PASSAGES PROJECT

Grandmother Project - Change through Culture

Girls' Holistic Development Program

Quantitative Research Report

MAY 2020

Prepared by

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This report presents the results of a quantitative study conducted in February 2019 with Grandmother Project (GMP). This study is the result of a partnership between GMP and the Institute for Reproductive Health (IRH), established with the aim of using a realist evaluation approach to understand the processes of change and the effectiveness of the Girls' Holistic Development (GHD) program for improving the well-being of adolescents. We are grateful to the participants of this study who donated their time and responses. We are grateful to GMP for their support in reviewing the research tools, helping with access to the communities where they work, and their support throughout this research and partnership. This study report was developed by Bryan Shaw, Anjalee Kohli, and Susan Igras.

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LIST OF ACRONYMS

DHF	Développement Holistique des Filles
DHS	Demographic and Health Survey
FGM/C	Female genital mutilation/cutting
GBV	Gender-based violence
GHD	Girls' Holistic Development
GMP	Grandmother Project
HIV	Human immunodeficiency virus
ICRW	International Center for Research on Women
IPDSR	Cheikh Diop University's Institute for Training and Research in Population, Development, and Health Reproduction
IRH	Institute for Reproductive Health at Georgetown University
NGO	Non-governmental organization
RH	Reproductive health
SBC	Social and behavioral change
SD	Standard deviation
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VYA	Very young adolescent
WHO	World Health Organization

EXECUTIVE SUMMARY

In rural Senegal, very young adolescent (VYA) girls face various constraints related to early and forced marriage, teen pregnancy, female genital mutilation/cutting (FGM/C), and staying in school. To date, little progress has been made in reducing these constraints. Many programs addressing these issues narrowly focus on changing attitudes and behaviors of VYA girls and occasionally, their caregivers. In this context, Grandmother Project (GMP) | Change through Culture recognizes that VYA girls alone cannot end these and other harmful practices which are collectively influenced by other family members and community actors . Sustained change to benefit VYA girls can come about only when there is change in these norms. GMP is addressing these issues through the Girls' Holistic Development (GHD) program or, as it is locally known, *Développement Holistique des Filles* (DHF). It is an intergenerational approach which involves all key categories of community actors, male and female, and particularly grandmothers, to promote community-wide support for VYA girls' upbringing and to catalyzes community-wide change related to these critical issues that limit VYA girls' development and options in life.

Study design & methods. From February to March 2019, Georgetown University's Institute for Reproductive Health (IRH) with Cheikh Diop University's Institute for Training and Research in Population, Development, and Health Reproduction (IPDSR) conducted a quantitative, cross-sectional study to assess the effects of the GHD approach after 18 months of activity in the Némataba Commune in Senegal. It was not possible to collect baseline information given that implementation in the intervention area needed to begin immediately due to donor wishes, leaving no time to prepare and obtain ethical clearance for a baseline. Consequently, the assessment was a quasi-experimental post-test intervention/control design. Seven villages in the Némataba Commune that received the full GHD intervention package over 18 months were involved in the study, and seven non-intervention villages were purposively selected for comparison. Surveys were conducted with all eligible VYA girls (12-16 years of age at endline) and grandmothers—women of an age where they could have biological grandchildren of VYA age—and a subset of VYA caregivers in selected villages. The study sample included 399 VYA girls, 196 grandmothers, and 205 caregivers. The study team developed measures for gender attitudes, social norms (through vignettes), self-efficacy, intergenerational communication, and target behaviors and behavioral intentions related to early marriage and pregnancy, girls' education, and FGM/C. Differences in these measures were assessed comparing groups in intervention and comparison villages.

Participation in the intervention. The findings from the endline clearly demonstrate that the GHD intervention reached target populations with 80.1% of VYA girls, 76.3% of their caregivers, and 85.7% of grandmothers in intervention villages reporting involvement in at least one of the GHD intervention activities. The extent of reported participation varied, by design, for each of the eight key intervention activities. Despite the relatively close proximity of comparison villages, less than 4% of individuals in comparison villages reported participation in any of the GHD intervention activities. In intervention villages, the findings also demonstrate that participants reported changes in attitudes, with over two-thirds of VYA girls, their caregivers, and grandmothers reporting that their participation in the GHD intervention led to changes in attitudes around early marriage and pregnancy, girls' education, and/or FGM/C.

Intervention effects. The GHD intervention clearly promoted intergenerational dialogue between elders, caregivers, and adolescents and recognition of grandmothers as a valuable community resource for shifting norms around FGM/C, girls' schooling, child marriage, and early pregnancy. In intervention villages, grandmothers were reported as more likely to be involved in family decision-making and providing advice and support to caregivers to avoid FGM/C for their daughters, to keep girls in school, and to delay marriage and pregnancy compared to comparison villages. Moreover, grandmothers in intervention villages were significantly more likely to report that they would be willing to assist a VYA girl and/or advise a caregiver to help girls' stay in school and delay marriage and pregnancy compared to grandmothers in comparison villages. Finally, grandmothers in intervention villages were significantly more likely to report that they felt valued in their communities compared to grandmothers in comparison villages. The findings also demonstrate that VYA girls, caregivers, and grandmothers in intervention villages all felt that their opinions are significantly more likely to be heard by other family members, for their opinions to be valued, and for their individual desires relating to GHD Project outcomes to be achieved compared to comparison villages.

While there were few significant differences in individual attitudes among VYA girls, caregivers, and grandmothers toward gender roles and to girls' schooling, child marriage, and early pregnancy, there were significant differences in attitudes toward FGM/C, with caregivers and grandmothers in intervention villages were significantly less likely to be supportive of the practice compared to those in comparison villages. Unlike individual attitudes, community norms related to GHD outcomes have shifted, particularly in intervention villages. There were significantly different perceptions of typical and accepted behaviors (i.e., social norms) around GHD behavioral outcomes comparing intervention and comparison villages. Practicing FGM/C, removing girls from school prior to completing their desired level of education, child marriage, and early pregnancy were significantly less likely to be perceived as the norm in intervention villages as reported by VYA girls, caregivers, and grandmothers, compared to those in comparison villages.

The data demonstrate considerable positive effects of the intervention on intergenerational dialogue and support, self-efficacy of VYA girls, caregivers, and grandmothers, and on social norms related to FGM/C, girls' schooling, child marriage, and early pregnancy. Owing to the short time frame of this intervention, we did not expect to see (and did not see) large differences in prevalence of out-of-school girls, child marriage, or early pregnancy or differences in schooling, marriage, and fertility intentions when comparing intervention to comparison villages.

Conclusion. The results indicate that the GHD change strategies – elicting dialogue between generations of elders, parents and adolescents, on VYA girl issues and working through existing community structures to shift norms related to adolescent girls' reproductive health (RH) and life outcomes – are shifting norms to be supportive of keeping girls in school, delaying marriage and pregnancy, and avoiding FGM/C after only 18 months of GHD intervention. Training and supporting grandmothers and other community actors as change agents in VYA girls' lives is a unique opportunity to achieve behavior change through collective community action mechanisms, focusing on issues of interest to local communities. Overall, the research lends support to the relevance of norms-shifting interventions in social and behavior change (SBC) initiatives.

INTRODUCTION

CONTEXT

Social norms are defined by the Passages Project as "perceptions of social expectations of typical or normal and appropriate behavior within a valued reference group." Harmful social norms around gender roles, childbearing, female genital mutilation/cutting (FGM/C), gender-based violence (GBV), reproductive health (RH), and female education hinder the positive development of adolescent girls in Senegal (Guttmacher Institute, 2014). The limited research and literature available in Senegal and West Africa have mostly focused on evaluating interventions' influence on knowledge, attitudes, and behaviors of adolescent girls, whereas very few explore the influence of additional social factors such as the roles and influence of family members on girls, girls' agency, social norms, intergenerational communication, and community social cohesion and collective action.

Girls' education, teen pregnancy, marriage, and FGM/C represent a nexus with interlocked interactions difficult to separate out. Girls' education, for example, is proven to have wide ranging benefits including reducing child marriage, adolescent pregnancy, GBV, child mortality, and promoting gender equality, improving health outcomes for girls, and even improving the economies of countries and communities (Schultz, 2002; United Nations, 2015; Global Partnership For Education, 2016; World Bank, 2017). Early marriage and FGM/C are related in some cultures (Karumbi et al., 2017). All four domains influence adolescent pregnancy and well-being outcomes, adult gender roles, and family and economic opportunities. Yet, our review indicates that few interventions and studies globally, regionally, and in Senegal attempt to look holistically at the interconnected processes and effects sought by interventions like the Girls' Holistic Development (GHD) approach that include child marriage, adolescent pregnancy, FGM/C, and girls' education.

Child Marriage & Adolescent Pregnancy

Child marriage is a practice embedded within the societal institutions and familial structures in West and Central Africa. Marriage is often considered a "rite of passage" for adolescent girls after they enter puberty. Evidence shows that there is an association between FGM/C and child marriage in terms of underlying drivers and circumcised girls are in some cases more desired for early marriage compared to those who are not (Karumbi et al., 2017). Social norms influence when families are formed, including when men and women should marry and when they should have children. Nine of the 15 countries with the highest rates (over 30%) of child marriage are in West and Central Africa (including Senegal). West and Central Africa also have the highest rates of adolescent pregnancy, including Senegal (Fenn et al., 2015). Recent global Demographic and Health Survey (DHS) data shows that 36.7% of married women between 18-22 years old married before the age of 18. Twenty percent of these women also gave birth to their first child before the age of 18. While in some countries, adolescent pregnancy occurs outside of marriage, in many countries, adolescent pregnancy is a result of child marriage. The younger a girl gets married, the more children she is likely to have throughout her lifetime. Child marriage is also correlated with girls dropping out of school, cited as one of the main reasons for girls leaving school (Wodon et al., 2017). A review conducted by the United Nations Children's Fund (UNICEF) and the International Center for Research on Women (ICRW) found that, "young women 20-24 in nearly all countries are more likely to have sex, birth, and marriage before 18 if they have no education, live in a rural area, and are poorer" (Fenn et al., 2015). The review also

highlighted the need for child marriage to be looked at from a gender lens including differences in decision-making and power for men and women related to marriage and family planning (Fenn et al., 2015).

Most child marriage interventions or projects are not wide-reaching, scaled up, or evaluated. Interventions that have been evaluated have mostly looked at ultimate outcomes such as pre- and post-test child marriage rates and do not look at other related outcomes. An evidence review that looked at 23 child marriage prevention programs (including Senegal) found that interventions with incentives or that empower girls are more effective than others (Lee-Rife et al., 2012). Recently, rigorous studies of cash transfer to families to offset the costs of dowries or school fees have been shown to be effective in reducing child marriage. Interventions that focused more exclusively on the complex of child marriage influences were shown to be more effective than interventions that were multi-sectoral, including HIV, RH, and empowerment outcomes (Kalamar et al., 2016). An evaluation of an intervention in Ethiopia called Berhane Hewan, that targeted adolescent girls through a multi-component intervention of community dialogue, distribution of school supplies, a conditional asset transfer of a goat, and girls' groups facilitated by female mentors, found that girls aged 10-14 who participated in the program were much less likely to be married and were more likely to stay in school compared to the control group.

While a number of evaluations and research are available globally on interventions that prevent adolescent pregnancy, the results are conflicting and more research is needed on layered and multi-component approaches. A systematic review published on interventions to prevent unintended pregnancies for adolescents, that included 53 studies and 105,368 participants, found that interventions with multiple intervention components (education, skills-building, and RH) are more effective than interventions that focus on RH education or promoting contraception alone (Oringanje et al., 2009). There is strong evidence for curriculum-based comprehensive accurate, age-appropriate reproductive health education, and making contraceptive methods available to adolescents. The evidence base shows the importance of creating supportive and enabling environments for unmarried adolescents to use RH services. Communication and community interventions that involve influential people in the community have been shown to be effective (Mouli et al., 2014).

Female Genital Mutilation/Cutting

The prevalence of FGM/C is reported in 28 countries in Africa, with the highest rates found along the Sahel region, which includes Senegal (28 Too Many, 2015). Shouldn't you mention the prevalence rate in Senegal? While it is high in West Africa in Senegal it is 23/24%? Over the previous two decades, there has been an increase in funding and interest to implement interventions to reduce FGM/C. Increasingly, local national and international implementing organizations are using social and behavior change (SBC) approaches to address FGM/C. Yet even with this uptick in funding, few programs targeting FGM/C in Africa have been rigorously evaluated and the decline of FGM/C has been slower than anticipated (WHO, 2011). In 2013 UNICEF (2013) reported that in Senegal the prevalence had not decreased in the 20 years. Research has shown that FGM/C is deeply rooted in community social norms and that "the abandonment of FGM/C is possible when programs and policies address the complex social dynamics associated with the practice and challenge established gender relationships and existing assumptions and stereotypes" (UNICEF, 2010). An analysis of DHS data in Burkina Faso, Egypt, and Senegal showed that FGM/C prevalence rates of girls are highly associated with whether or not their mother has been cut. Girls whose mothers have not been cut are

at much lower risk of being cut than girls with mothers who have been cut. FGM/C is associated with the education of the mother, and the higher the education, the less likely the daughter is to be cut (Farina and Ortensi, 2014). A scoping review of FGM/C in Nigeria found that, "social and cultural beliefs and norms are the leading factors pushing families to have their daughters circumcised, as FGM/C represents a symbol for the formation of an ethnic identity for the girl in the society in which she lives, and a reflection of her transition from teenager to womanhood" (Mberu, 2017). The review also found that FGM/C is used as a tool of social conformity that is often upheld by women who have been cut such as mothers, grandmothers, and aunts (Mberu, 2017).

To date, some research has been carried out on the effectiveness of FGM/C interventions, but there is limited data on shifts in social norms tied to FGM/C. A review led by the World Health Organization (WHO) that reviewed programs from 102 national and international organizations showed that interventions that only provide information on the harmful effects of FGM/C are ineffective, that policy interventions have limited enforcement, and characteristics of effective interventions include collaboration between non-governmental organizations (NGO) and the government, communication behavior change and mass media elements, alternative rites of passage traditions, formative research, and involving beneficiaries in the design of the intervention (WHO, 2011). A more recent rapid assessment review of high-quality evaluations of interventions showed multi-pronged approaches that involve the community are effective in reducing FGM/C because they transcend information sharing and include participatory reflection and dialogue for addressing harmful social norms. An alternative rites of passages program in Kenya increased community knowledge on the health effects of FGM/C and ultimately resulted in community abandonment of the practice because the intervention worked with the schools, health system, and community and religious leaders. The review also found that TOSTAN's Community Education Empowerment Programs in Senegal, Ethiopia, and Somalia showed a reduction in FGM/C for girls under the age of 10 and that this could be attributed to the program's holistic, skills-based, and community participation approach (Esho et al., 2017).

In Senegal, evidence from TOSTAN's Community Education Empowerment Program, a community-based education village empowerment intervention with norms-shifting components, found that community-based approaches are effective in reducing FGM/C. TOSTAN trains community management committees and facilitators in communities to lead classes on human rights, problem solving, hygiene, and women's health, and to hold inter-village meetings for discussion and social mobilization around abandoning FGM/C. Evaluations of the program found that FGM/C rates decreased for girls under ten years of age in the intervention sites (Diop & Askew, 2009; Diop et al., 2004a; b; Esho et al., 2017). A mixed-method study conducted in the Gambia and Senegal on decision-making for FGM/C and behavior change for abandoning FGM/C concluded that: decision-making for FGM/C involves multiple family members, including elder women and fathers; motivation to change attitudes and behaviors around FGM/C is influenced by understanding the costs and benefits of the practice; and peer pressure and pressure to conform were greatly associated with FGM/C abandonment (Shell et al., 2010). In further qualitative work in Senegal, Shell-Duncan et al. (2018) found that older women are uniquely positioned to honor tradition and negotiate change. The authors report that rather than resisting change, some older women express a willingness to critically reassess norms around FMG/C while they seek to maintain well-being, moral integrity, and cultural identity of young girls. In addition to elder women, Shell-Duncan (2020) also discusses the changing networks of decision-makers, particularly a move away from men and extended family, and the implications for interventions and behavior change.

Girls' Education

The gender gap for education, especially secondary school enrollment and completion, is wide in sub-Saharan Africa and particularly high in West and Central Africa (Fenn et al., 2015). The greatest barrier for girls to access education is poverty. With limited resources, families often choose to send their sons to school over their daughters. School fees are a major barrier for girls attending school, especially for girls with mothers with lower levels of schooling (Bhalotra et al., 2014). Gender and social norms influence families' decisions to send boys to school over girls or to value girls' education in general (Global Partnership For Education, 2016). Socio-ecological approaches can improve girl enrollment and retention rates in school and make projects more sustainable. Interventions that intervene at multiple levels and engage the community and parents can improve girls' enrollment, especially if gender equity is part of the intervention (Raghavendra & Anderson, 2013). A study in Ghana showed leadership, collective action, and women's involvement improved the sustainability of community participation in community schools (Nkansa & Chapman, 2006). A qualitative study in Nairobi, Kenya on the challenges that girls' transitioning from primary to secondary school face, concluded that parents and community leaders perceived parent community meetings as a way to improve school retention for girls (Abuya et al., 2017). In Senegal, research that addresses girls' education is usually wrapped up in other evaluations of interventions that address FGM/C, child marriage, and/or adolescent pregnancy. Research in Senegal has indicated that teacher training improves gender equity pedagogy in the classroom (McElroy et al., 2010). An evaluation of the Forum for African Women Educationalists Centres of Excellence, which uses a holistic approach involving students, teachers, parents, and the community with gender-sensitization and skill training for girls, found that girls' enrollment in school greatly increased after the intervention was introduced where? (Sutherland-Addy, 2008).

Review Conclusion

This review demonstrates the relatively small amount of research in Senegal on adolescent pregnancy, child marriage, girls' education, and FGM/C, as well as the limited research and programming focused more broadly on socio-ecological levels that address the gamut of these health and development outcomes for adolescent girls.

To date, research has been carried out in Senegal to understand what works to reduce FGM/C, explore bride price and trends in child marriage, and evaluate the effectiveness of youth-friendly health services, sex education, and holistic approaches to improve girls' education. However, little research has been conducted to understand the impact of community-based interventions on multiple girl-related outcomes. In addition, the current literature includes studies that focus on one or two health outcomes such as FGM/C rates or child marriage and early pregnancy rather than looking at how interventions impact a number of interconnected outcomes for girls such as education, child marriage, adolescent pregnancy, and FGM/C. Minimal studies were found on the influence of social norms on these outcomes in Senegal, yet there is a growing body of evidence on how transforming social norms can impact behavior change. Therefore, it was important that a study be undertaken to evaluate how social norms may influence these behaviors. The evaluation of the Grandmothers Project's (GMP) GHD Program provides new evidence to scale up the intervention in Senegal to improve the health and well-being of girls.

THE GIRLS' HOLISTIC DEVELOPMENT PROGRAM

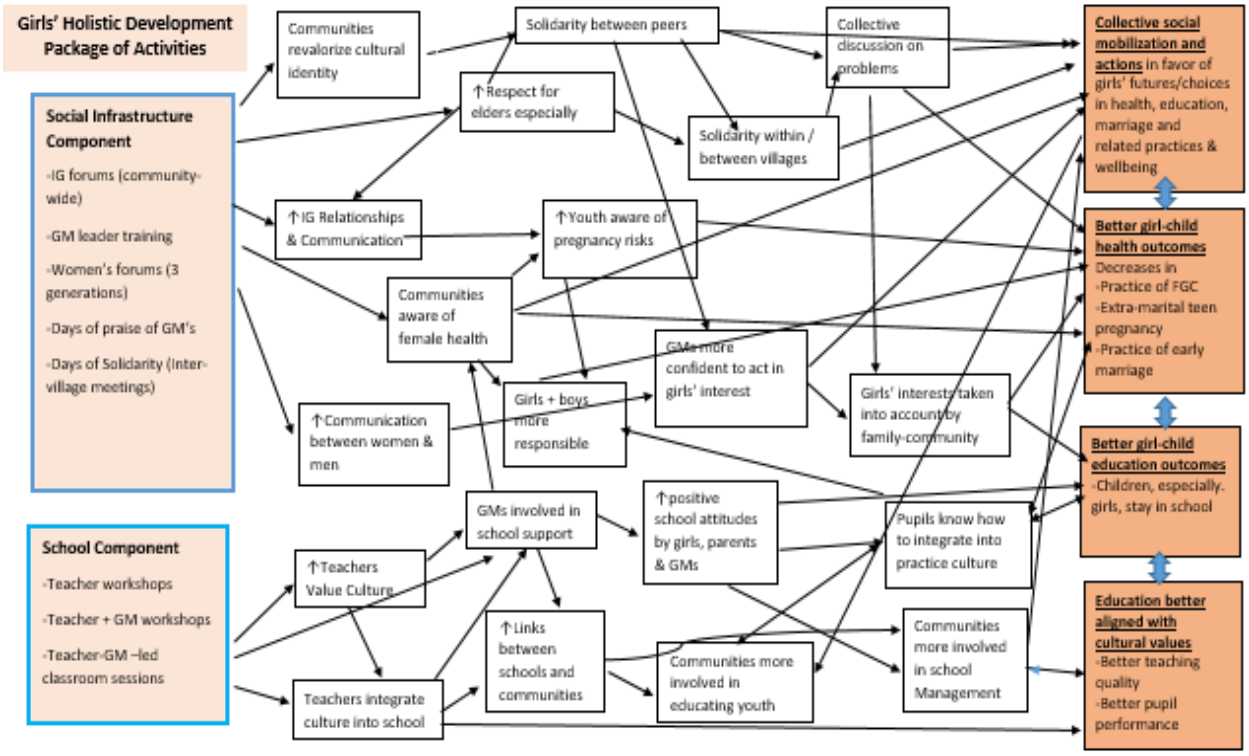
Grandmother Project - Change through Culture (GMP) (https://grandmotherproject.org/) is an American and Senegalese NGO that promotes community health and well-being through programs that build on local culture . GMP is committed to developing innovative community change strategies that are grounded in the specific structure, roles and values of non-western, collectivist cultures. The goal of the GHD Program is to increase community capacity to promote the rights and well-being of girls. In southern Senegal, girls face major challenges related to: limited family support for their education; child marriage; teen pregnancy; and FGM/C. In addition, limited communication between generations and between the sexes within families, and limited sense of solidarity and social cohesion within communities, limit the support that girls need to develop and flourish. GHD exemplifies GMP's *Change through Culture* approach, which builds on culturally-defined values, roles and resources to preserve positive elements that are beneficial to girls while discouraging harmful ones.

The GHD Program began as an action research project in Velingara, Senegal in 2008 to develop and test a community-driven strategy to promote girls' health and well-being. Target outcomes include reducing the rate of child marriage, early pregnancy, and FGM/C, and increasing girls' school attendance rate through GMP's "culture change" methodology. GHD aims to promote sustained change in culturally-embedded social norms and practices within family and community systems through an inclusive and participatory approach that creates a supportive enabling environment for them by building community-wide support for change for girls. To increase community engagement, GMP recognizes the importance of building on cultural roles and values cherished by rural communities in southern Senegal, including the respect for and the authority of elders. GMP specifically identified grandmothers as an underutilized cultural resource who can be levers for change for GHD in families and communities. The *Change through Culture* approach involves: identifying culturally-designated authorities within family systems who are responsible for transmitting traditional roles and values; identifying formal and informal leaders of three generations (elders, adults and adolescents) and both sexes in communities; sharing new ideas with them; and engaging them in dialogue to revisit existing attitudes and to reflect on new ideas and practices. The GHD methodology for change is based on concepts and insights from community development, adult education and systems change.

