Empowering Women Through Education:
Evidence from Sierra Leone

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We use data from Sierra Leone where a substantial education program provided increased access to education for primary-school age children but did not benefit children who were older. We exploit the variation in access to the program generated by date of birth and the variation in resources between various districts of the country. We find that the program has increased educational attainment and that an increase in education has changed women's preferences. An increase in schooling, triggered by the program, had an impact on women's attitudes towards matters that impact women's health and on attitudes regarding violence against women. An increase in education has also reduced the number of desired children by women and increased their propensity to use modern contraception and to be tested for AIDS. The results do not depend on the extent of exposure to violence during the civil war. While education makes women more intolerant of practices that conflict with their well-being, increased education has no impact on men's attitudes towards women's well-being.

Keywords: Health, education, empowerment, violence against women

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1. Introduction

Individuals with more education command higher earnings in the labor market, and the return to education is higher in developing countries (Psacharopoulos 1994, Schultz 2002). Education has a positive impact on other outcomes as well, such as the health status of individuals. More educated people are better producers of health; i.e. they are healthier in comparison to those with less education (Chou, Liu, Grossman and Joyce 2010; Grossman 1972a, 1972b; Lleras-Muney 2005). In addition, an increase in education of a particular generation has a positive impact on educational attainment of the next generation. Specifically, an increase in mothers' education raises the level of their offspring's education (Currie and Moretti 2003).

The impact of education on well-being is also documented at the country level. For example, education of the labor force, which is a measure of human capital in a country, is a significant determinant of economic growth (Hanushek and Kimko 2000). Although low-income countries struggle with low levels of human capital as a barrier to development, many of these countries exhibit substantial discrepancies in education acquired by men vs. women. For example, school life expectancy is 0.5 years higher for men compared to women in countries where per capita income is less than $8,000.[1] The difference in expected schooling is about one year in favor of men among countries where per capita income is less than $4,000, and it goes up to 1.4 years in countries where per capita income is less than $2,000.

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[1] School life expectancy is the total number of years of schooling a child is expected to receive. Information is based on education data obtained from UNESCO Institute for Statistics and income data from the World Bank.

Gender difference in education is not an isolated phenomenon. Similar differences between men and women exist in developing countries in many other dimensions ranging from life expectancy to participation in politics, to the propensity for being exposed to violence.[2] Eradicating these inequalities is important for a number of reasons, ranging from human rights to economic development. For example, drawing on Galor and Weil (1996), Lagerlöf (2003) shows that long-run economic development in Europe is related to the long-term trend in gender equality. Knowles et al. (2002) find that female schooling increases labor productivity across countries. Schultz (2002) indicates that countries which have reduced the inequality of educational attainment between men and women have grown faster. Furthermore, he argues that developing countries should reallocate public education resources in favor of women on the ground of efficiency, because social returns to education is higher for females than it is for males.

In this paper we use data from Sierra Leone to investigate whether education empowers women. Empowerment is usually understood as an exogenous change in the social or institutional structure to provide opportunities that were not previously available. Examples include changing the inheritance laws, providing property rights and voting rights, enacting laws and implementing quotas to increase participation in the labor market and in politics (see Duflo 2012 for a detailed discussion).

We define empowerment as having the knowledge along with the power and the strength to make the right decisions regarding one's own well-being. Because of social norms

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[2] Gender inequalities are determined by complex historical, economic, social and cultural factors. For example, there is evidence for preference for sons in many developing countries such as China and India where the ratio of newborn boys to girls is greater than one. However, the preference for sons is not exclusively a developing country phenomenon. For example, Dahl and Moretti (2008) find evidence for preference for sons in the U.S.

or a lack of economic power, women may feel obligated to submit to the wishes of others (e.g. their husband or father) even though doing so would clearly decrease their well-being in some circumstances. An example is the belief that the husband is justified in beating the wife if she refuses to have sex. We argue that women are empowered internally when they can take positions to protect their own well-being. In the example above, if a woman changes her belief and declares that violence against women in the form of wife beating is not justified, we call this an indication of empowerment.[3] Another example is the attitudes towards the violent practice of female genital mutilation (FGM), which is physically and psychologically harmful to the woman affected. FGM is considered an extreme form of discrimination against women as well as a human rights violation (World Health Organization 2008).[4] If a woman, who lives in an FGM-practicing society, alters her position on the appropriateness of the practice of FGM as a social norm, and supports its abolition, we consider this an indication of empowerment.[5]

We investigate the impact of education on seven outcomes, four of which are attitudes regarding violence towards women. The issue is important, especially because a recent comprehensive report of the World Health Organization documented that 35 percent of women worldwide have been victims of physical and/or sexual intimate partner violence or non-partner sexual violence since age 15 (World Health Organization 2013).

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[3] Our argument is consistent with that of some sociologists, who long hypothesized that objective inequalities between groups cannot be eliminated unless subjective beliefs about the legitimacy of these inequalities are eradicated (Weber 1964 [1922]; Durkheim 1933 [1893]).

[4] United Nations has launched a program in 2007 involving the UNICEF, the UNFPA and other public and private organizations to help stop the practice of FGM.

[5] It should be noted that male circumcision is a completely different practice than female genital mutilation. Male circumcision is not harmful and it has medical benefits (World Health Organization 2010)

We exploit variations in schooling that were generated by an exogenous education policy reform in Sierra Leone, implemented in 2001. The program increased access to primary education, and its intensity varied between different districts of the country. We employ the Sierra Leone Demographic and Health Survey, administered in 2008, to investigate the extent to which exposure to enhanced educational resources had an impact on acquired schooling. Using instrumental variables, we then estimate the impact of schooling on women's preferences regarding their own health and well-being.[6] The identification strategy employed in the paper is similar to that used by Duflo (2001) and Osili and Long (2008), in which differences in program intensity between districts, and differences in the exposure to the program across age cohorts are exploited. Specifically, individuals who were of the primary school age (6 to 11 years) when the policy began in 2001 were exposed to the free and compulsory primary education, while older individuals could not benefit from the program.

We find that an exogenous increase in education triggers a change in attitudes that is empowering for women. One avenue through which education can modify individuals' behavior is through access to information. For example, when a woman becomes literate she can read and learn about the health risks of unprotected sex. Although we find evidence that a switch from being illiterate to literate has an impact on women's preferences in OLS regressions, we cannot say with confidence that this is a causal effect because the impact does not exist in instrumental variables regressions. This is because of the weak relationship between schooling and literacy in Sierra Leone. Alternatively, education can change preferences by influencing people's time discounting (Becker and Mulligan 1997), which can in turn impact behavior. Education can also improve the bargaining power of women in the

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[6] The general idea of this paper is similar to the one pursued by Jensen and Oster (2009) where they investigated if access to cable TV modified women's attitudes toward domestic violence, preference for sons, and fertility.

household by increasing potential labor market earnings. The improved bargaining position may help women to take positions which do not conflict with their well-being. Although we cannot determine the particular channel through which education alters attitudes, we demonstrate that there is a strong net effect of education.

It should be noted that even if increased internal empowerment could be a necessary condition to improve the well-being of women, it may not be sufficient to actually achieve a tangible change in outcomes, at least in the short-run, if external obstacles remain. We find indirect evidence on this when we analyze how education impacts *men's attitudes* towards *women's* well-being. We also analyze the extent to which education alters women's behaviors such as the use of modern contraceptives, whether she is tested for AIDS, as well as her desired number of children.

The remainder of the paper is organized as follows. Section 2 provides some background information on the educational system in Sierra Leone and the Free Primary Education policy. Section 3 describes the data used in the analysis. Section 4 describes the empirical strategy. Section 5 presents the results, and Section 6 is the conclusion.

2. Free Primary Education (FPE) Policy in Sierra Leone

Sierra Leone is one of the poorest countries in the world. In 2010, per capita gross national income was $340. About 70 percent of females and half of males of the country are illiterate, and life expectancy at birth is 46 years. The population is about 5.5 million, and the fertility rate is 5 births per woman. The civil war, which broke out in March 1991 and lasted for about

a decade, killing at least 50,000 individuals (World Bank 2007).[7] Even before the civil war, children faced challenges in having access to education. For example, parents were responsible for the payment of tuition and fees, teaching and learning materials and other expenses such as textbook purchases and exam fees. One consequence of the civil war was the destruction of infrastructure, including schools. By the end of the war, 1,270 primary schools had been destroyed, representing over 70 percent of all schools estimated to have been in existence before the conflict started (International Monetary Fund 2001). As a result, more than half of the primary schools had disappeared and this led to almost 70 percent of school-age children being out of school (International Monetary Fund 2001).

In 2001, Sierra Leone started implementing a policy of providing free primary education (FPE) for all pupils in government-owned and government-assisted schools.[8] Financed largely by domestic public funds, donor contributions from international financial institutions and foreign governments, the FPE was part of an overall universal primary education policy aimed at constructing and rehabilitating basic education facilities as well as providing free access to education. The specific goal was to increase basic education (comprising six years of primary education and three years of secondary education) by making it free and compulsory.

By far, this has been the largest education funding initiative to be undertaken in Sierra Leone since its independence in 1961. During the period from 2001 to 2005, the government committed almost 20 percent of its expenditures (equivalent to 4 percent of the GDP) towards education. Almost half of all education expenditure was devoted to primary education (UNDP

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[7] Although the civil war officially ended in January 2002, the war has come to an end in 2001 for all practical purposes.

[8] At least 95 percent of all recognized primary and secondary schools are either government-owned or government-assisted (World Bank 2007).

2007). Consequently, the number of schools grew rapidly and by the end of 2005 there were at least 4,300 primary schools, approximately 30 percent of which was newly constructed since 2001.

Sierra Leone spans about 72,000 km squares (about 28,000 square miles, or roughly the size of South Carolina). The country consisted of 14 districts in 2001 (see Figure 1).[9] With the implementation of the FPE program, each district received new funding for education and the program was associated with a pronounced change in primary school enrollments. The number of students doubled from 0.6 million to 1.3 million children between 2001 and 2004, and the primary school gross enrollment rate exceeded 100 percent in 2004.[10] In 2004, Sierra Leone had the highest primary school enrollment rates amongst all Sub-Saharan countries (World Bank 2007).

3. Data

We use data from the 2008 Sierra Leone Demographic and Health Survey (SLDHS). The SLDHS is part of a broader program of demographic and health surveys conducted in other developing countries. The SLDHS is a cross-sectional nationally representative household

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[9] During the decentralization process in 2004, the country is divided into 19 political units, called Local Councils. For further details on the system of administration in Sierra Leone, see Statistics Sierra Leone and ICF Macro (2009a, Appendix A, p. 275).

