A Community-Driven Approach to Reducing Teenage Pregnancy in Sierra Leone Midline Evaluation Brief

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# Table of Contents

Summary................................................................................................................................. 4  
Background.............................................................................................................................. 5  
Intervention............................................................................................................................ 6  
Design and Methods............................................................................................................... 7  
Findings................................................................................................................................ 9  
Limitations............................................................................................................................ 13  
Conclusion............................................................................................................................. 13  
References............................................................................................................................. 15  
Annexes ................................................................................................................................ 16
Summary

Preliminary evidence from a 2009 global evidence review suggested that community-based child protection mechanisms are likely to be more effective and sustainable if they are linked with formal aspects of the child protection system. To test the value of nonformal-formal linkages, this action research uses a quasi-experimental design to test the effectiveness of a community owned and driven intervention that seeks to reduce teenage pregnancy. In each of Moyamba and Bombali Districts, there were two clusters of three communities in different but comparable chiefdoms. One cluster was an intervention cluster, whereas the other was a comparison cluster. In the intervention clusters, community members from three villages worked collaboratively to develop an intervention that addressed a child protection concern of their choosing. In both intervention clusters, the communities elected to focus on teen pregnancy, an issue that had been documented as a key concern in previous ethnographic work. The intervention, which was developed by the community, included components on family planning, sexual and reproductive health education, and life skills and was implemented in partnership with NGOs and District Ministry of Health partners.

Using a survey of adolescents (13-19 years of age), this study reports on mid-term (T2) changes in contrast to the baseline (T1) findings:

- Exposure to the intervention was found to increase with age, and was particularly high among individuals who had a partner but were unmarried. The latter individuals had 1.7 times the odds of attending a presentation when compared to those who were married.
- Between baseline (T1) and T2, the percentage of teenagers aged 15-17 in intervention areas who were willing to ask their partners to use a condom increased by 17.1 percentage points, whereas the control villages showed a decrease of 6.2 percentage points.
- Girls and adolescents under 15 years in intervention areas showed a significant increase in their intention to use condoms regularly, while the opposite was true in control areas.
- Similarly, adolescents who were exposed to the intervention’s programs were nearly twice as likely (1.74 times the odds) to report intending to say no to unwanted sex.
- Sexual activity was also found to have increased between T1 and T2 in control areas, while no increase occurred in intervention areas, suggesting possible signs of impact of the program.

Although it is too soon to discern the full effects of the intervention, these findings suggest that the intervention is on its way toward achieving intermediate results that will ultimately help reduce teenage pregnancy and contribute to the evidence base on community based child protection programming.
Background

Children and youth in Sierra Leone, as in many countries, face a variety of adversities including exposure to violence, lack of education, and other harmful social practices. Despite significant resources invested by the global humanitarian community in supporting communities to protect their children, there is little evidence about what works to strengthen community responses to issues like violence and reproductive health, and furthermore about how to strengthen linkages between communities and government as part of a more effective national child protection system. Established in 2009 by a group of child protection agencies, the aim of the Inter-agency Learning Initiative is to explore the ways communities care for their children, and to generate a robust evidence base on the effectiveness of different community-driven strengthening interventions that enable community based child protection mechanisms (CBCPMs) to prevent and respond appropriately and effectively to child protection issues.

Since 2009, the Interagency Learning Initiative has worked in Sierra Leone and Kenya to strengthen the practice of child protection in two different African contexts, with a focus on community driven connections between community processes and aspects of the wider child protection system. Evidence from a systematic literature review suggests that the deeply established sense of ownership and connection between a community and its intervention will encourage increased activity, sustainability, and effectiveness for affected children (Wessells, 2009). In an effort to evaluate the value of bottom-up approaches to establishing nonformal-formal linkages, the initiative in Sierra Leone enables communities to decide how to improve their CBCPMs and their connections to formal actors and systems.

