the next few years?" The answers were "yes definitely" (91%), "maybe" (9%), and "definitely not" (0%).

We also asked these girls "What would make it possible for you to go to school?", and allowed each girl to give up to three reasons. The most commonly given reasons were "financial conditions" (58%) and "self-motivation" (35%). The others were "find a place at school" (3%), "If I get the permission from one family member" (3%), and "if my health condition improves" (2%).

4.3 Household and Parental Support for Girls' Schooling

Support for schooling can be thought of primarily in two forms: 1) financial; 2) household members and parents being involved in the girl's education.

On the “being involved” front, we asked girls the following four questions. For the first two, the girls could answer “never”, “one-one time”, “sometimes”, or “everytime”²⁴. For the second two, girls could answer “no” or “yes”.

Figure 10: Household members’ involvement in girls’ education

	Never	One-One time	Some times	Every time
Do people in this household talk with you about school?	6%	10%	35%	49%
Do people in your household help you with your school work?	11%	11%	25%	53%
	No		Yes	
Does/did anybody in your life make you go to school even on the days you didn’t want to go?	20%		80%	
When you have/had parent meetings at school, did anybody go to those meetings on your behalf?	3%		97%	

As you can see from the table, 80% of girls report both that somebody in their life makes them go to school when the girl doesn’t want to go, and also that somebody goes to parent meetings at school on their behalf.

We also asked girls four questions along the lines of: “Would you drop out of school if....?”

Figure 11: Potential drop-out reasons

Percent who said “yes” to: “Would you drop out of school if...”	12-13 year olds	14-15 year olds	All ages
...The person who currently pays your school fees stopped being able to pay	49%	50%	49%
...Your parents/guardian did not make you go	30%	28%	29%
...You didn’t like your teacher	8%	9%	9%
...Somebody offered you a job where you could make 200 LD per day	3%	3%	3%

The second is indicative of the extent to which daily household and parental encouragement (and insistence) may possible be important to girl’s school attendance: 29% of girls report that they would drop out if their parent/guardian did not make them go to school.²⁵

The first is indicative of how critical financial support for the girl’s education is: 49% of girls would drop school if the person who pays their school fees stopped being able to pay. As for who is “putting the most” towards the girls’ educations, 75% of the girls say their parents, and 23% of the girls say another family member. Girls were asked how much was spent on the girl’s school tuition and fees over the past six months. The mean figure given by girls was 52 US dollars; and the median 38 US dollars. Household heads were asked about a more comprehensive figure – how much was spent in the last six months on the girls schooling, including tuition, fees, uniforms, books, supplies, transport to and from school, and feeding

²⁴ The interpretation of “one-one time”, “sometimes”, and “everytime” is subjective. However, amongst these, the least obvious is “one-one time”. Some people consider this to mean “once”, and others consider it to mean “very rarely, but on occasion”.

²⁵ In the qualitative data, several girls reported an older brother or sister encouraging them with school (talking to them about it, and helping them with their homework).

and lodging at school. The mean figure given by household heads was 81 US dollars; and the median was 63 US dollars. This amount is put in context by section 5, which discusses girls' households' overall financial situations.

4.4 Educational Aspirations

Universally, educational aspirations were extremely high: 96% of sample girls' "ideal" ²⁶ was to complete university. However, when asked about their actual plans only 64% of girls "planned" ²⁷ to achieve university, 32% of girls planned to complete only senior secondary school; and 3% planned to complete only junior secondary school. Amongst girls' guardians, 95% thought their girl will go to university²⁸. Our understanding is that the difference between girl's ideal, and girl's actual plans, is due to their awareness of the various reasons why they may likely not actually go as far as the ideal.

Note, educational aspirations for girls far exceeded actual educational achievement by girls' mothers and fathers, and the most educated people in girls' households. 48% of the girls' mothers didn't complete any education and only 2.4% completed university. Fathers are more educated – only 15% of them didn't complete any education, 31% of them completed senior secondary and 13.1% completed university. They also exceed the actual educational achievement of the most recent cohort. Indeed, of women in Greater Monrovia aged 20-24, 11% did not complete primary; 16% completed only primary; 60% completed only secondary; and 13% completed post-secondary education. ²⁹

4.5 Perceived Value of an Education

We asked girls, and their guardians, to tell us the main reason, in their opinion, why girls – and boys – should have an education. The survey was coded with possible answer options, which are listed in the table below. In addition to these, the enumerator could also select "none/not important", "other, specify", and "don't know"). But these were not read to the respondents: the respondent gave a free-form answer, and the enumerator then selected the appropriate option. In the case that a respondent gave a free-form answer that encompassed several categories, the enumerator asked them which was the main reason.

The following figure shows the popularity of each of the answer options. The columns under "girl" (on the left) reflects the answers given by girl survey respondents. The columns under "guardian" (on the right) reflects the answers given by the guardian survey respondents. During the survey, we asked first the main reason why girls should have an education (this is recorded, for each of girls' and guardians' responses, under the column "girls"), and then we asked the main reason why boys should have an education (this is recorded, for each of girls' and guardians' responses, under the column "boys"). Some answer options were selected the same amount by survey respondents for girls and for boys – for instance, 36% of girls selected the option "for their independence" when answering about girls, and 36% of girls selected that same option when answering about boys. When an answer was selected the same amount for girls and boys (for instance, in the case of "for their independence", we have merged the two columns.

²⁶ The question asked was "If you have the opportunity to study as far as you want, until what level would you like to study?"

²⁷ The question asked was "Up to what level are you planning on continuing studying until?"

²⁸ The question asked to the guardian was "Up to what level do you think [the girl] will study?"

²⁹ Data from Liberia 2013 DHS final report, available here <http://dhsprogram.com/what-we-do/survey/survey-display-435.cfm>

Figure 12: Reasons for education

Survey respondent: ³⁰	Girl		Guardian	
Girls/boys should have an education for:	Girls	Boys	Girls	Boys
For their independence	36%		44%	50%
Earning potential and employability	21%	28%	23%	26%
Enables one to advance in a career	22%	19%	13%	
To improve marriage prospects	11%	7%	16%	8%
For their social network	4%		2%	
For the mobility to go elsewhere	3%		1%	

As can be seen from the above table, the most common reason for getting an education is “for their independence” for both girls and boys. This is reported by both girls and their guardians, with guardians naming something in line with this option more than girls. A common free form answer that would have been coded as “for their independence” would be: “able to stand on my own”, or “able to stand on my own and provide for myself and not depending on anybody”.