[10] Primary school gross enrollment rate for any given year is the number of students enrolled in primary school expressed as a percentage of the population of primary-school-age children. In Sierra Leone, the official primary school age ranges from 6 to 11 years. It is possible for the primary school gross enrollment rate to be above 100 percent. This is because some of the enrolled may consist of older-aged children who have returned to school after the war, pre-primary school-aged kids attending primary school as well as repeaters.

survey and is the first of this kind in Sierra Leone.[11] Interviews for the SLDHS were conducted

from April to June 2008.[12] The data contain information for over 10,000 individuals who were

aged 15-49 (females) and 15-59 (males) in 2008.   Using the age reported in 2008 and the

reported birth dates, we identified individuals who were 8 to 11 years old in 2001. This

particular group was exposed to the FPE policy. We similarly identified those who were 15-21

years old in 2001. These individuals were beyond the primary school age during the

implementation of FPE and could not benefit from the policy. We provide more details on the

identification strategy and its variations in the next section, including variations in the

composition of the control group.

Because district level information on the amount of education funding is not available,

we impute funding received by each of the 14 districts by multiplying the total government

spending on the FPE program in 2004 (which was about 14 billion Le, or about $6 million at

the prevailing exchange rate) with the share of each district in local government development

grants. Information on the district-level share of local government development grants and

matching grants was for fiscal year 2006 (see UNDP 2007, p.79), while total funding allotment

for primary education came from the Government of Sierra Leone Budget and Statement of

Economic and Financial Policies for the financial year 2004. The resource variable per district

is the logarithm of funding received by the district per 100 teachers. Over the period 2004-

2011, Local Government Development Grants were distributed based on a formula which was

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[11] Demographic and Health Surveys (DHS) have been conducted for more than 75 developing countries since 1985 as repeated cross sections. In most of these countries, there are several waves of the survey. In Sierra Leone, the 2008 DHS is the only one that is done so far.

[12] While funding for the survey came from a variety of international agencies, the collection, processing and dissemination of the data were undertaken by Statistics Sierra Leone in collaboration with the Ministry of Health and Sanitation, with technical support provided by ORC Macro International.

initially determined by population and the infrastructure damage index. Later, this distribution of grants was based on population and the poverty index. It is important to note that the distribution of these grant funds was unrelated to population attributes. Nor were they influenced by the leadership style of district leaders (e.g. whether or not district leaders have a more progressive social attitude).[13] Correlations between funds received by districts and some district characteristic in 2004 support this claim. For example, the biggest ethnic minorities in Sierra Leone are the Temne and the Mende. Correlations between district funding and the proportion by Temne and Mende in the district are 0.085, and -0.145, respectively, while the correlation between funding and population per square kilometer is 0.90.

We employ four variables as measures of women's empowerment. As discussed in the introduction, we adopt the definition of empowerment as one's ability to make correct decisions about the issues that impact one's own well-being. We consider affirmative answers to the following questions as being consistent with a woman's well-being: (i) whether a wife is justified in refusing to have sex when she is tired or not in the mood; (ii) whether a wife is justified in refusing to have sex with her husband if she knows he has a sexually transmitted disease (STD); (iii) whether female genital mutilation should be stopped as a custom. The fourth question asks the respondent "whether a husband is justified in hitting or beating his wife if she refuses to have sex with him." If the answer of the woman to this question is in the affirmative, we consider her beliefs being inconsistent with her well-being.

We also gauge the preference towards fertility, measured by the number of desired children. An alternative measure would have been the number of children ever born, but because we focus on young individuals (who are 15 to 28 years old in 2008) their fertility is

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[13] Personal communication with Mr. Adams Kargbo, Director of Local Government Finance Department, Ministry of Finance and Economic Development, Sierra Leone; August 2012.

unlikely to be completed. Furthermore, desired fertility is conceptually different from completed fertility, where the latter may diverge from the former for a variety of reasons. Two additional variables gauge whether the woman uses modern contraceptive methods and whether she has ever been tested for AIDS.

Column (2) of Table 1 displays the means and standard deviations of the full sample of females who were either 8 to 11 years old or 15 to 21 years old in 2001. The information provided in the table pertains to 2008 when the individuals were aged 15 to 28. Of this group, those who were 8 to 11 years old in 2001 were exposed to the FPE. This is the "treatment" group, the descriptive statistics of which are provided in column (3). Those who were 15 to 21 years old in 2001 constitute the "control" group, listed in column (4).

On average, women desire to have 4.7 children over their lifetime. The number of desired children for women in the treated group is 4.2, while it is 4.9 for those who are not exposed to the FPE program. The rate of modern contraceptive use is lower for those in the treatment group, but this is likely because the average age in this group is lower (16.5) in comparison to the average age in the control group (25.5). This is also the likely reason for the difference in the rate of having been tested for AIDS between the two groups.

The proportion of women who indicate that a wife is justified in refusing sex when she is tired, is higher among the control group. The same is true for the question that asks whether a wife is justified in refusing to have sex with her husband if he has a sexually transmitted disease. It is somewhat puzzling that the proportion of affirmative answers is higher for the control group which has less education. On the other hand, the proportion of married women is larger in the control group. To the extent that married women have better information and experience on the issues raised by these two questions, it could be reasonable to have higher

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proportion of affirmative answers among the control group. The proportion of women who thinks that wife beating can be justified is lower in the treatment group, and the proportion of women who thinks that female genital mutilation should be discontinued is higher among the treatment group.

Although the individuals who are exposed to the FPE are younger than those who are not exposed, the former group has more schooling on average than the latter as expected (4.4 years vs. 2.1 years). The data set contains information on religious affiliation and ethnic background. Islam and Christianity are the two dominant religions in Sierra Leone; and Temne and Mende are the two largest ethnic groups. We also have information on whether the person resides in an urban or rural area. The wealth of the person is measured by dummy variables titled *Wealth1, Wealth2* and so on, to indicate the wealth quintile to which the individual's household belongs. Total wealth is calculated using all household assets, including cars and television sets, as well as dwelling characteristics such as flooring material, type of drinking water source, toilet facilities.[14] *TV, Radio* and *Fridge* indicate whether the household of the individual has these consumer durables. These variables are correlated with wealth. In addition, TV and radio may have a direct impact on attitudes because they may enable the person to have access to information. For example, Jensen and Oster (2009) show that the introduction of cable television into rural India has changed the reported acceptability of domestic violence toward women and the preference for sons. Chong and la Ferrara (2009) report that access to a particular TV channel, which has monopoly over soap operas (which

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[14] For the details of the creation of this measure, see the DHS website at http://www.measuredhs.com/data/Data-Quality-and-Use.cfm#CP_JUMP_5373 (accessed February 15, 2012).

typically contain themes related to criticism of traditional values and female empowerment and emancipation) is associated with increased divorce rates.

The data set does not contain information on the region of birth, childhood place of residence or the place of education. As a result, we cannot determine whether the individual has received her education in a given district and then moved and was surveyed in 2008 while living in a different district of the country. The basic assumption behind our empirical analyses is that individuals have received their education in the same district where they were interviewed in 2008. However, later in the paper we identify those who have lived in the same residence continuously since the school years. Using this sub-sample of individuals, who clearly have not relocated since the elementary school age, we obtain similar results.

3. Empirical Strategy

We first estimate the impact of the education policy on schooling acquired by women using a specification depicted by Equation (1) below.

(1) $$S_{ijt} = \beta_0 + \beta_1 \, FPECohort_i + \mathbf{X_i} \, \mathbf{\Omega} + \gamma_j + \delta_t + \varepsilon_{ijt,}$$

where S_{ijt} stands for years of education (measured in 2008) of individual i, in district j, who was born in year t. $FPECohort_i$ is a dichotomous indicator which takes the value of one if the cohort of the individual was exposed to the Free Primary Education (FPE) policy, and zero otherwise. The primary school age in Sierra Leone is 6 to 11. Those who were six years old in 2001 when the FPE policy started were 13 years old in 2008 when they answered the survey questions. However, the minimum age of those who were part of the survey in 2008 is 15 and these individuals were 8 years old in 2001. Therefore, we consider those individuals who were

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8 to 11 years old in 2001 (who were 15 to 18 in 2008) as part of the treatment group; and

FPECohort takes the value of one for these individuals. At the start of the policy in 2001, those who were above the primary schooling age (e.g. those who were 12 or 13) were nevertheless allowed to enroll in school. Because these older children have returned to school, the primary school gross enrollment rate rose above 100 percent (World Bank 2007). Even in 2004, more than half of the children enrolled in the first grade of the primary school were older than six years. This was true of the other grade levels of the primary school as well (World Bank 2007), which means that children who were older than 11 years of age in 2001 could have also benefitted from the program. Therefore, we chose as the control group those who were 15 to 21 when the implementation of the FPE started. This older group was not exposed to the policy. We also entertain alternative clasifications of the control group which do not alter the results appreciably. These are discussed in Section 4.

The vector X_i includes attributes of the individuals such as religion, ethnic background, residence in an urban area, and indicators of wealth. The equation includes district fixed-effects γ_j, year of birth fixed effects δ_t, and a standard white noise error term ε_{ijt}.[15]

An alternative specification is depicted by Equation (2) where schooling is assumed to be impacted not only by exposure to the treatment by the FPE, but also by the intensity of the program.

(2) $$S_{ijt} = \varphi_0 + \varphi_1(FPECohort_i * R_j) + X_i \Psi + \xi_j + \theta_t + \upsilon_{ijt} ,$$

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[15] Sierra Leone is divided into four main regions (East, West, North and South) comprising a total of 14 districts where one leader from each district has a seat in the country's parliament. The design of the SLDHS was done to take this district-level grouping into consideration. Figure 1 shows the division of these districts according to regions.

where R_j represents per teacher spending allocated to district j. As described in the introduction, because of the devastation of the infrastructure during the civil war, there was significant damage to school buildings. While the government could not increase the number of teachers at the end of the civil war in 2001, it started repairing damaged classrooms and building new schools. The intensity of this effort, which differs between districts, measured as log spending per 100 teachers in 2004, is represented by R_j. X_i is a vector of personal characteristics of the individual as before; ξ_j and θ_t represent district and year of birth fixed-effects, respectively.