To achieve this goal, the structure of the initiative includes an action component wherein six rural villages in two districts were invited to design and implement an intervention based on locally agreed child protection priorities. The first stage of this process involved a rapid ethnography in each village to learn about local people’s understandings of childhood, child protection risks, local pathways of response to those risks, preventive factors, and linkages between community protection mechanisms and processes with those of the formal, government led aspects of the child protection system (Wessells et al., 2012). This phase, which involved local researchers living in the villages, allowed the research team to build trust and rapport with the communities, which proved essential for the subsequent work. The findings from this phase were fed back in a process that enabled collective reflection. Community members confirmed that the research had accurately captured what they themselves saw as the main child protection problems, and they began on their own initiative to reflect on what they could do to address those problems. That communities defined the problems themselves and discussed how they might address them was an important foundation for the locally owned process that has resulted in the current intervention.
The action component is complemented by an evaluation to measure the effectiveness of this intervention. For this purpose, a quasi-experimental evaluation was designed, with half of the villages chosen to begin the program, while the other half remained as a control group. In each of the two districts, Moyamba and Bombali, there was one “intervention” chiefdom and one “control” chiefdom. Chiefdoms contained three villages each, for a total of 12 (see Annex 1).

**Intervention**

The community-driven intervention was created through a highly consultative process that included children and adults. First, the findings from the ethnographic phase were reflected upon and discussed among the intervention villages. With the support of local facilitators hired to live in and work with the villages, community members identified a child protection concern that they wished to address that linked community-based mechanisms with formal actors (including NGOs and the District government). Plans were first discussed in each village in open community meetings and meetings among sub-groups including adult men, adult women, teenage girls, teenage boys, and elders. Home visits were also enacted to garner input from people unable to attend public meetings. The results of these discussions were given to the elected representatives (including both adults and children) who met with counterparts from other intervention villages in the same chiefdom.

Over a period of several months, during which inter-village discussions were relayed back to village level meetings (and vice-versa), teenage pregnancy was identified as the child protection issue of central concern. Continued discussions at the inter- and intra-village levels led to the development of an intervention model and implementation plan that all three communities approved in each intervention cluster. The model includes three elements that began in April 2013 in the six villages in these clusters:

1. family planning, including improved access to contraceptives;
2. sexual and reproductive health education on puberty, reproduction, reproductive health and challenges, and the problems associated with teenage pregnancy; and
3. life skills, including the ability to say 'no' to unwanted sex and to negotiate and plan sexual activity, facilitated through house-to-house visits undertaken by peer volunteers.

Community members, and in particular adolescents, are the main drivers of the intervention. Young people themselves have decided how to create and communicate key messages. For example, they have developed dramas showing young couples making wise decisions about sexual activity or acting on impulse, with very different consequences. Afterwards, community members are encouraged to discuss the implications. The youth leaders play a key role in stimulating
dialogue, reflection, and constructive problem solving around the prevention of teenage pregnancy.

The theory of change for this project (see Annex 3) focuses on shifting social norms among both parents and adolescents, reducing stigma around discussing sex or accessing and using contraception. Through education and discussion, the goal is to begin to foster a culture of acceptance and comfort around these sensitive topics. In essence, this social norms change approach aims to support healthy decisions to reduce unprotected sex and rates of teenage pregnancy, thereby supporting children’s well being and advancing the Sierra Leone National Strategy for the Reduction of Teenage Pregnancy 2013-2015.

**Design and Methods**

The evaluation aims to measure the impact of the community-driven interventions on the incidence of teenage pregnancy, and also on a range of immediate and medium-term outcomes. These include changes in young people’s knowledge and attitudes towards contraception, and access to and use of contraception, as well as social norms, behavioral intentions, and expectations in the communities around sex, relationships and contraceptive use.

The evaluation is based on a randomized trial design, with a baseline survey taken before intervention implementation and followed by successive rounds of evaluation after 8 (T2) and 20 (T3) months. The baseline survey took place in two parts, in February 2012 and March 2013. The first survey collected information on a large range of child protection issues (including HIV, domestic violence, and education) among 530 teenagers ages 13-19 since it was intended to provide a model of how to track population based outcomes for children over time. The second survey, which could be conducted only after the communities had selected an issue to address and had developed their intervention approach, was designed to collect additional information specific to the intervention. The second baseline survey followed up with 360 teenagers, 321 of whom had previously been interviewed. This survey focused on issues relevant to teenage pregnancy and included:

- personal demographics (age, sex, religion, ethnicity);
- knowledge and attitudes towards contraception, abortion and HIV and AIDS
- access to contraception and information about sex, relationships, pregnancy and contraception; and
- individual, peer, and community attitudes, intentions, and expectations regarding sex and teenage pregnancy.