The next most common reasons relate to earning potential and career advancement for both girls and boys, with girls selecting these options a bit more than guardians.

Both girls (11%) and their guardians (16%) were more likely to choose “to improve marriage prospects” as a reason for education for girls than for boys. Also, guardians were significantly more likely than the girls to choose this option. Nonetheless, this was not a very common choice.

Generally, both girls and their guardians value education for the independence and employment opportunities that it creates for both boys and girls.

The survey enumerators also made a number of statements, to which survey respondents could “really agree”, “agree”, “disagree”, or “really disagree”. In figure 13, we take either of the first two as “agree”.

Figure 13: Education statements

Survey respondent:	Girl	Guardian
	Agree	Agree
By going to school I gain knowledge and skills	99%	Not asked
Making an effort in studying is worth it because this will help me with my future	99%	Not asked
When the family is poor and cannot send all children to school, boys should go first	14%	14%
Females are not as good as males in school	24%	27%

Finally, to get a sense of people’s perspective on the monetary returns to education, in terms of expected wages, we asked girls and their guardians to think about the situation of thirty year old men and women in Monrovia, and to estimate the average monthly earnings of a current thirty year old Liberian in Monrovia.

³⁰ The question asked was “In your opinion, what is the main reason that a boy/a girl should have education?” the possible answers were the ones in figure 12

Figure 14: Perspectives on monetary returns to education

Estimated average monthly earnings of a current thirty year old Liberian in Monrovia	Estimated by Girl	Estimated by Guardian
... without a primary school degree	61 USD	89 USD
... only with a primary school degree (6 levels completed)	90 USD	124 USD
... who stopped halfway in secondary school (9 levels completed)	139 USD	164 USD
... with only a secondary school education (12 levels completed)	241 USD	249 USD
... with university education	531 USD	610 USD

As a benchmark to compare this to, in 2010, the minimum wage in Liberia was approximately 50 USD per month (in 2010, 15 Liberian dollars per hour not exceeding 8 hours per day).³¹ And the minimum wage for civil servants was approximately \$114 USD per month (5600 Liberian dollars).

As another point of comparison, we have data from the 2008 Liberia International NGO Forum compensation survey. For this survey, international NGOs in Liberia reported compensation at their organizations for different positions, this data was compiled, and average compensation for each position type was calculated. Some important pieces of background information are as follows³²:

1. The highest paying jobs in Liberia tend to be those offered by international NGOs.
2. Watchmen positions tend to be given to the least educated people, as they are the least desired jobs, and typically do not require literacy skills.
3. Logistics and Warehouse Assistant jobs typically require basic numeracy and literacy.
4. Program Assistants are typically secondary school graduates at minimum.
5. Program Officers are the most educated, and often university graduates.

Figure 15: Monthly salaries by position from LINGO 2008 Compensation Survey

Monthly salaries by position from LINGO 2008 Compensation Survey	Min-Max, and Mean, in USD
... Watchman	75-254, mean 155
... Logistics / Warehouse Assistant	104-523, mean 292
... Program Assistant	175-850, mean 418
... Program Officer	275-2120, mean 636

Comparing the girls' estimates versus the guardians estimates in figure 14, and comparing these in turn to the numbers in figure 15, it seems that both girls and their guardians have a relatively accurate idea of the returns to education in the Monrovia labor market.

³¹ <http://www.state.gov/j/drl/rls/hrrpt/2010/af/154354.htm>. Note, in May 2015 the minimum wage for unskilled laborers was raised to \$3.50 US dollars per day, and for skilled laborers to \$5.50 US dollars per day, but this was more than a year after the baseline survey.

³² This background information is from the personal experience of one of the co-authors of this report as the former country director of an international NGO in Liberia.

5 Sexuality and “Man Business”

5.1 Relationship Status, History, and Aspirations

We asked a number of questions about relationships with men, and girls’ thoughts about what they would like for their futures on that topic.

We asked girls “right now, are you married, cohabiting, separated, divorced, widowed, or never married”. We also asked girls “if you have a boyfriend at this time”.

99.9% of the girls in the study sample had never been married (that is, only 1 out of the 2,884 girls in the study had ever been married). And 99.5% had never lived together with a man (that is, of the 2,884 girls in the study, only 7 had ever cohabited with a man).

Figure 16 : Marital status

By age of girl	12 year olds	13 year olds	14 year olds	15 year olds	All ages
Has ever had a boyfriend (now, or previously) - % yes	1%	3%	10%	30%	10%
Has ever been married % yes	0%	0%	0%	0.15%	0.03%
Has ever cohabited with a man- % yes	0%	0%	0.32%	0.5%	0.17%

For girls who had a boyfriend, the mean (median) age of their boyfriend was 15.2 (15) for girls aged 12, 15.3 (14.5) for girls aged 13, 16.9 (16) for girls aged 14, and 18.5 (18) for girls aged 15.

We also asked girls when they thought they might first have a boyfriend, live with a man, and get married. Results reported below (figure 16)

Figure 17 : Girls anticipation toward their sexual/marital lives

By age of girl	12-13 year olds	14-15 year olds	All ages
At what age do you think that you might have your first boyfriend? (for girls who never had a boyfriend)	22	20	21
At what age do you think you might likely start living with a man? (for girls who never lived with a man)	26	25	26
At what age do you think you will get married? (for girls who never were married)	31	30	30

5.2 Sexual Activity

We also asked girls about their sexual activities. According to their survey answers, almost none of the 12-13 years old had ever had sex (1%: 21 out of 1612 girls) while 7% of the 14 year olds already had (44 out of 618 girls), and 26% of the 15 years olds (170 out of 648). The DHS data reports a median age at first sex of 16 in Greater Monrovia³³. Of course, given the sensitive nature of these questions, there is likely some under-reporting³⁴. However, girls were surveyed privately – out of hearing of any other person.