To investigate the extent to which schooling had an impact on women's preferences, we estimate versions of Equation (3).

$$(3) \qquad Y_{ijt} = \alpha_0 + \alpha_1 S_{ijt} + X_i \Phi + \mu_j + \lambda_t + \tau_{ijt},$$

where Y_{ijt} represents the response of individual i who was born in year t, and who resides in district j to questions on health, sexual activity and husband-wife relations, shown in Table 1. S_{ijt} stands for the level of schooling of the individual; μ_j and λ_t represent district fixed-effects and year of birth fixed effects, respectively. Because unobservable characteristics of the person, captured by the error term τ_{ijt}, impact her preferences (Y) and because these unobservables could be correlated with her level of schooling (S), Equation (3) is estimated using instrumental variables, where schooling is instrumented by exposure to the FPE and intensity of the program in the district ($FPECohort_i * R_j$). The factors that may be correlated with schooling as well as with the outcomes analyzed in the paper (Y) may include unobservable attributes of the families and the communities.

4. Results

Column (1) of Table 2 displays the result obtained from estimation of equation (1), where schooling is regressed, among other controls, on *FPECohort*, which is the dummy variable that measures the individual's exposure to the FPE program. The result indicates that being a member of the birth cohort that was exposed to the program increases women's schooling by 0.5 years in comparison to the older cohorts that were not exposed to the program. The specification displayed in column 2, based on equation (2) provides the same inference. The advantage of this specification is that it allows for variation in resource allocation between the districts and that year of birth fixed-effects are included. Column (3) reports the same specification as in column (2) with the exclusion of all covariates other than *(FPECohort * R)*. The estimated impact of the program remains the same.[16]

The specification displayed in Column (2) of Table 2 is the basic first-stage regression of the impact of the FPE program on schooling. In Table 3A we provide the results of the instrumental variables regressions where women's behavior regarding using modern contraceptives and testing for AIDS is analyzed, along with the analysis of their preferences regarding physical violence against them, and the issues that impact their health.

In each specification the primary variable of interest is the years of schooling, which is instrumented by the interaction of the cohort exposure dummy and the education funding received by the district of residence. The regressions employ sampling weights and standard

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[16] The average predicted education obtained from column (2) of Table 2 is 4.37 (std=2.45) for the treated group, and it is 2.10 (std=2.43) for the control group. The mean predicted level of education for these groups is 4.39 (std=1.70) and 2.11 (std=1.86), respectively, when using the model with no covariates, depicted in column (3) of Table 2.

errors are clustered by year of birth and district.[17] Columns (1) and (2) of Table 3A show that an additional year of education increases women's propensity to use modern contraception by about 12 percentage points and the propensity for being tested for AIDS by 11 percentage points. These are substantial impacts as the proportion of women who use modern contraception in the sample is 17 percent, and 13 percent of the women in the sample has been tested for AIDS. Column (3) of Table 3A demonstrates that an additional year of schooling generates a decrease in the desired number of children by 0.34. The fertility rate in Sierra Leone is 5 children per woman and the desired number of children in our sample is 4.7. Thus, according to our estimate, the desired number of children of a woman who completes primary schooling and receives six years of education will be 2 fewer children than the sample average (or a total of 2.7 children). Whether this decrease in desired fertility would translate into an actual decline in the number of children born depends on the interplay between the woman's and her husband's preferences along with other social expectations and pressures. As we demonstrate below, an increase in schooling for men does not translate into a significant change in their preference for the desired number of children.

Columns (4) to (7) of Table 3A present the results where we investigate the impact of education on women's attitudes regarding their own health and well-being. Columns (4) and (5) display the results of the models where the dependent variable measures whether the woman believes it is justified to refuse to have sex with the husband if the wife is tired (column 4), or if the husband has a sexually transmitted disease (column 5). In both cases, an increase in schooling makes women more likely to answer in the affirmative, although the impact is not statistically significant in case of the "refusing sex when tired" question. An increase in

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[17] We also clustered standard errors by cohort (treated vs. control) and district. This formulation provides only 28 clusters. With this caveat, the statistical significance of the estimated coefficients did not change. We report this later in this section.

education by one year increases a woman's propensity by 11 percentage points to declare that a wife is justified to refuse sex when the husband has an STD. At the sample mean this translates into an increase in the attitude by 23 percent.

Columns (6) and (7) of Table 3A present the results where the attitudes towards physical violence against women are analyzed. Column (6) shows that one additional year of schooling *reduces* women's propensity *to approve* wife beating by about 10 percentage points. About 36 percent of all women in the sample believe that wife beating is justified (see Table 1). Thus, the result reported in column (6) represents a sizable impact on the attitudes regarding acceptability of violence against women. Similarly, Table 1 shows that about only 30 percent of women in the sample believe that female genital mutilation should be discontinued. An increase in education by one year, triggered by the FPE program, increases women's propensity to declare that female genital mutilation should be stopped by about 9 percentage points (column 7 of Table 3A). Running the models with no control variables provided very similar results, as shown in Table 3B.

When we clustered the standard errors by cohort (treated vs. control groups) and district, the estimated standard errors were smaller. The p-values of the estimated coefficients were 0.019, 0.001, 0.013, 0.420, 0.036, 0.008 and 0.03 respectively, for the seven models reported in Table 3A.[18] Estimating the models (Equation 3) using OLS instead of instrumental variables generated results that are qualitatively similar to those reported in Table 3A. More specifically, these OLS specifications produced coefficients for education that had the same signs as those reported in Table 3A, and that were always significant at the 1-percent level or

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[18] It should be cautioned that this specification involves only 28 clusters.

better, but the OLS coefficients were smaller in absolute value in comparison to the instrumental variables coefficients. These OLS results are reported in table Appendix A-0.

Inserting Equation (2) into Equation (3) produces the reduced form where the dependent variables are explained by exogenous covariates as well as the instrument. The result of estimating the reduced form regressions for each outcome are summarized in Table 3C. There are no anomalies, in that the reduced-form coefficients are the products of the first-stage and the structural form coefficients, and the estimated reduced-form coefficients are statistically significant in all outcomes but the one reported in column (4), which was exactly the case for the instrumental variables regressions of Table 3A.

As mentioned earlier, those who were 8 to 11 years old in 2001 were exposed to the FPE policy. Those who were 15 to 21 in 2001 constitute the "control group" because at the start of the implementation of the policy, those who were older than the primary schooling age were still allowed to enroll in school. Nevertheless, we also estimated models by using those who were 12 to 16 in 2001 as the control group. Because some individuals in this group have benefitted from the FPE, the estimated impact of education is expected to be weaker. The results, presented in Table Appendix A-1 show that this is in fact the case. The point estimates are smaller and the impact of schooling is statistically significant only for contraceptive use, having been tested for AIDS, and reporting that a wife is justified in refusing sex if the husband has an STD. Finally, we experimented with yet another specification. Here, instead of dropping the individuals who were 12 to14 years old in 2001, and therefore who might or might not have benefitted from the FPE policy, we kept them in the sample but assigned them a value of 0.5. Put differently, in this specification those who are in the treatment group (ages 8 to 11 in 2001) are assigned the value of one, those who are in the control group (15 to 21) are

assigned a value of zero and the questionable middle group (ages 12 to 14) is assigned a value of 0.5. These results are reported in Table Appendix A-2. The point estimates are smaller than those reported in Table 3A as expected; but they are not substantially different.[19]

In summary, the results demonstrate that an increase in schooling alters women's preferences in favor of protecting their own well-being. An increase in education makes women more likely to declare that a woman is justified in refusing sex when there is a health risk or when she is tired. An increase in education also makes women more likely to disapprove acts of physical violence against them. These results indicate that education empowers women.[20]

Does Literacy Matter?

In the SLDHS, literacy was evaluated based on the ability of the respondents to read a sentence placed in front of them. We created a dummy variable, titled *Literate,* that takes the value of one if the individual was able to read the whole sentence. We defined a second variable, *Literate2,* which identifies those who could read the entire sentence as well those who could read only parts of the sentence. This second variable identifies those who are literate or are semi-literate. As shown in Table 1, 26 percent of the women in our sample is literate, and 32 percent is literate or semi-literate. This is consistent with the 30 percent literacy rate for females who are 15 years of age and older in 2009, reported by the World Bank (UNESCO Institute for Statistics 2011).[21]

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[19] Considering the treatment group of those who are 15-18 in 2001 reduces the sample size to about 1,700 and renders the estimated coefficients statistically insignificant.

[20] Friedman et al. (2011) also find that participation in a merit scholarship program that increases the years of education in Kenyan schools reduces young women's acceptance of male violence against women and children.

[21] The literacy rate for men 15 and over was 53 percent in 2009.

Table 4 presents the OLS results where all outcome variables are regressed on *Literate*. The results are similar to those reported in Table 3A. Being literate is associated with a higher probability of using modern contraception, a higher probability of having been tested for AIDS and a smaller number of desired children. Literate women are more likely to agree with the statement that a wife is justified in refusing sex if she is tired, or if the husband/partner has an STD. Women who are literate are also less likely to indicate that wife beating is justified and more likely to declare that female genital mutilation should be stopped. The same results are obtained when we employed *Literate2*.[22]

These OLS results, however, may not represent the causal effect of literacy if unobserved factors that are correlated with the likelihood of being illiterate are also related to women's preferences. Therefore, we ran the instrumental variables regressions reported in Table 3A, replacing the schooling variable with *Literate* or *Literate2* to investigate whether a switch from being illiterate to literate (or a switch from being illiterate to being semi-literate or literate) causes a change in women's preferences. The results, which are not reported, show that the coefficient of literacy is not significant in any of the seven regressions, regardless of whether we use *Literate* or *Literate2*. Furthermore, this result seems to emerge because of the lack of power in the first-stage regressions, where the F-values of the instrument are very low in each regression.

Because this result is somewhat surprising, we investigated the relationship between reported schooling and literacy by exposure to the FPE program. Table 5 reports the average literacy rate by education among those who are part of the control group (those who are not exposed to the FPE program) as well as for those who are treated by the program. Among

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[22] These results are not reported in the interest of space.

those with zero years of schooling, the literacy rate is essentially zero in both groups. Among the group of women who have 1 to 3 years of schooling, the literacy rate is zero if they are part of the control group (aged 21 to 28 in 2008), and 7.5 percent of this group is semi-literate or literate. Of the women who have 1 to 3 years of education and who are part of the treatment cohort (aged 15 to 18 in 2008), the literacy rate is about nine percent; and about 46 percent of this group is semi-literate or literate. The same pattern emerges among those with 4 to 6 years of schooling; that is, the literacy rate is higher in the treatment group, but it is far less than 100 percent. The fact that the literacy rate is extremely low among the control-group women who have some primary education (1 to 6 years) may be attributable to the fact that some of these women went to school during the civil war years and therefore it is likely that they did not receive high quality instruction during those years. On the other hand, the FPE program started post-civil war. Therefore women, who are part of the treatment cohort and who went to school under the FPE program, are not impacted by the interruptions of the civil war. It is remarkable that less than one-third (28.9 percent) of those who received 4 to 6 years of schooling under the FPE program can read a complete sentence.[23]

The literacy rates are 100 percent for those who have at least seven years of education. This is true both in the control group and in the treatment group. This result is not because of the effectiveness of the secondary school system. Rather, it is because of the fact that to enroll in the secondary school, the student must take an exam, and those who are still illiterate after having completed the 6th grade cannot plausibly pass the exam to qualify for the 7th grade.