In the GHD Program a series of community activities that involve three generations of community leaders (elders, adults, adolescents) aim to: strengthen relationships between generations and between the sexes and build social cohesion; share new information on GHD; and elicit collective dialogue on existing and new ideas. The objective is to develop community consensus on what should be done to promote GHD related to girls' education, marriage, pregnancy, and FGM/C. The community activities include: intergenerational forums; days of solidarity and dialogue with traditional and religious leaders; under-the-tree non-formal education learning activities with homogenous groups; and teacher-grandmother workshops. Grandmother leadership training empowers grandmothers to act collectively to promote and protect girls. All women forums involving girls, mothers and grandmothers strengthen communication and build both individual and collective agency to promote GHD. The various community activities that involve all categories of community actors contribute to a process of community-wide dialogue that can lead to a consensus on the need to modify prevailing norms and practices related to GHD.

The activities of the GHD Program are participatory and catalyze social mobilization of community leaders and groups. A theory of change was developed with the GMP team and stakeholders as illustrated in Figure 1 and used to guide the evaluation of expected girl-child and community cohesion outcomes and intermediate effects seen in the change pathways representing attitudes, self-efficacy, interpersonal and intergenerational communication of girls and communities leading to expected outcomes.

FIGURE 1: THE GIRLS' HOLISTIC DEVELOPMENT PROJECT THEORY OF CHANGE



OBJECTIVES OF THE STUDY

The primary objective of the study was to quantitatively assess the impact of the GHD intervention on expected programmatic outcomes including: 1) target VYA girl behaviors; and 2) key influences for those behaviors among VYA girls, their caregivers, and grandmothers (together, the trio of perspectives provide a way to measure changes in community social cohesion and the ability of communities to function and grow together in harmony rather than in conflict. The target behaviors include early marriage, adolescent pregnancy, girls' schooling and retention, and FGM/C.

Across target population groups, we expected the GHD intervention to lead to:

- Increased behavioral intentions and self-efficacy to delay the age of marriage and pregnancy and continue schooling for very young girls;
- Individual attitudes and social norms supportive of delayed age of marriage and pregnancy and continue schooling for adolescent girls, and to reduce the practice of FGM/C for very

young girls; and increased communication with and support from grandmothers for delaying the age of marriage and pregnancy and continuing schooling for adolescent girls, and reducing the practice of FGM/C for very young girls.

Research findings will be used to assess the impact of the GHD intervention in achieving these aims, confirm and/or refine the GHD intervention theory of change (Figure 1) and related, ensure that normative change mechanisms are monitored for fidelity of implementation during scale up of the GHD intervention. They will also become part of the global learning on the influence of social norms interventions at the individual and community level on individual health behaviors as well as recent efforts to measure social norms and reproductive empowerment and evaluate normative change interventions.

The specific objective of the quantitative study was to assess the extent to which the GHD intervention met its stated aims among target populations in seven intervention villages in rural Senegal compared to seven comparison villages. Research questions included:

1 Do behaviors, behavioral intentions, and/or aspirations to delay age of marriage and pregnancy and stay in school differ between VYA girls in GHD intervention and comparison sites? Do intentions and aspirations differ among VYA girls, caregivers, and grandmothers?;
2 Does self-efficacy to advocate for delaying age of marriage and pregnancy and staying in school differ among adolescent girls at GHD intervention versus comparison sites?;
3 Do attitudes toward gender, early marriage and pregnancy, girls' education and schooling, and FGM/C differ between GHD intervention and comparison sites? Do attitudes differ among adolescent girls, caregivers, and grandmothers?;
4 Do social norms (typical and appropriate behavior) supportive of increased gender equity, delaying marriage and pregnancy, continued girl schooling, and reduced FGM/C differ between GHD intervention and comparison sites? Do perceptions of typical and/or appropriate behavior differ between adolescent girls, caregivers, and grandmothers?; and
5 What influence do grandmothers have on age of marriage and pregnancy, continued girls' schooling, and FGM/C, and does this influence differ between GHD intervention and comparison sites?

STUDY METHODOLOGY

The quantitative study was cross-sectional, comparing individuals in GHD intervention sites to non-intervention sites after 18 months of intervention activities. It was not possible to collect baseline information given engagement of IRH in research activities after commencement of GHD intervention activities, so quantitative surveys were conducted at endline to collect post-test data only. Seven villages in the Nématába Commune that received the full GHD intervention package and seven villages purposively selected based on similar characteristics (i.e., population size, location/geography, and culture) to intervention sites were involved in the study. Intervention villages included Badiara, Bagayoko, Koulandiala, Kouméra, Nématába, Saré Sancoule, and Saré Yira. Comparison villages included Médina Dinguiraye, Médina Maoundé, Mangassara, Amadara, Saré Mibirou, Mankacounda, and Missirah Aguibou.

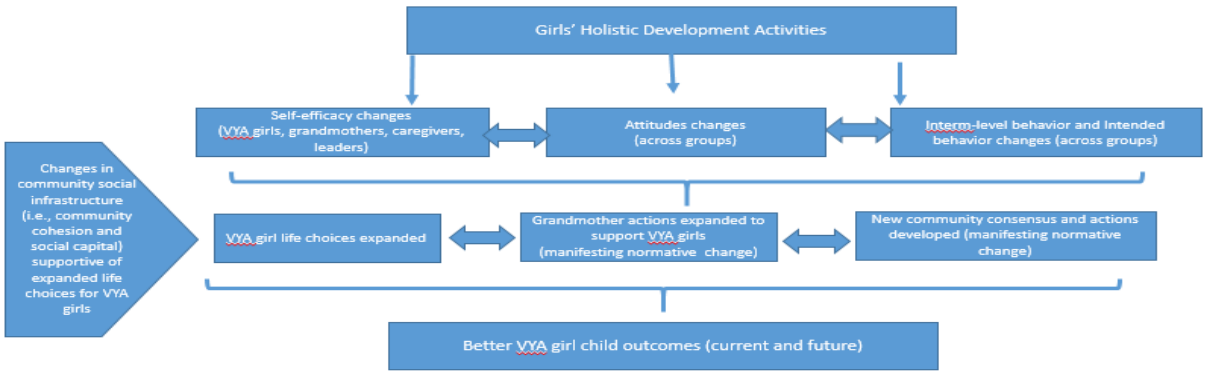
Surveys were conducted among GHD target groups including adolescent girls, caregivers of adolescent girls, and grandmothers. Saturation sampling was conducted and all adolescent girls residing in one

of these 14 villages that were 10-14 years of age at the start of their engagement with the GHD intervention were approached and included in the study (currently, 12-16 years of age). Every other adolescent girl included in the study also designated their primary caregiver (male or female), who was then included in the study. Grandmothers are defined by the GHD intervention as those women who are of the age that they could biologically have grandchildren and are recognized "grandmothers" within their communities, and are not necessarily the biological grandmothers of the adolescents surveyed. Saturation sampling was conducted and all women meeting these criteria in the 14 villages were included in the study. All participants provided assent (adolescent girls) and consent (caregivers and grandmothers) and caregivers were also asked to provide consent for their daughters. Fewer than 1% of eligible participants approached refused to participate in the study.

Areas of inquiry for this study included behavioral intentions, communication, self-efficacy, attitudes, and social norms related to age of marriage and pregnancy, continued schooling, and FGM/C. In addition, demographic information and questions on exposure to intervention activities were included. The domains and specific questions of interest were identified from available literature, GHD Program implementers, and from previous formative and qualitative research studies undertaken by GMP and/or IRH. The survey included vignettes (see Appendix 1), or short, culturally relevant, and hypothetical stories designed to elicit responses on sensitive subjects. Survey interviews were conducted in French and/or Pulaar, depending on the preferences of the participants. The study and tools were approved by the ethical review boards of Georgetown University and the National Committee for Health Research Ethics [Le Conseil National de Recherche en Santé].

Quantitative data were analyzed through descriptive statistics including proportions, means, and standard deviations (SD) and cross-tabulations with chi-square analysis to assess differences between intervention and comparison populations for key intervention outcomes. Some variables (e.g., attitudes and norms) were combined into summary indices. Figure 2 provides the logic for analysis of the endline survey. We first analyzed program effects on individual-level outcomes such as changes in self-efficacy, attitudes, and behavioral intentions. To assess effects on social cohesion, we analyzed community-level concepts such as changes in life opportunities, grandmother actions on behalf of VYA girls, and social norms to understand community consensus. We expect these individual- and group-level changes to lead to better VYA girl outcomes such as behaviors related to early marriage and pregnancy, and girls' schooling.

FIGURE 2: LOGIC & SCHEMA GUIDING ANALYSIS



RESULTS

SURVEY POPULATION & DEMOGRAPHICS

The sample was a complete census of VYA girls who would have been 10-14 years of age at the start of the GHD intervention and grandmothers in selected villages. In addition, half of the VYA girls surveyed nominated a caregiver for the caregiver sample. A total of 296 respondents were selected from intervention villages with an estimated population of 2,185. The estimated population of comparison villages was higher at 3,160 inhabitants, from which 503 respondents were selected. A total of 161 adolescent girls in intervention areas and 238 in comparison areas were surveyed for the evaluation at endline. Among these adolescent girls, a sub-sample of 80 of adolescent girls' caregivers in intervention areas and 125 in comparison areas were surveyed. Finally, 56 grandmothers in intervention areas and 140 in comparison areas participated in the survey. Table 1 gives breakdowns by the seven intervention and seven comparison villages.

Table 1: Study sample size by population, intervention arm, & village

Village (estimated total population)	Adolescent girls (n)	Caregivers (n)	Grandmothers (n)
Intervention total (n)	**161**	**80**	**56**
Badiara	11	3	1
Bagayoko	13	8	4
Koulandiala	29	15	12
Kouméra	21	10	7
Némataba	52	23	22
Saré Sancoulé	18	14	7
Saré Yira	17	7	3
Comparison total (n)	**238**	**125**	**140**
Médina Dinguiraye	82	42	42
Médina Maoundé	24	12	13
Mangassara	15	9	11
Amadara	13	7	11
Saré Mibirou	15	8	14
Mankacounda	73	40	38
Missirah Aguibou	16	7	11
Study total (n)	**399**	**205**	**196**

Participation in intervention

The majority of adolescent girls in intervention villages (80.1%) participated in at least one of the six intervention activities involving young girls, while 19.9% did not report participation in any of the listed intervention activities. Among activities, 73.9% of adolescent girls reported attending at least one "under-the-tree" grandmother-girl session. Approximately one-half reported attending women and girl forums (55.3%), grandmother presentations to classes (50.3%), and/or community days of grandmother solidarity (49.1%). About one-third of adolescent girls in intervention villages reported participating in at least one intergenerational forum (37.9%) or use of storybooks on cultural values (35.4%). Nearly one-third (31.1%) of adolescent girls reported attending at least one intergenerational

forum, "under-the-tree" grandmother-girl session, and women and girl forum, demonstrating high engagement with the intervention. Table 2 also gives reported percentages for adolescent girls that have participated in more than one of each of the activities over the duration of the intervention. Only 2.1% of adolescent girls in comparison villages reported attending any of the listed intervention activities.

Table 2: Participation of adolescent girls in key intervention activities

GHD activities reportedly attended	Intervention		Comparison	
	Attended (%)	Attended >1 (%)	Attended (%)	Attended >1 (%)
Total (n)	161		238	
Intergenerational forums	37.9	22.4	0.8	0.8
Community days of grandmother solidarity	49.1	32.3	0.8	0.8
"Under-the-tree" grandmother-girl sessions	73.9	65.8	1.3	1.3
Grandmother presentation to classes	50.3	38.5	0.8	0.4
Use of story books on cultural values	35.4	23.6	0.4	0.4
Women and girl forums	55.3	45.3	0.4	0.4
Attended at least one of any GHD activities	80.1		2.1	
Highly engaged	31.1		--	

Highly engaged = adolescent girl attended at least one session of each of the following: intergenerational forum + "under-the-tree" grandmother-girl session + women and girl forum

The majority of caregivers in intervention villages (76.3%) participated in at least one of the four intervention activities for caregivers while 23.7% did not report participation in any of the listed intervention activities. Over two-thirds (67.5%) of caregivers of adolescent girls reported attending at least one intergenerational forum and less than one-half reported attending women and girl forums (42.5%). About one-third of caregivers in intervention villages reported participating in at least one "under-the-tree" grandmother-girl session (37.5%) and/or women and girl forum (35.0%). Only one-fifth (20.0%) of caregivers of adolescent girls reported attending at least one intergenerational forum, "under-the-tree" grandmother-girl session, and women and girl forum, demonstrating high engagement with the intervention. Table 3 also gives reported percentages for caregivers that have participated in more than one of each of the activities over the duration of the intervention. Only 2.4% of caregivers of adolescent girls in comparison villages reported attending any of the listed intervention activities.

Table 3: Participation of caregivers of adolescent girls in key intervention activities

GHD activities reportedly attended	Intervention		Comparison	
	Attended (%)	Attended >1 (%)	Attended (%)	Attended >1 (%)
Total (n)	80		125	
Intergenerational forums	67.5	60.0	1.6	0.8
Community days of grandmother solidarity	42.5	37.5	0.8	0

"Under-the-tree" grandmother-girl sessions	37.5	32.5	1.6	0
Women and girl forums	35.0	31.3	0.8	0
Attended at least one of any GHD activities	76.3		2.4	
Highly engaged	20.0		--	
Highly engaged = caregiver of adolescent girl attended at least one session of each of the following: intergenerational forum + "under-the-tree" grandmother-girl session + women and girl forum				

The majority of grandmothers in intervention villages (85.7%) participated in at least one of the eight intervention activities involving grandmothers while 14.3% did not report participation in any of the listed intervention activities. In intervention villages, 76.8% of grandmothers reported attending at least one intergenerational forum while 64.3% reported attending any community days of grandmother solidarity. Around one-half of grandmothers in intervention villages reported attending a grandmother leaders training (57.1%), "under-the-tree" grandmother-girl session (53.6%), or grandmother presentation to classes (51.8%). Approximately one-third of grandmothers in intervention villages reported attending at least one women and girl forum (32.1%) and/or use of storybooks on cultural values (32.1%). Only about one-quarter (23.4%) of grandmothers reported attending at least one intergenerational forum, grandmother leaders training, "under-the-tree" grandmother-girl session, and women and girl forum, demonstrating high engagement with the intervention. Table 4 also gives reported percentages for grandmothers that have participated in more than one of each of the activities over the duration of the intervention. Only 3.6% of grandmothers in comparison villages reported attending any of the listed intervention activities.

Table 4: Participation of grandmothers in key intervention activities

GHD activities reportedly attended	Intervention		Comparison	
	Attended (%)	Attended >1 (%)	Attended (%)	Attended >1 (%)
Total (n)	56		140	
Intergenerational forums	76.8	60.7	0.7	0
Community days of grandmother solidarity	64.3	55.4	0	0
Grandmother leaders training	57.1	39.3	0	0
"Under-the-tree" grandmother-girl sessions	53.6	51.8	0	0
Teachers-grandmother discussion	46.4	44.6	2.1	0
Grandmother presentation to classes	51.8	46.4	0	0
Use of story books on cultural values	30.4	28.6	0.7	0
Women and girl forums	32.1	28.6	0.7	0
Attended at least one of any G activities	85.7		3.6	
Highly engaged	23.2		--	

Highly engaged = grandmother attended at least one session of each of the following: intergenerational forum + grandmother leaders training + "under-the-tree" grandmother-girl session + women and girl forum

Socio-demographic characteristics of respondents

Very young adolescent girls

Demographic information for VYA girls is provided in Table 5 below. VYA girls ranged from 12-16 years of age. The mean age for the girls in intervention and comparison villages was 13.9 years. No significant differences were observed between intervention and comparison villages by age of VYA girls. In both intervention (100%) and comparison (99.6%) villages, nearly all girls were Muslim. Likewise, in both intervention (97.0%) and comparison (97.5%) villages, the large majority of VYA girls were of Pulaar ethnicity. No significant differences were observed between intervention and comparison villages by ethnicity or religion of VYA girls. In both intervention and comparison areas, large majorities of VYA girls reported that their father or stepfather, mother or stepmother, and/or a sibling were currently residing in the same household as the girl. In intervention areas, 44.1% of VYA girls reported that they resided with their biological grandmother and another 29.2% reported that their biological grandmother lived within walking distance of their household (for a total of 73.3% of adolescent girls reporting that their biological grandmother was alive and residing in/near their household in intervention villages). There were no statistically significant differences comparing household composition of VYA girls between intervention and comparison villages. Using an asset-based index of household materials and items for the entire VYA girl sample, girls in intervention villages were significantly more likely ($p<0.01$) to belong to both the poorest and richest tertiles compared to VYA girls in comparison villages. There were no statistically significant differences comparing socioeconomic status of VYA girls between intervention and comparison villages.

Table 5: Demographic information for adolescent girls

	Intervention (%)	Comparison (%)
Total (n)	161	238
Age (in years)		
12	21.7	26.5
13	22.4	17.7
14	21.1	19.8
15	14.9	15.6
16	19.9	20.6
Mean age (SD)	13.89 (1.43)	13.86 (1.48)
Ethnicity		
Pulaar	97.0	97.5
Other	3.0	2.5
Religion		
Muslim	100	99.6
Christian	0	0.4
Household members		
Step/father	70.2	70.6
Step/mother	82.6	81.1
1+ brother	86.3	80.7
1+ sister	81.4	79.0

Grandmother (lives with)	44.1	44.1
Grandmother (lives near)	29.2	21.9
Socioeconomic tertile		
Poorest	36.0***	31.1***
Middle	24.8***	45.8***
Richest	39.1***	23.1***
* p<0.10; ** p<0.05; *** p<0.01		

Caregivers

Demographic information for caregivers of VYA girls is provided in Table 6 below. In intervention areas, about one-half (51.3%) of caregivers were the biological mother or the stepmother of the VYA girl followed by 38.2% of caregivers reported as being an VYA girl's biological father or stepfather. Small percentages of caregivers were also either the aunt or uncle of the VYA girl (7.9%) or some other family member (1.3%). There were no statistically significant differences comparing the relationships between caregivers and VYA girls between intervention and comparison areas. The sample of caregivers surveyed was about evenly split between female caregivers (53.8%) and male caregivers (46.3%) in intervention areas. There were no statistically significant differences between gender of caregivers comparing intervention and comparison villages.

Caregivers ranged from 21-89 years of age. The mean age for caregivers in intervention areas was 46.7 years, compared to 43.6 for those in comparison areas, and this difference was marginally statistically significant ($p<0.10$). In both intervention (100%) and comparison (97.6%) villages, nearly all caregivers were Muslim. Likewise, in both intervention (92.5%) and comparison (92.0%) villages, the large majority of caregivers were of Pulaar ethnicity. There were no statistically significant differences comparing either ethnicity or religion of caregivers between intervention and comparison villages. In intervention villages, 91.1% of caregivers reported that they were married and 8.9% were divorced or widowed. No caregivers reported being single. There were no statistically significant differences comparing marital status of caregivers between intervention and comparison villages. In both intervention villages (75.0%) and control villages (78.4%), the large majority of caregivers reported that they had no formal education. In intervention villages, 15.0% of caregivers reported that they had attended some or completed primary school, 8.8% attended some or completed secondary school, and 1.3% attended or completed university. There were no statistically significant differences comparing education status of caregivers comparing intervention and comparison villages. Using an asset-based index of household materials and items for the entire caregiver sample, there were no statistically significant differences comparing socioeconomic status of caregivers comparing caregivers in intervention and comparison villages.

Table 6: Demographic information for caregivers of adolescent girls

	Intervention (%)	Comparison (%)
Total (n)	80	125
Relationship to VYA girl		
Mother/stepmother	51.3	42.7
Father/stepfather	38.2	40.2
Sibling	0	1.7
Aunt/uncle	7.9	1.7
Other family member	1.3	12.0

Gender		
Male	46.3	52.0
Female	53.8	48.0
Age		
20-29	7.5	11.2
30-39	21.3	26.4
40-49	33.8	34.4
51+	37.5	28.0
Mean age (SD)	46.68 (12.62)*	43.55 (11.15)*
Ethnicity		
Pulaar	92.5	92.0
Other	7.5	8.0
Religion		
Muslim	100	97.6
Other	0	2.4
Relationship status		
Single	0	0.8
Married	91.1	92.8
Divorced	1.3	1.6
Widowed	7.6	4.8
Educational attainment		
No formal schooling	75.0	78.4
Some/completed primary	15.0	18.4
Some/completed secondary	8.8	3.2
Some/completed university	1.3	0
Socioeconomic tertile		
Poorest	35.0	40.0
Middle	31.3	31.2
Richest	33.8	28.8
* p<0.10; ** p<0.05; *** p<0.01		

Grandmothers

Demographic information for grandmothers is provided in Table 7 below. Grandmothers ranged from 35-92 years of age. The mean age for grandmothers in intervention areas was 62.0 years, compared to 60.0 for those in comparison areas, but this difference was not statistically significant. In both intervention (100%) and comparison (99.3%) villages, nearly all grandmothers were Muslim. Likewise, in both intervention (98.2%) and comparison (94.2%) villages, the large majority of grandmothers were of Pulaar ethnicity. There were no statistically significant differences comparing either ethnicity or religion of grandmothers between intervention and comparison villages. In intervention villages, 50.0% of grandmothers reported that they were married and 50%% were widowed. No grandmothers in intervention areas reported being single or divorced. There were no statistically significant differences comparing marital status of grandmothers between intervention and comparison villages. In intervention areas, grandmothers reported a mean of 4.3 biological children and 5.0 biological grandchildren. This was significantly lower compared to the number of biological children reported by grandmothers in comparison villages (5.2; $p<0.05$) and marginally statistically significant lower for the number of biological grandchildren (7.7; $p<0.10$). In both

intervention villages (87.5%) and control villages (97.1%), the large majority of grandmothers reported that they had no formal education. In intervention villages, 12.5% of grandmothers reported that they had attended some or completed primary school. No grandmothers in intervention areas reported achieving higher than a primary education. Grandmothers in intervention villages were statistically significant more likely ($p<0.01$) to have some/completed primary school compared to grandmothers in comparison villages. Using an asset-based index of household materials and items for the entire grandmother sample, there were no statistically significant differences comparing socioeconomic status of grandmothers comparing those in intervention and comparison villages.

Table 7: Demographic information for grandmothers

	Intervention (%)	Comparison (%)
Total (n)	56	140
Age		
<40	0	5.1
41-50	8.9	15.9
51-60	39.3	39.9
61-70	30.4	22.5
70+	21.4	16.7
Mean age (SD)	62.04 (13.26)	60.00 (13.09)
Ethnicity		
Pulaar	98.2	94.2
Other	1.8	5.8
Religion		
Muslim	100	99.3
Other	0	0.7
Marital status		
Single	0	0.7
Married	50.0	64.3
Divorced	0	1.4
Widowed	50.0	33.6
Number of children/ grandchildren		
Children: Mean (SD)	4.20 (0.33)**	5.16 (0.25)**
Grandchildren: Mean (SD)	4.96 (0.51)*	7.65 (0.85)*
Educational attainment		
No formal schooling	87.5***	97.1***
Some/completed primary	12.5***	2.1***
Some/completed secondary	0***	0.7***
Some/completed university	0***	0***
Socioeconomic tertile		
Poorest	39.3	26.4
Middle	23.2	32.1
Richest	37.5	41.4

* p<0.10; ** p<0.05; *** p<0.01

Intervention and comparison groups were comparable vis-à-vis ethnicity, religion, and household composition. However, there were two statistically significant differences of note: iintervention group VYA girls were better off socioeconomically than comparison girls (with socioeconomic status similar

across groups for caregivers and grandmothers); and intervention group grandmothers had less formal schooling than comparison grandmothers.