³³ Data from Liberia 2013 DHS final report, available here <http://dhsprogram.com/what-we-do/survey/survey-display-435.cfm>

³⁴ As part of the baseline survey, we conducted a survey experiment to see the extent to which enumerator gender might be correlated with under-reporting on sensitive subjects, such as these. A separate report will be published with these findings. But one

Figure 18 : Girl's sexuality

By age of girls	12-13 year olds	14 year olds	15 year olds	All ages
"have you ever had sex" - % yes ³⁵	1%	7%	26%	8%
Only for girls who already had sex				
The first time you had sex, how old were you? – mean ³⁶	11	13	14	13.5
In the last 30 days, how many times did you have sex? ³⁷ – mean	0.78	1.56	1.29	1.3
In the last 12 months, how many different men did you have sex with? ³⁸ – mean	0.74	0.83	0.91	0.88
How many boyfriends you have right now? – mean	0.63	0.93	1.09	0.93
The last time had sex with your husband/man/boyfriend. Did you use condoms? ³⁹ - % yes	33%	33%	56%	50%
The last time you had sex other person who not your husband, man, or boyfriend, did you use condom? - % yes among girls who ever had sex ⁴⁰	50%	13%	42%	36%
Are you currently in a relationship where you have received anything, such as money, gifts, and help with business, or something else, which were given to you in <i>direct</i> exchange for sex (e.g. godpa)? - % yes ⁴¹	11%	26%	13%	15%
Are you in a relationship where you don't like the guy and you're staying because he is helping you? - % yes	17%	16%	10%	11%
Over the last 12 months, have you been in a situation where you needed to have sex with non-boyfriends on at least one occasion to raise money? - % yes	6%	2%	2%	2%

Note, in the table, where the answer is less than one – for example, for “in the last 12 months, how many different men did you have sex with?” – this means that for some girls, the answer was zero, and for other girls, it was greater than zero. The girls who answered zero pull the average down, to below one.

of our findings is that there were no differences on average on answers to these questions between girls surveyed by female versus male enumerators.

³⁵ You na do man business? [EVER]

³⁶ The first time you do the man business, you were how many years?

³⁷ Real question was “In the last 30 days, how many times you do man business?”

³⁸ In the last 12 months, how many different men you do man business with?

³⁹ The last time you do man business with your husband / man / boyfriend, you use condoms?

⁴⁰ The last time you do man business with any other person who not your husband, man, or boyfriend, you use condom?

⁴¹ Are you currently in a relationship where you have received anything such as money, gifts, and help with business, or something else, which were given to you in *direct* exchange for sex

5.3 Pregnancy, Childbearing, and Childcare

Finally, we also asked the girls about pregnancy, their thoughts about childbearing, and whether they were caring for any children at the moment. A total of 24 girls, out of 2884, had ever been pregnant. And a total of 14 girls, out of 2,884, answered at least 1 to the question “how many children born to you in your whole life. Thus, 10 of the pregnant girls did not give birth, and for these, we do not know whether they had an abortion or miscarriage.

Figure 19 : Pregnancy

By age of girls	12-13 year olds	14-15 year olds	All ages
Have you ever been pregnant) - % yes	0%	0.1%	0.1%
Only for those girls who have ever been pregnant			
How old were you the first time you got pregnant? – mean	Not applicable	15	15
How many children born to you in your whole life? – mean	Not applicable	0.7	0.7
You have any born children who are still living? ⁴² - % yes	Not applicable	100%	100%
How old is your oldest living child – mean – in months	Not applicable	14 months	14 months

We also asked girls what age they would like to be when they have their first born child, and how many born children they would like to have in their whole life.

Figure 20 : Girls’ anticipation of chilbearing

By age of girls	12-13 year olds	14-15 year olds	All ages
What age would you like to be when you have your first born child?	28	27	28
How many born children would you like to have in your whole life?	3.2	3.4	3.3

Note, according to other data sources, the adolescent fertility rate for Liberia is 127 for 1,000⁴³ against 115 for sub-saharan Africa⁴⁴. Another way to express this is that 12.7% of Liberian females give birth to their first child before the age of 18. According to the 2013 DHS data, the median age of women at first birth in Greater Monrovia is 18.

6 Self-Esteem and Self-Efficacy

6.1 “I am able to...”

The survey enumerators read a number of statements about the girls, to which survey respondents could “really agree”, “agree”, “disagree”, or “really disagree”. These were read both to the girl, and to the guardian, about the girl. The table below shows percentage of girls who either agreed or really agreed. On these statements, we have almost no missing data, or “not applicable”, this means that the rest of the sample either “disagree” or “really disagree”. We also compared whether the answers given for and about younger girls (aged 12-13) and older girls (14-15) were different from each other, to see whether any of these senses of ability increase or decrease with age, and where such a difference exists, we break out the data by younger vs older girls.

⁴² This means that of the children that were born to them, how many are still alive?

⁴³ <http://www.indexmundi.com/facts/liberia/adolescent-fertility-rate>

⁴⁴ <http://www.prb.org/Publications/Articles/2013/adolescent-fertility.aspx>

Some answer options were selected the same amount by survey respondents for both 12-13 year old girls and for 14-15 year old girls. When an answer was selected the same amount for 12-13 year olds and for 14-15 year olds (for instance, in the case of “able to do homework”) we have merged the two columns.

Figure 21 : Reason for girls and boy to have an education according to girls and household heads

Percent who “agree” or “really agree” with the statement				
Respondent:	Girl		Guardian	
	12 & 13 year olds	14 & 15 year olds	12 & 13 year olds	14 & 15 year olds
... able to do homework	91%		87%	
...able to work with friends or classmates to solve problems	91%	93%	88%	
... able to participate in class	96%		78%	
... able to speak in front of a group of people and share opinions	83%		78%	
... at least as smart as most other young people my age	93%		94%	91%
... make good decisions concerning how to manage money	86%	92%	71%	78%

6.2 “Voice”

The same was done for “voice” which is a concept along the lines of the girl feeling that she can express herself, and act.

Figure 22: Voice

Percent who “agree” or “really agree” with the statement				
Respondent:	Girl		Guardian	
	Younger	Older	Younger	Older
... not hesitate to let others know opinions	83%	80%	81%	79%
...when have an idea or opinion, able to express it	90%	92%	89%	
... when don’t understand something, not shy about asking a question	89%		87%	
... when someone treats me unfairly, I say something or take action against it	45%	53%	51%	
... if I see a student or friend being picked on, I will try and stop it	87%	89%	84%	
... I ask my teacher and other adults for help when I need it	92%		96%	

6.3 Self-Esteem

Another set of questions was also asked, just of the girl, to try to capture self-esteem. These questions were originally developed for studies being carried out by Christopher Blattman, with older youth, in Liberia.

Figure 23: Self esteem

Percent who “agree” or “really agree” with the statement		
Respondent:	Younger	Older
You are satisfied with yourself	92%	
Sometimes you think everything you try your hand on can fail	29%	35%
You think you don’t have enough respect for yourself	11%	
Do you think you are a good person but doing nothing	30%	35%
The way life looking with you, you can feel shame?	28%	32%

We also asked the girls “how happy are you with...” about different aspects of their lives, on a scale of 1 to 5, where 1 is “not happy at all”, and 5 is “completely happy”. Mean scores were as follows. We also ran the data to compare younger versus older girls, and found no differences between them.