Taken together, these results indicate that an increase in schooling changes the attitudes of women regarding the issues that matter for their well-being but that this effect is not due to

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[23] Such poor education outcomes are common in developing countries. For example, Banerjee et al. (2007) indicate that in India 44 percent of the children aged 7 to 12 cannot read a basic paragraph.

women's improved reading ability due to increased schooling.   The mechanism through which education impacts attitudes is unclear.   Education's impact could be due to the exposure to teachers/lectures even though such exposure does not significantly enhance literacy. It could also be due to some other channel such as socialization experiences while in school; it could also be the result of multiple influences.

The Impact on Men

In this section we investigate the extent to which the increase in educational attainment due to the FPE program has impacted *men's attitudes* regarding *women's well–being*. Table 6 displays the descriptive statistics for men. A comparison between men and women reveals an interesting and surprising picture. For example, while 56 percent of women indicated that a wife would be justified in refusing sex when she is tired (see Table 1), 68 percent of men believe that such a refusal is justified. Similarly, the proportion who thinks that a wife is justified in refusing sex if the husband has an STD is *higher* among *men* than women. Along the same lines, the proportion of men who think that wife beating is justified is *lower* than the proportion of women who think the same (0.23 vs. 0.36), and the proportion of individuals who think that female genital mutilation should be discontinued is higher among men than women (0.38 vs. 0.30). These are surprising findings because one would expect that the rate of support for the statements in favor of women's well-being would be higher among women. This outcome, however, is not an artifact of the data we employ. It is consistent with a health report on Sierra Leone (Statistics Sierra Leone and ICF Macro 2009b) and could be a reflection of a culture that fosters particular behavioral patterns for women and promotes a subservient attitude to men. Similarly, El Feki writes that in Egypt, where female genital mutilation is a

custom, mothers, rather than fathers, decide on whether to circumcise their daughters and that

men are traditionally not involved in this decision making process (El Feki 2013).

Table 7 presents the instrumental variables regressions for men. This table is the

counterpart of Table 3A, which presented the same information for women. Table 7 shows

that, as was the case for women, an additional year of schooling increases the propensity to use

modern contraception and the likelihood to have been tested for AIDS among men. On the

other hand, an increase in education on the margin (the mean years of schooling is 5 years

among men) has no impact on men's attitudes towards women's well-being.

Potential Migration

The data set does not allow us to identify the district in which the individuals received

their education. There is, however, one question in the survey that asks individuals how long

(in years) they have been living in their current residence. For each individual we calculate the

number of years since they completed their schooling. If the number of years in the current

residence is greater or equal to the years since the highest grade completed, the individual has

not moved to another district since completing schooling. We call such people "non-movers."

Note that the question about residence pertains to the location of the physical dwelling and not

to the city or the district of residence. This means for example, that a person who has

completed her schooling 10 years ago but lived in the same residence continuously for only 9

years is considered a "mover." In reality this particular individual may have moved to another

residence in the same district -- thus her place of current residence and her place of schooling

may be the same. However, there is no way to distinguish between the cases in which the

move was to a new residence and where the move was to a new district. Put differently, this

crude measure forces us to classify anybody as a "mover" who has not lived in the current place of residence longer than the number of years since schooling is completed. As a result, we end up with those who definitely went to school in the same district as where they were surveyed in 2008, but we omit those who have moved to a different residence in the same district. Consequently, we lose more than 1,000 observations, some of which are non-movers who had to be classified as movers.

The results obtained from this sample of "non-movers" are presented in Table 8 for women. The point estimates of schooling are smaller in some cases in comparison to those reported in Table 3A, but the main inference does not change.[24] Although the impact of schooling on attitudes of women is not statistically significant at conventional levels for questions regarding sexual relations in case of a sexually transmitted disease, education has a statistically significant impact on questions pertaining to violence against women. Specifically, an increase in education has a negative impact on the propensity to declare that wife beating is justified and it increases the propensity to declare that female genital mutilation should be eradicated.

Exposure to War Violence

The civil war in Sierra Leone started in 1991 and ended in 2001. The schooling reform started at the end of the war in 2001. This means that people in the control group, who were 15 to 21 year old in 2001, were 5-11 years old when the war started in 1991. On the other hand, people in the treatment group were not yet born, or they were at most 1 year old when the war started. This regularity suggests that the results reported so far may not be due to the impact of

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[24] In these specifications, the coefficient of the instrument in the first-stage is 1.2 (se=0.3). This is bigger that the first-stage coefficient estimated (column 2 of Table 2) for the main regressions reported in Table 3A.

education, but they may be because of exposure to war. In other words, the control group is exposed to war while the treatment group is not; and if exposure to violence during the war has "hardened" the older cohorts, we are capturing the though attitudes of these hardened individuals in comparison to those who did not experience war violence.

To address this concern we used detailed data on war atrocities compiled by the Sierra Leone Truth and Reconciliation Commission (TRC). The TRC was initiated in 2000 by the Parliament of Sierra Leone under Section 6(1) of the TRC Act which states that the objective of the Commission, among other things is "to create an impartial record of violations and abuses of human rights and international humanitarian law related to the armed conflict in Sierra Leone, from the beginning of the conflict in 1991..." (Truth, 2004a, pp. 3-4). Creation of this commission is provided for under Article XXVI of the Lomé Peace Agreement of July 1999.[25]

The general function of the Commission is to "investigate, report on the nature and extent of the human rights violations and abuses, and on the context in which these violations and abuses occurred" (Truth, 2004c). In carrying out this function, the Commission provided an opportunity for both victims and perpetrators to share their experiences. Although not every possible victim or perpetrator was interviewed, information was collected from almost all of the chiefdoms,[26] the purpose of which was to record the experiences of the population, paying attention to specific groups such as women, children and amputees. It is important to note that

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[25] Financial support for the Commission came from a number of countries including the United States of America, the United Kingdom, Germany, Canada and France. Other support came from the European Commission, members in the Office of the High Commission for Human Rights, the United Nations Development Programme (UNDP), the United Nations Mission in Sierra Leone, the President of Sierra Leone, Dr. Ahmad Tejan Kabbah and the Government of Sierra Leone.

[26] Chiefdoms are the third-level of administrative units (next to the central government and local councils) in Sierra Leone and are governed by chiefs. Districts are divided into chiefdoms, of which there are 149. Dues to security reasons, the Commission was unable to reach 9 of these.

victims were not compensated for providing an account of their experiences to the Commission.

A total of 7,706 detailed statements made by Sierra Leoneans (living at home as well as refugees in Gambia, Guineas and Nigeria) were collected by the Commission. Approximately, one-third of the statements were given by women while two-thirds were given by men. Of those women providing statements, roughly 79 percent were victims of violations while about 84 percent of the men were victims. Another 16 percent of the females indicated they were witnesses to violence against family members while 10 percent of the men witnessed violence against one or more family members. This detailed account of these individuals was compiled, processed and presented in a statistical appendix to the Commission's report (see Truth 2004b).

The commission identified a variety of atrocities during the war ranging from torture to rape, from amputation to assault/beating, from sexual slavery to forced labor. A total of 40,242 violent acts took place during the war. These incidents are identified by gender of victim, year and district in which they took place. Using these data, for each person in the data set we calculated measures of *exposure to war violence*. First, we created an exposure variable which takes the value of zero for people in the treatment cohort (younger cohort), and that is equal to the number of atrocities in the district during the war if the person is in the control group. As an alternative method, we employed the same procedure but used the number of atrocities against females in the district instead of total atrocities. Third, we created a more refined measure of violence. We used each person's age at the end of the war to determine their *exposure to years of violence* since age 2 (or age 3, 4 or 5). For example, the years of exposure to war since age four is 11 years for somebody who was 15 years old in 2001. This person was 4 years old in 1990, so she was exposed to the entire war (11 years) since she was four years

old. On the other hand, a person who was 11 years old in 2001 was four years old in 1994. Thus, she was exposed to war for 7 years: between 1994 and 2000. A person who was 9 in 2001 was exposed to 5 years of war since she was four, and so on.

Finally, we used both the location and age of individuals at the end of the war to measure exposure to total atrocities since age 2 (or alternatively since age 3, or age 4, or age 5). For example, consider a person who is 8 years old in 2001. If we measure exposure to violence since age 4, this person was exposed to war violence in years between 1997 (when she was four) and the year 2000 when the war ended. Because we know the district of residence of the person, we add up the number of all war atrocities in that district between 1997 and 2000 and use it as a measure of exposure to violence for that person. In this procedure, there is of course variation in war violence between districts; but also people who live in the same district are exposed to different levels of war violence because they were of different ages when the war started.

We tried all of these measures as controls of violence exposure. None of them altered the estimated coefficients of schooling in any meaningful way. We report one specification, where the logarithm of exposure to the number of war atrocities since age two (*Exposure to war violence since age 2*) is used as an additional control variable. The results are presented in Table 9. Exposure to violence during civil war is negatively related to the propensity to use modern contraceptives and the propensity for being tested for AIDS, but it has no impact on other outcomes. Importantly, exposure to violence does not alter the estimated impact on schooling in any meaningful way. The use of other measures of violence, described above, provided very similar results.

We also estimated a final specification in which we included both the logarithm of war atrocities since age 2 and its interaction with the years of schooling. We considered this interaction variable as endogenous and used instrumented this variable with our instrument.[27]

The results, which are reported in Appendix Table A-3, are qualitatively very similar to those reported in Table 9. The coefficients of schooling are smaller in magnitude, but the mean value of log violence exposure since age two is 7.4. Thus evaluated at the sample mean of violence, the impact of schooling is very similar to those reported in Table 9.