BEHAVIORAL & SOCIAL NORMS OUTCOMES

Early marriage

Outcomes, intentions, & expectations

In intervention villages, 82.0% of VYA girls reported that they were unmarried and not engaged, 15.5% of girls that they were engaged or currently promised in marriage, and 2.5% reported that they were currently married (see Table 8). No significant differences were observed between intervention and comparison villages by marital status for VYA girls.

Table 8: Marriage status for VYA girls

	Intervention (%; n)	Comparison (%; n)
Total (n)	161	238
Not married/engaged	82.0 (132)	84.5 (201)
Engaged	15.5 (25)	12.6 (30)
Married	2.5 (4)	2.9 (7)
No statistically significant differences between intervention/comparison		

Table 9 provides information for VYA girls' marriage expectations and desires. Among unmarried VYA girls in intervention villages, the mean age at which they expect to be married is 19.9 years of age, compared to their desired age of marriage at a mean of 20.2 years of age. Both expected and desired age of marriage are slightly higher in intervention compared to comparison villages. However, these differences were not statistically significant. When asked about their own involvement in the decision to marry them, 68.9% of unmarried VYA girls in intervention areas felt confident that their family would ask their opinion on whether to be married. This confidence was statistically significantly ($p<0.05$) higher compared to unmarried VYA girls in comparison villages (56.2%). There was also a statistically significant difference ($p<0.01$) between unmarried VYA girls in intervention villages reporting that they felt confident that their opinion would be listened to during decision-making (68.2%) compared to 53.7% of VYA girls in comparison villages. Finally, a slightly higher percentage (57.6%) of unmarried VYA girls in intervention areas reported that they were confident that they could get married at the age that they want compared to 48.3% of unmarried VYA girls in comparison villages. However, this difference was not statistically significant.

Table 9: VYA girls' marriage expectations & desires

Among unmarried girls…	Intervention (%)	Comparison (%)
Total (n)	132	201
Expected/desired age at marriage		
Expected age (mean, SD)	19.86 (2.87)	19.56 (2.75)
Desired age (mean, SD)	20.24 (3.05)	19.88 (2.92)
Expected involvement of adolescent girl		
Confident that family will ask my opinion whether to be married	68.9**	56.2**

Confident that my opinion will be listened to during decision-making	68.2***	53.7***
Confident that I will get married at age I want	57.6	48.3
* p<0.10; ** p<0.05; *** p<0.01		

Among caregivers of unmarried VYA girls in intervention villages, 23.1% responded that they plan on promising their daughter in marriage to another family or boy (see Table 10). Among those, 13.3% reported that they planned to promise their daughter in marriage before the age of 16. While not statistically significant, fewer caregivers in comparison villages (18.6%) reported that they planned on promising their daughter in marriage. However, a statistically significant ($p<0.05$) lower proportion of caregivers that plan to promise their daughter in marriage in intervention villages, plan on doing so before the age of 16 (13.3% vs. 27.9%) compared to caregivers in comparison villages.

Table 10: Marriage/promising intentions of caregivers of VYA girls

I plan on…	Intervention (%)	Comparison (%)
Total (n)	80	125
Promising daughter in marriage	23.1	18.6
Among those that plan on promising daughter, those that plan on doing so before girl is 16 years	13.3**	27.9**
* p<0.10; ** p<0.05; *** p<0.01		

Among caregivers of unmarried VYA girls in intervention villages, the expected age of marriage for their daughter was 18.5 years of age and the desired age of marriage was 18.8 years (see Table 11). There was little difference in expected and desired ages of marriage for their daughters comparing caregivers in intervention and comparison villages. The majority of caregivers in both intervention areas (71.8%) and comparison areas (67.2%) reported that they felt confident that their daughter would be married at the age they want, and this difference was not statistically significant. However, there was a significant difference ($p<0.01$) comparing caregivers in intervention villages to comparison villages when asking whether the caregiver would ask their daughter's opinion about marriage for her. In intervention villages, 77.8% of caregivers reported that they would ask their daughter's opinions when thinking about marriage for her compared to only 47.8% of caregivers in comparison villages.

Table 11: Marriage expectations of caregivers for VYA girls

	Intervention (%)	Comparison (%)
Total (n)	80	125
Expected/desired age at marriage		
Expected age (mean, SD)	18.45 (2.23)	18.19 (2.04)
Desired age (mean, SD)	18.78 (2.57)	18.70 (2.54)
Confident that daughter will be married at the age I prefer	71.8	67.2
Expected involvement of adolescent girl		
Will ask daughter's opinion when thinking about marriage for her	77.8***	47.8***
Her opinion will be important for decision	100	90.9
* p<0.10; ** p<0.05; *** p<0.01		

Attitudes toward gender equity, early marriage & pregnancy, & girls' education

VYA girls were asked whether they agree, neither agree nor disagree, or disagree with ten statements about their personal attitudes toward gender, girls' education, and gender (see Table 12). Attitudinal statements were recoded to align with program objectives and combined in a 10-item attitudinal index, ranging from 0 (disagree with program objectives across all statements) to 10 (agree with program objectives across all statements). Adolescent girls in intervention villages agreed with a mean of 7.91 attitudinal statements. There was no statistically significant difference by mean attitude scores comparing intervention (7.9) and comparison (7.9) populations. Among the ten individual statements (see Appendix 2 for full table), VYA girls in intervention villages (67.1%) were statistically significantly ($p<0.05$) more likely to agree that "a married girl should be able to continue her schooling" compared to girls in comparison villages (56.7%). There was also a marginally statistically significant ($p<0.10$) difference between VYA girls in intervention (59.0%) and in comparison villages (50.4%) that disagreed that "seizing the opportunity of a good marriage is more important than schooling for a girl." No differences were seen comparing VYA girls in intervention and comparison areas for the remaining statements.

Table 12: VYA girl attitudes toward gender equity, early marriage & pregnancy, & girls' education

	Intervention	Comparison
Total (n)	161	238
Mean score (SD) on 10-item attitude index	7.91 (1.69)	7.90 (1.54)
No statistically significant differences between intervention/comparison		

Attitudes of caregivers of VYA girls toward gender, girls' education, and gender were assessed on a 5-point Likert scale in Table 13. Thirteen attitudinal statements were posed to caregivers and combined into a 13-item attitudinal index, ranging from zero (disagree with program objectives across all statements) to 13 (agree with program objectives across all statements). Caregivers in intervention villages were slightly less likely to hold positive attitudes compared to caregivers in comparison villages, agreeing with a mean of 8.88 vs. 9.11 statements. However, the difference was not statistically significant. Among the 13 individual statements (see Appendix 2 for full table), there were few significant differences between caregivers in intervention and comparison villages.

Table 13: Caregiver attitudes toward gender equity, early marriage & pregnancy, & girls' education

	Intervention	Comparison
Total (n)	80	125
Mean score (SD) on 13-item attitude index	8.88 (2.68)	9.11 (2.40)
No statistically significant differences between intervention/comparison		

Attitudes of grandmothers toward gender, girls' education, and gender were assessed on a 5-point Likert scale in Table 14. Thirteen attitudinal statements were posed to caregivers and combined into a 13-item attitudinal index, ranging from zero (disagree with program objectives across all statements) to 13 (agree with program objectives across all statements). Grandmothers in intervention villages were slightly more likely to hold positive attitudes compared to comparison villages, agreeing with a mean of 8.80 vs. 8.17 attitudinal statements. However, the difference was not statistically significant. A few significant differences were seen comparing grandmothers in intervention and comparison

villages among the 13 individual statements (see Appendix 2 for full table). Grandmothers in intervention villages were statistically significantly ($p<0.05$) more likely to disagree (72.2%) that "girls over age 16 who are not married are a burden to their families" compared to 57.4% of grandmothers in comparison villages disagreeing with the statement. In addition, grandmothers in intervention villages were statistically significantly ($p<0.05$) more likely to disagree (46.5%) that "a girl marrying before age 16 is required by our religion" compared to 34.3% of grandmothers in comparison villages.

Table 14: Grandmother attitudes toward gender equity, early marriage & pregnancy, & girls' education

	Intervention	Comparison
Total (n)	56	140
Mean score (SD) on 13-item attitude index	8.80 (2.69)	8.17 (2.54)
No statistically significant differences between intervention/comparison		

Social norms related to girls delaying marriage

Social norms related to early marriage as perceived by adolescent girls were assessed through use of a vignette (see Appendix 1 for vignette) in which a hypothetical adolescent girl less than 16 years of age and her parents are being pressured to marry her to a local boy from a good family. Statements about social norms were asked related to typical behavior (descriptive norms) and approved behavior (injunctive norms) facing the story's adolescent girl and her parent. Two statements were combined each for descriptive norms and injunctive norms, resulting in two 4-point indices, ranging from zero (early marriage is very typical and approved behavior) to four (early marriage is very rare and not approved behavior). Results are presented in Table 15. VYA girls in intervention villages were statistically significantly ($p<0.05$) more likely to perceive positive descriptive norms relating to early marriage (mean of 3.2) compared to girls in comparison villages (mean of 3.0). In addition, VYA girls in intervention villages were statistically significantly ($p<0.05$) more likely to perceive positive injunctive norms relating to early marriage (mean of 3.2) compared to girls in comparison villages (mean of 3.0). For a full table of social norms items for early marriage as perceived by VYA girls, see Appendix 2.

Related to social norms, the vignette also included questions about girls' agency and the expectation of negative sanctions (e.g., shaming) from the community for a girl or a parent trying to delay marriage after the girl reaches 16 years of age. VYA girls in intervention villages were marginally statistically significantly ($p<0.10$) more likely to perceive that the girl in the vignette would be able to convince her parents to delay marriage (52.8%) compared to girls in comparison villages (43.3%); and girls in intervention areas were statistically significantly ($p<0.01$) more likely to expect that the girl would engage others in her family or community for support to achieve her marriage desires (93.1%) compared to girls in comparison villages (81.9%). Among VYA girls in intervention areas, 44.4% expected the girl in the story to receive negative treatment from her community if she tried to delay the marriage, and 34.3% expected the parents in the story to receive negative treatment from the community if they agreed to delay the marriage. There were no statistically significant differences for negative sanctions comparing perceptions of VYA girls in intervention and comparison areas.

Table 15: Social norms related to adolescent girls delaying marriage as perceived by VYA girls with vignette

	Intervention (%)	Comparison (%)
Total (n)	161	238
Social norms scores		
Mean score (SD) on 4-point descriptive norm index	3.22 (0.86)**	3.01 (1.08)**
Mean score (SD) on 4-point injunctive norm index	3.19 (0.88)**	2.97 (1.14)**
Girl's agency		
Girl would be able to convince parents to delay marriage	52.8*	43.3*
Girl would enlist support from family/community to delay marriage	93.1***	81.9***
Community sanctions		
Community would shame adolescent girl for delaying marriage	44.7	52.1
Community would shame parents for delaying marriage	34.3	40.9
* p<0.10; ** p<0.05; *** p<0.01		

Social norms related to early marriage as perceived by caregivers were assessed through use of a vignette (see Appendix 1 for vignette) in which a hypothetical adolescent girl less than 16 years of age and her parents are being pressured to marry her to a local boy from a good family. Statements about social norms were asked related to typical behavior (descriptive norms) and approved behavior (injunctive norms) facing the story's adolescent girl and her parent. Two statements were combined each for descriptive norms and injunctive norms, resulting in two 4-point indices, ranging from zero (early marriage is very typical and approved behavior) to four (early marriage is very rare and not approved behavior). Results are presented in Table 16. Caregivers in intervention villages generally perceived positive descriptive norms (mean of 3.1) and injunctive norms (mean of 3.2) relating to early marriage. There was little difference between caregivers in intervention and comparison villages (mean of 3.1) for descriptive norms, but there was a marginally statistically significant difference ($p<0.10$) for injunctive norms, with caregivers in comparison villages less likely to perceive positive injunctive norms (mean of 2.9) relating to early marriage. For a full table of social norms items for early marriage as perceived by caregivers, see Appendix 2.

In intervention villages, 68.8% of caregivers perceived that the girl in the vignette would be able to convince her parents to delay marriage, and 93.7% of caregivers expected that the girl would engage others in her family or community for support to achieve her marriage desires. In addition, among caregivers in intervention areas, 32.5% expected the girl in the story to receive negative treatment from her community if she tried to delay the marriage, and 18.8% expected the parents in the story to receive negative treatment from the community if they agreed to delay the marriage. There were no statistically significant differences for items relating to girls' agency and sanctions comparing perceptions of caregivers in intervention and comparison areas.

Table 16: Social norms related to girls delaying marriage as perceived by caregivers with vignette

	Intervention (%)	Comparison (%)
Total (n)	80	125
Social norms scores		
Mean score (SD) on 4-point descriptive norm index	3.10 (0.91)	3.09 (1.02)
Mean score (SD) on 4-point injunctive norm index	3.15 (0.99)*	2.85 (1.33)*
Girl's agency		
Girl would be able to convince parents to delay marriage	68.8	64.0

Girl would enlist support from family/community to delay marriage	93.7	90.4
Community sanctions		
Community would shame adolescent girl for delaying marriage	32.5	43.2
Community would shame parents for delaying marriage	18.8	13.6
* p<0.10; ** p<0.05; *** p<0.01		

Social norms related to early marriage as perceived by grandmothers were assessed through use of a vignette (see Appendix 1 for vignette) in which a hypothetical adolescent girl less than 16 years of age and her parents are being pressured to marry her to a local boy from a good family. Statements about social norms were asked related to typical behavior (descriptive norms) and approved behavior (injunctive norms) facing the story's adolescent girl and her parent. Two statements were combined each for descriptive norms and injunctive norms, resulting in two 4-point indices, ranging from zero (early marriage is very typical and approved behavior) to four (early marriage is very rare and not approved behavior). Results are presented in Table 17. Grandmothers in intervention villages generally perceived positive descriptive norms (mean of 3.3) and injunctive norms (mean of 3.2) relating to early marriage. There was a marginally statistically significant difference ($p<0.10$) for descriptive norms, with grandmothers in comparison villages less likely to perceive positive descriptive norms (mean of 3.0) relating to early marriage, compared to grandmothers in intervention villages. In addition, there was a statistically significant difference ($p<0.05$) for injunctive norms, with grandmothers in comparison villages less likely to perceive positive injunctive norms (mean of 2.9) relating to early marriage, compared to grandmothers in intervention villages. For a full table of social norms items for early marriage as perceived by grandmothers, see Appendix 2.

In intervention villages, 57.1% of grandmothers perceived that the girl in the vignette would be able to convince her parents to delay marriage, and 86.8% of grandmothers expected that the girl would engage others in her family or community for support to achieve her marriage desires. In addition, among grandmothers in intervention areas, 37.5% expected the girl in the story to receive negative treatment from her community if she tried to delay the marriage, and 17.9% expected the parents in the story to receive negative treatment from the community if they agreed to delay the marriage. There were no statistically significant differences for items relating to girls' agency and sanctions comparing grandmothers in intervention and comparison areas.

Table 17: Social norms related to girls delaying marriage as perceived by grandmothers with vignette

	Intervention (%)	Comparison (%)
Total (n)	56	140
Social norms scores		
Mean score (SD) on 4-point descriptive norm index	3.33 (0.84)**	3.00 (1.14)**
Mean score (SD) on 4-point injunctive norm index	3.20 (1.02)*	2.86 (1.24)*
Girl's agency		
Girl would be able to convince parents to delay marriage	57.1	56.4
Girl would enlist support from family/community to delay marriage	86.8	88.4
Community sanctions		
Community would shame adolescent girl for delaying marriage	37.5	43.6
Community would shame parents for delaying marriage	17.9	22.9
* p<0.10; ** p<0.05; *** p<0.01		

Girls' education

Outcomes, intentions, & expectations

In both intervention villages (96.9%) and control villages (95.8%), the large majority of VYA girls have been enrolled in school at some point in their life (see Table 18). Over three-quarters of VYA girls in both intervention villages (81.4%) and control villages (75.4%) reported that they were currently enrolled in school. Approximately one-third of the sample of VYA girls in intervention villages had completed some primary school (31.7%), completed primary (32.9%), and completed some secondary schooling (32.3%). No significant differences were observed between intervention and comparison villages by education status of VYA girls.

Table 18: Education status of VYA girls

	Intervention (%; n)	Comparison (%; n)
Total (n)	161	238
Ever been to school	96.9	95.8
Currently enrolled in school	81.4 (127)	75.4 (172)
Not currently enrolled in school	18.6 (34)	24.6 (66)
Highest grade completed		
None	3.1	4.2
Some primary	31.7	36.6
Completed primary	32.9	30.7
Some secondary	32.3	28.6
No statistically significant differences between intervention/comparison		

Table 19 presents VYA girls' schooling expectations and satisfaction with schooling among girls currently enrolled in school. Among VYA girls currently enrolled in school in intervention villages, 97.6% reported liking school which was marginally significantly higher ($p<0.10$) compared to girls in comparison villages (93.0%). For schooling expectations and desires, 55.1% of enrolled girls in intervention villages expect to attend some/complete university, while 62.2% desire to attend some/complete university; 34.7% expect to finish secondary school, while 36.2% desire to finish primary school; and 10.2% expect to finish less than secondary school, while only 1.6% of VYA girls in intervention areas desire to finish less than secondary school. There were no significant differences comparing intervention and comparison populations for schooling expectations and desires. In intervention villages, 75.6% of VYA girls were confident that they will be able to achieve their desired level of schooling which was statistically significantly ($p<0.01$) higher compared to girls in comparison villages (62.8%). Girls in intervention villages were also statistically significantly ($p<0.05$ and $p<0.01$, respectively) more likely to believe that their opinion will be asked for (75.6%) and listened to (85.8%) compared to girls in comparison villages (62.2% and 62.8%).

Table 19: In-school VYA girls' schooling expectations, desires, & satisfaction

Among girls currently in school…	Intervention (%)	Comparison (%)
Total (n)	127	172
Expected education level upon leaving school		
Finish primary	0	0.6
Some secondary	10.2	10.5
Finish secondary	34.7	34.9

University	55.1	54.1
Desired education level upon leaving school		
Finish primary	0	0.6
Some secondary	1.6	7.0
Finish secondary	36.2	33.7
University	62.2	58.1
Expected involvement of adolescent girl		
Confident that family will ask my opinion on when I leave school	75.6**	62.8**
Confident that my opinion will be listened to during decision-making	85.8***	62.2***
Confident that I will stay in school until level I want	78.7***	62.8***
Satisfaction with schooling		
Likes school	97.6*	93.0*
* p<0.10; ** p<0.05; *** p<0.01		

Table 20 presents caregivers schooling expectations for their daughters. Among caregivers of VYA girls in intervention villages, 82.4% perceived that their daughters were doing very well in school which was marginally significantly higher ($p<0.10$) compared to caregivers in comparison villages (69.5%). For schooling expectations and desires, 54.6% of caregivers in intervention villages expect their daughters to attend some/complete university, while 61.8% desire attendance of some/completion of university for their daughters. It did appear that caregivers in comparison villages were statistically significantly ($p<0.05$) more likely to desire that their daughters attend some/complete university (80.2%) compared to caregivers in intervention villages. In intervention villages, 92.4% of caregivers were confident that they will be able to achieve their desired level of schooling for their daughter which was marginally statistically significantly ($p<0.10$) higher compared to girls in comparison villages (79.8%). Caregivers in intervention villages were also highly likely (90.6%) to ask for their daughter's opinion when considering taking her out of school, while fewer (63.2%) reported that their daughter's opinion would be very important to the decision made. There were no statistically significant differences in these questions comparing caregivers in intervention and comparison villages.

Table 20: Caregivers' of VYA girls schooling expectations, desires, & satisfaction

	Intervention (%)	Comparison (%)
Total (n)	80	125
Expected education level upon leaving school		
Finish primary	3.0	1.2
Some secondary	9.1	8.1
Finish secondary	33.3	23.3
University	54.6	67.4
Desired education level upon leaving school		
Finish primary	3.0	0
Some secondary	2.9	6.3
Finish secondary	32.4	13.5
University	61.8	80.2
Expected involvement of adolescent girl		
Will ask daughter's opinion when considering taking her out of school	90.6	88.5
Her opinion will be very important to decision made	63.2	60.0
Confident that daughter will stay in school until level I prefer	92.4*	79.8*

Satisfaction with schooling		
Daughter is doing very well in school	82.4*	69.5*
* p<0.10; ** p<0.05; *** p<0.01		

Social norms related to girls staying in school

Social norms related to girls' education as perceived by VYA girls were assessed through use of a vignette (see Appendix 1 for vignette) in which a hypothetical family of an adolescent girl less than 16 years of age who likes school is considering taking her out of school. Statements about social norms were asked related to typical behavior (descriptive norms) and approved behavior (injunctive norms) facing the story's adolescent girl and her family. Two statements were combined each for descriptive norms and injunctive norms, resulting in two 4-point indices, ranging from zero (girls being taken out of school before they want to end their education is very typical and approved behavior) to four (girls being taken out of school before they want to end their education is very rare and not approved behavior). Results are presented in Table 21. VYA girls in intervention villages were statistically significantly ($p<0.05$) more likely to perceive positive descriptive norms relating to girls staying in school (mean of 3.3) compared to girls in comparison villages (mean of 3.1). In addition, VYA girls in intervention villages were statistically significantly ($p<0.05$) more likely to perceive positive injunctive norms relating to girls staying in school (mean of 3.3) compared to girls in comparison villages (mean of 3.0). For a full table of social norms items for adolescent girls' education as perceived by VYA girls, see Appendix 2.

Related to social norms, the vignette also included questions about girls' agency and the expectation of negative sanctions from the community for a girl or a parent trying to delay a VYA girl leaving school. VYA girls in intervention villages were statistically significantly ($p<0.01$) more likely to perceive that the girl in the vignette would be able to convince her parents to delay leaving school (70.2%) compared to girls in comparison villages (53.8%). The majority (84.5%) of girls in intervention villages expected that the girl would engage others in her family or community for support, but this was not significantly different compared to girls in comparison villages. Among VYA girls in intervention areas, 44.1% expected the girl in the story to receive negative treatment from her community if she tried to delay leaving school, and 62.7% expected the parents in the story to receive negative treatment from the community if they agreed to not take the girl out of school. Perceptions of sanctions against keeping the adolescent girl in school were statistically significantly higher ($p<0.05$ and $p<0.01$, respectively) for comparison populations for the girl (55.5%) and the parents (89.9%).