Figure 24 : Satisfaction toward education, family and friends

On a scale of 1 to 5, how happy are you with...	All girls
Your education level?	4.3
Your relationship with your family?	4.6
Who your friends are and your relationship with them?	4.4

7 Girls’ Households’ Financial Strength

7.1 Household Wealth

One way to measure household wealth is to use a wealth index. These wealth indices are calculated using easy-to-collect data on a household’s ownership of selected assets, such as televisions and bicycles; materials used for housing construction; and types of water access and sanitation facilities. And their purpose is to determine a household’s relative wealth within a given population.

The 2013 Liberia DHS survey collected data for both a nationally representative sample, as well as for a sample that is representative of Greater Monrovia. Generated with a statistical procedure known as principal components analysis, the DHS wealth index places individual households on a continuous scale of relative wealth, and separates them into five wealth quintiles.

During the SOS baseline survey, we collected a reduced number of wealth index variables. During the SOS endline survey, we collected the full complement of DHS wealth index variables.

Analyzing this data, we conclude that SOS households are very similar to a representative sample of households in Greater Monrovia. The wealth scores for Greater Monrovia households and SOS study sample households are within 5% of each other. Furthermore, SOS study sample households are distributed more or less perfectly across the DHS wealth quintiles, meaning that SOS study sample households are evenly drawn from poor, middle, and wealthy households.

The details of this analysis are included in appendix 2.

7.2 Contribution of household members:

We used a household roster to capture data on every individual in the girl's household. This roster was completed by the household head. During this, for each individual in the household, we asked "Does ___ regularly contribute income to the household?", and "How much per month does ___ contribute?" However, given that this data was collected from guardians, only some of whom were household heads, and given that household members with different status and roles within the household have differential knowledge of other household members income generating activities and contributions to the household, the fact that the survey respondents have differential status and roles within their household muddies up the interpretation of the data somewhat. Regardless, it is still worth having a look at.

Households had a mean of 2 individuals that contributed to it financially. The median number of adults who were contributing financially to households was 2, and the median was 0 for both minors and seniors. The mean number of financially contributing adults was 1.78; of minors was 0.16; and of seniors was 0.14.

The mean household monthly income, based off of total contributions per month, was 185 US dollars (median 125 US dollars). Thus note that this monthly income figure is a bit imprecise, firstly because each household member is the one that best knows his or her income, and our data came from the guardian – who may or may not know about other household members' various income streams and amounts. Second, because the data we collected was "How much does person X contribute to the household" on a monthly basis, which is not necessarily the same as what he or she earned, income-wise – each person may only contribute a portion of his or her income to the household. So we use this figure, and call it "household monthly income", though we are aware of its limitations, and it may be more suitable to call this "household monthly financial resources". Taking each household's monthly income, and dividing it by the number of household members, gives us a mean per capita monthly income (or "mean per capita household monthly financial resources") of 26 US dollars (median 18 US dollars)⁴⁵.

Mean monthly contributions amongst those who were contributing were 139 US dollars for working-age men; 99 US dollars for working-age women; 140 US dollars for seniors; and 44 US dollars for minors. A complementary discussion on the dependency ratio, using both the conventional construction, and looking at the ratio of household members who financially contribute to the household versus those who do not, can be found in section 3.4.

7.3 Schooling expenses relative to household income

To put schooling expenses paid on behalf of the sample girls in perspective of household income, we can create a "total income per year" figure by multiplying monthly income by twelve, and "total schooling expenditures on girl per year" by multiplying the 6-month figure by two. Thus, households mean annual income was 2,220 US dollars; mean annual per capita income was 312 US dollars; and mean expenditures on girl's schooling was 182 US dollars. Medians for annual household income was 1,500 US dollars; for per capita income was 216 US dollars; and for expenditures on girls schooling was 125 US dollars. Girl's schooling expenditures were therefore equivalent to 58% of mean per capita income, and 8% of mean total household income.

7.4 Households' savings

We also asked about savings, debt, and ability to borrow money. At the time of the baseline survey, guardians had a mean savings of 209 US dollars across all places⁴⁶ (median of 25 US dollars). And they had mean debt of 126 US dollars across all places⁴⁷ (median of 0 US dollars). The medians may be more useful to think about than the means, as the medians present

⁴⁵ That is, the mean per capita monthly income figure was constructed for each household, separately.

⁴⁶ Susu, bank account, with someone else, with self, and in any other place.

⁴⁷ Debt from family members, friends, savings clubs, susu, banks, microfinance, and any other place.

the situation for the average person in our sample, and the means can be pulled up by a few people who have and owe big sums. 32% of guardians had no savings at the time of the baseline survey, and 59% had no debt. The main purposes given by guardians for funds saved were household expenses (33% of HH heads), and schooling fees (26% of HH heads). To gauge whether guardians could access money in a pinch, we asked “if you needed to get 50 US dollars within the next month, do you think you can get it?” We also asked the same for 300 US dollars. 53% of guardians said “yes” to 50 USD, and 14% said “yes” to 300 USD.

7.5 Housing conditions

57% of households owned the place they live in, and amongst those households that rent, mean monthly rent is 17 US dollars. In 60% of the housing walls are made of cement (as compared to 57% in the DHS data), in 14% of dirt blocks (12% in the DHS data), and in 12% in zinc (14% in the DHS data). Roofs are in metal/zinc in 95% of the households (98% in the DHS data), and in plastic in 4% of the household (1% in the DHS data). In 89% of the households the floor is made of concrete or stones (70% in the DHS data), in 6% of red earth, and 4% of bare ground (7% in DHS Data for red earth or mud). The poorest girls in our sample live in houses where walls are in zinc, roof are in plastic, and floors are bare ground.

7.6 Food security

We also tried to capture household financial well-being through questions on food security and hunger, made to both the girl, and the guardian. We asked girls how many times a day they usually eat (mean answer was 2), and how many days in the last 7 days they slept hungry (mean answer was 0.25). 31% of girls either eat 1 time per day or less, or went to sleep hungry at least once in the past 7 days.

We asked guardians four hunger questions: “In the last 30 days, did you or any household member have to eat a smaller meal than you felt you needed because there was not enough food?” (68% yes); “In the last 30 days, did you or any household member have to eat fewer meals in a day because there was not enough food?” (69% yes); “In the past 7 days, did you or any household member go to sleep at night hungry because there was not enough food?” (43% yes); and “In the last 12 months, did you or any other household member cut the size of your meals or skip meals because there was not enough food?” (30% said “yes, one one time”, 41% “yes, sometimes”, and 8% “yes, every time”).