5. Conclusion

The impact of schooling on earnings is well-documented and an increase in education improves health outcomes. These direct impacts of education on human capital and labor productivity are important ingredients for economic development. Increased education can produce other benefits for the individuals and the society by changing attitudes and preferences.[28] In this paper we investigate whether an increase in schooling changes women's preferences regarding the issues that are directly related to women's well-being.

We use data from Sierra Leone where a substantial education program was started in 2001. The program provided increased access to education for children who were primary-school age, but did not benefit children who were older. We exploit the variation in access to the program generated by date of birth and the variation in resources between various districts of the country. We analyze whether an increase in schooling, triggered by the program, had an

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[27] We cannot add schooling as a separate variable because we have one instrument.
[28] For example, Dee (2004) finds that increased educational attainment improves civic engagement in terms of voting behavior and support of free speech in the U.S.

impact on women's attitudes towards matters that impact women's health and on attitudes regarding violence against women.

The household survey includes health-related questions on the *acceptability* of attitudes such as whether a wife is justified in refusing to have sex if the husband has a sexually transmitted disease, or whether a wife is justified in refusing sex when she is tired. It also includes questions gauging *attitudes* towards violence against women such as whether beating a wife is justified if she refused to have sex and whether the custom of female genital mutilation should be eradicated. Attitudes for violence against women are particularly important as the World Health Organization recently declared that more than one-third of all women around the world have been victims of physical or sexual violence (World Health Organization 2013). We also employ questions that involve health behaviors such as the use of modern contraceptives and whether the person has been tested for AIDS, as well as the desired number of children.

We find that an increase in education changes women's preferences. Specifically, an additional year of schooling makes women more likely to declare that a wife is justified in refusing sex when she is tired or when the husband has a sexually transmitted disease. The same increase in schooling makes women more likely to disagree with the statement that wife beating is justified and more likely to declare that the practice of female genital mutilation should be stopped. These results indicate that education empowers women because an increase in education makes women more intolerant of practices that conflict with their well-being. An increase in education also reduces the number of desired children and increases the propensity to use modern contraception and to be tested for AIDS.

We can determine a respondent's literacy based on their ability to read a sentence as asked in the survey. We find that a switch from being illiterate to being literate is not the

source of the change in attitudes. This is because an increase in education has no strong impact on women's literacy in Sierra Leone. Less than 40 percent of the individuals who have completed 1 to 3 years of schooling under the new program (post 2001) are literate or semi-literate. It is unclear through which particular mechanism education alters women's preferences. The impact could be due to a variety of factors ranging from the influence of teachers and peers as role models to socialization experiences in school. Nevertheless, an increase in education has a causal effect on preferences, much like the causal effect of education on health, although the exact mechanism remains also unclear in case of health outcomes (Mocan and Altindag 2012; Chou, Liu, Grossman and Joyce 2010; Cutler and Lleras-Muney 2010; Grossman 2008). The results are not driven by differential exposure to violence during the civil war of those who did and did not benefit from the education program.

Even though education empowers women so that they can voice preferences that are aligned with their own well-being, whether or not this would translate into actual behavioral change is unclear. This is because we also find that an increase in men's education, triggered by the program, does *not* alter *men's attitudes* regarding *women's well-being*. If men resist change, it is unclear if women's well-being would be improved in the short-run.[29] At the same time, it is also possible that a change in women's preferences, detected in this paper, could facilitate a change in men's preferences over a period of time. Furthermore, much like the transmission of human capital from mothers to daughters reported by previous research, it is possible that the change in women's preferences could have an impact on their daughter's preferences. Regardless, these findings are potentially important for women's well-being to the

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[29] Thus, sanctions for violence against women are important policy levers given the evidence on deterrent effect of punishment, even for violent crime (Machin et al. 2011, Corman and Mocan 2000, Kessler and Levitt 1999).

extent that exogenous changes in the legal and political structure may not be effective in improving women's well-being quickly if women themselves don't believe that such changes are necessary.

Figure 1

Sierra Leone divided by districts in 2004
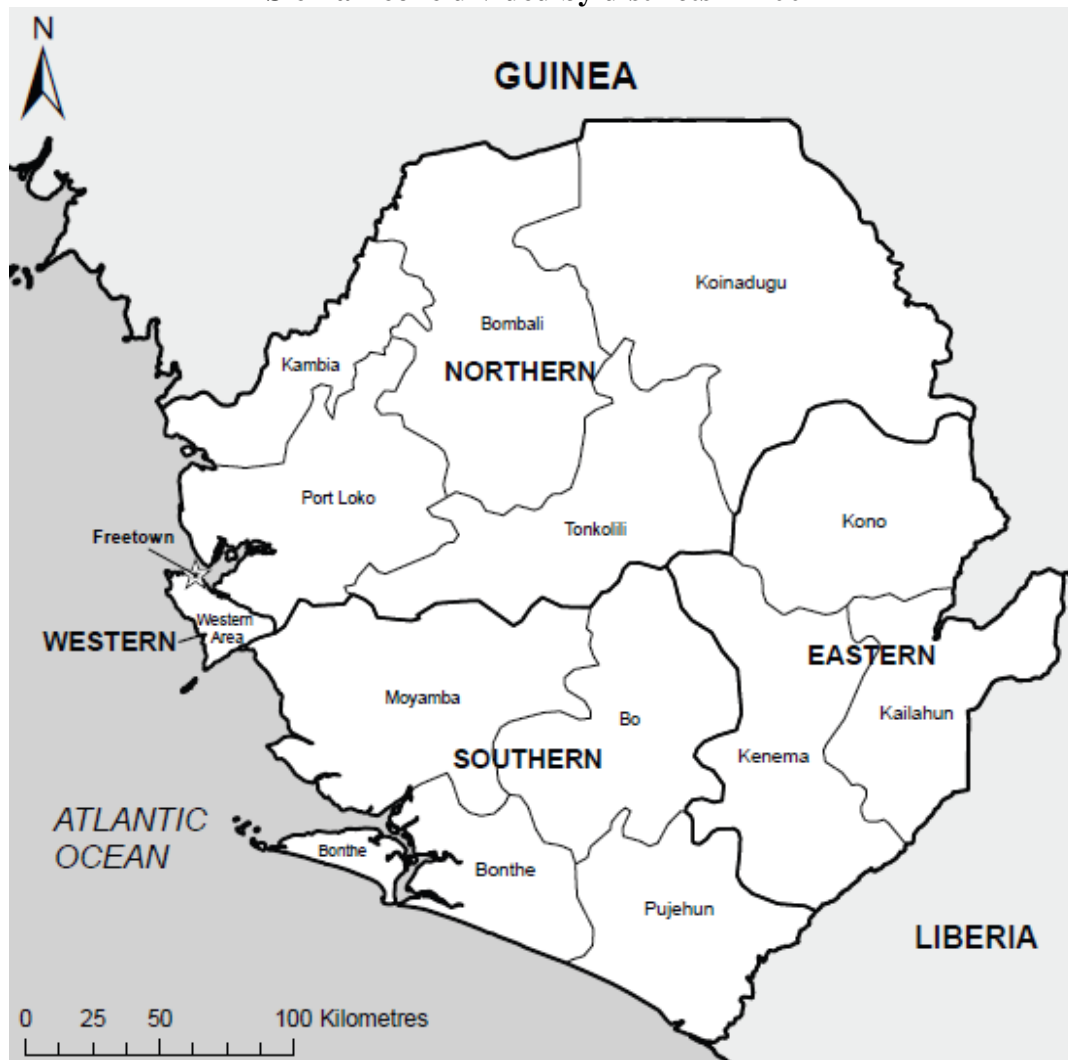
Notes: The fourteen districts are as follows: Eastern region consists of Kailahun, Kenema and Kono; Western region consists of the Western Urban Area (comprising mainly the capital Free Town) and the Western Rural Area; Northern region consists of Bombali, Kambia, Koinadugu, Port Loko and Tonkolili and the Southern region comprises Bo, Bonthe, Moyamba and Pujehun.

Source: Sierra Leone Demographic and Health Survey 2008 Report

Table 1
Summary Statistics: 2008 SLDHS Sample (Individual Level Data) - Females

Variables	Variable Definition	All	Treated group (Ages 8-11 in 2001)	Control group (Ages 15-21 in 2001)
		Mean (std)	Mean (std)	Mean (std)
	(1)	(2)	(3)	(4)
Desired number of children	Number of children desired	4.700 (2.116)	4.200 (2.113)	4.948 (2.074)
Modern contraceptives	Equals one if respondent uses modern contraceptives, zero otherwise	0.172	0.082	0.217
Tested for AIDS	Equals one if respondent has ever been tested for AIDS, zero otherwise	0.131	0.054	0.170
Wife justified in refusing sex when tired	Equals one if respondent thinks a wife is justified in refusing to have sex with her husband when she is tired or not in the mood, zero otherwise	0.559	0.499	0.589
Wife justified in refusing sex with STD husband	Equals one if respondent thinks a wife is justified in refusing to have sex with a husband who has a sexually transmitted disease, zero otherwise	0.485	0.443	0.507
Wife beating justified in refusing sex	Equals one if respondent thinks that wife beating is justified if she refuses to have sex with husband, zero otherwise	0.357	0.260	0.406
Stop female genital mutilation	Equals one if respondent thinks the practice of female genital mutilation should be discontinued, zero otherwise	0.296	0.371	0.259
Schooling	Years of schooling completed	2.863 (3.966)	4.389 (3.481)	2.107 (3.976)
Literate	Equals one if respondent is able to read all of a sentence, zero otherwise	0.257	0.436	0.169
Literate2	Equals one if respondent is able to read all of a sentence or some parts of a sentence, zero otherwise	0.319	0.576	0.193
Age	Age in years	22.521 (4.473)	16.548 (1.171)	25.482 (1.669)
Employed	Equals one if employed, zero otherwise	0.662	0.458	0.762
Married	Equals one if married, zero otherwise	0.558	0.209	0.731
Radio	Equals one if respondent's household has a radio, zero otherwise	0.604	0.620	0.596
Fridge	Equals one if respondent's household has a refrigerator, zero otherwise	0.083	0.104	0.073
TV	Equals one if respondent's household has a television, zero otherwise	0.129	0.151	0.119
Urban	Equals one if resides in an urban area, zero otherwise	0.383	0.451	0.349
Wealth 1(poorest)	Percentage of respondents within the first wealth quintile	0.177	0.148	0.192

Table 1 (concluded)

Wealth 2 (poorer)	Percentage of respondents within the second wealth quintile	0.168	0.150	0.177
Wealth 3 (middle)	Percentage of respondents within the third wealth quintile	0.195	0.182	0.202
Wealth 4 (richer)	Percentage of respondents within the fourth wealth quintile	0.215	0.225	0.209
Wealth 5 (richest)	Percentage of respondents within the fifth wealth quintile	0.245	0.295	0.220
Religion				
Christian	Equals one if belong to Christian religion, zero otherwise	0.216	0.258	0.195
Islam	Equals one if belong to Islam, zero otherwise	0.773	0.730	0.794
Other religion	Equals one if belong to another religion, zero otherwise	0.011	0.012	0.011
Ethnicity				
Temne	Equals one if belong to Temne ethnic group, zero otherwise	0.367	0.331	0.385
Mende	Equals one if belong to Mende ethnic group, zero otherwise	0.307	0.329	0.296
Other ethnicity	Equals one if belong to another ethnic group, zero otherwise	0.326	0.340	0.319
Observations		2,727	950	1,777
Education Resources (R)	Funding for primary education in the district measured as the logarithm of funding per 100 teachers in 2004. (N=14)	Mean=1.294, Std=0.637		

The descriptive statistics are calculated using sample weights from the SLDHS.