Table 21: Social norms related to girls staying in school as perceived by VYA girls with vignette

	Intervention (%)	Comparison (%)
Total (n)	161	238
Social norms scores		
Mean score (SD) on 4-point descriptive norm index	3.30 (0.87)**	3.05 (1.10)**
Mean score (SD) on 4-point injunctive norm index	3.27 (0.90)**	3.04 (1.12)**
Girl's agency		
Girl would be able to convince parents to stay in school	70.2***	53.8***
Girl would enlist support from family/community to stay in school	84.5	81.5
Community sanctions		

Community would shame adolescent girl for staying in school	44.1**	55.5**
Community would shame parents for keeping girl in school	62.7***	89.9***
* p<0.10; ** p<0.05; *** p<0.01		

Social norms related to girls' education as perceived by caregivers were assessed in a similar manner as for adolescent girls, through use of a vignette (see Appendix 1 for vignette) in which a hypothetical family of an adolescent girl less than 16 years of age who likes school is considering taking her out of school. Statements about social norms were asked related to typical behavior (descriptive norms) and approved behavior (injunctive norms) facing the story's adolescent girl and her family. Two statements were combined each for descriptive norms and injunctive norms, resulting in a two 4-point indices, ranging from zero (girls being taken out of school before they want to end their education is very typical and approved behavior) to four (girls being taken out of school before they want to end their education is very rare and not approved behavior). Results are presented in Table 22. Caregivers in intervention villages generally perceived positive descriptive norms relating to girls' education (mean of 3.3) and positive injunctive norms relating to girls' education (mean of 3.2). However, there were no statistically significant differences observed between caregivers in intervention and comparison villages. For a full table of social norms items for adolescent girls' education as perceived by caregivers, see Appendix 2.

Related to social norms, the vignette also included questions to caregivers about girls' agency and the expectation of negative sanctions from the community for a girl or a parent trying to delay an adolescent girl leaving school. Most caregivers (72.5%) in intervention villages perceived that the girl in the vignette would be able to convince her parents to delay leaving school and that she would enlist support from other family or community members to stay in school (92.5%). In addition, 38.8% expected the girl in the story to receive negative treatment from her community if she tried to delay leaving school, and 11.3% expected the parents in the story to receive negative treatment from the community if they agreed to not take the girl out of school. However, there were no statistical differences between intervention and comparison populations for these perceptions.

Table 22: Social norms related to girls staying in school as perceived by caregivers with vignette

	Intervention (%)	Comparison (%)
Total (n)	80	125
Social norms scores		
Mean score (SD) on 4-point descriptive norm index	3.31 (1.00)	3.11 (1.10)
Mean score (SD) on 4-point injunctive norm index	3.23 (1.16)	2.96 (1.27)
Girl's agency		
Girl would be able to convince parents to stay in school	72.5	65.6
Girl would enlist support from family/community to stay in school	95.0	90.4
Community sanctions		
Community would shame adolescent girl for staying in school	38.8	28.8
Community would shame parents for keeping girl in school	11.3	11.2
No statistically significant differences between intervention/comparison		

Social norms related to girls' education as perceived by grandmothers were assessed in a similar manner as for adolescent girls and caregivers, through use of a vignette (see Appendix 1 for vignette)

in which a hypothetical family of an adolescent girl less than 16 years of age who likes school is considering taking her out of school. Statements about social norms were asked related to typical behavior (descriptive norms) and approved behavior (injunctive norms) facing the story's adolescent girl and her family. Two statements were combined each for descriptive norms and injunctive norms, resulting in a two 4-point indices, ranging from zero (girls being taken out of school before they want to end their education is very typical and approved behavior) to four (girls being taken out of school before they want to end their education is very rare and not approved behavior). Results are presented in Table 23. Grandmothers in intervention villages generally perceived positive descriptive norms relating to girls' education (mean of 3.5), which was marginally statistically significantly ($p<0.10$) higher compared to grandmothers in comparison villages (mean of 3.3). Grandmothers in intervention villages also generally perceived positive injunctive norms relating to girls' education (mean of 3.3). However, there were no statistically significant differences observed for injunctive norms between grandmothers in intervention and comparison villages. For a full table of social norms items for adolescent girls' education as perceived by grandmothers, see Appendix 2.

Related to social norms, the vignette also included questions about girls' agency and the expectation of negative sanctions from the community for a girl or a parent trying to delay an adolescent girl leaving school. Most grandmothers (58.9%) in intervention villages perceived that the girl in the vignette would be able to convince her parents to delay leaving school and that she would enlist support from other family or community members to stay in school (92.3%). In addition, 41.1% expected the girl in the story to receive negative treatment from her community if she tried to delay leaving school. There were no statistically significant differences between grandmothers in intervention and comparison villages for these perceptions. However, grandmothers in intervention villages were statistically significantly ($p>0.05$) more likely to expect that the parents in the story to receive negative treatment from the community if they agreed to not take the girl out of school (16.1%) compared to grandmothers in comparison villages (6.4%).

Table 23: Social norms related to girls staying in school as perceived by grandmothers with vignette

	Intervention (%)	Comparison (%)
Total (n)	56	140
Social norms scores		
Mean score (SD) on 4-point descriptive norm index	3.52 (0.63)*	3.27 (0.93)*
Mean score (SD) on 4-point injunctive norm index	3.34 (0.79)	3.11 (1.03)
Girl's agency		
Girl would be able to convince parents to stay in school	58.9	65.0
Girl would enlist support from family/community to stay in school	92.3	90.9
Community sanctions		
Community would shame adolescent girl for staying in school	41.1	32.9
Community would shame parents for keeping girl in school	16.1**	6.4**
* p<0.10; ** p<0.05; *** p<0.01		

Early pregnancy

Outcomes, intentions, & expectations

In intervention villages, 1.2% of VYA girls reported that they had ever been pregnant, compared to 3.4% reporting having ever been pregnant in comparison villages (see Table 24). No significant differences were observed between intervention and comparison villages by pregnancy history for VYA girls.

Table 24: Pregnancy history for VYA girls

	Intervention (%; n)	Comparison (%; n)
Total (n)	161	238
Have previously been/currently pregnant	1.2 (2)	3.4 (8)
No statistically significant differences between low/high engagement, intervention/comparison		

Among VYA girls in intervention villages who have never been pregnant, the mean age at which they expect to have their first child is 21.3 years of age, compared to their desired age of first child at a mean of 21.6 years of age (see Table 25). Both expected and desired age of marriage are similar in intervention and comparison villages. When asked about their own involvement in the decisions on when to have their first child, 23.7% of VYA girls in intervention areas felt confident that their partner, in-laws, and family would ask their opinion on when to have their first child. This confidence was not statistically significantly different compared to girls in comparison villages (30.1%). Nearly half (42.7%) of girls in intervention villages reported that they felt confident that their opinion would be listened to during decision-making and that they would have their first child at the age they want. This was slightly higher compared to girls in comparison villages (39.7% and 37.1%, respectively) but was not a statistically significant difference.

Table 25: VYA girls' first pregnancy expectations & desires

Among never pregnant girls…	Intervention (%)	Comparison (%)
Total (n)	159	230
Expected/desired age at first pregnancy		
Expected age (mean, SD)	21.32 (0.30)	21.27 (0.22)
Desired age (mean, SD)	21.64 (0.27)	21.65 (0.22)
Expected involvement of adolescent girl		
Confident that others will ask my opinion whether/when to have first child	23.7	30.1
Confident that my opinion will be listened to during decision-making	42.7	39.7
Confident that I will get have first child at age I want	42.7	37.1
No statistically significant differences between low/high engagement, intervention/comparison		

Among caregivers of VYA girls in intervention villages, the expected age of first child for their daughter was 19.8 years of age and their desired age of first child for their daughter was 19.9 years (see Table 26). There was little difference in expected and desired age of first pregnancy for their daughters comparing caregivers in intervention and comparison villages. Caregivers in intervention villages were statistically significantly ($p<0.01$) more likely to report that they felt confident that their daughter would have her first child at the age the caregiver prefers (59.7%) compared to 48.3% reporting the

same in comparison villages. Similarly, caregivers in intervention villages were statistically significantly (p<0.01) more likely to report that they will ask their daughter's opinion about the timing of her first pregnancy (77.8%) compared to only 47.8% of caregivers in comparison villages. Finally, the majority of caregivers in intervention villages (80.7%) and comparison villages (88.5%) reported that their daughter's opinion would be important for any decisions made, but this difference was not statistically significant.

Table 26: First pregnancy expectations of caregivers of VYA girls

For adolescent daughter…	Intervention (%)	Comparison (%)
Total (n)	80	125
Expected/desired age at first pregnancy		
Expected age (mean, SD)	19.83 (2.42)	19.59 (2.13)
Desired age (mean, SD)	19.92 (2.34)	20.14 (2.63)
Confident that daughter will have first pregnancy at the age I prefer	59.7***	48.3***
Expected involvement of adolescent girl		
Will ask daughter's opinion about timing of first pregnancy	77.8***	47.8***
Her opinion will be important for decision	80.7	88.5
* p<0.10; ** p<0.05; *** p<0.01		

Social norms related to girls delaying pregnancy

Social norms related to early pregnancy as perceived by VYA girls were assessed through use of a vignette (see Appendix 1 for vignette) in which a hypothetical 16-year old girl who was recently married is being pressured into pregnancy by her partner and in-laws, despite her wishes to finish secondary school. Statements about social norms were asked related to typical behavior (descriptive norms) and approved behavior (injunctive norms) facing the story's adolescent girl and her parents. Two statements were combined each for descriptive norms and injunctive norms, resulting in two 3-point indices, ranging from zero (early pregnancy is very typical and approved behavior) to three (early pregnancy is very rare and not approved behavior). Results are presented in Table 27. VYA girls in intervention villages were statistically significantly (p<0.01) more likely to perceive positive descriptive norms relating to early pregnancy (mean of 2.0) and positive injunctive norms relating to early pregnancy (mean of 2.0) compared to girls in comparison villages (mean of 1.7 and 1.5, respectively). For a full table of social norms items for early pregnancy as perceived by adolescent girls, see Appendix 2.

Related to social norms, the vignette also included questions about girls' agency and the expectation of negative sanctions from the community for a girl or a parent trying to delay pregnancy in order to finish school. VYA girls in intervention villages were statistically significantly (p<0.01) more likely to perceive that the girl in the vignette would be able to convince decision-makers to delay pregnancy (41.6%) compared to girls in comparison villages (28.6%); and girls in intervention areas were statistically significantly (p<0.01) more likely to expect that the girl would engage others in her family or community for support to achieve her pregnancy desires (73.9%) compared to girls in comparison villages (53.6%). Among VYA girls in intervention areas, 72.1% expected the girl in the story to receive negative treatment from her community if she tried to delay pregnancy, and 66.5% expected the parents in the story to receive negative treatment from the community if they agreed to support the girl to delay pregnancy. Girls in comparison villages were statistically significantly (p<0.01) to expect

negative reactions from the community for the adolescent girl (86.1%) and her parents (92.9%) compared to girls in intervention villages.

Table 27: Social norms related to girls delaying pregnancy as perceived by VYA girls with vignette

	Intervention (%)	Comparison (%)
Total (n)	161	238
Social norms scores		
Mean score (SD) on 3-point descriptive norm index	1.97 (0.97)***	1.66 (0.99)***
Mean score (SD) on 3-point injunctive norm index	1.96 (0.89)***	1.53 (0.98)***
Girl's agency		
Girl would be able to convince others to delay first pregnancy	41.6***	28.6***
Girl would enlist support from family/community to delay first pregnancy	73.9***	53.6***
Community sanctions		
Community would shame adolescent girl for trying to delay first pregnancy	72.1***	86.1***
Community would shame parents/in-laws for allowing girl delay first pregnancy	66.5***	92.9***
* p<0.10; ** p<0.05; *** p<0.01		

Social norms related to early pregnancy as perceived by caregivers were assessed, similar to adolescent girls, through use of a vignette (see Appendix 1 for vignette) in which a hypothetical 16-year old girl who was recently married is being pressured into pregnancy by her partner and in-laws, despite her wishes to finish secondary school. Statements about social norms were asked related to typical behavior (descriptive norms) and approved behavior (injunctive norms) facing the story's adolescent girl and her parents. Two statements were combined each for descriptive norms and injunctive norms, resulting in two 3-point indices, ranging from zero (early pregnancy is very typical and approved behavior) to three (early pregnancy is very rare and not approved behavior). See Table 28 for results. Caregivers in intervention villages were statistically significantly ($p<0.01$) more likely to perceive positive descriptive norms relating to early pregnancy (mean of 2.4) and positive injunctive norms relating to early pregnancy (mean of 2.4) compared to caregivers in comparison villages (mean of 2.1 and 2.0, respectively). For a full table of social norms items for early pregnancy as perceived by caregivers, see Appendix 2.

Related to social norms, the vignette also included questions about girls' agency and the expectation of negative sanctions from the community for a girl or a parent trying to delay pregnancy in order to finish school. Caregivers in intervention villages were statistically significantly ($p<0.05$) more likely to perceive that the girl in the vignette would be able to convince decision-makers to delay pregnancy (38.8%) compared to caregivers in comparison villages (28.6%). Approximately three-quarters of caregivers in intervention villages (79.5%) and comparison villages (73.1%) expected that the girl would engage others in her family or community for support to achieve her pregnancy desires, but this was not a statistically significant difference. A small majority of caregivers in intervention villages (61.3%) expected the girl in the story to receive negative treatment from her community if she tried to delay pregnancy while a smaller number (42.5%) expected the parents in the story to receive negative treatment from the community if they agreed to support the girl to delay pregnancy. However, there

were no statistically significant differences comparing caregivers in intervention and comparison villages with regards expectations of sanctions.

Table 28: Social norms related to girls delaying pregnancy as perceived by caregivers with vignette

	Intervention (%)	Comparison (%)
Total (n)	80	125
Social norms scores		
Mean score (SD) on 3-point descriptive norm index	2.44 (0.78)***	2.10 (0.84)***
Mean score (SD) on 3-point injunctive norm index	2.39 (0.74)***	1.99 (0.80)***
Girl's agency		
Girl would be able to convince others to delay first pregnancy	38.8**	24.8**
Girl would enlist support from family/community to delay first pregnancy	79.5	73.1
Community sanctions		
Community would shame adolescent girl for trying to delay first pregnancy	61.3	71.2
Community would shame parents/in-laws for allowing girl delay first pregnancy	42.5	46.4
* p<0.10; ** p<0.05; *** p<0.01		

Social norms related to early pregnancy as perceived by grandmothers were assessed, similar to adolescent girls and caregivers, through use of a vignette (see Appendix 1 for vignette) in which a hypothetical 16-year old girl who was recently married is being pressured into pregnancy by her partner and in-laws, despite her wishes to finish secondary school. Statements about social norms were asked related to typical behavior (descriptive norms) and approved behavior (injunctive norms) facing the story's adolescent girl and her parents. Two statements were combined each for descriptive norms and injunctive norms, resulting in two 3-point indices, ranging from zero (early pregnancy is very typical and approved behavior) to three (early pregnancy is very rare and not approved behavior). Results are presented in Table 29. Grandmothers in intervention villages were statistically significantly ($p<0.05$) more likely to perceive positive descriptive norms relating to early pregnancy (mean of 1.8) and positive injunctive norms relating to early pregnancy (mean of 1.7) compared to grandmothers in comparison villages (mean of 1.38 and 1.29, respectively). For a full table of social norms items for early pregnancy as perceived by grandmothers, see Appendix 2.

Related to social norms, the vignette also included questions about girls' agency and the expectation of negative sanctions from the community for a girl or a parent trying to delay pregnancy in order to finish school. Grandmothers in intervention villages were marginally statistically significantly ($p<0.10$) more likely to perceive that the girl in the vignette would be able to convince decision-makers to delay pregnancy (28.6%) compared to caregivers in comparison villages (16.4%). In addition, grandmothers in intervention villages (70.4%) were statistically significantly ($p<0.05$) more likely to expect that the girl in the vignette would engage others in her family or community for support to achieve her pregnancy desires compared to grandmothers in comparison villages (50.4%). A small majority of grandmothers in intervention villages (53.3%) expected the girl in the story to receive negative treatment from her community if she tried to delay pregnancy while a smaller number (30.4%) expected the parents in the story to receive negative treatment from the community if they

agreed to support the girl to delay pregnancy. Expectations of sanctions by grandmothers in comparison villages was statistically significantly higher for sanctions against adolescent girls ($p<0.05$) and against parents ($p<0.01$) for grandmothers in comparison villages (75.0% and 56.4%, respectively) compared to grandmothers in intervention villages.

Table 29: Social norms related to girls delaying pregnancy as perceived by grandmothers with vignette

	Intervention (%)	Comparison (%)
Total (n)	56	140
Social norms scores		
Mean score (SD) on 3-point descriptive norm index	1.82 (0.97)**	1.38 (1.13)**
Mean score (SD) on 3-point injunctive norm index	1.73 (1.02)**	1.29 (1.15)**
Girl's agency		
Girl would be able to convince others to delay first pregnancy	28.6*	16.4*
Girl would enlist support from family/community to delay first pregnancy	70.4**	50.4**
Community sanctions		
Community would shame adolescent girl for trying to delay first pregnancy	53.3**	75.0**
Community would shame parents/in-laws for allowing girl delay first pregnancy	30.4***	56.4***
* p<0.10; ** p<0.05; *** p<0.01		

Female genital mutilation/cutting

Intentions & expectations

FGM/C is typically performed on infant girls, long before they reach adolescence in this setting. However, we did ask a range of questions to caregivers and grandmothers about their future intentions and perceived ability to influence the practice of FGM/C in Table 30. Among caregivers of VYA girls in intervention villages, only 7.2% reported that if they could completely choose for themselves, that they would still have their daughter undergo FGM/C which was statistically significantly ($p<0.01$) lower compared to 34.0% of caregivers responding that they would have had their daughter undergo FGM/C if it were completely up to them in comparison villages. As well, 80.3% of caregivers in intervention villages reported that they were confident that they could avoid FGM/C for their daughter if they did not want it, which was statistically significantly ($p<0.05$) higher compared to caregivers in comparison villages (60.8%).

Table 30: Caregivers' of VYA girls FGM/C desires & agency

	Intervention (%)	Comparison (%)
Total (n)	80	125
Agency relating to FGM/C		
If you could completely choose for yourself, would still have had your daughter undergo FGM/C	7.2***	34.0***
How confident are you that you could have avoided FGM/C for your daughter if you wanted to	80.3**	60.8**
* p<0.10; ** p<0.05; *** p<0.01		

Attitudes & social norms toward abandonment of FGM/C

Attitudes of caregivers of VYA girls toward FGM/C were assessed on a 5-point Likert scale. Six attitudinal statements were posed to caregivers and combined into a 6-item attitudinal index, ranging from zero (disagree with program objectives across all statements) to six (agree with program objectives across all statements). Results are presented in Table 31. Caregivers in intervention villages were statistically significantly ($p<0.01$) more likely to hold positive attitudes compared to intervention villages, agreeing with a mean of 3.6 vs. 2.6 statements. Among the six individual statements (see Appendix 2 for full table), caregivers in intervention villages were statistically significantly more likely to disagree that: "cutting helps a girl stay a virgin until she is married" (64.6% vs. 47.5%; $p<0.05$), "uncut girls are not pure" (79.0% vs. 40.8%; $p<0.01$), "cutting is part of our tradition and culture" (17.5% vs. 5.6%; $p<0.01$), and that "cutting teaches a girl obedience and respect" (65.8% vs. 50.0%; $p<0.01$)—compared to caregivers in comparison villages.

Social norms related to FGM/C as perceived by caregivers were assessed through use of a vignette (see Appendix 1 for vignette) in which a hypothetical family of a very young girl is considering having their daughter cut, but the parents remain uncertain on whether to have their daughter undergo FGM/C. Statements about social norms were asked related to typical behavior (descriptive norms) and approved behavior (injunctive norms) facing the story's parents of an adolescent girl. Two statements were combined each for descriptive norms and injunctive norms, resulting in two 3-point indices, ranging from zero (FGM/C is very typical and approved behavior) to three (FGM/C is very rare and not approved behavior). Caregivers in intervention villages were statistically significantly ($p<0.01$) more likely to perceive positive descriptive norms relating to early pregnancy and positive injunctive norms relating to early pregnancy (mean of 2.7 for each) compared to caregivers in comparison villages (mean of 2.3 for each). For a full table of social norms items for FGM/C as perceived by caregivers, see Appendix 2.

Related to social norms, the vignette also included questions about agency and the expectation of negative sanctions from the community for a parent trying to avoid FGM/C for their very young daughter. Caregivers in intervention villages were marginally statistically significantly ($p<0.10$) more likely to perceive that the parents in the vignette would be able to convince decision-makers to avoid FGM/C for their VERY young daughter (70.0%) compared to caregivers in comparison villages (58.4%). Approximately three-quarters of caregivers in intervention villages (84.6%) and comparison villages (70.3%) expected that the parent would engage others in their family or community for support to avoid FGM/C, and this difference was statistically significant ($p<0.05$). Very few caregivers (12.5%) expected that the community would shame the caregiver in the vignette for trying to avoid FGM/C for their baby daughter, and this was statistically significantly ($p<0.05$) lower compared to caregivers' in comparison villages expectations of negative sanctions (35.2%).

Table 31: Caregiver attitudes & social norms toward abandonment of FGM/C

	Intervention (%)	Comparison (%)
Total (n)	80	125
Mean score (SD) on 6-item attitude index	3.55 (1.70)***	2.58 (1.72)***
Mean score (SD) on 3-point descriptive norm index	2.70 (0.68)***	2.33 (0.90)***
Mean score (SD) on 3-point injunctive norm index	2.65 (0.71)***	2.26 (0.91)***

Caregiver's agency		
Caregiver would be able to convince other decision-makers to avoid FGM/C for girl	70.0*	58.4*
Caregiver would enlist support from family/community to avoid FGM/C for girl	84.6**	70.3**
Community sanctions		
Community would shame caregiver for trying to avoid FGM/C for girl	12.5***	35.2***
* p<0.10; ** p<0.05; *** p<0.01		

Attitudes of grandmothers toward FGM/C were assessed, similarly to caregivers, on a 5-point Likert scale. Six attitudinal statements were posed to caregivers and combined into a 6-item attitudinal index, ranging from zero (disagree with program objectives across all statements) to six (agree with program objectives across all statements). Results are presented in Table 32. Grandmothers in intervention villages were statistically significantly ($p<0.01$) more likely to hold positive attitudes compared to intervention villages, agreeing with a mean of 3.4 vs. 2.6 statements. Among the six individual statements (see Appendix 2 for full table), grandmothers in intervention villages were statistically significantly more likely to disagree that: "cutting helps a girl stay a virgin until she is married" (53.5% vs. 44.2%; $p<0.10$), "cutting is part of our tradition and culture" (75.0% vs. 49.3%; $p<0.01$), and agree that "cutting is not the right thing to do to girls in our community" (80.4% vs. 50.7%)—compared to grandmothers in comparison villages.

Social norms related to FGM/C as perceived by grandmothers were assessed, similar to caregivers, through use of a vignette (see Appendix 1 for vignette). Statements about social norms were asked related to typical behavior (descriptive norms) and approved behavior (injunctive norms) facing the story's parents of an adolescent girl. Two statements were combined each for descriptive norms and injunctive norms, resulting in two 3-point indices, ranging from zero (FGM/C is very typical and approved behavior) to three (FGM/C is very rare and not approved behavior). Grandmothers in intervention villages were more likely to perceive positive descriptive norms relating to early pregnancy (mean of 2.6) and positive injunctive norms relating to early pregnancy (mean of 2.7) compared to caregivers in comparison villages (means of 2.5). However, the difference was not statistically significant. For a full table of social norms items for FGM/C as perceived by caregivers, see Appendix 2.

Related to social norms, the vignette also included questions about agency and the expectation of negative sanctions from the community for a parent trying to avoid FGM/C for their adolescent daughther. A small majority of grandmothers in intervention villages (64.3%) believed that the caregiver in the vignette would be able to convince other decision-makers to avoid FGM/C for the adolescent girl, but this was not significantly different compared to grandmothers in comparison villages. Over three-quarters of grandmothers in intervention villages (84.3%) believed that the parents in the vignette would enlist support from others in their community to help them avoid FGM/C for their daughter which was statistically significantly ($p<0.05$) higher compared to grandmothers in comparison villages (69.9%). Very few grandmothers (5.4%) expected that the community would shame the caregiver in the vignette for trying to avoid FGM/C for their daughter, and this was statistically significantly ($p<0.01$) lower compared to grandmothers' in comparison villages expectations of negative sanctions (28.6%).