The T2 measurement followed the same approach as the combined T1 round of study, utilizing local enumerators to interview adolescents in each village. The trained enumerators interviewed participants using a smartphone-based survey composed of questions identical to those in the previous rounds of study (see Stark
et al., 2013 and Shirley et al., 2013) in order to make longitudinal comparisons possible. Each survey was administered in a language comfortable to the interviewee and took approximately 45 minutes.

Data collection took place in December 2013 and was conducted by 12 researchers, all but two of whom were involved in the baseline evaluation. The researchers were organized into two teams, one each in Bombali and Moyamba chiefdoms. All researchers participated in a rigorous two-week training in Freetown, which included instructions on consent, ethics, and appropriate interviewing techniques, as well as field-testing.

Using tracing information from the previous data collection, researchers found previously interviewed individuals in each village and followed others to different villages wherever possible. In addition to T1 participants, all people between the ages of 13-19 in each of the twelve villages were interviewed. In total, 574 individuals were interviewed, approximately 52% of whom were interviewed at baseline. In all areas, the team leaders directly supervised the consent and interview process and examined the data for consistency. The use of mobile phone collection ensured survey completeness and minimized error. For each participant, the enumerator read the question as written on the device and listed the response options when applicable before recording the option chosen or mentioned by the respondent.

A range of analytic approaches was used to assess impact at this stage of the intervention. Longitudinal approaches utilized data from 295 individuals that were followed from baseline to T2. A series of cross-sectional analyses compared the 574 individuals in T2 with the baseline participants. The significance of the differences between intervention and control areas over time was investigated by breaking the populations into sub-groups of independent and non-independent observations. Analyses were also run to determine the relationship between intervention exposure and a variety of variables at a significance level of α=0.05.
Findings

*Exposure to the intervention increased with age and age-related demographics and was highest in unmarried people with a partner*

There was a strong relationship between directly experiencing at least one aspect of the intervention and a variety of demographic variables. 23% of individuals in the treatment areas reporting experiencing some aspect of the intervention. The odds of attending one of the presentations or receiving in-home visits increased with age, with people over 18 years being significantly more likely than any other age group to have experienced some aspect of the intervention (see Annex 1 for more details). Education level followed a similar trend, with teens with higher levels of education having increased odds of exposure to the intervention. Individuals who already had children were 2.8 times as likely to report some engagement with the intervention, which may also be a factor of age.

In contrast to the increasing age trend, married respondents actually had lower odds of direct exposure than people who had a boyfriend or girlfriend. Participants with a boyfriend or girlfriend reported 1.7 times the odds of exposure compared to married individuals, and also had much higher odds of exposure than single people. This signals that certain sub-groups of adolescents may be more actively seeking out information than others.

*Adolescents in intervention areas, particularly those under 18, are more willing to ask their partner to use a condom*¹

Social norms surrounding contraceptive use and acceptance are important determinants of reducing pregnancy and the success of the project. As indicated in Figure 1, intervention areas saw a marked improvement between T1 and T2, with an increase of 9.8 percentage points in participants responding that they do not think they would be made fun of if they asked their partner to use a condom. Comparatively, respondents in the non-

¹ The specific question asked a respondent to indicate their level of agreement with the following statement: “I would not ask a sex partner to use a condom because I would be criticized or made fun of”.

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Figure 1: Percentage of Adolescents Who Not Fear Criticism for Asking Their Partner to Use a Condom
intervention areas saw little change in this measurement, just 1.2 percentage point increase. This difference over time between the two areas is marginally significant (p<0.1) for the adolescents who had previously been interviewed.

![Figure 2: Percentage of Adolescents Who Would Not Fear Criticism for Asking Their Partner to Use a Condom- Ages 15-17](image)

When broken down by age, it appears that adolescents under 18 in intervention areas are less worried about being criticized for negotiating condom use during sex. Figure 2 shows a large increase (17.1 percentage points) among individuals in treatment areas between the ages of 15-17, in relation to a decrease of 6.2 percentage points in the same age group among control participants. This difference is marginally significant (p=0.07) between T1 and T2 among individuals who participated in both rounds, suggesting potential changing norms around the social acceptability of condoms in the intervention areas.