Table 2
The Impact of the FPE Program on Schooling - Females

	(1)	(2)	(3)
	Dependent variable: Years of Schooling		
FPE Cohort	0.521**		
	(0.238)		
FPE Cohort * R		0.706***	0.700***
		(0.204)	(0.236)
Christian	0.918***	0.905***	
	(0.212)	(0.211)	
Temne	-0.294	-0.332	
	(0.245)	(0.246)	
Mende	0.265	0.254	
	(0.243)	(0.248)	
Urban	0.980***	0.925***	
	(0.208)	(0.206)	
Married	-2.111***	-2.155***	
	(0.219)	(0.222)	
Employed	-0.761***	-0.763***	
	(0.166)	(0.172)	
Radio	0.323**	0.302**	
	(0.139)	(0.138)	
Fridge	1.234**	1.255**	
	(0.539)	(0.537)	
TV	0.611*	0.610*	
	(0.334)	(0.325)	
Wealth 1	-0.325*	-0.298	
	(0.188)	(0.190)	
Wealth 2	-0.019	-0.024	
	(0.185)	(0.188)	
Wealth 4	0.656***	0.649***	
	(0.193)	(0.196)	
Wealth 5	1.535***	1.526***	
	(0.355)	(0.359)	
District fixed-effects	Yes	Yes	Yes
Birth year fixed-effects	No	Yes	Yes
Observations	2,661	2,661	2,661
R-square	0.445	0.452	0.281

Standard errors in parentheses are clustered at the birth-year & district level. Statistical levels of significance: * indicates $p<0.1$, ** indicates $p<0.05$, *** indicates $p<0.01$. The FPE cohort consists of those who were 8 to 11 in 2001 while those who were 15 to 21 in 2001 form the control group. FPE Cohort*R is the product of the FPE Cohort dummy and the logarithm of district-level funding allocated for primary school education for every 100 teachers in 2004. Regressions are weighted by sample weights from the SLDHS.

Table 3A
The Impact of Schooling on Preferences – Instrumental Variables Regressions – Females

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Dependent variable:						
	Modern contracep-tives	Tested for AIDS	Desired number of children	Wife justified in refusing sex when tired	Wife justified in refusing sex with STD husband	Wife beating justified in refusing sex	Stop Female Genital Mutilation
Schooling	0.118**	0.112***	-0.340*	0.043	0.107**	-0.095*	0.088*
	(0.053)	(0.036)	(0.183)	(0.043)	(0.054)	(0.056)	(0.047)
Christian	-0.033	-0.032	-0.030	-0.036	-0.079	0.072	0.085
	(0.058)	(0.042)	(0.204)	(0.050)	(0.066)	(0.060)	(0.054)
Temne	0.037	0.054*	0.036	0.014	0.083**	0.031	-0.014
	(0.041)	(0.031)	(0.140)	(0.035)	(0.040)	(0.042)	(0.041)
Mende	-0.054	0.039	0.011	-0.111***	-0.053	-0.034	-0.038
	(0.042)	(0.036)	(0.176)	(0.037)	(0.049)	(0.041)	(0.042)
Urban	-0.096*	-0.068*	0.080	-0.046	-0.090	0.063	0.028
	(0.053)	(0.040)	(0.248)	(0.051)	(0.066)	(0.066)	(0.059)
Married	0.153	0.238***	-0.173	0.052	0.168	-0.090	0.100
	(0.115)	(0.083)	(0.421)	(0.102)	(0.121)	(0.122)	(0.105)
Employed	0.111**	0.079**	-0.095	-0.028	0.030	-0.034	0.033
	(0.048)	(0.033)	(0.184)	(0.042)	(0.052)	(0.050)	(0.039)
Radio	-0.045**	-0.023	0.051	0.024	-0.020	0.035	-0.041
	(0.022)	(0.022)	(0.123)	(0.026)	(0.031)	(0.031)	(0.028)
Fridge	-0.154*	-0.102	0.279	-0.022	-0.076	0.065	-0.016
	(0.085)	(0.062)	(0.291)	(0.061)	(0.091)	(0.095)	(0.080)
TV	0.021	-0.063	0.058	0.032	-0.076	-0.014	-0.053
	(0.061)	(0.053)	(0.209)	(0.068)	(0.064)	(0.059)	(0.052)
Wealth 1	0.006	0.008	0.093	0.071**	0.063	-0.038	-0.028
	(0.032)	(0.032)	(0.179)	(0.036)	(0.044)	(0.044)	(0.032)
Wealth 2	-0.012	0.019	0.262	0.059	0.034	0.033	-0.035
	(0.026)	(0.027)	(0.191)	(0.041)	(0.042)	(0.038)	(0.027)
Wealth 4	-0.042	-0.050	0.044	0.007	-0.061	-0.023	-0.057
	(0.038)	(0.039)	(0.194)	(0.043)	(0.053)	(0.054)	(0.052)
Wealth 5	-0.091	-0.117	0.095	-0.021	-0.123	0.047	-0.114
	(0.090)	(0.076)	(0.350)	(0.086)	(0.108)	(0.101)	(0.092)
District FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
First stage (F-stat.)	12.041	11.362	12.041	12.819	12.221	11.762	12.041
Observations	2,661	2,615	2,661	2,624	2,640	2,655	2,661

Notes: Standard errors in parentheses are clustered at the birth-year*district level. Statistical levels of significance are: * indicates $p<0.1$, ** indicates $p<0.05$, *** indicates $p<0.01$. The FPE cohort consists of those who were 8 to 11 in 2001 while those who were 15 to 21 in 2001 form the control group. Instrument: interaction of FPE cohort and R, where R is calculated as the logarithm of total funding allocated for primary school education for every 100 teachers in each district in 2004. Regressions are weighted by sample weight from the SLDHS.

Table 3B
The Impact of Schooling on Preferences – Instrumental Variables Regressions – Females
Regressions without Control Variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Dependent variable						
	Modern contracep-tives	Tested for AIDS	Desired number of children	Wife justified in refusing sex when tired	Wife justified in refusing sex with STD husband	Wife beating justified in refusing sex	Stop Female Genital Mutilati-on
Schooling	0.137**	0.130***	-0.357*	0.053	0.111*	-0.106*	0.096*
	(0.065)	(0.043)	(0.204)	(0.051)	(0.067)	(0.059)	(0.050)
District FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
First stage (F-stat.)	7.561	7.149	7.561	7.783	7.439	7.463	7.561
Observations	2,721	2,675	2,721	2,678	2,694	2,710	2,721

Notes: Standard errors in parentheses are clustered at the birth-year*district level. Statistical levels of significance are: * indicates p<0.1, ** indicates p<0.05, *** indicates p<0.01. The FPE cohort consists of those who were 8 to 11 in 2001 while those who were 15 to 21 in 2001 form the control group. Instrument: interaction of FPE cohort and *R*, where *R* is the logarithm of total funding allocated for primary school education for every 100 teachers in each district in 2004. Regressions are weighted by sample weight from the SLDHS.

Table 3C
The Impact of Schooling on Preferences – Reduced Form Regressions – Females
Regressions with Control Variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Dependent variable						
	Modern contracep-tives	Tested for AIDS	Desired number of children	Wife justified in refusing sex when tired	Wife justified in refusing sex with STD husband	Wife beating justified in refusing sex	Stop Female Genital Mutilati-on
FPE Cohort *R	0.084**	0.077***	-0.240*	0.032	0.076**	-0.066*	0.062**
	(0.039)	(0.027)	(0.134)	(0.032)	(0.036)	(0.037)	(0.028)
District FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,661	2,615	2,661	2,624	2,640	2,655	2,661
R-square	0.189	0.133	0.199	0.107	0.079	0.134	0.201

Notes: Standard errors in parentheses are clustered at the birth-year*district level. Statistical levels of significance are: * indicates p<0.1, ** indicates p<0.05, *** indicates p<0.01. The FPE cohort consists of those who were 8 to 11 in 2001 while those who were 15 to 21 in 2001 form the control group. Instrument: interaction of FPE cohort and *R*, where *R* is the logarithm of total funding allocated for primary school education for every 100 teachers in each district in 2004. Regressions are weighted by sample weight from the SLDHS. Regressions include controls for religion, ethnicity, urban residence, marital status, whether respondent's household has a radio, whether respondent's household has a television and a set of wealth status indicators.