Table 32: Grandmother attitudes & social norms toward abandonment of FGM/C

	Intervention (%)	Comparison (%)
Total (n)	56	140
Mean score (SD) on 6-item attitude index	3.43 (1.65)***	2.64 (1.72)***
Mean score (SD) on 3-point descriptive norm index	2.64 (0.70)	2.52 (0.80)
Mean score (SD) on 3-point injunctive norm index	2.71 (0.62)	2.52 (0.82)
Grandmother's agency		
Grandmother would be able to convince other decision-makers to avoid FGM/C for girl	64.3	65.0
Grandmother would enlist support from family/community to avoid FGM/C for girl	84.3**	69.9**
Community sanctions		
Community would shame caregiver for trying to avoid FGM/C for girl	5.4***	28.6***
* p<0.10; ** p<0.05; *** p<0.01		

Engagement of grandmothers in support & decision-making

VYA girls were asked a range of questions regarding their expectations of grandmother involvement with decisions in their lives and their personal interactions with grandmothers in their communities, including asking for advice or support around key decisions in the girl's life (see Table 33). For decision-making, 42.4% of VYA girls in intervention villages expected a grandmother to be consulted/involved in decisions around her marriage and 46.9% for decisions about her schooling. This was statistically significantly ($p<0.01$) higher compared to VYA girls in comparison villages (7.1% and 16.0%, respectively). In addition, VYA girls in intervention villages were statistically significantly ($p<0.05$) more likely to expect a grandmother to be consulted/involved in decisions around her first pregnancy (33.0%) compared to 11.8% of girls in comparison villages. With regards communication for advice and support, girls in intervention villages were statistically significantly ($p<0.01$) more likely to have talked about or asked advice from a grandmother in the previous one year for marriage (42.4% vs. 10.0%), schooling (60.6% vs. 21.5%), and pregnancy (27.9% vs. 5.2%) compared to girls in comparison villages.

Table 33: Communication between VYA girls & grandmother(s) & expectations for grandmother(s) involvement in decision-making

	Intervention (%)	Comparison (%)
Total (n)	161	238
Grandmother(s) as decision-makers		
Expect grandmother to contribute to decision-making about:		
Marriage	42.4***	7.1***
Schooling	46.9***	16.0***
Pregnancy	33.0**	11.8**
Communication between adolescent girl and grandmother		
In past year, talked with/asked advice and support about:		
Marriage	42.4***	10.0***
Schooling	60.6***	21.5***
Pregnancy	27.9***	5.2***

* p<0.10; ** p<0.05; *** p<0.01

Expectations of support from grandmothers were also assessed in the vignettes relating to early marriage, girls' schooling, and early pregnancy according to the perceptions of VYA girls (see Table 34). VYA girls in intervention villages were statistically significantly more likely to perceive that the adolescent girls in the vignettes would receive support from a grandmother to: delay marriage (80.8% vs. 64.6%; p<0.01), stay in school (85.0% vs. 78.6%; p<0.05), and delay first pregnancy (76.4% vs. 45.4%; p<0.01)—compared to VYA girls in comparison villages. VYA girls in intervention villages were also statistically significantly more likely to perceive that a grandmother's support would successfully convince decision-makers to achieve the VYA girl's desire to: delay marriage (80.1% vs. 67.9%; p<0.05), stay in school (72.5% vs. 61.3%; p<0.05), and delay first pregnancy (75.2% vs. 59.2%; p<0.01)—compared to VYA girls in comparison villages.

Table 34: Support from grandmother(s) according to VYA girls with vignettes

	Intervention (%)	Comparison (%)
Total (n)	161	238
Expected support from grandmother(s)		
Girl would receive support from grandmother to:		
Delay marriage	80.8***	64.6***
Stay in school	85.0**	78.6**
Delay first pregnancy	76.4***	45.4***
Expected effect of grandmother(s)' support		
Grandmother's support would help convince decision-makers to:		
Delay marriage	80.1**	67.9**
Stay in school	72.5**	61.3**
Delay first pregnancy	75.2***	59.2***

* p<0.10; ** p<0.05; *** p<0.01

Similar to VYA girls, caregivers were also asked a range of questions regarding their expectations of grandmother involvement with decisions in their daughters' lives and their personal interactions with grandmothers in their communities, including asking for advice or support around key decisions in their daughter's life (see Table 35). For decision-making, 17.7% of caregivers in intervention villages reported that grandmothers would be key decision-makers in decisions about their daughter's schooling, which was marginally statistically significantly (p<0.10) higher compared to caregivers in comparison villages (8.3%). Caregivers in intervention villages were statistically significantly (p<0.05) more likely to expect grandmothers to contribute to decision-making for their daughter's marriage (26.6%) compared to 14.9% of caregivers in comparison villages. Finally, caregivers in intervention villages were highly statistically significantly (p<0.01) more likely to expect grandmothers to be involved in decision-making for their daughter's future pregnancy (24.1%) compared to caregivers in comparison villages (9.8%). With regards communication for advice and support, caregivers in intervention villages were more likely to report that they had talked about or asked advice from a grandmother in the previous year for marriage for their daughter (89.7%) compared to caregivers in comparison villages (81.7%, each), but this was not statistically significant. However, statistically significant (p<0.01) higher proportions of caregivers in intervention villages reported that they had talked about or asked advice for schooling (77.9%) and first pregnancy (40.5%) for their daughter compared to caregivers in comparison villages (49.0% and 22.5%, respectively). Large majorities

(>85%) of caregivers in both intervention and comparison villages reported a grandmother's recommendations would be very important to their decisions for their daughter for marriage, schooling, and pregnancy.

Table 35: Communication between caregivers & grandmother(s) and expectations for grandmother(s) involvement in decision-making

	Intervention (%)	Comparison (%)
Total (n)	80	125
Grandmother(s) as decision-makers		
Expect grandmother to contribute to decision-making about:		
Marriage of adolescent girl	26.6**	14.9**
Schooling of adolescent girl	17.7*	8.3*
Pregnancy of adolescent girl	24.1***	9.8***
Communication between caregiver and grandmother		
In past year, talked with/asked advice and support about:		
Marriage of adolescent girl	89.7	81.7
Schooling of adolescent girl	77.9***	49.0***
Pregnancy of adolescent girl	40.5***	22.5***
Importance of grandmother(s)' recommendation		
Grandmother(s)' recommendation would be important, regarding:		
Marriage of adolescent girl	88.6	86.7
Schooling of adolescent girl	86.8	93.6
Pregnancy of adolescent girl	98.1	100
* p<0.10; ** p<0.05; *** p<0.01		

Expectations of support from grandmothers were also assessed in the vignettes relating to early marriage, girls' schooling, and early pregnancy according to the perceptions of caregivers of VYA girls (see Table 36). Caregivers in intervention villages were statistically significantly more likely to perceive that the adolescent girls in the vignettes would receive support from a grandmother to delay first pregnancy (61.3% vs. 41.9%; p<0.05). About three-quarters of caregivers in intervention villages perceived that the girl would receive support to delay marriage (71.3%) and stay in school (75.0%), but this was not significantly different compared to caregivers in comparison villages. Between two-thirds and three-quarters of caregivers in intervention villages perceived that a grandmother's support for an adolescent girl would help her to delay marriage (76.0%), stay in school (71.3%), and delay first pregnancy (68.4%), but this was not significantly different compared to caregivers' perceptions in comparison villages.

Table 36: Support from grandmother(s) according to caregivers with vignettes

	Intervention (%)	Comparison (%)
Total (n)	80	125
Expected support from grandmother(s)		
Girl would receive support from grandmother to:		
Delay marriage	71.3	71.0
Stay in school	75.0	80.8

Delay first pregnancy	61.3**	41.9**
Expected effect of grandmother(s)' support		
Grandmother's support would help convince decision-makers to:		
Delay marriage	76.0	84.6
Stay in school	71.3	74.8
Delay first pregnancy	68.4	66.9
* p<0.10; ** p<0.05; *** p<0.01		

Grandmothers were asked about their perceptions of community members coming to them for support, including VYA girls and their caregivers (see Table 37). For VYA girls, grandmothers in intervention villages were highly statistically significantly (p<0.01) more likely to perceive that VYA girls would come to them for advice or support to achieve their desires if: their families/potential partner's family were pressuring them into marriage at less than 16 years of age (76.8% vs. 30.2%), their parents were considering removing them from school (85.7% vs. 39.3%), and their families/potential partner's family were pressuring them into having a child before age 16 (75.0% vs. 22.1%) compared to grandmothers in comparison villages. As well, 80.0% of grandmothers in intervention villages felt that, in general, VYA girls were willing to come to them for advice and support compared to 34.5% of grandmothers in comparison villages, and this difference was highly statistically significant (p<0.01). Similarly, grandmothers in intervention villages were highly statistically significantly (p<0.01) more likely to perceive that caregivers would come to them for advice or support to achieve their desires for their daughters if they are considering: marriage for their daughter at less than 16 years of age (69.6% vs. 27.9%), removing their daughter from school (73.2% vs. 34.1%), and their potential partner's family were pressuring them into having a child before age 16 (67.9% vs. 20.0%)—compared to grandmothers in comparison villages. As well, 80.4% of grandmothers in intervention villages felt that, in general, caregivers of adolescent girls were willing to come to them for advice and support compared to 39.3% of grandmothers in comparison villages, and this difference was highly statistically significant (p<0.01). Finally, grandmothers in intervention villages were highly statistically significantly (p<0.01) more likely to perceive that she is a valued part of her community (87.5%) compared to 60.4% of grandmothers in comparison villages.

Table 37: Perceptions of VYA girls and caregivers coming to grandmothers for support according to grandmothers

	Intervention (%)	Comparison (%)
Total (n)	56	140
Adolescent girls would come to me for support and advice if:		
Future husbands/families are pressuring them to get married before age 16 and girl does not want	76.8***	30.2***
Parents are considering removing girls from school and girl does not want	85.7***	39.3***
Future husbands/families are pressuring them to get pregnant before age 16 and girl does not want	75.0***	22.1***
In general, I feel that adolescent girls are willing to come to me for advice and support	80.0***	34.5***
Caregivers of adolescent girls would come to me for support and advice if:		

They are considering marriage for daughter before age 16	69.6***	27.9***
They are considering removing daughter from school	73.2***	34.1***
Future husbands/families are pressuring daughter to get pregnant before age 16 and girl does not want	67.9***	20.0***
In general, I feel that caregivers of adolescent girls are willing to come to me for advice and support	80.4***	39.3***
I feel that I am a valued part of this community	87.5***	60.4***
* p<0.10; ** p<0.05; *** p<0.01		

Grandmothers were asked if they would be willing to provide unconditional (regardless of age of girl) support to help a VYA girl and/or her caregivers to achieve their marriage, schooling, and first pregnancy desires (see Table 38). Grandmothers in intervention villages were statistically significantly more likely to report that they would provide support for a VYA girl and/or her caregivers for delaying marriage (69.6% vs. 59.7%; p<0.05) and delaying first pregnancy (69.1% vs. 38.9%; p<0.01) compared to grandmothers in comparison villages. Similar proportions of grandmothers in both intervention villages (83.9%) and comparison villages (84.2%) responded that they would be willing to support a VYA girl staying in school longer. About two-thirds to three-quarters of grandmothers in intervention villages expressed confidence that their support would be able to convince others to delay marriage (73.6%), keep a girl in school (67.9%), and delay first pregnancy (64.4%). There were no statistically significant differences between grandmothers in intervention and comparison villages for confidence in achieving these outcomes for VYA girls and their caregivers.

Table 38: Willingness to provide support to VYA girls according to grandmothers

	Intervention (%)	Comparison (%)
Total (n)	56	140
Grandmother would provide unconditional support to an VYA girl/caregiver if wanted to:		
Delay marriage	69.6**	59.7**
Stay in school	83.9	84.2
Delay first pregnancy	69.1***	38.9***
Grandmother is confident could convince others to help VYA girl/caregiver to:		
Delay marriage	73.6	63.2
Stay in school	67.9	60.1
Delay first pregnancy	64.4	50.6
* p<0.10; ** p<0.05; *** p<0.01		

Expectations of support from grandmothers were also assessed in the vignettes relating to early marriage, girls' schooling, early pregnancy, and FGM/C according to the perceptions of grandmothers (see Table 39). Grandmothers in intervention villages were statistically significantly more likely to perceive that the girls in the vignettes would receive support from a grandmother to: delay marriage (96.4% vs. 72.9%; p<0.01), stay in school (100.0% vs. 91.4%; p<0.10), and delay first pregnancy (82.2% vs. 51.8%; p<0.01)—compared to caregivers in comparison villages. Grandmothers in intervention villages were also statistically significantly more likely to perceive that a grandmother's support would successfully convince decision-makers to achieve the adolescent girl's desire to: delay marriage (94.6% vs. 72.9%; p<0.01) and delay first pregnancy (87.3% vs. 53.2%; p<0.01)—com pared

to VYA girls in comparison villages. A larger proportion of grandmothers in intervention villages also expected that the grandmother's support would assist the girl in staying in school (91.0% vs. 77.9%) compared to grandmothers in comparison villages, but this was not a significant difference.

Table 39: Support from grandmother(s) according to grandmothers with vignettes

	Intervention (%)	Comparison (%)
Total (n)	56	140
Expected support from grandmother(s)		
Girl would receive support from grandmother to:		
Delay marriage	96.4***	72.9***
Stay in school	100.0*	91.4*
Delay first pregnancy	82.2***	51.8***
Expected effect of grandmother(s)' support		
Grandmother's support would help convince decision-makers to:		
Delay marriage	94.6***	72.9***
Stay in school	91.0	77.9
Delay first pregnancy	87.3***	53.2***
* p<0.10; ** p<0.05; *** p<0.01		

Satisfaction with the intervention

VYA girls, their caregivers, and grandmothers in intervention villages were asked about their perceptions of whether the overall GHD intervention and specific activities within the intervention led to changes in their thinking about early marriage, girls' education, early pregnancy, and FGM/C (see Table 40). Approximately three-quarters of VYA girls responded that the GHD intervention led them to think differently about: when girls should marry (73.9%), how long girls should stay in school (77.0%), when girls should have their first child (71.9%), and FGM/C (70.8%). Under-the-tree sessions were the activity cited as leading to changes in thinking across the four outcomes (approximately one-half of girls citing this activity), followed by women and girl forums (approximately one-third of girls citing this activity) and days of grandmother solidarity (approximately one-quarter of girls citing this activity). Similar proportions of caregivers responded that the GMP intervention led them to think differently about: when girls should marry (72.5%), how long girls should stay in school (71.3%), when girls should have their first child (71.3%), and FGM/C (67.5%). Intergenerational forums were the activity cited as leading to change in thinking across the four outcomes (approximately two-thirds of caregivers citing this activity), followed by about one-third of caregivers citing days of grandmother solidarity, under-the-tree sessions, and women and girl forums. Slightly fewer grandmothers perceived that GHD activities have changed their thinking compared to adolescent girls and their caregivers with approximately two-thirds of grandmothers responding that the GHD intervention led them to think differently about: when girls should marry (67.9%), how long girls should stay in school (66.1%), when girls should have their first child (64.3%), and FGM/C (64.3%). More than one-half of grandmothers cited intergenerational forums, under-the-tree sessions, days of grandmother solidarity, and teacher-grandmother discussions as the specific GHD activities leading to changes in thinking.

Table 40: Changes in thinking as a result of exposure to GHD

	VYA girls (%)	Caregivers (%)	Grandmothers (%)

Total (n)	161	80	56
Have any GHD activities made you think differently about when girls should marry	73.9	72.5	67.9
Which activities			
IG forums	20.5	65.0	60.7
Days of GM solidarity	24.8	41.3	53.6
GM leaders training	--	--	39.3
Under-the-tree sessions	52.8	33.8	58.9
Teacher-GM discussions	--	--	55.4
GM class presentations	23.0	--	46.4
Story books on cultural values	16.2	17.5	28.6
Women and girl forums	37.3	33.8	30.4
Have any GHD activities made you think differently about how long girls should stay in school	77.0	71.3	66.1
Which activities			
IG forums	20.5	65.0	62.5
Days of GM solidarity	26.7	37.5	53.6
GM leaders training	--	--	39.3
Under-the-tree sessions	49.7	35.0	57.1
Teacher-GM discussions	--	--	50.0
GM class presentations	31.7	--	41.1
Story books on cultural values	21.1	17.5	26.8
Women and girl forums	32.3	32.5	33.9
Have any GHD activities made you think differently about when girls should have their first child	71.9	71.3	64.3
Which activities			
IG forums	19.3	62.5	60.7
Days of GM solidarity	24.8	38.8	53.4
GM leaders training	--	--	39.3
Under-the-tree sessions	57.8	32.5	58.9
Teacher-GM discussions	--	--	50.0
GM class presentations	18.6	--	44.6
Story books on cultural values	14.3	17.5	32.1
Women and girl forums	36.0	33.8	35.7
Have any GHD activities made you think differently about FGM/C	70.8	67.5	64.3
Which activities			
IG forums	19.9	63.3	66.1
Days of GM solidarity	23.6	37.5	57.1
GM leaders training	--	--	41.1
Under-the-tree sessions	53.4	33.8	62.5
Teacher-GM discussions	--	--	50.0
GM class presentations	23.6	--	39.3
Story books on cultural values	14.3	21.3	25.0
Women and girl forums	31.1	68.8	30.4

VYA girls, their caregivers, and grandmothers in intervention villages were also asked about their perceptions of whether the overall GMP intervention led to changes in: feeling connected to their community, speaking their opinion, their opinion being taken more seriously, and support for and from community members to help VYA girls' and their caregivers' marriage, education, pregnancy, and FGM/C desires (see Table 41). Approximately 90% of grandmothers and caregivers perceived that they have a stronger connection to their community, can speak their opinion more freely, and their opinion is considered and valued more after the GMP intervention compared to before. Approximately two-thirds of VYA girls perceived the same. About three-quarters of adolescent girls also stated that they felt that they have more support from their caregivers and from grandmothers in achieving their marriage, education, pregnancy, and FGM/C desires compared to before the GMP intervention. Approximately 90% or more of caregivers and grandmothers also felt that they had increased support and ability to interact with each other and their communities to advocate for delaying marriage and pregnancy past the age of 16 for girls, avoiding FGM/C in young girls, and helping girls to achieve higher levels of schooling.

Table 41: Changes in feeling resulting from exposure to GHD

	VYA girls (%)	Caregivers (%)	Grandmothers (%)
Total (n)	161	80	56
I feel like I have a stronger connection to my community than before the GHD Program			
Agree	69.0	93.1	92.8
No difference	23.2	4.1	5.5
Disagree	7.7	2.8	1.8
I feel I can speak my opinion more freely now than before the GHD Program			
Agree	63.2	86.2	87.0
No difference	14.8	6.9	9.3
Disagree	21.9	6.9	3.7
I feel my opinion is taken more seriously by others in the community than before the GHD Program			
Agree	72.4	90.5	96.3
No difference	17.3	8.2	3.7
Disagree	10.3	1.4	0
I feel like I have more support from my caregivers when trying to convince them of my opinions and desires than before the GHD Program			
Agree	75.5	--	--
No difference	12.9	--	--
Disagree	11.6	--	--
I feel like I have more support from grandmothers when trying to convince them of my opinions and desires than before the GHD Program			

Agree	79.5	--	--
No difference	10.8	--	--
Disagree	9.7	--	--
I feel like I have more support within the community when trying to convince others of matters such as keeping girls in school, delaying adolescent marriage and pregnancy, and avoiding FGM/C			
Agree	--	89.1	96.3
No difference	--	6.9	3.7
Disagree	--	4.1	0
I can state my opinion on matters such as keeping girls in school, delaying adolescent marriage and pregnancy, and avoiding FGM/C			
Agree	--	90.5	92.6
No difference	--	8.2	5.6
Disagree	--	1.4	1.8
I feel I have more support from Grandmothers about keeping girls in school, delaying adolescent marriage and pregnancy, and avoiding FGM/C			
Agree	--	94.5	--
No difference	--	4.1	--
Disagree	--	1.4	--
Parents of adolescent girls view me as an important person when making decisions about keeping girls in school, delaying adolescent marriage and pregnancy, and avoiding FGM/C			
Agree	--	93.1	98.1
No difference	--	4.1	1.9
Disagree	--	2.8	0
Adolescent girls view me and other grandmothers as important people when making decisions about keeping girls in school, delaying adolescent marriage and pregnancy, and avoiding FGM/C			
Agree	--	94.5	98.1
No difference	--	4.1	1.9
Disagree	--	1.4	0

STUDY LIMITATIONS

It is important to interpret the results of the quantitative study with some caution. First, the post-test only, intervention/comparison group study design is best used to evaluate projects that implement

well-tested interventions, which is the case for GHD. However, the design limits the ability to establish causation, that the intervention directly caused the changes in target outcomes, as it is not possible to compare pre-/post-intervention changes with other communities. In addition, the collected information was all based on self-report; direct observation and other means of verification was not possible. The potential for social desirability biases around sensitive topics such as child marriage and FGM/C could be high, especially in intervention populations aware of GHD messaging. Finally, cognition and understandings of the sampled respondents could be low, especially among 12-16 year old girls, and survey translation (from local forms of Pulaar into French) is challenging. However, vignettes were explicitly chosen to minimize these biases.

The study included a comparison population carefully selected to match sociodemographic conditions of intervention villages and control for confounding factors. To our best knowledge, there were no other health or education projects operating in the study villages during the period in which the study was conducted. Such contextual information is important in assessing if changes were likely due to GHD. The villages were small and often in close proximity, but we saw few indications of high mobility between intervention and comparison villages during the data collection or in data analysis. All eligible individuals for VYA girls (and every other caregiver) and grandmothers in selected villages was conducted for target groups, limiting problems of selection bias and representation. Caregivers were a mix of men and women and analyzed together due to the small sample size, and thus, differences within and between caregivers and other populations could be due to gender as well as their different roles. Careful consideration was given to translation (including terms such as "grandmother" and "female genital cutting/mutilation"), and local translations were elicited and used. The surveys were piloted and pre-tested prior to data collection and benefited from formative research, including the conduct of a social norms exploration exercise consisting of participatory techniques to elicit key terms and social norms according to participants. The survey included "refuse" options and techniques to enhance understandings, particularly for adolescents, such as pictures and vignettes. Vignettes were also used to elicit responses on sensitive subjects by introducing hypothetical characters rather than the participant's own experiences. Finally, non-response was extremely low (<1%). The findings will be compared to qualitative data for additional triangulation.

DISCUSSION

In this discussion, we address three areas: 1) the effectiveness of the GHD intervention in achieving behavior and normative change; 2) opportunities for additional research and evidence; and 3) implications for future GHD Programming.

Does the Girls' Holistic Development Program approach lead to improved behavioral outcomes, attitudes, and social norms for very young adolescent girls?

We did not expect, and did not see, differences between intervention and comparison villages in prevalence of key behavioral outcomes including early marriage, early pregnancy, and schooling status of VYA girls. At the time of the survey, the large majority of VYA girls in both intervention and comparison villages were enrolled in school, unmarried, and had never been pregnant. Given the sample size, the relatively short intervention duration of 18 months in which to achieve change in VYA girls' lives, and complexity of a community engagement approach to change these outcomes, this lack of a statistically significant difference was expected.