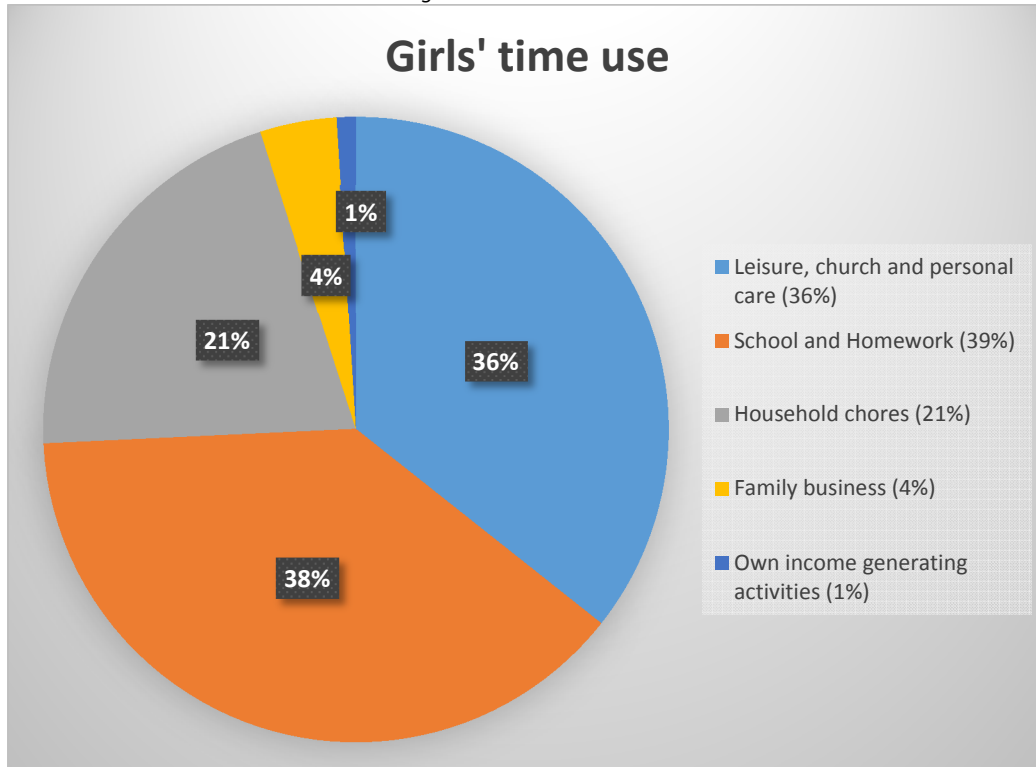
7.7 Healthcare expenses

76% of girls reported that their household always pays for their health care expenses when they are sick. And 96% of the guardians declare that the household was able to pay for medical expenses last time the girl was sick.

8 Girls’ Time Use

We went through a detailed time use module with the girls, in which they picked from amongst 11 activities the “main” activity for each hour of the day, from 5am to midnight, for the most recent weekday. The mean girl spent 6 hours on education/school/training; 2.4 hours on unpaid work at home (e.g. cooking, cleaning, or washing clothes); 2 hours on personal care (bathing, dressing, eating); 1.7 hours in non-social leisure time (reading, watching tv); 1.5 hours in social leisure time (chatting or watching TV, friends, family gatherings, group meetings, parties, gossip); 0.8 hours on unpaid work outside the home (e.g. going to the market or fetching water); 0.6 hours on unpaid work in family business or on family farm; 0.13 hours at church/mosque; and 0.09 hours in own business.

Figure 25: Girls' time use



9 Girls' Income Generating Activities

The survey asked “Now I want to ask about the activities that you, your family members, and your close friends can do.” Then it asked “In the last 30 days did you....X”. Where X was a typical income generating activity, such as “do any household labor, or work in an office as a cleaner, for pay”, or “do welling from a shop, container, or store”. For each X that the girl said “yes” to, we also asked “Was it for yourself or just to help someone”, and we asked “Did you get paid for this (money that would be for you)”.

Note, in this section of the survey we are not talking about household chores like cooking, cleaning, washing clothes, going to the market, or fetching water. We are just talking about the types of things that are usually considered income generating activities

39% of the girls answered “yes” to having worked at least one of the activities in the past 30 days before the survey with or without getting paid. The majority of working girls worked to help someone, most often in the family, and didn’t get paid.

27% of girls work without getting paid, and 12% get paid for at least some of their work

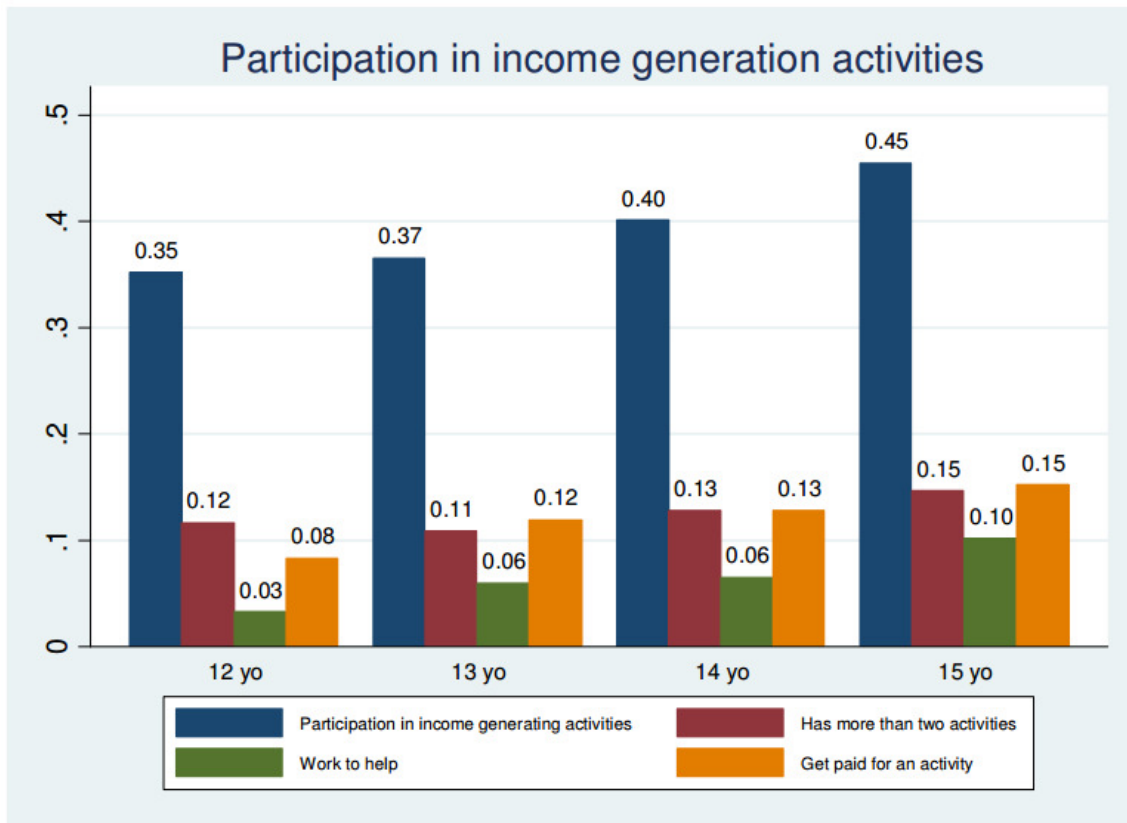
For the girls who had worked, the average time spent working, counting all activities was 15 hours over the past 30 days. Most of the girls (68%) who worked had one activity, 32% had two activities or more. In terms of type of activities, 63% of the girls were engaged in selling (at a market table or in the street), and 17% were engaged in trade activities (food processing, handcrafting etc...), and 19% were engaged in both.