**Participants in all areas reported that it is easier to access contraceptives in T2 compared to T1**

Overall, both control and intervention areas saw an increase between T1 and T2 in regard to perceived ease of accessing contraceptives (see Figure 3). Among those who were interviewed in T1 and T2, both groups saw a statistically significant increase in this measure (p<0.05), with levels significantly higher in intervention areas (p<0.05), but the difference between the clusters over time was not significant. Both genders and all age groups saw similar increases. This across-the-board increase is a positive sign for the districts studied, and while the change in the different groups may be in part due to the project in the intervention areas, it is likely attributable to another cause, such as national awareness campaigns to reduce teen pregnancy.

![Figure 3: Percentage of Respondents Who Consider it Easy to Access Contraceptives in Their Village](image)
Experiencing the intervention led to increased behavioral intent to turn down unwanted sex

After accounting for important demographic factors such as age and education level, it was found in the T2 survey that teenagers who had been exposed to the intervention were nearly twice as likely (1.74 times the odds) to report intending to turn down sex with someone they do not want to have sex with compared with unexposed teenagers. While the goal of the teen pregnancy and sexual health presentations is increased knowledge about specific topics like contraceptives and sexually transmitted infections, the main purpose of the peer visits is to discuss life skills and how to make appropriate decisions about sexual activity. The positive association between intervention exposure and these decision-making factors regarding sex, even after including confounding variables, suggests a positive impact of these peer visits on teenagers and the possibility of increased agency around the topic of sex.

Teenagers in intervention areas, particularly girls and those under 15, increasingly plan to use condoms regularly

Given the overall goal of the intervention to reduce teen pregnancy, improved decision-making, knowledge and access to the tools to prevent pregnancy will be key to success. When asked about whether they plan to use condoms regularly, there was an increase of 5.8 percentage points in teenagers who said yes in T2 compared to T1 in intervention areas, while there was a decrease of 9.7 percentage points of those who said yes in control areas (see Figure 4). This difference over time was marginally significant (p=0.05) between intervention and control among people interviewed in both T1 and T2.

In particular, girls showed positive trends in their plans to use a condom regularly, with an increase of 4.6 percentage points in intervention areas compared to a decrease of 7.7 percentage points in non-intervention villages (see Figure 5). This finding, especially when considered together with the results about comfort asking a partner to use condoms, may signal growing agency among girls in the intervention areas in regard to making choices concerning use of condoms.
Even more encouraging may be the difference among teenagers under 15 between T1 and T2, particularly those interviewed in each round. Figure 6 shows an increase of 11.2 percentage points in the treatment area group between T1 and T2, compared to a decrease of 5.5 percentage points in control areas, a difference that is statistically significant among twice-interviewed adolescents (p<0.05). As these younger adolescents will be a key population of interest when determining overall program effectiveness, the increased intent to use protection in this age group may signal a significant impact if, in combination with improved access to contraception, there are fewer pregnancies for this age group in the next few years.

**Teenagers in control villages had increased levels of sexual activity between T1 and T2**

Figure 7 shows changes between T1 and T2 in terms of percentage of participants who responded that they had had sex in the last year. While the intervention areas remained relatively constant (36.6% to 37.0%), rates of sexual activity reportedly increased in the control villages (from 44.1% to 48.9%) between the two time periods. While the trend in the differences between clusters between T1 and T2 is promising for future rounds of study, the difference is not yet statistically significant.
**Increase in sexual activity in control areas seems attributable to unmarried girls over 18 with partners**

The results on sexual activity indicate that one key demographic, unmarried girls over 18 with partners, is largely responsible for the increased sexual activity in control areas. While intervention regions saw minimal differences for any group between T1 and T2 (with some small decreases), girls in control areas had a rise of 12.8 percentage points, and teenagers with a partner had a rise of 9.7 percentage points (see Figure 8). While the decrease of sexual activity in the intervention areas combined with the increased intent to say 'no' to unwanted sex suggests these levels could be attributable in part to the intervention presentations (possibly through improved decision-making abilities or increased awareness of sexual health concerns), the evidence does not yet bear this out as the findings were not statistically significant.

**Limitations**

Data analysis from T2 shows that intervention chiefdoms were statistically similar to control chiefdoms in most demographic categories (e.g. age, gender, ethnicity, history of children, and work status). However, they differed significantly in education level, religion, and relationship status. People in the intervention chiefdoms had higher odds of being married, Christian, and educated to a secondary school level. These differences may impact future analyses comparing intervention and control areas, and will be adjusted for in final analyses at T3.