It does appear that the GHD intervention is leading to significant improvements in several intermediate outcomes at the individual level. There was little difference comparing individual VYA girls' attitudes toward gender equality, early marriage, and/or girls' education. However, VYA girls in intervention villages were significantly more likely to report increased personal involvement and self-efficacy to achieve each of their schooling, marriage, and pregnancy desires compared to girls in comparison areas. These findings demonstrate that it is likely the GHD intervention is leading to increased involvement of VYA girls in decision-making about their RH and well-being.

Does the Girls' Holistic Development Program approach lead to improved normative outcomes for intervention communities?

We did not see strong differences comparing individual attitudes between intervention and comparison villages, but this was not unexpected considering the GHD Project focuses more on changes at the social level through involvement of diverse community actors. There were considerable differences in social norms or perceptions of typical and approved behaviors related to each of the behaviors of interest in their communities comparing intervention and comparison villages. VYA girls and grandmothers were significantly more likely to perceive that marriage and/or pregnancy in girls under age 16 was neither typical nor approved behavior in their communities compared to their counterparts in comparison villages. In addition, girls being taken out of school prior to finishing their secondary education was perceived by VYA girls and grandmothers as neither typical nor approved behavior in the intervention communities. Fewer differences were seen comparing caregiver perceptions of norms in intervention and comparison villages. However, this may result from having both male and female caregivers in the sample with perceptions of social norms influenced by the sex of the caregiver. All target groups in intervention groups, however, were less likely to expect negative sanctions for VYA girls or their caregivers for potentially violating normative behaviors compared to those in comparison populations. Finally, all target groups were also considerably more likely to perceive that FGM/C was neither typical nor approved behavior in intervention villages as opposed to comparison villages. These findings demonstrate that the GHD intervention is likely leading to a normative environment in which avoiding FGM/C, delaying marriage and pregnancy, and girls staying in school is becoming increasing acceptable to these communities.

Does the Girls' Holistic Development Program's grandmother-inclusive approach result in more support for very young adolescent girls?

The re-establishment of grandmothers as the traditional family counselor and advocate for VYA girls is a central part of the GHD Program theory of change. The findings indicate that the GHD approach is increasing grandmothers' roles and power in these domains at the level of family and community. VYA girls in intervention villages were significantly more likely to expect that grandmothers would be heavily involved in decision-making about marriage, schooling, and pregnancy compared to girls in comparison villages and to report going to grandmothers for advice to achieve their desires for each of these outcomes. Caregivers conferred more with grandmothers on VYA issues in intervention villages.

Grandmothers themselves believed their roles and self-efficacy were strengthened as counselors and advocates within the family, with significant differences between intervention and comparison respondents. More than two-thirds of grandmothers in intervention villages reported that VYA girls and caregivers seeking to delay marriage or pregnancy and/or stay in school would come to them for

advice and support compared to only about one-quarter of grandmothers in comparison villages. Seventy percent or more of grandmothers in intervention villages reported that they would support a girl or caregiver to achieve their marriage, schooling and/or pregnancy desires, compared to only about one-half of grandmothers in comparison villages. As well, grandmothers in intervention villages were generally more confident that their advice and support would be effective in achieving those desires compared to grandmothers in comparison villages. Finally, there is clear indication that grandmothers' position in the community has expanded with nearly 90% of grandmothers in intervention villages reporting that they felt valued in their communities compared to only about 60% of grandmothers in comparison villages.

In summary, it appears that the GHD intervention is leading to significant improvements in some behavioral outcomes and several intermediate outcomes, most especially for measures of self-efficacy, social norms, and grandmother involvement in VYA girls' RH. Given increasing evidence for the associations between empowerment and social norms and VYA girl outcomes, we might expect significant improvements in outcomes related to marriage, pregnancy, and schooling for VYA girls to follow.

Does the Girls' Holistic Development Program approach lead to improved behavioral intentions for daughters and intermediate outcomes among caregivers of very young adolescent girls?

Parents and other caregivers were asked about their own intentions to have their daughters remain in school, marry later and delay having children, and avoid cutting. Caregivers in intervention villages were significantly more likely to report that they did not intend to promise their daughter in marriage under the age of 16 and that they would have liked to avoid FGM/C for their daughter compared to caregivers in comparison villages. However, there were no differences in girls' education and early pregnancy outcomes.

It does appear that the GHD intervention is leading to significant improvements in several intermediate outcomes at the individual level for caregivers as well. There was little difference comparing individual caregiver attitudes toward gender equality, early marriage, and/or girls' education. However, caregivers in intervention villages were significantly more likely to have individual attitudes that were not supportive of the practice of FGM/C for very young girls. Caregivers of VYA girls in intervention areas were also significantly more likely to report increased personal involvement and self-efficacy to achieve their desired outcomes for their daughters compared to caregivers of VYA girls in comparison areas. These findings demonstrate caregiver support for girls increased self-efficacy and consideration for her opinions in decision- making.

What did we learn about evaluating norms-shifting interventions for VYA girls and what do we still need to know?

The quantitative survey was part of a larger mixed methods study seeking to understand the GHD intervention mechanisms for change (qualitative interviews and targeted learning studies) and to evaluate the success of the intervention in shifting norms and VYA girl RH behaviors (quantitative survey). The quantitative survey suggests that the GHD intervention is achieving normative change as well as positive change along other indicators such as self-efficacy of VYA girls and their caregivers and involvement of grandmothers in VYA girl RH decision-making. However, the quantitative survey design was limited (endline only with intervention/comparison populations) in conclusively

demonstrating that the changes came about solely due to the intervention—for which a randomized longitudinal design would be needed. However, we did find strong differences between intervention and comparison villages for several of the indicators leading us to believe that they differences are likely due to the intervention. The design was also limited by the small available sample, which made it difficult to disaggregate findings by geography, sex, age, etc.

We also learned that formative work such as the use of IRH's Social Norms Exploration Tool allows us to better understand the normative context for a given population and setting. We used findings from this process to help fine-tune the quantitative survey, including social norms items and the construction of vignettes. On this latter item, we learned that social norms measures could be constructed from vignettes in a way that is understandable and acceptable to both VYA and adult respondents. Vignettes included questions on descriptive and injunctive norms, reference groups, and sanctions. Moreover, information collected on social norms from vignettes correlated well with more traditional ways of assessing social norms in the survey. We constructed our norm measures by creating indices for descriptive and injunctive norms and assessed sanctions and reference groups via single items. In addition to vignettes, VYA girls responded well to other participatory techniques embedded in the survey to enhance comprehension and minimize sensitivity such as including games in the survey when assessing attitudes.

Finally, we would like to explore further the findings around differences in reported prevalence of FGM/C comparing intervention and comparison villages. Currently, we are uncertain if this is a real effect or if this is likely due to social desirability or other biases. It is likely that such biases are also at play for other behavioral outcomes. However, we are uncertain of the extent of the effect of such biases. More research is needed to understand the potentially high impact of bias on findings.

What did we learn about norms-shifting programming to improve reproductive health for very young adolescent girls?

The GHD intervention, including the emphasis on norms shifting, is acceptable to and valued by VYA girls, their caregivers, and grandmothers in rural Senegalese communities. Moreover, it is likely that the GHD intervention is shifting perceptions of typical and acceptable behaviors relating to child marriage, early pregnancy, girls' schooling, and FGM/C in intervention communities—particularly among VYA girls and grandmothers. While some degree of social desirability responses may be at play, the norms, attitudes, and intentions around FGM/C appear to be clearly favoring avoidance of the practice. A more rigorous, longitudinal research design is needed to determine causation and to further explore findings, but it appears that the GHD intervention is effectively shifting norms in ways that are likely to lead to sustained enabling environments for VYA girls. While we did expect to see significant differences in early marriage and pregnancy behaviors and schooling status, given increasing evidence for the associations between empowerment and social norms and VYA girl outcomes, we might expect significant improvements in outcomes related to marriage, pregnancy, and schooling for VYA girls to follow.

The GHD intervention appears to be leading to improved social cohesion and social capital through facilitated intergenerational dialogue that offers opportunities to communicate across gender, generational and social roles on issues of interest to communities. As well, the research clearly demonstrates that grandmothers are more likely to be involved in decision-making; seen as a resource

to achieve a VYA girl's or a caregiver's desires, and feel empowered to make a difference in their communities. In other settings, older women are often seen as more conservative members of society who systematically resist change. In this setting, however, grandmothers trained through the GHD Program demonstrated more open, progressive attitudes and social norms and willingness to advocate for delaying marriage and pregnancy, keeping girls in school, and avoiding FGM/C compared to grandmothers in comparison villages. Grandmothers' roles as advocates for VYA girls and caregivers can and should be expanded for greater impact in Senegal and elsewhere. Furthermore, the results suggest that interventions do not always need to primarily focus directly on the main population risk group (VYA girls), which in this case were targeted less than grandmothers. Instead, interventions that focus more on involving family and community members, while also engaging adolescent girls, can potentially have greater impact on normative and behavior change for VYA girls.

The GHD approach reverses the typical focus on interventions seeking to improve VYA girl outcomes, by involving caregivers, including grandmothers and other elders, along with VYA, to bring about change to benefit VYA girls. The findings indicate that this reverse focus is successful in building both VYA and community capacity to promote VYA rights and well-being. The successful reversal also challenges how we think about adolescent health and rights programming where most programs primarily focus on the adolescent. The GHD approach assumes that information alone does not adequately address the strong social influences of the family and community and that efforts that shift power dynamics within families and communities can contribute to positive shifts in norms and individual behavior. Approaches that aim to build social cohesion of communities should be tested in secondary towns where neighborhoods may be less socially cohesive to begin with, to assess how the intervention works in a different context. The unique focus on grandmothers also needs to be tested in more urban settings including the questions: Does the influence of village-based grandmothers transcend geography when granddaughters live in more urban settings? Do other elders take on grandmother roles when the grandmothers are not physically present?

This research, whose findings are supportive of the GHD theory of change in Figure 1 and expected pathways to individual change, helps explain the social norms-behavioral change linkage. Activities that lead to greater community cohesion around girl child issues and collective community action supportive of girl-child outcomes contribute to behavior change of VYA girls; particularly at a younger age when girls power vis-à-vis adults is minimal. These results challenge existing program and theory paradigms; which tend to be beneficiary-focused (or risk-group focused) and which emphasize individual attitudes and behavior, rather than those that focus on community systems (i.e., targeting the networks within families and communities that influence attitudes, norms, and behavior); and that involve information-dissemination rather than catalyzing critical reflection among family and community actors. The results of this research also bolster the importance of taking an integrated approach to socially intertwined outcomes. Overall, the research lends support to the power of norms-shifting interventions in SBC initiatives.

APPENDICES

APPENDIX I: VIGNETTES USED IN SURVEY

Early marriage

VIGNETTE A. EARLY MARRIAGE
Part 1 **Now I will tell you the story of a girl called [Girl Name]. I would like you to imagine that [Girl Name] is a typical girl living in this community. Please listen carefully to her story.** **[Girl Name] is 14 years old and lives with her parents, [Father Name] and [Mother name] and 4 brothers and sisters. She goes to school most days and likes school because she can see her friends there.** **One day [Girl Name's] parents tell her that they have been approached by another family in the community who would like for their son to marry [Girl Name] and are deciding what to do next. The family and their son are seen as good members of the community and have sufficient money to support [Girl Name].** **Part 2** **[Girl Name] is very unsure about the idea of getting married – she enjoys going to school and wants to continue her education. She decides that she will try to convince her parents to allow her to wait to get married.** **Part 3** **Now imagine that [Girl Name] is successful in convincing her parents to allow her not to marry then, even though the marriage proposal was good.**

Girls' education

VIGNETTE B. GIRL'S EDUCATION

Part 1
Now I will tell you the story of a girl called [Girl Name]. I would like you to imagine that [Girl Name] is a typical girl living in this community. Please listen carefully to her story.

[Girl Name] is 13 years old and lives with her parents, [Father Name] and [Mother Name] and 3 brothers and sisters. She goes to school most days and likes school because she can see her friends there. She is a good student and would like to one day work in the bank in the nearest town. She finds it hard to keep up with all her work because she also is expected to do many things at home.

One day [Girl Name's] father tells her that he doesn't think she should continue going to school and that she will stop going in two weeks. Her brother, who is a year younger than her, will continue at school until he has finished secondary school. Her father tells her he doesn't think the money he pays for her to go to school is worth it given all the other responsibilities she has in the family.

Part 2
[Girl Name] does not want to leave school – she enjoys going to school and wants to continue her education. She decides that she will try to convince her parents to allow her to continue her education.

Part 3
Now imagine that [Girl Name] is successful in convincing her parents to allow her to stay in school for as long as she wanted.

Early pregnancy

VIGNETTE C. ADOLESCENT PREGNANCY

Part 1
Now I will tell you the story of a girl called [Girl Name]. I would like you to imagine that [Girl Name] is a typical girl living in this community. Please listen carefully to her story.

[Girl Name] is 16 years old and lives with her husband [Husband Name], who she married when she was 15 years old, and his family. She is his only wife and no longer goes to school, where she was a very good student. [Girl Name] works at a small shop and is able to save some money. She does not have any children yet.

[Girl Name's] mother-in-law and husband would like for her to get pregnant and start a family.

Part 2
[Girl Name] wants her shop to succeed. She is unsure about getting pregnant and would like to wait longer before having her first child.

Part 3
Now imagine that [Girl Name] is successful in convincing [Husband Name] and his family to allow her to delay getting pregnant.

Female genital cutting/mutilation

VIGNETTE D. FEMALE GENITAL MUTILATION/CUTTING

Part 1
Now I will tell you the story of a girl called [Girl Name]. I would like you to imagine that [Girl Name] is a typical girl living in this community. Please listen carefully to her story.

[Girl Name] is a 10 year old girl, who lives with her parents [Father Name] and [Mother Name]. She has one older sister and one older brother. Both her brother and sister go to school and are good students. One day her [family member involved in FGM/C] come to [Girl Name's] house to discuss [local term for FGM/C] with [Girl Name's] parents. [Girl Name's] sister had [local term for FGM/C] at a similar age as [Girl Name] is now. The suggestion is that [Girl Name] be cut in two weeks.

Part 2
[Mother Name] is not happy with the idea of having [Girl Name] cut. She decides that she will try to prevent that from happening.

Part 3
Now imagine that [Mother Name] is successful in not having [Girl Name] be [local term for FGM/C].

APPENDIX II: ADDITIONAL DATA TABLES

Attitudes toward gender, early marriage, & girls' education

Adolescent girl attitudes toward gender, early marriage, & girls' education

	Intervention (%)	Comparison (%)
Total (n)	161	238
A girl should finish secondary school		
Agree	95.7	97.9
Neither agree/disagree	1.2	0
Disagree	3.1	2.5
A married girl should be able to continue her schooling		
Agree	67.1**	56.7**
Neither agree/disagree	5.0**	9.7**
Disagree	28.0**	33.6**
Education provides economic security for a girl		
Agree	89.4	93.3
Neither agree/disagree	7.5	4.2
Disagree	3.1	2.5
Seizing the opportunity of a good marriage is more important than schooling for a girl		
Agree	29.2*	37.8*
Neither agree/disagree	11.8*	11.8*
Disagree	59.0*	50.4*
Physical changes in appearance is a sign that a girl is ready for marriage		
Agree	16.2	16.4
Neither agree/disagree	11.2	12.2
Disagree	72.7	71.4
Girls over 16 who are not married are a burden on their families		
Agree	13.7	21.4
Neither agree/disagree	12.4	8.0
Disagree	73.9	70.6
Marrying girls before 16 is required by religion		
Agree	15.5	20.2
Neither agree/disagree	11.2	5.0
Disagree	73.3	74.8
In your opinion, is a girl marrying before age 16 good or bad		
Mostly good	10.6	10.1
Mostly bad	85.1	85.7
Both good and bad	4.4	4.2
In your opinion, is a girl finishing secondary school good or bad		
Mostly good	94.7	95.3
Mostly bad	3.8	1.7

Neither good nor bad	0	0.9
In your opinion, is a girl getting pregnant before age 16 mostly good or bad		
Mostly good	2.5	4.6
Mostly bad	97.5	95.4
Both good and bad	0	0
* p<0.10; ** p<0.05; *** p<0.01		

Caregiver attitudes toward gender, early marriage, & girls' education

	Intervention (%)	Comparison (%)
Total (n)	80	125
A girl should finish secondary school		
Strongly agree	91.3	92.8
Agree	3.8	5.6
Neither agree/nor disagree	0	0.8
Disagree	0	0
Strongly disagree	5.0	0.8
A married girl should be able to continue her schooling		
Strongly agree	57.5	59.7
Agree	13.8	12.1
Neither agree/nor disagree	6.3	9.7
Disagree	2.5	3.2
Strongly disagree	20.0	15.3
Education provides economic security for a girl		
Strongly agree	80.0	83.9
Agree	11.3	12.1
Neither agree/nor disagree	0	2.4
Disagree	0	0
Strongly disagree	6.3	1.6
Seizing the opportunity of a good marriage is more important than schooling for a girl		
Strongly agree	30.0	31.5
Agree	10.0	8.1
Neither agree/nor disagree	5.0	9.7
Disagree	6.3	2.4
Strongly disagree	48.8	48.4
Physical changes in appearance is a sign that a girl is ready for marriage		
Strongly agree	25.0	18.4
Agree	5.0	7.2
Neither agree/nor disagree	1.3	0
Disagree	3.8	2.4
Strongly disagree	65.0	72.0
Girls over 16 who are not married are a burden to their families		
Strongly agree	47.5	40.8
Agree	10.0	5.6

Neither agree/nor disagree	2.5	5.6
Disagree	2.5	2.4
Strongly disagree	37.5	45.6
A girl marrying before 16 is required by our religion		
Strongly agree	32.5	29.5
Agree	3.8	2.5
Neither agree/nor disagree	2.5	5.7
Disagree	2.5	0.8
Strongly disagree	58.8	61.5
A girl under 16 is more fertile than a girl above 16		
Strongly agree	20.5	18.6
Agree	7.7	4.0
Neither agree/nor disagree	2.6	3.2
Disagree	5.1	9.7
Strongly disagree	64.1	64.5
Marrying girls before 16 ensures purity (virginity) on their wedding day		
Strongly agree	33.8	31.2
Agree	6.3	5.6
Neither agree/nor disagree	5.0	8.8
Disagree	5.0	4.0
Strongly disagree	50.0	50.4
Marrying girls under 16 can sometimes be a means to get money to repay debt		
Strongly agree	13.8	7.3
Agree	2.5	4.8
Neither agree/nor disagree	1.3	3.2
Disagree	11.3	6.5
Strongly disagree	71.3	78.2
Marrying girls under 16 can sometimes be a means to settle alliances		
Strongly agree	26.3**	21.6**
Agree	13.8**	10.4**
Neither agree/nor disagree	5.0**	8.0**
Disagree	0**	11.2**
Strongly disagree	55.0**	48.8**
The younger and less educated a girl is, the cheaper the bride price that the husband's family pays		
Strongly agree	15.0*	19.2*
Agree	6.3*	4.0*
Neither agree/nor disagree	5.0*	1.6*
Disagree	0*	7.2*
Strongly disagree	73.8*	68.0*
Marrying girls under 16 allows her parents to secure her financial status		
Strongly agree	16.3	13.7
Agree	8.8	11.3

Neither agree/nor disagree	3.8	8.9
Disagree	7.5	4.0
Strongly disagree	63.8	62.1
In your opinion, is a girl marrying before age 16 good/bad		
Mostly good	11.4	8.8
Mostly bad	78.5	79.2
Neither good/nor bad	5.1	8.0
Both good and bad	0	4.0
* p<0.10; ** p<0.05; *** p<0.01		

Grandmothers' attitudes toward gender, early marriage, and girls' education

	Intervention (%)	Comparison (%)
Total (n)	56	140
A girl should finish secondary school		
Strongly agree	96.4	95.0
Agree	1.8	2.1
Neither agree/nor disagree	1.0	2.1
Disagree	0	0
Strongly disagree	0	0.7
A married girl should be able to continue her schooling		
Strongly agree	69.6	70.5
Agree	14.3	8.6
Neither agree/nor disagree	7.1	7.9
Disagree	0	0.7
Strongly disagree	8.9	12.2
Education provides economic security for a girl		
Strongly agree	52.7*	45.7*
Agree	10.9*	9.3*
Neither agree/nor disagree	9.1*	13.6*
Disagree	3.6*	2.1*
Strongly disagree	23.6*	29.3*
Seizing the opportunity of a good marriage is more important than schooling for a girl		
Strongly agree	76.8	86.4
Agree	7.1	9.3
Neither agree/nor disagree	5.4	2.9
Disagree	3.6	0.7
Strongly disagree	7.1	0.7
Physical changes in appearance is a sign that a girl is ready for marriage		
Strongly agree	32.1	38.1
Agree	16.1	10.8
Neither agree/nor disagree	3.6	5.8
Disagree	7.1	2.2
Strongly disagree	41.1	43.2
Girls over 16 who are not married are a burden to their families		

Strongly agree	13.0**	33.8**
Agree	11.1**	5.2**
Neither agree/nor disagree	3.7**	3.7**
Disagree	0**	7.4**
Strongly disagree	72.2**	50.0**
A girl marrying before 16 is required by our religion		
Strongly agree	35.7**	56.4**
Agree	12.5**	5.7**
Neither agree/nor disagree	5.4**	3.6**
Disagree	5.4**	0.7**
Strongly disagree	41.1**	33.6**
A girl under 16 is more fertile than a girl above 16		
Strongly agree	26.8	37.1
Agree	12.5	5.0
Neither agree/nor disagree	3.6	2.9
Disagree	1.8	5.0
Strongly disagree	55.4	50.0
Marrying girls before 16 ensures purity (virginity) on their wedding day		
Strongly agree	19.6	28.1
Agree	3.6	4.3
Neither agree/nor disagree	5.4	4.3
Disagree	8.9	5.8
Strongly disagree	62.5	57.6
Marrying girls under 16 can sometimes be a means to get money to repay debt		
Strongly agree	23.6*	38.5*
Agree	9.1*	8.9*
Neither agree/nor disagree	3.6*	8.9*
Disagree	3.6*	1.5*
Strongly disagree	60.0*	42.2*
Marrying girls under 16 can sometimes be a means to settle alliances		
Strongly agree	12.5	13.8
Agree	1.8	4.4
Neither agree/nor disagree	5.4	1.5
Disagree	7.1	3.6
Strongly disagree	73.2	76.8
The younger and less educated a girl is, the cheaper the bride price that the husband's family pays		
Strongly agree	21.8*	34.3*
Agree	12.7*	9.3*
Neither agree/nor disagree	7.3*	4.3*
Disagree	1.8*	4.3*
Strongly disagree	56.4*	47.9*
Marrying girls under 16 allows her parents to secure her financial status		

Strongly agree	18.2**	30.4**
Agree	3.6**	3.6**
Neither agree/nor disagree	10.9**	3.6**
Disagree	12.7**	5.8**
Strongly disagree	54.6**	56.5**
In your opinion, is a girl marrying before age 16 good/bad		
Mostly good	15.1	18.6
Mostly bad	69.8	70.0
Neither good/nor bad	0	0
Both good and bad	15.1	11.4
* p<0.10; ** p<0.05; *** p<0.01		