To the question “did you get paid for this (money that would be for you)” only 12% of girls who worked answered “yes” in at least one of their activities. In the last 30 days, girls who worked and get paid got an average (mean) of 17.5 US dollars (median 7 US dollars). 59% of the girls who are paid while working said they can decide how to spend their money

themselves. The rest of the girls declare that their father (92%), their mother (96%), and other family members (88%) are involved in deciding how to spend the money.

As we can see in the histogram below, the older the girls get, the more they participate in income generating activities and get paid for their participation.

Figure 26: Participation in income generating activities



We asked the household to declare whether the girls contributed to the expenses of the household. Only 1% of all girls contribute to the expenses of the household. Among girls who had worked and get paid over the past 30 days, 3% had contributed to the expenses of the household (9 girls) with an average contribution of 6 US Dollars monthly.

10 Domestic and Sexual Violence

Girls were asked to rank frequency of violence in the household along a 4-point scale, with “never” being the least (1), and “every time” being the most (4), while answering the following questions about the household members: “do you have fights with them” “Do they tell you, you are causing them shame” “do they tell you they will beat you” “do they push, hit, slap or throw things at you?” Figure 26 gives us an example of frequency of violence. For 45% of the girls, household members never throw thing at her, push, hit or slap her. For 32% of the girls this happens “one one time”; for 20 % this happens “sometimes”; and for 3% this happens “everytime”.

Figure 27: Violence against the girl in the household

Percentage who declare “never” “one one time” “sometimes” and “every time” to the following assertions				
Respondent	never	one one time	sometimes	every time
People at girl's household tell her she causes them shame	69%	16%	12%	3%
People at girl's household have fights or arguments with her	78%	14%	7%	1%
People at girl's household tell her they will beat her	30%	33%	31%	6%
People at girl's household push, hit, slap or throw things at her	45%	32%	20%	3%

18% of girls always answered never, meaning they did not declare enduring any violence at home ; 20% of the girls answered “never” 3 times out of 4, meaning they didn’t declare enduring much violence at home; 35% answered “never” twice out of four, 19% only once and 7.75% never answered never, meaning they were enduring violence of all sorts at home.

We asked questions about being sexually molested as a child. 4% of girls were molested as a child. 2% were sexually molested by peers (“At the time you were small, I mean when you were below 10, did any of your equal friends, male or female, do rude-rude things to you when you actually didn’t want to do it?”), and 2% were sexually molested by adults (“At the time you were small, I mean when you were below 10, did any big man or woman do rude-rude things to you?”).

Amongst those girls who had had a boyfriend, man, or husband in the last 12 months (which is 9% of girls in total), 7% reported that an argument had resulted in at least one of slapping, pushing, shaking, hitting, kicking, dragging, beating, choking, burning, use of a weapon, or forcing the girl to have sex when she did not want to.

We did not ask questions about general physical or sexual violence within the household.

11 Mentors and Role Models

We asked the girls the following question “Do you have any person you regard as your mentor? By mentor I mean a person that provides guidance, moral support, and gives you advices to help you succeed in life. 83% of the girls answered they had such a person in their life. Among girls who declare having a person like this in their lives, 50% declared they had more than one.

We asked them to tell us which one advised them the most and called this person a mentor. We asked the girls “how often do you talk to this person” the answers were “never” (11%), “few time” (31%), “monthly” (12%), and “most/all the time” (45%).

The mentor was a family member for 53% of the girls, it was a member of the household for 30% of the girls, and it was a community member for 21% of the girls.

About the topics covered with the mentor, 73% of the girls talked about their plans for the future with their mentor, 53% talked about health problems, 42% of the girls talked about peers at school, 28% talked about family problems, 18% about conflict with guardians, 4% about conflict with their boyfriends, 34% about conflicts with their friends or neighbors, and 32% about conflicts with siblings.

The highest level of schooling completed by the mentors was “no education” for 22% of the girls’ mentors, primary for 11% of the girls’ mentors, junior secondary for 14% of the girls’ mentors, senior secondary for 25% of the girls’ mentors, post-secondary for 7% of the girls’ mentors, and university for 8% of the girls’ mentors.

We asked the girls whether they knew what their mentors’ main income generating activities was. Among girls who have a mentor 67% of them gave us the main income generating activities of their mentors. Among mentors who had an income generating activities, 53% were selling (at a market table or in the street), 10% were teachers or health workers, 9% were working in trade activities (food processing, handcrafting etc...), 5% were working for the government, 5% were working in unskilled trade, 4% were doing household labor or cleaning, and 3% were working in an office for a profit business.

12 Appendix 1: Note on Guardians

12.1 The Problem

Baseline survey data was collected from each girl in the study sample, as well as one guardian per girl. The study design had originally intended for the girl and her household heads to be interviewed at baseline. However, analysis suggests that this did not always happen: sometimes an adult household member other than the household head was interviewed instead.

The first indication that guardians may not always actually be the household head was their gender. In our sample, 70% of the guardians are female, and 30% male. In contrast, representative data for Greater Monrovia from 2013 puts the percentage of households headed by a female at 42%, and the percentage of households headed by a male at 58% (2013 DHS). Looking in the DHS data for Greater Monrovia for 2013 only at those households with 12-15 year old girls, only 45% of household heads are female.