**Conclusion**

Several lessons can be gleaned from these initial findings, which may influence future efforts. First and foremost, data from the T2 survey supports the proposed theory of change (see Annex 3) with some early evidence of changes in knowledge, attitudes, intentions, and behavior around sexual health in the intervention communities in Moyamba and Bombali districts. The findings around behavior, specifically the intent to turn down unwanted sex and increase condom use, are promising, and point to the importance (and early effectiveness) of peer discussions of these sensitive topics in a comfortable, safe space.
In particular, the increased willingness to ask a partner to use a condom and plans to use condoms in people under 18 is encouraging for future rounds of the project. By heightening awareness and shifting social norms in the generation of adolescents who are just becoming sexually active, change may follow in targeted outcome areas including pregnancy. Combined with the perceived increased access to contraceptives in all areas, there are signs that the intervention is supporting adolescents in the treatment villages to use contraception in early sexual activity.

It is evident that certain groups, particularly those over 18 years, currently have a higher likelihood of accessing the presentation component of the intervention. While this is a positive development, particularly if high access among unmarried adolescents with a partner indicates a desire to prevent pregnancy before marriage, it may also indicate a need for additional strategies for engaging younger populations.

Collectively, and given the short window of time in which it has been active, the findings presented in this brief suggest positive trends and signal that the intervention is moving in the right direction with the potential for a much larger impact in the coming years.
References


Annexes

Annex 1:

**Figure 1: Multi-stage action research process**

Identification of 2 districts, 4 chiefdoms, 12 villages

Ethnography on all 12 villages

Definition of Outcomes based on local views

Randomization of Chiefdom and 3 villages clusters to intervention or comparison group

Bombali District
- Chiefdom A
  - 3 villages
  - T1: Baseline data
  - T2: Repeated data
  - T3: Repeated data

Chiefdom B
  - 3 villages
  - Intervention

Moyamba District
- Chiefdom C
  - 3 villages
  - T1: Baseline data
  - T2: Repeated Data
  - T3: Repeated data

Chiefdom D
  - 3 villages
  - No intervention

Legend:
- Intervention Cluster
- Comparison Cluster
Annex 2:

**Table 1**
Title: Bivariable analyses between covariates and exposure to intervention

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Intervention Exposure (n=95)</th>
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<tr>
<td></td>
<td>OR (CI)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>Under 15</td>
<td>0.187 (0.1, 0.351)</td>
</tr>
<tr>
<td>15-16</td>
<td>0.268 (0.14, 0.514)</td>
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<tr>
<td>17-18</td>
<td>0.382 (0.211, 0.691)</td>
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<tr>
<td>Over 18 (ref)</td>
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<tr>
<td>Education Level</td>
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<tr>
<td>No school</td>
<td>0.083 (0.018, 0.389)</td>
</tr>
<tr>
<td>Primary or below</td>
<td>0.162 (0.081, 0.325)</td>
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<tr>
<td>Junior Secondary</td>
<td>0.395 (0.199, 0.785)</td>
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<tr>
<td>Senior Secondary or above</td>
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<tr>
<td>Relationship status</td>
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<tr>
<td>Boyfriend/Girlfriend</td>
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<tr>
<td>Married (ref)</td>
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<td>Intervention Area</td>
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<tr>
<td>Yes</td>
<td>2.637 (1.631, 4.263)</td>
</tr>
<tr>
<td>No (ref)</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at a level of alpha = 0.05
Annex 3: Theory of Change

**Super impacts**

Better protection of children - reduction in transactional sex and sexual exploitation, reduction in early marriage, reduction in violence against children

**Impact**

Reduction in teenage pregnancy

**Outcomes**

Increased willingness of girls and boys to say ‘no’

Decreased belief in misconceptions about contraceptives

Increased understanding of why condom use is important

Increased discussions and negotiation by young people about sex

Increased understanding of risks of teenage pregnancy

Peers, leaders, and parents encourage safe sex, family planning, and life skills

**Outputs**

Local government and NGOs collaborate with communities

Health post staff invited to and more active in the communities

Young people have increased access to information on SRH

Young people have increased access to contraception

Entire community more active in supporting safe sex by young people

**Intervention**

Social mobilization around sexual and reproductive health, family planning, and life skills

Community dialogues

Parent-child discussions

Peer modelling

Youth-led dramas and songs presented in communities

Key messages

Link with government

Link with NGOs

Capacity building of peer educators and community Task Force

Community-driven process of issue selection, planning, design, & implementation