Perceived life opportunities for girls & women according to adolescent girls

	Intervention (%)	Comparison (%)
Total (n)	161	238
Work outside the home to earn money	82.0***	62.2***
Go to school past secondary	81.4	85.7
* p<0.10; ** p<0.05; *** p<0.01		

Additional tables related to early marriage of VYA girls

Expected decision-maker(s) at future marriage according to adolescent girls

Who do you think will contribute to decisions about your marriage?	Intervention (%)	Comparison (%)
Total (n)	161	238
Me	24.1	28.6
Mother	75.9	84.1
Father	89.7*	69.8*
Grandmother	48.3	39.7
Sibling	17.3	17.5
Other family member	44.8	34.9
Other community member	3.5	11.1
Multiple response options: columns do not sum to 100% * p<0.10; ** p<0.05; *** p<0.01		

Expected support network for marriage at desired age according to adolescent girls

Who do you think can help you to get married at the age you want?	Intervention (%)	Comparison (%)
Total (n)	161	238
Nobody	27.2***	67.9***
Mother	55.4*	32.1*
Father	31.5	28.6
Grandmother	43.5***	0***
Sibling	13.0	3.6
Other family member	28.3***	3.6***
Other community member	26.1***	3.6***

Multiple response options: columns do not sum to 100%
* p<0.10; ** p<0.05; *** p<0.01

Adolescent girl opinions on benefits/disadvantages of early marriage

What are the benefits/disadvantages to early marriage?	Intervention (%)	Comparison (%)
Total (n)	161	238
Benefits		
None	65.2	72.2
Starting a family	18.9	17.0
Economic security	3.8	3.0
Independence	2.3	0.4
Status in family/ community	1.5	2.2
Disadvantages		
None	2.5	5.9
End schooling	22.5	24.9
Early pregnancy	51.7	43.0
Lead to poor health for me	20.8	19.9
Expect violence from husband	1.7	0.5

* p<0.10; ** p<0.05; *** p<0.01

Descriptive norms related to adolescent girls delaying marriage as perceived by VYA girls

In the past year, in your community…	Intervention (%)	Comparison (%)
Total (n)	161	238
Personally know a girl <16 years that is married	34.6**	47.0**
How many girls are married at <16 years		
None	51.6***	48.7***
Some	44.0***	35.2***
Many	4.5***	12.7***
Most	0***	3.4***

* p<0.10; ** p<0.05; *** p<0.01

Norms about early marriage as perceived by adolescent girls with vignette

In this community…	Intervention (%)	Comparison (%)
Total (n)	161	238
Most *girls* like X *would*:		
Agree without giving opinion	1.9**	7.1**
Agree but voice opinion	3.7**	2.9**
Try to convince parents to delay by self	36.7**	28.2**
Try to convince parents to delay through support from others	57.8**	61.8**
Most *girls* of similar age would *expect* X to:		
Agree without giving opinion	3.1*	9.2*
Agree but voice opinion	3.1*	2.1*
Try to convince parents to delay by self	31.1*	24.0*
Try to convince parents to delay through support from others	62.7*	64.7*
Most *parents* of girls like X *would*:		
Agree for X to get married	26.6***	42.8***
Listen to X and delay marriage	73.4***	57.2***

Most *parents* of girls like X would *expect* X's parents to:		
Agree for X to get married	28.6***	44.2***
Listen to X and delay marriage	71.4***	55.8***
* p<0.10; ** p<0.05; *** p<0.01		

Sanctions for girl/parents trying to delay marriage as perceived by adolescent girls with vignette

If X was to try to delay her marriage…	Intervention (%)	Comparison (%)
Total (n)	161	238
How would other people in X's community react to her trying to delay marriage		
Support	49.1	38.8
Not support	14.3	17.7
Not care	6.2	8.9
Depends	30.4	34.6
Would community praise/shame X		
Praise her	42.4	34.0
Shame her	12.9	17.0
Neither	2.3	1.3
Some would praise/some shame	42.4	47.7
If parents of X agreed to delay marriage, other parents would		
Not care	13.5**	31.4**
Support them	54.1*	34.3*
Think they were wrong	13.5	20.0
Think less of their family	10.8	2.9
* p<0.10; ** p<0.05; *** p<0.01		

What would make caregiver think adolescent daughter will be ready for marriage

	Intervention (%)	Comparison (%)
Total (n)	80	125
What things will be most important in determining when daughter gets married		
Daughter's opinion	55.7	46.3
When she gets proposal	34.2	42.3
Financial circumstances	10.1	9.9
Her safety	7.6**	20.7**
Her reputation	12.7	18.2
When her friends are getting married	17.7	13.2
When she is physically ready	51.9	47.9
When she has completed enough schooling	25.3	27.3
Whether she will be able to find a husband	10.1	9.1
Multiple response options: columns do not sum to 100%		
* p<0.10; ** p<0.05; *** p<0.01		

Expected decision-maker(s) at future marriage according to caregivers

Who do you think will contribute to decisions about your daughter's marriage?	Intervention (%)	Comparison (%)

Total (n)	80	125
Me	58.2	52.1
Mother	51.9	55.4
Father	21.3	16.8
Grandmother	26.6**	14.9**
Sibling	18.8	24.0
Other family member	3.8	6.6
Other community member	18.8	24.0
Multiple response options: columns do not sum to 100% * p<0.10; ** p<0.05; *** p<0.01		

Caregiver opinions on benefits/disadvantages of early marriage

What are the benefits/disadvantages to a girl marrying early?	Intervention (%)	Comparison (%)
Total (n)	80	125
Benefits		
None	77.5	80.0
Starting a family	12.3	6.4
Economic security	4.0	4.8
Independence	1.3	4.8
Status in family/ community	5.0	4.0
Disadvantages		
None	3.8**	7.3**
End schooling	10.8**	6.5**
Early pregnancy	34.3**	56.5**
Lead to poor health for daughter	33.8**	26.6**
Lead to poor health for child	12.5**	1.6**
Potential violence from husband	5.0**	1.6**
* p<0.10; ** p<0.05; *** p<0.01		

Descriptive norms related to girls delaying marriage as perceived by caregivers

In the past year, in your community…	Intervention	Comparison
Total (n)	80	125
Personally know a girl <16 years that is married	18.8*	29.6*
How many girls are married at <16 years		
None	78.2**	58.1**
Some	16.7**	30.8**
Many	5.1**	11.1**
Most	0**	0**
* p<0.10; ** p<0.05; *** p<0.01		

Norms about early marriage as perceived by caregivers with vignette

In this community…	Intervention (%)	Comparison (%)
Total (n)	80	125
Most *girls* like X *would*:		
Agree without giving opinion	3.8	5.6
Agree but voice opinion	6.3	4.0

Try to convince parents to delay by self	47.5	44.8
Try to convince parents to delay through support from others	42.5	45.6
Most *girls* of similar age would *expect* X to:		
Agree without giving opinion	3.8*	14.4*
Agree but voice opinion	6.3*	4.0*
Try to convince parents to delay by self	43.8*	38.4*
Try to convince parents to delay through support from others	46.3*	43.2*
Most *parents* of girls like X *would*:		
Agree for X to get married	16.7	19.0
Listen to X and delay marriage	83.3	81.0
Most *parents* of girls like X would *expect* X's parents to:		
Agree for X to get married	17.5	25.6
Listen to X and delay marriage	82.5	74.4
* p<0.10; ** p<0.05; *** p<0.01		

Sanctions for girl/parents trying to delay marriage as perceived by caregivers with vignette

If X was to try to delay her marriage…	Intervention (%)	Comparison (%)
Total (n)	80	125
How would other people in X's community react to her trying to delay marriage		
Support	66.3	56.0
Not support	3.8	7.2
Not care	1.3	0.8
Depends	28.8	36.0
Would community praise/shame X		
Praise her	60.0	55.2
Shame her	2.5	5.6
Neither	2.5	0
Some would praise/some shame	35.0	39.2
If parents of X agreed to delay marriage, other parents would		
Not care	13.8	16.0
Support them	73.8**	86.4**
Think they were wrong	15.0	23.2
Think less of their family	17.5	12.8
* p<0.10; ** p<0.05; *** p<0.01		

Grandmother's opinions on benefits/disadvantages of early marriage

What are the benefits/ disadvantages to a girl marrying early?	Intervention (%)	Comparison (%)
Total (n)	56	140
Benefits		
None	66.7	72.6
Starting a family	27.8	19.4
Economic security	1.9	4.0
Independence	1.9	3.2
Status in family/ community	1.9	0.8
Disadvantages		

None	12.7*	9.6*
End schooling	29.1*	8.8*
Early pregnancy	16.4*	37.5*
Lead to poor health for me	34.6*	34.6*
* p<0.10; ** p<0.05; *** p<0.01		

Support for adolescent girls trying to delay marriage according to grandmothers

In your community…	Intervention (%)	Comparison
Total (n)	56	140
If a girl came to you for support to delay her marriage would you:		
Provide support	69.6***	59.7***
Refuse support	5.4***	30.2***
Depends on her age	25.0***	10.1***
If would support, how would you support her		
Speak to her parents/family	88.5**	97.9**
Speak to the parents of her intended partner	9.6**	2.1**
Speak to community/ religious leaders	1.9**	0**
How sure are you that you could convince others to delay her marriage		
Sure	73.6	63.2
Don't know	18.9	23.2
Not sure	7.5	13.7
* p<0.10; ** p<0.05; *** p<0.01		

Descriptive norms related to girls delaying marriage as perceived by grandmothers

In the past year, in your community…	Intervention	Comparison
Total (n)	56	140
Personally know a girl <16 years that is married	20.0	27.1
How many girls are married at <16 years		
None	69.2*	63.9*
Some	30.8*	25.6*
Many	0*	10.5*
Most	0*	0*
* p<0.10; ** p<0.05; *** p<0.01		

Norms about marriage as perceived by grandmothers with vignette

In this community…	Intervention (%)	Comparison (%)
Total (n)	56	140
Most *girls* like X *would*:		
Agree without giving opinion	1.8**	7.1**
Agree but voice opinion	7.1**	7.1**
Try to convince parents to delay by self	23.2**	39.3**
Try to convince parents to delay through support from others	67.9**	46.4**
Most *girls* of similar age would *expect* X to:		
Agree without giving opinion	5.4**	10.0**

Agree but voice opinion	7.1**	5.7**
Try to convince parents to delay by self	19.6**	37.9**
Try to convince parents to delay through support from others	67.9**	46.4**
Most *parents* of girls like X *would*:		
Agree for X to get married	23.2	23.9
Listen to X and delay marriage	76.8	76.1
Most *parents* of girls like X would *expect* X's parents to:		
Agree for X to get married	25.0	29.2
Listen to X and delay marriage	75.0	70.8
* p<0.10; ** p<0.05; *** p<0.01		

Sanctions for girl/parents trying to delay marriage as perceived by grandmothers with vignette

If X was trying to delay her marriage…	Intervention (%)	Comparison (%)
Total (n)	56	140
How would other people in X's community react to her trying to delay marriage		
Support	62.5	56.4
Not support	10.7	8.6
Not care	0	0
Depends	26.8	35.0
Would community praise/shame X		
Praise her	48.2	54.3
Shame her	8.9	7.1
Neither	1.8	1.4
Some would praise/some shame	41.1	37.1
If parents of X agreed to delay marriage, other parents would		
Not care	16.1	19.3
Support them	83.9	72.9
Think they were wrong	8.9	17.1
Think less of their family	16.1	20.7
* p<0.10; ** p<0.05; *** p<0.01		

Additional tables related to schooling of VYA girls

Expected decision-maker(s) for staying in school according to adolescent girls

Who do you think will contribute to decisions about when you leave school?	Intervention (%)	Comparison (%)
Total (n)	161	238
Me	44.4	60.0
Mother	72.8	64.0
Father	60.5	68.0
Grandmother	46.9***	16.0***
Sibling	6.2	12.0
Other family member	21.0	8.0

Other community member	1.2	0

Multiple response options: columns do not sum to 100%
* p<0.10; ** p<0.05; *** p<0.01

Expected support network for staying in school until desired level according to adolescent girls

Who do you think can help you to stay in school until the level you want?	Intervention (%)	Comparison (%)
Total (n)	161	238
Nobody	23.5	40.0
Mother	40.7	32.0
Father	32.1	32.0
Grandmother	40.7***	8.0***
Sibling	12.4	16.0
Other family member	14.8	8.0
Other community member	2.5	0

Multiple response options: columns do not sum to 100%
* p<0.10; ** p<0.05; *** p<0.01

Adolescent girl opinions on benefits/disadvantages of girls' education

What are the benefits/disadvantages to a girl completing secondary school?	Intervention (%)	Comparison (%)
Total (n)	161	238
Benefits		
None	2.3	0.4
Economic security	12.2	8.6
Better employment	61.1	59.9
Independence	2.3	3.0
Status in family/ community	13.0	11.6
Good for family	9.2	16.4
Disadvantages		
None	48.8	48.0
Not available to help in household	10.9	11.8
Doesn't earn money	14.0	13.1
Won't find a suitable marriage	7.8	10.9
Less status	13.2	7.0
Late to start a family	5.4	9.2

* p<0.10; ** p<0.05; *** p<0.01

Descriptive norms related to girls staying in school as perceived by adolescent girls

In the past year, in your community…	Intervention	Comparison
Total (n)	161	238
Personally know a girl that started primary school but stopping before finishing	72.7***	88.2***
Personally know a girl that stayed in school even though her family was against it	38.5	37.0
How many girls in community start but do not finish primary school		

None	8.7***	2.5***
Some	47.2***	39.9***
Many	28.0***	39.9***
Most	16.2***	17.7***
How many girls in community finish secondary school		
None	18.0	13.5
Some	59.0	60.1
Many	22.4	19.8
Most	0.6	6.7

* p<0.10; ** p<0.05; *** p<0.01

Norms about girls' education as perceived by adolescent girls with vignette

In this community…	Intervention (%)	Comparison (%)
Total (n)	161	238
Most *girls* like X *would*:		
Agree without giving opinion	1.9*	7.6*
Agree but voice opinion	3.8*	1.7*
Try to convince parents to continue schooling by self	33.8*	31.5*
Try to convince parents to continue schooling through support from others	60.6*	59.2*
Most *girls* of similar age would *expect* X to:		
Agree without giving opinion	3.1	8.4
Agree but voice opinion	1.9	2.9
Try to convince parents to continue schooling by self	29.8	26.1
Try to convince parents to continue schooling through support from others	65.2	62.6
Most *parents* of girls like X *would*:		
Make X leave school	20.3***	37.0***
Agree to keep X in school	79.8***	63.0***
Most *parents* of girls like X would *expect* X's parents to:		
Make X leave school	24.2***	37.0***
Agree to keep X in school	75.8***	63.0***

* p<0.10; ** p<0.05; *** p<0.01

Sanctions for girl/parents trying to stay in school as perceived by adolescent girls with vignette

If X was to try to delay stay in school…	Intervention (%)	Comparison (%)
Total (n)	161	238
How would other people in X's community react to her trying to stay in school		
Support	49.7	44.5
Not support	10.6	11.3
Not care	6.8	9.2
Depends	32.9	34.9
Would community praise/shame X?		
Praise her	47.4*	41.5*
Shame her	5.9*	9.0*

Neither	5.9*	2.1*
Some would praise/some shame	40.8*	47.4*
If parents of X agreed to keep her in school, other parents would not care	10.8***	37.1***
Support them	64.9***	48.6***
Think they were wrong	9.9	2.9
Think less of their family	9.0	0
* p<0.10; ** p<0.05; *** p<0.01		

What would make caregiver think adolescent daughter will be ready to leave school

	Intervention (%)	Comparison (%)
Total (n)	80	125
What things will be most important in determining when daughter leaves school		
Her academic performance	69.1	80.2
Her safety	17.7	18.8
Her desires	47.1	56.3
When she is needed for help in the home	4.4	2.1
Cost of school	33.8**	19.8**
When she receives a marriage proposal	11.8*	4.2*
When she gets married	2.9*	10.4*
What things will be most important in determining when daughter gets married		
Multiple response options: columns do not sum to 100%		
* p<0.10; ** p<0.05; *** p<0.01		

Expected decision-maker(s) for daughter leaving school according to caregivers

Who do you think will contribute to decisions about when your daughter leaves school?	Intervention (%)	Comparison (%)
Total (n)	80	125
Me	57.4	47.9
Mother	39.7	42.7
Father	13.8**	4.8**
Grandmother	17.7*	8.3*
Sibling	10.0	7.2
Other family member	5.9	4.2
Other community member	12.5***	0.8***
Multiple response options: columns do not sum to 100%		
* p<0.10; ** p<0.05; *** p<0.01		

Caregiver opinions on benefits/disadvantages of girls' education

What are the benefits/disadvantages to a girl completing secondary school?	Intervention (%)	Comparison (%)
Total (n)	80	125
Benefits		
None	5.3**	0**
Economic security	6.7**	5.6**

Better employment	48.0**	48.0**
Independence	12.0**	10.4**
Status in family/ community	1.3**	8.8**
Good for family	26.7**	27.2**
Disadvantages		
None	52.0***	65.3***
Not available to help in household	13.3***	8.9***
Doesn't earn money	6.7***	4.8***
Won't find a suitable marriage	4.0***	0***
Less status	8.0***	16.1***
Late to start a family	16.0***	4.8***

* p<0.10; ** p<0.05; *** p<0.01

Descriptive norms related to girls staying in school as perceived by caregivers

In the past year, in your community…	Intervention	Comparison
Total (n)	80	125
Personally know a girl that started primary school but stopping before finishing	38.0***	60.8***
How many girls in community start but do not finish primary school		
None	35.4**	25.2**
Some	50.6**	42.3**
Many	13.9**	32.5**
Most	0**	0**
How many girls in community finish secondary school		
None	0	0
Some	33.3	33.3
Many	48.7	43.9
Most	17.9	22.8

* p<0.10; ** p<0.05; *** p<0.01

Norms about girls' education as perceived by caregivers with vignette

In this community…	Intervention (%)	Comparison (%)
Total (n)	80	125
Most *girls* like X *would*:		
Agree without giving opinion	5.1	8.1
Agree but voice opinion	2.5	4.8
Try to convince parents to continue schooling by self	36.7	39.5
Try to convince parents to continue schooling through support from others	55.7	47.6
Most *girls* of similar age would *expect* X to:		
Agree without giving opinion	10.0	11.4
Agree but voice opinion	3.8	4.1
Try to convince parents to continue schooling by self	30.0	38.2
Try to convince parents to continue schooling through support from others	56.3	46.3
Most *parents* of girls like X *would*:		

Make X leave school	8.8	12.2
Agree to keep X in school	91.3	87.8
Most *parents* of girls like X would *expect* X's parents to:		
Make X leave school	10.0*	19.4*
Agree to keep X in school	90.0*	80.7*
* p<0.10; ** p<0.05; *** p<0.01		

Sanctions for girl/parents trying to stay in school as perceived by caregivers with vignette

If X was to try to delay stay in school…	Intervention (%)	Comparison (%)
Total (n)	80	125
How would other people in X's community react to her trying to stay in school		
Support	63.8	69.6
Not support	5.0	3.2
Not care	3.8	0
Depends	27.5	27.2
Would community praise/shame X		
Praise her	60.0	71.2
Shame her	6.3	1.6
Neither	1.3	0
Some would praise/some shame	32.5	27.2
If parents of X agreed to keep her in school, other parents would		
Not care	7.5	9.6
Support them	88.8	89.6
Think they were wrong	16.3	16.8
Think less of their family	10.0	9.6
* p<0.10; ** p<0.05; *** p<0.01		

Grandmother's opinions on benefits/disadvantages of completing secondary school

What are the benefits/disadvantages to a girl completing secondary school?	Intervention (%)	Comparison (%)
Total (n)	56	140
Benefits		
None	14.3***	1.4***
Economic security	17.9***	10.1***
Better employment	41.1***	56.1***
Independence	7.1***	5.0***
Status in family/community	5.4***	3.6***
Good for family	14.3***	23.7***
Disadvantages		
None	75.7**	58.0**
Not available to help in household	7.7**	11.8**
Doesn't earn money	10.0**	14.1**
Won't find a suitable marriage	1.4**	6.9**
Less status	3.8**	7.0**
Late to start a family	1.4**	1.4**

* p<0.10; ** p<0.05; *** p<0.01

Support for girls trying to stay in school according to grandmothers

In your community…	Intervention (%)	Comparison
Total (n)	56	140
If a girl came to you for support to delay leaving school would you:		
Provide support	83.9**	94.2**
Refuse support	0**	0.7**
Depends on her age	16.1**	5.0**
If would support, how would you support her		
Speak to her parents/family	80.4**	91.9**
Speak to her teachers	14.3**	3.7**
Speak to community/ religious leaders	5.4**	4.4**
How sure are you that you could convince others to keep her in school		
Sure	67.9	60.1
Don't know	30.4	21.7
Not sure	1.8	17.2
* p<0.10; ** p<0.05; *** p<0.01		

Descriptive norms related to girls staying in school as perceived by grandmothers

In the past year, in your community…	Intervention	Comparison
Total (n)	56	140
Personally know a girl that started primary school but stopping before finishing	29.1**	44.6**
How many girls in community start but do not finish primary school		
None	26.8***	26.1***
Some	62.5***	40.3***
Many	10.7***	32.1***
Most	0***	1.5***
How many girls in community finish secondary school		
None	1.8	1.5
Some	7.1	17.8
Many	64.3	51.1
Most	26.8	29.6
* p<0.10; ** p<0.05; *** p<0.01		

Norms about girls' schooling as perceived by grandmothers with vignette

In this community…	Intervention (%)	Comparison (%)
Total (n)	56	140
Most *girls* like X *would*:		
Agree without giving opinion	0	4.3
Agree but voice opinion	1.8	1.4
Try to convince parents to continue schooling by self	30.4	40.7
Try to convince parents to continue schooling through support from others	67.9	53.6

Most *girls* of similar age would *expect* X to:		
Agree without giving opinion	0	6.4
Agree but voice opinion	1.8	2.1
Try to convince parents to continue schooling by self	33.9	39.3
Try to convince parents to continue schooling through support from others	64.3	52.1
Most *parents* of girls like X *would*:		
Make X leave school	11.1	14.6
Agree to keep X in school	88.9	85.4
Most *parents* of girls like X would *expect* X's parents to:		
Make X leave school	18.4	20.6
Agree to keep X in school	81.6	79.4
* p<0.10; ** p<0.05; *** p<0.01		

Sanctions for girl/parents trying to keep girl in school as perceived by grandmothers with vignette

If X was to try to delay her leaving school…	Intervention (%)	Comparison (%)
Total (n)	56	140
How would other people in X's community react to her trying to stay in school		
Support	66.1	65.7
Not support	1.8	2.9
Not care	0	1.4
Depends	32.1	30.0
Would community praise/shame X		
Praise her	57.1	65.0
Shame her	3.6	0.7
Neither	1.8	2.1
Some would praise/some shame	37.5	32.1
If parents of X agreed to stay in school, other parents would		
Not care	19.6	12.9
Support them	87.5	91.4
Think they were wrong	8.9	7.9
Think less of their family	12.5	6.4
* p<0.10; ** p<0.05; *** p<0.01		

Additional tables related to early pregnancy of VYA girls

Expected decision-maker(s) for first pregnancy according to adolescent girls

Who do you think will contribute to decisions about when you first become pregnant?	Intervention (%)	Comparison (%)
Total (n)	161	238
Me	52.3	55.9
Mother	62.4**	85.3**

Father	39.5	32.4
Grandmother	6.4	14.7
Sibling	33.0**	11.8**
Other family member	0.9**	8.8**
Other community member	4.6	2.9
Multiple response options: columns do not sum to 100% * p<0.10; ** p<0.05; *** p<0.01		