From this data, one can conclude that one of the following must be true:

1. Either SOS households are much more likely to be female-headed, or
2. Some of the guardians interviewed during baseline were not actually girls household heads.

12.2 Initial Investigation

During the baseline survey implementation, the field team was supposed to have followed the following procedure:

Step 1: Use as a starting point the person indicated on the girl’s registration form as her household head.

Step 2: Read to this person the following definitions out loud to confirm that the true household head was the respondent before proceeding with the guardian survey: A household is a group of persons who normally eat and live together. These people may or may not be related by blood, but make common provision for food or other essentials for living and they have only one person whom they all regard as the head of the household. The head of the household is the person all members of the household regard as the head, and who normally makes day-to-day decisions governing the running of the household.

Step 3: Based on this definition, confirm who is the true head of the girl’s household, and interview that person.

Investigative conversations with the field team yielded the following observations:

- During registration, girls were supposed to indicate the household head’s name and contact, but during the first few days of registration we realized that some of the people the girls were naming were actually a friend or a sister.

- During registration girls may have intentionally named somebody closer to them, easier to convince, more available, more sympathetic, etc, as in order for the girl to be eligible for the program, this person would have to participate in the baseline survey and give consent for the girl's participation in the baseline survey and the SOS program.
- During the survey enumerators may have preferred to complete the survey with whomever was more available, so as to allow them to more quickly complete the number of surveys they were supposed to complete, and though when they were directly monitored by supervisors we know this did not occur, only a small fraction of surveys completed were directly monitored by supervisors during the moment of the interview.
- Even though the named person was supposed to confirm that he or she was truly the household head – or to name the true household head in instances where he/she was not – it could be that the named person felt eager for the girl to be able to participate in the SOS program, and in cases where the true household head would have been less enthusiastic, or simply unavailable, the named person would have had a reason to falsely identify him or herself as the true household head.

The conclusion of this investigation was that there was strong evidence suggesting that some of the guardians interviewed during baseline were not actually girl's household heads.

12.3 Investigation using Baseline Data

One way to investigate whether guardians interviewed during baseline are actually the true household head is to use other survey questions embedded within the baseline survey questionnaire that are also indicative of household headship.

Based on our experience with our study samples, there is often significant overlap between who the household head is, and who is named in response to the following two questions, if the same person is named in both: (a) Who is the main financial supporter of the household?; and (b) Who in this household takes decisions on how to spend the money?

We compared the extent to which the guardians interviewed were also named as the person in (a) and/or (b).

- For 59% of girls, the guardian interviewed was also the person named in both (a) and (b).
- 13% of guardians interviewed were named only in (b) as the main decision-maker, and 6% were named only in (a) as the main supporter.
- 84% of male guardians (674) and 50% of female guardians (1017) were named in both (a) and (b).
- Taking a further look at the female guardians, 34% were named only in (b) as the main decision-maker, and 8% were named only in (a) as the main supporter.
- Of the 50% of female guardians who were NOT named in both (a), and (b), half are married to the person the person named in both (a) and (b), and one-quarter are married to the person named in (a).

If one were to crudely estimate from this that between 25% and 50% of households where female guardians were interviewed actually have a male household head, that would reduce the incidence of female headed households in the sample to between 35% and 52.5%, which would be in line with incidence of female headed households within the DHS data.

12.4 Investigation using Endline Data

During the endline survey we undertook an additional exercise to further shed light on the question of who girls' true household heads were at the time of the baseline survey.

To the person who put him or herself forward as the head of the girl's household at endline, we read the same definitions of household and household head as at baseline. We then asked: "Who is the head of household that [girl] is a part of?"

If the interviewee identified him or herself as girl's head of household, we continued the interview. If he or she named someone else, we discontinued the interview, and started it anew with that person, and repeated the same procedure. Once the true current household head was secured, the enumerator asked the following series of questions:

1. "Was [girl] part of this household two years ago?"
2. If yes to 1: "2 years ago, were you the head of this household?"
3. If yes to 1 and no to 2: "Who was the head of this household two years ago?"
4. If no to 1: "Who was the head of household for the household in which [girl] lived 2 years ago?"

We then used this data, collected at endline, to retroactively construct a new variable for who girls' household heads were at baseline. With this measure, we find that at the time of the baseline survey, 59% of household heads were female, and 41% were male. This would place incidence of female head households within the SOS study sample at 14 percentage points higher than the 2013 DHS data for households in Greater Monrovia.

13 Appendix 2: Methodology for Wealth Benchmarking of SOS Sample

One way to measure household wealth is to create a wealth index. These wealth indices are created using easy-to-collect data on a household's ownership of selected assets, such as televisions and bicycles; materials used for housing construction; and types of water access and sanitation facilities. And their purpose is to determine a household's relative wealth within a given population.

The 2013 Liberia DHS survey collected data for both a nationally representative sample, as well as for a sample that is representative of Greater Monrovia. Generated with a statistical procedure known as principal components analysis, the DHS wealth index places individual households on a continuous scale of relative wealth, and separates them into five wealth quintiles.

During the SOS baseline survey, we collected a reduced number of wealth index variables. During the SOS endline survey, we collected the full complement of DHS wealth index variables.

One of our key goals with this wealth data was to determine how SOS households compare to a representative sample of households in Greater Monrovia.

A few limitations to the data are as follows:

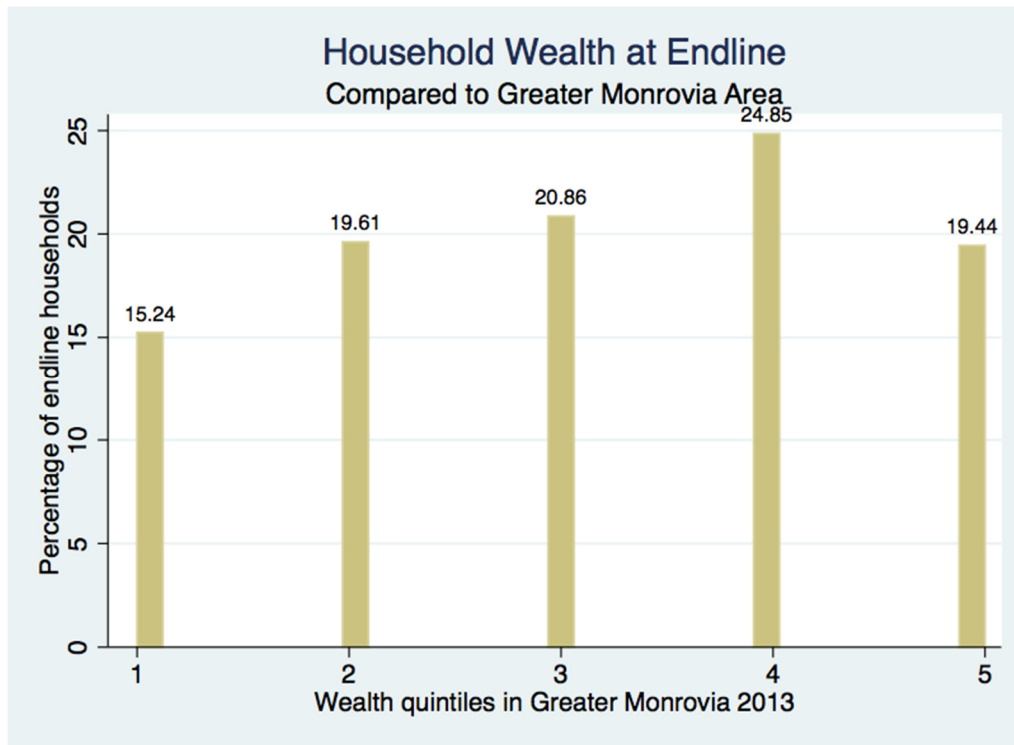
- We collect the full complement of DHS wealth index variables from our sample only at endline in 2016; whereas the DHS data we want to compare it to is from 2013.
- We only have endline data for a sub-set of SOS study sample households⁴⁸.
- Households in Greater Monrovia, and/or households in the SOS study sample, could have become more or less wealthy between 2013 and 2016.

Employing a variety of techniques to analyze the data given these constraints, we conclude that SOS households are very similar to a representative sample of households in Greater Monrovia. The wealth scores for Greater Monrovia households and SOS study sample households are within 5% of each other. Furthermore, SOS study sample households are distributed more or less perfectly across the DHS wealth quintiles, meaning that SOS study sample households are evenly drawn from poor, middle, and wealthy households.

⁴⁸ We only have endline from non-attrited households. See section 13.4 for more details on the implications of this.

13.1 Distribution of SOS study sample households at endline across Liberia DHS 2013 wealth quintiles
Each DHS wealth quintile for Greater Monrovia is mechanically comprised of 20% of households. Using weights derived from principal component analysis of the DHS data together with the data from the SOS endline survey, we distribute the SOS study sample households across the 2013 DHS wealth quintiles, and find that their distribution is quite similar to the DHS sample.

Figure 288 : Distribution of SOS study sample households at endline across Liberia DHS 2013 wealth quintiles.



The data also suggests that 5% of SOS study sample households are in a higher wealth bracket than what one would see looking at a representative sample for Greater Monrovia. However, this result only holds if there is no change in wealth between 2013 and 2016 either within the study sample or in Greater Monrovia overall.

13.2 SOS Study Sample Household Wealth at Baseline versus Endline

This analysis uses only variables that are present in both SOS baseline and SOS endline survey instruments. And this analysis uses only data from SOS study sample households from which this data was collected at both baseline and endline. The 2013 Liberia DHS wealth index is created assigning a weight to each index component, and for this analysis, we use the weights.

For those wealth index component variables present in both the SOS baseline and endline, we calculate a mean value at baseline, and a mean value at endline, using the same methodology as the DHS. For the SOS baseline data, we multiply each variable by the relevant weight, to create a per variable wealth score. We then sum these together, to generate a SOS baseline cumulative mini wealth score. We do the same with the SOS endline data. We call this a “mini wealth score” because it is constructed using a small sub-set of wealth index variables.

In this way, we generate two arbitrary, but comparable, mini wealth scores, that allow us to compare study sample households at baseline and endline. The baseline mini wealth score is 0.352; and the endline mini wealth score is 0.342.

The relationship between these scores can be thought of as follows:

Baseline mini / Endline mini = 1.029.

Endline mini / Baseline mini = 0.972

This analysis thus suggests that SOS study sample households decreased in wealth between baseline and endline, but only by about 3%.

It would be helpful to know the extent to which wealth within Greater Monrovia households overall increased over this same period, but we do not have good data on this. What we do know is that World Bank National accounts data and OECD National Accounts data, which show only very slight increases in GNI per capita and GDP per capita between 2013 and 2015⁴⁹.

13.3 Comparison of SOS study sample households wealth versus a representative sample of Greater Monrovia Households

Step 1: Using the full complement of wealth index component variables, and the weights from the 2013 Liberia DHS survey, we calculate a “full wealth score” for Greater Monrovia households (using the 2013 Liberia DHS survey data for Greater Monrovia), and a full wealth score for the SOS study sample households at endline. These full wealth scores are 0.641 for Greater Monrovia, and 0.621 for SOS study sample households at endline.

Step 2: We use the relationship between the baseline and endline mini wealth scores to adjust the 2016 SOS study sample endline data so that it looks more like what 2013 data would have looked like, and we consider this measure the “SOS study sample baseline full wealth score”.

$$0.621 \times 1.029 = 0.639$$

Step 3: We compare the Greater Monrovia 2013 full wealth score of 0.641 to the SOS study sample baseline full wealth score of 0.639.

$$0.639 / 0.641 = 0.997$$

This analysis suggests that SOS study sample households are the same, on average, than Greater Monrovia households.

Of course, this conclusion only holds if SOS study sample households and Greater Monrovia households did not differentially change in wealth over the period of 2013 and 2016; and if the attrited SOS study sample households that are missing from the endline dataset are not different, on average, wealth-wise, than the rest of the SOS study sample.

13.4 Comparison of attrited households to non-attrited SOS study sample households

Using a similar approach to what is described in section 13.2, we create three mini wealth scores:

- A score for all SOS study sample households at baseline
- A score for only those SOS study sample households that are interviewed at both baseline and endline. These are the non-attrited households.
- A score for only those SOS study sample households that are not interviewed at baseline. These are the attrited households.

These three scores are as follows:

- All households at baseline: 0.345
- Non-attrited households only: 0.350

⁴⁹ This is true using either the GNI per capita PPP current international \$, or the GNI per capita Atlas method current US\$. Source: Data.worldbank.org . <http://www.worldbank.org/en/country/liberia/overview>

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- Attrited households only: 0.346

This analysis suggests that there is at maximum, on average a 1% difference, in the wealth of attrited and non-attrited households.