Table 4
The Impact of Literacy on Preferences – OLS Regressions – Females

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Dependent variable:						
	Modern contracep-tives	Tested for AIDS	Desired number of children	Wife justified in refusing sex when tired	Wife justified in refusing sex with STD husband	Wife beating justified in refusing sex	Stop Female Genital Mutilati-on
Literate	0.165***	0.105***	-0.573***	0.114***	0.107***	-0.097***	0.164***
	(0.030)	(0.025)	(0.099)	(0.033)	(0.029)	(0.029)	(0.030)
Christian	0.056**	0.056***	-0.286***	-0.012	0.005	-0.004	0.151***
	(0.024)	(0.015)	(0.085)	(0.025)	(0.033)	(0.024)	(0.027)
Temne	0.007	0.024	0.108	0.003	0.051	0.058**	-0.031
	(0.027)	(0.021)	(0.117)	(0.032)	(0.032)	(0.030)	(0.036)
Mende	-0.019	0.074***	-0.081	-0.103***	-0.031	-0.056*	-0.012
	(0.029)	(0.029)	(0.137)	(0.036)	(0.042)	(0.032)	(0.037)
Urban	-0.003	0.020	-0.174	-0.022	-0.001	-0.015	0.094***
	(0.021)	(0.018)	(0.135)	(0.032)	(0.033)	(0.037)	(0.033)
Married	-0.069***	0.022	0.422***	-0.021	-0.047*	0.093***	-0.059***
	(0.023)	(0.020)	(0.102)	(0.029)	(0.026)	(0.028)	(0.022)
Employed	0.040**	0.007	0.112	-0.048*	-0.039	0.031	-0.014
	(0.018)	(0.016)	(0.106)	(0.027)	(0.032)	(0.024)	(0.024)
Radio	-0.017	0.004	-0.036	0.029	0.007	0.007	-0.023
	(0.016)	(0.015)	(0.110)	(0.023)	(0.026)	(0.024)	(0.023)
Fridge	-0.023	0.031	-0.079	0.015	0.037	-0.041	0.074
	(0.036)	(0.034)	(0.134)	(0.043)	(0.050)	(0.032)	(0.046)
TV	0.081**	-0.006	-0.125	0.061	-0.009	-0.072*	-0.006
	(0.037)	(0.031)	(0.188)	(0.062)	(0.061)	(0.043)	(0.042)
Wealth 1	-0.030	-0.029	0.177	0.059*	0.031	-0.009	-0.055**
	(0.023)	(0.023)	(0.167)	(0.035)	(0.038)	(0.039)	(0.027)
Wealth 2	-0.012	0.021	0.230	0.060	0.037	0.029	-0.035
	(0.023)	(0.022)	(0.186)	(0.041)	(0.041)	(0.036)	(0.028)
Wealth 4	0.022	0.018	-0.168	0.029	0.002	-0.079**	-0.009
	(0.020)	(0.020)	(0.150)	(0.035)	(0.039)	(0.035)	(0.038)
Wealth 5	0.061*	0.044	-0.344*	0.025	0.023	-0.085*	-0.008
	(0.032)	(0.036)	(0.192)	(0.056)	(0.052)	(0.048)	(0.050)
District FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,637	2,591	2,637	2,602	2,617	2,631	2,637

Notes: Standard errors in parentheses are clustered at the birth-year*district level. Statistical levels of significance are: * indicates p<0.1, ** indicates p<0.05, *** indicates p<0.01. The FPE cohort consists of those who were 8 to 11 in 2001 while those who were 15 to 21 in 2001 form the control group. Literate is a dummy variable to indicate literacy of the person. Regressions are weighted by sample weight from the SLDHS.

Table 5
Percentage of Literate and Semi-literate Females by Completed Schooling and Exposure to the FPE Program.

Education	Control Group (Not exposed to the FPE Program)		Treated Group (Exposed to the FPE Program)	
	Literate (%)	Literate or Semi-literate (%)	Literate (%)	Literate or Semi-literate (%)
0 years	0	0.7	0	0
1 to 3 years	0	7.5	9.2	45.8
4 to 6 years	5.6	27.0	28.9	72.3
Greater than 7 years	100	100	100	100

Table 6
Summary Statistics: 2008 SLDHS Sample - Males

Variables	Variable Definition	All	Treated group (Ages 8-11 in 2001)	Control group (Ages 15-21 in 2001)
		Mean (std)	Mean (std)	Mean (std)
	(1)	(2)	(3)	(4)
Desired number of children	Number of children desired	4.438 (2.938)	4.122 (2.731)	4.687 (3.070)
Modern contraceptives	Equals one if respondent uses modern contraceptives, zero otherwise	0.228	0.072	0.350
Tested for AIDS	Equals one if respondent has ever been tested for the AIDS virus, zero otherwise	0.070	0.024	0.101
Wife justified in refusing sex when tired	Equals one if respondent thinks a wife is justified in refusing to have sex with her husband when she is tired or not in the mood, zero otherwise	0.683	0.616	0.736
Wife justified in refusing sex with STD husband	Equals one if respondent thinks a wife is justified in refusing to have sex with a husband having an STD, zero otherwise	0.578	0.521	0.623
Wife beating justified in refusing sex	Equals one if respondent thinks that wife beating is justified if she refuses to have sex with husband, zero otherwise	0.231	0.239	0.225
Stop female genital mutilation	Equals one if respondent thinks the practice of female genital mutilation should be DISCONTINUED, zero otherwise	0.375	0.338	0.404
Schooling	Years of schooling completed	4.956 (4.678)	5.283 (3.547)	4.700 (5.392)
Literate	Equals one if respondent is able to read all of the sentence, zero otherwise	0.471	0.572	0.392
Literate2	Equals one if respondent is able to read all of the sentence or some parts of the sentence, zero otherwise	0.566	0.730	0.437
Age	Age in years	21.582 (4.733)	16.555 (1.171)	25.528 (1.858)
Employed	Equals one if employed, zero otherwise	0.705	0.525	0.845
Married	Equals one if married, zero otherwise	0.237	0.005	0.419
Radio	Equals one if respondent's household has a radio, zero otherwise	0.653	0.632	0.669
Fridge	Equals one if respondent's household has a refrigerator, zero otherwise	0.101	0.112	0.092
TV	Equals one if respondent's household has a television, zero otherwise	0.160	0.144	0.172
Urban	Equals one if resides in an urban area, zero otherwise	0.440	0.472	0.414
Wealth 1(poorest)	Percentage of respondents within the first wealth quintile	0.166	0.166	0.167

Table 6 (Concluded)

Wealth 2 (poorer)	Percentage of respondents within the second wealth quintile	0.160	0.153	0.166
Wealth 3 (middle)	Percentage of respondents within the third wealth quintile	0.160	0.148	0.169
Wealth 4 (richer)	Percentage of respondents within the fourth wealth quintile	0.209	0.219	0.201
Wealth 5 (richest)	Percentage of respondents within the fifth wealth quintile	0.304	0.314	0.297
Religion				
Christian	Equals one if belong to Christian religion, zero otherwise	0.223	0.208	0.234
Islam	Equals one if belong to Islam, zero otherwise	0.776	0.792	0.763
Other religion	Equals one if belong to another religion, zero otherwise	0.001	0.000	0.003
Ethnicity				
Temne	Equals one if belong to Temne ethnic group, zero otherwise	0.386	0.354	0.411
Mende	Equals one if belong to Mende ethnic group, zero otherwise	0.383	0.278	0.287
Other ethnicity	Equals one if belong to another ethnic group, zero otherwise	0.331	0.368	0.302
Observations		896	404	492

The descriptive statistics are calculated using sample weights from the SLDHS.

Table 7
The Impact of Schooling on Preferences – Instrumental Variables Regressions – Males

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Dependent variables						
	Modern contracep-tives	Tested for AIDS	Desired number of children	Wife justified in refusing sex when tired	Wife justified in refusing sex with STD husband	Wife beating justified in refusing sex	Stop Female Genital Mutilati-on
Schooling	0.069***	0.048***	-0.131	-0.037	-0.059	-0.024	0.011
	(0.026)	(0.015)	(0.216)	(0.056)	(0.049)	(0.039)	(0.031)
Christian	0.053	-0.003	-0.005	0.097	0.170**	-0.017	0.141**
	(0.049)	(0.035)	(0.312)	(0.075)	(0.076)	(0.057)	(0.059)
Temne	-0.008	-0.022	0.418	-0.058	0.105*	0.016	-0.019
	(0.047)	(0.027)	(0.256)	(0.050)	(0.056)	(0.045)	(0.054)
Mende	0.022	-0.040	0.137	-0.069	-0.025	0.048	-0.028
	(0.055)	(0.040)	(0.213)	(0.045)	(0.054)	(0.043)	(0.055)
Urban	-0.004	-0.072	0.528	0.000	0.060	0.082	0.052
	(0.065)	(0.045)	(0.390)	(0.122)	(0.109)	(0.079)	(0.075)
Married	-0.018	0.065*	0.721	-0.023	-0.112	-0.112	-0.036
	(0.063)	(0.038)	(0.473)	(0.117)	(0.113)	(0.090)	(0.067)
Employed	0.178***	0.121**	0.015	-0.045	-0.109	-0.011	0.046
	(0.065)	(0.050)	(0.476)	(0.134)	(0.123)	(0.087)	(0.072)
Radio	-0.007	0.030	0.070	0.028	0.007	-0.021	-0.010
	(0.036)	(0.023)	(0.233)	(0.043)	(0.056)	(0.047)	(0.047)
Fridge	0.057	0.179***	0.216	-0.070	-0.147**	-0.054	-0.050
	(0.043)	(0.040)	(0.235)	(0.089)	(0.075)	(0.078)	(0.059)
TV	-0.029	0.009	-0.280	0.009	0.088	0.078	-0.034
	(0.065)	(0.056)	(0.327)	(0.074)	(0.075)	(0.074)	(0.077)
Wealth 1	-0.031	0.018	0.521	-0.093	-0.085	-0.054	-0.039
	(0.054)	(0.035)	(0.442)	(0.078)	(0.085)	(0.077)	(0.070)
Wealth 2	-0.008	-0.001	0.677*	-0.034	0.023	0.016	-0.054
	(0.049)	(0.038)	(0.363)	(0.071)	(0.079)	(0.067)	(0.069)
Wealth 4	-0.005	-0.049	-0.797**	0.037	0.048	-0.039	-0.031
	(0.049)	(0.036)	(0.384)	(0.071)	(0.075)	(0.067)	(0.063)
Wealth 5	-0.124	-0.159***	-0.337	0.147	0.183	0.017	-0.002
	(0.076)	(0.061)	(0.670)	(0.136)	(0.133)	(0.117)	(0.109)
District FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
First stage (F-stat.)	12.145	11.736	12.145	9.145	10.499	11.240	12.145
Observations	883	723	883	859	863	879	883

Notes: Standard errors in parentheses are clustered at the birth-year*district level. Statistical levels of significance are: * indicates $p<0.1$, ** indicates $p<0.05$, *** indicates $p<0.01$. The FPE cohort consists of those who were 8 to 11 in 2001 while those who were 15 to 21 in 2001 form the control group. Instrument: interaction of FPE cohort and R, where R is the logarithm of total funding allocated for primary school education for every 100 teachers in each district in 2004. Regressions are weighted by sample weight from the SLDHS.