Expected support network for delaying first pregnancy until desired age according to adolescent girls

Who do you think can help you delay your first pregnancy until the age you want?	Intervention (%)	Comparison (%)
Total (n)	161	238
Nobody	62.4*	79.4*
Mother	14.7**	0**
Father	22.9	11.8
Grandmother	3.7	5.9
Sibling	25.7***	2.9***
Other family member	5.5	0
Other community member	8.3	2.9
Multiple response options: columns do not sum to 100% * p<0.10; ** p<0.05; *** p<0.01		

Adolescent girl opinions on benefits/disadvantages of adolescent pregnancy

What are the benefits/disadvantages to early pregnancy?	Intervention (%)	Comparison (%)
Total (n)	161	238
Benefits		
None	65.2	72.2
Starting a family	18.9	17.0
Status in family/community	7.6	5.6
Disadvantages		
None	2.5	5.9
End schooling	22.5	24.9
Lead to poor health for me	51.7	43.0
Lead to poor health for child	20.8	19.9
Lead to poverty	1.7	0.5
* p<0.10; ** p<0.05; *** p<0.01		

Descriptive norms related to girls delaying pregnancy as perceived by VYA girls

In the past year, in your community…	Intervention (%)	Comparison (%)
Total (n)	161	238
Personally know a girl that has been pregnant <16 years	28.8***	52.3***
How many girls in community <16 have been pregnant		
None	64.4***	43.4***
Some	35.6***	43.0***
Many	0***	11.5***
Most	0***	2.1***

* p<0.10; ** p<0.05; *** p<0.01

Norms about early pregnancy as perceived by adolescent girls with vignette

In this community…	Intervention (%)	Comparison (%)
Total (n)	161	238
Most *girls* like X *would*:		
Agree without giving opinion	0**	2.3**
Agree but voice opinion	12.4**	17.0**
Try to convince husband's family to delay pregnancy by self	72.7**	58.0**
Try to convince husband's family to delay pregnancy through support from others	14.9**	22.7**
Most *girls* of similar age would *expect* X to:		
Agree without giving opinion	1.8***	9.8***
Agree but voice opinion	6.9***	10.0***
Try to convince husband's family to delay pregnancy by self	69.6***	46.6***
Try to convince husband's family to delay pregnancy through support from others	21.7***	33.6***
Most *husbands* of girls like X *would*:		
Make X accept pregnancy	62.5**	72.5**
Agree to delay pregnancy for X	37.5**	27.5**
Most *husbands* of girls like X would *expect* X's husband to:		
Make X accept pregnancy	62.5**	73.0**
Agree to delay pregnancy for X	37.5**	27.0**
* p<0.10; ** p<0.05; *** p<0.01		

Sanctions for girl/parents trying to delay first pregnancy as perceived by adolescent girls with vignette

If X was to try to delay first pregnancy…	Intervention (%)	Comparison (%)
Total (n)	161	238
How would other people in X's community react to her trying to delay pregnancy		
Support	32.3***	15.1***
Not support	21.1***	31.9***
Not care	6.8***	10.1***
Depends	39.8***	42.9***
Would community praise/shame X		
Praise her	22.4***	13.0***
Shame her	15.5***	22.7***
Neither	5.6***	0.8***
Some would praise/some shame	56.6***	63.5***
If husband and his family of X agreed to delay pregnancy, others in community would:		
Not care	18.0**	40.0**
Support them	39.6***	8.6***

Think they were wrong	31.5	22.9
Think less of their family	18.9*	5.7*
* p<0.10; ** p<0.05; *** p<0.01		

What would make caregiver think adolescent daughter will be ready for her first pregnancy?

	Intervention (%)	Comparison (%)
Total (n)	80	125
What things will be most important in determining when daughter first becomes pregnant		
When she gets married	87.3	87.7
When she finishes school	40.5	38.5
Her knowledge of contraception	6.3	6.6
Her desire to have children	38.0	45.1
Her husband's desire to have children	27.9*	41.0*
Her husband's family's desire to have children	11.4	18.0
Her occupation	19.0	21.3
Her family's financial situation	5.1	9.1
Multiple response options: columns do not sum to 100%		
* p<0.10; ** p<0.05; *** p<0.01		

Expected decision-maker(s) for first pregnancy according to caregivers

Who do you think will contribute to decisions about when your daughter first become pregnant?	Intervention (%)	Comparison (%)
Total (n)	80	125
Me	27.9***	12.3***
My spouse	25.3**	13.9**
My parents/in-laws	17.5***	1.6***
Grandmother	24.1***	9.8***
Sibling	8.8	4.0
Other family member	3.8	1.6
Other community member	10.0***	0.8***
Daughter herself	27.9***	48.4***
Daughter's husband	21.5***	54.10***
Daughter's husband's family	2.5*	9.0*
Health worker	2.5	3.3
Multiple response options: columns do not sum to 100%		
* p<0.10; ** p<0.05; *** p<0.01		

Caregiver opinions on benefits/disadvantages of adolescent pregnancy

What are the benefits/disadvantages to early pregnancy?	Intervention (%)	Comparison (%)
Total (n)	80	125
Benefits		
None	73.6***	48.2***
Starting a family	20.0***	46.4***
Status in family/ community	6.4***	5.4***
Disadvantages		

None	19.6	6.0
End schooling	8.9	12.7
Lead to poor health for me	64.3	71.6
Lead to poor health for child	5.4	6.7
Lead to poverty	1.8	3.0
* p<0.10; ** p<0.05; *** p<0.01		

Descriptive norms related to girls delaying pregnancy as perceived by caregivers

In the past year, in your community…	Intervention (%)	Comparison (%)
Total (n)	80	125
Personally know a girl that has been pregnant <16 years	16.5	24.4
How many girls in community <16 have been pregnant		
None	81.0*	66.4*
Some	16.5*	28.5*
Many	2.5*	5.2*
Most	0*	0*
* p<0.10; ** p<0.05; *** p<0.01		

Norms about early pregnancy as perceived by caregivers with vignette

In this community…	Intervention (%)	Comparison (%)
Total (n)	80	125
Most *girls* like X *would*:		
Agree without giving opinion	7.5**	10.1**
Agree but voice opinion	10.0**	20.3**
Try to convince husband's family to delay pregnancy by self	61.3**	40.8**
Try to convince husband's family to delay pregnancy through support from others	21.3**	28.8**
Most *girls* of similar age would *expect* X to:		
Agree without giving opinion	6.2***	12.7***
Agree but voice opinion	8.8***	19.3***
Try to convince husband's family to delay pregnancy by self	53.8***	31.2***
Try to convince husband's family to delay pregnancy through support from others	31.3***	36.8***
Most *husbands* of girls like X *would*:		
Make X accept pregnancy	66.0	71.7
Agree to delay pregnancy for X	34.0	28.3
Most *husbands* of girls like X would *expect* X's husband to:		
Make X accept pregnancy	61.8	69.4
Agree to delay pregnancy for X	38.2	30.6
* p<0.10; ** p<0.05; *** p<0.01		

Sanctions for girl/parents trying to delay first pregnancy as perceived by caregivers with vignette

If X was to try to delay first pregnancy…	Intervention (%)	Comparison (%)
Total (n)	80	125

How would other people in X's community react to her trying to delay pregnancy		
Support	22.8	27.2
Not support	20.0	32.0
Not care	2.5	0.8
Depends	43.8	40.0
Would community praise/shame X		
Praise her	31.7***	28.2***
Shame her	13.9***	28.2***
Neither	6.3***	0***
Some would praise/some shame	48.1***	43.6***
If husband and his family of X agreed to delay pregnancy, others in community would		
Not care	17.5	27.2
Support them	50.0	45.6
Think they were wrong	28.8***	48.0***
Think less of their family	32.5	33.6
* p<0.10; ** p<0.05; *** p<0.01		

Grandmother's opinions on benefits/disadvantages of early pregnancy

What are the benefits/disadvantages to early pregnancy?	Intervention (%)	Comparison (%)
Total (n)	56	140
Benefits		
None	73.6***	48.2***
Starting a family	20.0***	46.4***
Status in family/ community	6.4***	5.4***
Disadvantages		
None	19.6	6.0
End schooling	8.9	12.7
Lead to poor health for me	64.3	71.6
Lead to poor health for child	5.4	6.7
Lead to poverty	1.8	3.0
* p<0.10; ** p<0.05; *** p<0.01		

Support for girls trying to delay pregnancy according to grandmothers

In your community…	Intervention (%)	Comparison
Total (n)	56	140
If a girl came to you for support to delay pregnancy would you:		
Provide support	69.1**	38.9**
Refuse support	18.2**	51.8**
Depends on her age	12.7**	9.4**
If would support, how would you support her		
Speak to her parents/family	73.3	77.4
Speak to her husband/his family	22.2	10.7
Speak to community/ religious leaders	0	2.4

Speak to health workers	4.4	9.5
How sure are you that you could convince others to allow her to delay pregnancy		
Sure	64.4	50.6
Don't know	20.0	24.7
Not sure	15.6	24.7
* p<0.10; ** p<0.05; *** p<0.01		

Descriptive norms related to girls delaying pregnancy as perceived by grandmothers

In the past year, in your community…	Intervention (%)	Comparison (%)
Total (n)	56	140
Personally know a girl that has been pregnant <16 years	29.1**	44.6**
How many girls in community <16 have been pregnant		
None	26.8***	26.1***
Some	62.5***	40.3***
Many	10.7***	32.1***
Most	0***	1.5***
* p<0.10; ** p<0.05; *** p<0.01		

Norms about early pregnancy as perceived by grandmothers with vignette

In this community…	Intervention (%)	Comparison (%)
Total (n)	56	140
Most *girls* like X *would*:		
Agree without giving opinion	10.5***	32.0***
Agree but voice opinion	4.1***	1.1***
Try to convince husband's family to delay pregnancy by self	67.3***	43.9***
Try to convince husband's family to delay pregnancy through support from others	18.2***	23.0***
Most *girls* of similar age would *expect* X to:		
Agree without giving opinion	7.9**	29.5**
Agree but voice opinion	10.3**	5.8**
Try to convince husband's family to delay pregnancy by self	56.4**	35.3**
Try to convince husband's family to delay pregnancy through support from others	25.5**	29.5**
Most *husbands* of girls like X *would*:		
Make X accept pregnancy	66.0	71.7
Agree to delay pregnancy for X	34.0	28.3
Most *husbands* of girls like X would *expect* X's husband to:		
Make X accept pregnancy	61.8	69.4
Agree to delay pregnancy for X	38.2	30.6
* p<0.10; ** p<0.05; *** p<0.01		

Sanctions for girl/parents trying to delay pregnancy as perceived by grandmothers with vignette

If X was to try to delay getting pregnant…	Intervention (%)	Comparison (%)

Total (n)	56	140
How would other people in X's community react to her trying to delay pregnancy		
Support	47.3***	18.0***
Not support	16.4***	44.6***
Not care	3.6***	1.4***
Depends	32.7***	36.0***
Would community praise/shame X		
Praise her	44.4***	23.8***
Shame her	2.2***	27.4***
Neither	2.2***	1.2***
Some would praise/some shame	51.1***	47.6***
If husband and his family of X agreed to delay marriage, others in community would		
Not care	14.3	16.4
Support them	67.9***	36.4***
Think they were wrong	16.1***	42.9***
Think less of their family	17.9***	40.7***
* p<0.10; ** p<0.05; *** p<0.01		

Additional tables related to FGM/C for VYA girls

Caregiver attitudes toward FGM/C

	Intervention (%)	Comparison (%)
Total (n)	80	125
Cutting helps a girl stay a virgin until she marries		
Strongly agree	21.5**	38.8**
Agree	8.9**	4.3**
Neither agree/nor disagree	5.1**	9.5**
Disagree	1.3**	3.5**
Strongly disagree	63.3**	44.0**
Cutting marks the transition from a girl child to an adult woman		
Strongly agree	21.5	25.6
Agree	5.1	5.8
Neither agree/nor disagree	1.3	3.3
Disagree	2.5	2.5
Strongly disagree	69.6	62.8
Cutting is not the right thing to do to girls in our community		
Strongly agree	58.2	54.9
Agree	5.1	3.3
Neither agree/nor disagree	2.5	6.6
Disagree	1.3	0.8
Strongly disagree	32.9	34.4
Uncut girls are not pure		
Strongly agree	19.7***	45.8***

Agree	1.3***	6.7***
Neither agree/nor disagree	0***	6.7***
Disagree	7.9***	3.3***
Strongly disagree	71.1***	37.5***
Cutting is part of our traditions and culture		
Strongly agree	78.8***	94.4***
Agree	3.8***	0***
Neither agree/nor disagree	0***	0***
Disagree	2.5***	0.8***
Strongly disagree	15.0***	4.8***
Cutting teaches a girl obedience and respect		
Strongly agree	21.5***	41.8***
Agree	10.1***	3.3***
Neither agree/nor disagree	2.5***	4.9***
Disagree	2.5***	4.9***
Strongly disagree	63.3***	45.1***
* p<0.10; ** p<0.05; *** p<0.01		

Caregiver opinions on benefits/disadvantages of FGM/C

What are the benefits/disadvantages to FGM/C?	Intervention (%)	Comparison (%)
Total (n)	80	125
Benefits		
None	53.3*	37.0*
She will be respecting tradition	37.7*	52.1*
She will be a good community member	6.5*	4.2*
Maintain her chastity	0*	0.8*
She will get a good marriage	0*	2.5*
She will be like other girls her age	2.6*	0.8*
Disadvantages		
None	5.3***	37.2***
Her physical health will be harmed	65.3***	39.8***
Her mental health will be harmed	21.3***	5.3***
She will be seen as backwards	1.3***	1.8***
* p<0.10; ** p<0.05; *** p<0.01		

Descriptive norms related to abandonment of FGM/C as perceived by caregivers

In the past year, in your community…	Intervention (%)	Comparison (%)
Total (n)	80	125
Personally know a girl that has had FGM/C performed	11.4***	27.1***
How many young girls in community have had FGM/C performed on them		
None	76.0***	54.2***
Some	14.7***	15.0***
Many	6.7***	21.7***
Most	2.7***	9.2***
* p<0.10; ** p<0.05; *** p<0.01		

Norms about FGM/C as perceived by caregivers

In this community…	Intervention (%)	Comparison (%)
Total (n)	80	125
Most *parents* like X and Y *would*:		
Agree for their daughter to get FGM/C	10.3***	25.8***
Not agree for their daughter to get FGM/C	84.6***	64.2***
Ask others for advice on what to decide	5.1***	10.0***
Most *parents* of girls of a similar age would *expect* X and Y to:		
Agree for their daughter to get FGM/C	11.5***	29.2***
Not agree for their daughter to get FGM/C	80.8***	60.0***
Ask others for advice on what to decide	7.7***	10.8***
* p<0.10; ** p<0.05; *** p<0.01		

Sanctions for parents trying to avoid FGM/C as perceived by caregivers

If X and Y were to try to avoid FGM/C…	Intervention (%)	Comparison (%)
Total (n)	80	125
How would other people in X and Y's community react to them trying to avoid FGM/C for their daughter		
Support	65.4***	37.4***
Not support	9.0***	21.1***
Not care	0***	0***
Depends	25.6***	41.5***
Would community praise/shame X and Y		
Praise her	55.3**	31.7**
Shame her	10.5**	19.5**
Neither	1.3**	1.6**
Some would praise/some shame	32.9**	47.2**
If X and Y did not have FGM/C done to their daughter, other parents of girls a similar age would:		
Not care	10.0**	20.8**
Support them	86.3***	60.0***
Think they were wrong	15.0***	36.0***
Think less of their family	10.0***	28.0***
* p<0.10; ** p<0.05; *** p<0.01		

Grandmother attitudes toward FGM/C

	Intervention (%)	Comparison (%)
Total (n)	56	140
Cutting helps a girl stay a virgin until she marries		
Strongly agree	32.1*	42.9*
Agree	5.4*	10.0*
Neither agree/nor disagree	8.9*	2.9*
Disagree	7.1*	7.1*
Strongly disagree	46.4*	37.1*

Cutting marks the transition from a girl child to an adult woman		
Strongly agree	3.8	19.6
Agree	15.1	9.4
Neither agree/nor disagree	11.3	3.6
Disagree	9.4	7.3
Strongly disagree	60.4	60.1
Cutting is not the right thing to do to girls in our community		
Strongly agree	10.7***	39.3***
Agree	5.4***	7.1***
Neither agree/nor disagree	3.6***	2.9***
Disagree	5.4***	5.7***
Strongly disagree	75.0**	45.0***
Uncut girls are not pure		
Strongly agree	44.6	53.3
Agree	7.1	5.1
Neither agree/nor disagree	5.4	5.8
Disagree	3.6	3.7
Strongly disagree	39.3	32.1
Cutting is part of our traditions and culture		
Strongly agree	14.3***	37.0***
Agree	7.1***	6.5***
Neither agree/nor disagree	3.6***	7.3***
Disagree	8.9***	1.5***
Strongly disagree	66.1***	47.8***
Cutting teaches a girl obedience and respect.		
Strongly agree	28.6	28.6
Agree	12.5	10.7
Neither agree/nor disagree	5.4	6.4
Disagree	5.4	4.3
Strongly disagree	48.2	50.0
* p<0.10; ** p<0.05; *** p<0.01		

Support for parents trying to avoid FGM/C according to grandmothers

In your community…	Intervention (%)	Comparison
Total (n)	56	140
If a parent of a girl came to you for support to avoid FGM/C would you:		
Provide support	71.2***	48.5***
Refuse support	9.6***	49.3***
Depends on her age	19.2***	2.2***
If would support, how would you support her		
Speak to other family members	90.2	79.4
Speak to community/ religious leaders	9.8	16.2
Speak to health workers	0	4.4

How sure are you that you could convince others to allow her family to avoid FGM/C		
Sure	78.1	64.7
Don't know	14.6	19.1
Not sure	7.3	16.2
* p<0.10; ** p<0.05; *** p<0.01		

Descriptive norms related to abandonment of FGM/C as perceived by grandmothers

In the past year, in your community…	Intervention (%)	Comparison (%)
Total (n)	56	140
Personally know a girl that has had FGM/C performed Interviewer bias! They certainly know many, many who have been cut so I don't know what tese answers represent. Clearly most girls, at least those over 10 yrs have been cut.	17.9	21.4
How many young girls in community have had FGM/C performed on them		
None	76.9**	69.5**
Some	23.1**	14.5**
Many	0**	9.2**
Most	0**	6.9**
* p<0.10; ** p<0.05; *** p<0.01		

Norms about FGM/C as perceived by grandmothers with vignette

In this community…	Intervention (%)	Comparison (%)
Total (n)	56	140
Most *parents* like X and Y *would*:		
Agree for their daughter to get FGM/C	12.5	17.5
Not agree for their daughter to get FGM/C	76.8	73.0
Ask others for advice on what to decide	10.7	9.5
Most *parents* of girls of a similar age would *expect* X and Y to:		
Agree for their daughter to get FGM/C	8.9	19.0
Not agree for their daughter to get FGM/C	80.4	74.5
Ask others for advice on what to decide	10.7	6.6
* p<0.10; ** p<0.05; *** p<0.01		

Sanctions for parents trying to avoid FGM/C as perceived by grandmothers with vignette

If X and Y were to try to avoid FGM/C…	Intervention (%)	Comparison (%)
Total (n)	56	140
How would other people in X and Y's community react to them trying to avoid FGM/C for their baby daughter		
Support	67.3*	52.5*
Not support	5.5*	15.8*
Not care	0*	0*

Depends	27.3*	31.7*
Would community praise/shame X and Y		
Praise her	59.3**	45.9**
Shame her	1.9**	16.5**
Neither	1.9**	2.3**
Some would praise/some shame	37.0**	35.3**
If X and Y did not have FGM/C done to their daughter, other parents of girls a similar age would:		
Not care	17.9	15.7
Support them	87.5**	70.7**
Think they were wrong	5.4***	24.3***
Think less of their family	8.9**	21.4**
* p<0.10; ** p<0.05; *** p<0.01		

Perceptions of community members coming to grandmothers for support as perceived by grandmothers

…come to me for support and advice for…	Intervention (%)	Comparison (%)
Total (n)	56	140
Adolescent girls in this community whose parents are considering removing them from school		
Strongly agree	85.7***	39.3***
Agree	5.4***	6.4***
Neither agree/nor disagree	0***	1.4***
Disagree	0***	0.7***
Strongly disagree	8.9***	52.1***
Adolescent girls in this community whose parents are considering FGM/C		
Strongly agree	78.6***	21.6***
Agree	3.6***	1.4***
Neither agree/nor disagree	3.6***	3.6***
Disagree	0***	1.4***
Strongly disagree	14.3***	71.9***
Adolescent girls in this community whose future husbands/families are pressuring them to get married before age 16		
Strongly agree	76.8***	30.2***
Agree	5.4***	5.8***
Neither agree/nor disagree	1.8***	2.2***
Disagree	1.8***	1.4***
Strongly disagree	14.3***	60.4***
Adolescent girls in this community whose future husbands/families are pressuring them to get pregnant before age 16		
Strongly agree	75.0***	22.1***
Agree	5.4***	5.0***
Neither agree/nor disagree	1.8***	3.6***

Disagree	1.8***	0.7***
Strongly disagree	16.1***	68.6***
Parents of adolescent girls in this community who are considering removing them from school		
Strongly agree	73.2***	34.1***
Agree	3.6***	6.5***
Neither agree/nor disagree	0***	1.5***
Disagree	0***	0.7***
Strongly disagree	23.2***	57.3***
Parents of adolescent girls in this community who are considering FGM/C		
Strongly agree	76.4***	23.9***
Agree	3.6***	3.6***
Neither agree/nor disagree	0***	5.8***
Disagree	0***	0.7***
Strongly disagree	20.0***	65.9***
Parents of adolescent girls in this community who are considering marriage before age 16		
Strongly agree	69.6***	27.9***
Agree	5.4***	7.1***
Neither agree/nor disagree	0***	2.9***
Disagree	0***	0***
Strongly disagree	24.0***	62.1***
Parents of adolescent girls in this community whose future husbands/families are pressuring them to get pregnant before age 16		
Strongly agree	67.9***	20.0***
Agree	5.4***	4.3***
Neither agree/nor disagree	0***	4.3***
Disagree	0***	2.1***
Strongly disagree	26.8***	69.3***
In general, I feel that community members are willing to come to me for advice/support		
Strongly agree	78.6***	40.7***
Agree	8.9***	15.0***
Neither agree/nor disagree	1.8***	10.7***
Disagree	1.8***	1.4***
Strongly disagree	8.9***	32.1***
In general, I feel that adolescent girls are willing to come to me for advice/support		
Strongly agree	80.0***	34.5***
Agree	12.7***	14.4***
Neither agree/nor disagree	1.8***	4.3***
Disagree	0***	2.2***
Strongly disagree	5.5***	44.6***
In general, I feel that caregivers of adolescent girls are willing to come to me for advice/support		

Strongly agree	80.4***	39.3***
Agree	12.5***	13.6***
Neither agree/nor disagree	1.8***	7.9***
Disagree	0***	0.7***
Strongly disagree	5.4***	38.6***
I feel that I am a valued part of this community		
Strongly agree	87.5***	60.4***
Agree	12.5***	20.9***
Neither agree/nor disagree	0***	6.5***
Disagree	0***	0***
Strongly disagree	0***	12.2***
* p<0.10; ** p<0.05; *** p<0.01		

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