Table 8
The Impact of Schooling on Preferences – Instrumental Variables Regressions – Females
(Sample of Non-Movers)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Dependent variables						
	Modern contracep-tives	Tested for AIDS	Desired number of children	Wife justified in refusing sex when tired	Wife justified in refusing sex with STD husband	Wife beating justified in refusing sex	Stop Female Genital Mutilati-on
Schooling	0.055*	0.043*	-0.227*	0.005	0.054	-0.064**	0.051*
	(0.032)	(0.023)	(0.126)	(0.028)	(0.037)	(0.030)	(0.029)
Christian	0.004	0.035	(0.098)	0.031	(0.013)	0.048	0.100**
	(0.039)	(0.025)	(0.161)	(0.038)	(0.054)	(0.038)	(0.040)
Temne	(0.001)	0.025	0.117	0.060	0.091**	0.030	(0.026)
	(0.033)	(0.027)	(0.135)	(0.045)	(0.042)	(0.039)	(0.039)
Mende	(0.006)	0.009	0.031	-0.138***	(0.012)	(0.043)	(0.043)
	(0.040)	(0.035)	(0.187)	(0.043)	(0.055)	(0.051)	(0.049)
Urban	(0.064)	(0.024)	0.040	(0.004)	(0.049)	0.052	0.025
	(0.040)	(0.032)	(0.218)	(0.051)	(0.061)	(0.053)	(0.054)
Married	0.000	0.065	0.324	(0.049)	0.073	0.006	(0.006)
	(0.064)	(0.051)	(0.308)	(0.067)	(0.079)	(0.076)	(0.065)
Employed	0.056*	0.015	0.045	-0.069*	(0.025)	0.011	(0.013)
	(0.033)	(0.025)	(0.139)	(0.037)	(0.044)	(0.036)	(0.036)
Radio	-0.038*	-0.036*	0.086	0.032	(0.010)	(0.001)	(0.035)
	(0.021)	(0.019)	(0.143)	(0.031)	(0.033)	(0.031)	(0.033)
Fridge	(0.070)	(0.036)	0.026	0.039	-0.107**	(0.035)	0.094
	(0.061)	(0.034)	(0.182)	(0.052)	(0.055)	(0.044)	(0.080)
TV	0.054	(0.058)	0.141	0.068	0.021	0.043	(0.045)
	(0.058)	(0.040)	(0.248)	(0.069)	(0.068)	(0.057)	(0.064)
Wealth 1	(0.022)	(0.031)	0.218	0.047	(0.020)	-0.108**	(0.007)
	(0.030)	(0.031)	(0.194)	(0.044)	(0.055)	(0.049)	(0.037)
Wealth 2	(0.017)	(0.001)	0.481**	0.005	0.009	(0.029)	0.004
	(0.031)	(0.029)	(0.201)	(0.045)	(0.053)	(0.042)	(0.031)
Wealth 4	(0.010)	-0.056*	0.237	0.030	(0.070)	-0.099*	(0.011)
	(0.042)	(0.033)	(0.235)	(0.049)	(0.056)	(0.055)	(0.052)
Wealth 5	(0.034)	(0.018)	0.007	(0.011)	(0.107)	(0.023)	(0.002)
	(0.071)	(0.060)	(0.328)	(0.083)	(0.096)	(0.068)	(0.084)
District FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
First stage (F-stat.)	13.628	13.026	13.628	14.283	13.186	13.364	13.628
Observations	1,612	1,589	1,612	1,585	1,600	1,608	1,612

Notes: Standard errors in parentheses are clustered at the birth-year*district level. Statistical levels of significance are: * indicates p<0.1, ** indicates p<0.05, *** indicates p<0.01. The FPE cohort consists of those who were 8 to 11 in 2001 while those who were 15 to 21 in 2001 form the control group. Instrument: interaction of FPE cohort and R, where R is the logarithm of total funding allocated for primary school education for every 100 teachers in each district in 2004. Regressions are weighted by sample weight from the SLDHS.

Table 9
The Impact of Schooling on Preferences, Controlling for Exposure to War Violence –
Instrumental Variables Regression – Females

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Use modern contracep-tive	Tested for AIDS virus	Desired number of children	Wife justified in refusing sex when tired	Wife justified in refusing sex with STD husband	Wife beating justified in refusing sex	Stop Female Genital Mutilation
Schooling	0.100**	0.091***	-0.344*	0.060	0.111**	-0.098*	0.098**
	(0.050)	(0.031)	(0.184)	(0.045)	(0.051)	(0.054)	(0.049)
Log (Exposure to War Atrocities since Age 2)	-0.090***	-0.099***	-0.020	0.086	0.020	-0.016	0.048
	(0.032)	(0.038)	(0.243)	(0.062)	(0.075)	(0.057)	(0.039)
Christian	-0.018	-0.015	-0.026	-0.051	-0.083	0.075	0.077
	(0.055)	(0.036)	(0.207)	(0.052)	(0.063)	(0.059)	(0.056)
Temne	0.029	0.046*	0.034	0.021	0.085**	0.029	-0.010
	(0.038)	(0.027)	(0.142)	(0.036)	(0.039)	(0.042)	(0.042)
Mende	-0.050	0.044	0.012	-0.113***	-0.053	-0.034	-0.040
	(0.039)	(0.033)	(0.176)	(0.039)	(0.050)	(0.041)	(0.043)
Urban	-0.079	-0.050	0.084	-0.062	-0.093	0.066	0.019
	(0.051)	(0.035)	(0.253)	(0.052)	(0.064)	(0.064)	(0.060)
Married	0.112	0.193***	-0.181	0.090	0.177	-0.097	0.121
	(0.111)	(0.073)	(0.422)	(0.103)	(0.115)	(0.119)	(0.108)
Employed	0.095**	0.061**	-0.098	-0.013	0.033	-0.037	0.041
	(0.046)	(0.029)	(0.185)	(0.044)	(0.050)	(0.049)	(0.040)
Radio	-0.039*	-0.017	0.052	0.018	-0.022	0.036	-0.044
	(0.021)	(0.020)	(0.124)	(0.027)	(0.031)	(0.031)	(0.029)
Fridge	-0.129*	-0.074	0.284	-0.043	-0.081	0.069	-0.028
	(0.078)	(0.052)	(0.296)	(0.064)	(0.089)	(0.094)	(0.084)
TV	0.033	-0.051	0.061	0.021	-0.079	-0.012	-0.059
	(0.057)	(0.047)	(0.209)	(0.068)	(0.065)	(0.058)	(0.054)
Wealth 1	0.000	0.001	0.092	0.077**	0.065	-0.039	-0.025
	(0.030)	(0.029)	(0.178)	(0.037)	(0.043)	(0.044)	(0.032)
Wealth 2	-0.013	0.019	0.262	0.059	0.034	0.033	-0.035
	(0.024)	(0.025)	(0.192)	(0.041)	(0.042)	(0.039)	(0.028)
Wealth 4	-0.031	-0.036	0.046	-0.003	-0.063	-0.021	-0.063
	(0.036)	(0.035)	(0.197)	(0.045)	(0.053)	(0.054)	(0.053)
Wealth 5	-0.064	-0.085	0.101	-0.046	-0.129	0.052	-0.128
	(0.084)	(0.066)	(0.352)	(0.090)	(0.104)	(0.101)	(0.095)
District FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
First stage (F-stat.)	13.021	12.452	13.021	13.935	13.127	12.723	13.021
Observations	2,661	2,615	2,661	2,624	2,640	2,655	2,661

Notes: Standard errors in parentheses are clustered at the birth-year*district level. Statistical levels of significance are: * indicates $p<0.1$, ** indicates $p<0.05$, *** indicates $p<0.01$. The sample comprises the FPE cohort (those born during the period 1990 to 1993) and those females born during the period 1980 to 1985. Instrument: interaction of FPE cohort and FPE input, where FPE input is calculated as the logarithm of total funding allocated for primary school education for every 100 teachers in 2004. Regressions are weighted by sample weight from the SLDHS.

References

Banerjee, Abhijit, Shawn Cole, Ester Duflo and Leigh Linden. 2007. " Remedying Education: Evidence from Two randomized Experiments in India." *The Quarterly Journal of Economics,* 122:3, pp. 1235-64.

Becker, Gary S. and Casey B Mulligan. 1997. "The Endogenous Determination of Time Preference." *The Quarterly Journal of Economics,* 112:3, pp. 729-758.

Chong, Alberto and Eliana La Ferrara. 2009. "Television and Divorce: Evidence from Brazilian *NOVELAS*," *Journal of the European Economic Association*, 7:2-3, pp. 458-68.

Chou, Shin-Yi, Jin-Tan Liu, Michael Grossman, and Ted Joyce. 2010. "Parental Education and Child Health: Evidence from a Natural Experiment in Taiwan." *American Economic Journal: Applied Economics*, 2:1, pp. 33–61.

Corman, Hope, and H. Naci Mocan. 2000. "A Time-Series Analysis of Crime, Deterrence, and Drug Abuse in New York City." *American Economic Review*, 90(3): 584-604.

Currie, J. and E. Moretti. 2003. "Mother's education and the intergenerational transmission of human capital: evidence from college openings." *Quarterly Journal of Economics,* Vol. 118, pp. 1495-1532.

Cutler, D. and A. Lleras-Muney. 2010. "Understanding Differences in Health Behaviors by Education." *Journal of Health Economics,* 29, pp.1-28.

Dahl, Gordon B. and Enrico Moretti. 2008. "The Demand for Sons." *Review of Economic Studies,* 75: 4, pp. 1085-1120.

Dee, Thomas S. 2004. "Are There Civic Returns To Education?" *Journal of Public Economics*, volume 88, issue 9-10, pp. 1697-1720.

Duflo, Esther. 2001. "Schooling and Labor Market Consequences of School Construction in Indonesia: Evidence from an Unusual Policy Experiment." *American Economic Review,* 91:4 pp. 795-813.

Duflo, Esther. 2012. "Women Empowerment and Economic Development." *Journal of Economic Literature,* 50:4 pp. 1051-1079.

Durkheim, Emile, 1933. *The Division of Labor in Society*. New York: MacMillan.

El Feki, Shereen. 2013. *Sex and the Citadel: Intimate Life in a Changing Arab World.* New York: Pantheon.

Friedman, Willa, Michael Kremer, Edward Miguel and Rebecca
  Thornton. 2011. "Education as Liberation." NBER Working Paper. No: 16939.

Galor, Oded and David N. Weil. 1996. "The Gender Gap, Fertility, and Growth." *American Economic Review*, 86:3, pp. 374-87.

Grossman, Michael. 1972a. "On the Concept of Health Capital and the Demand for Health." *Journal of Political Economy,* 80:2, pp. 223-255.

Grossman, Michael. 1972b. *The Demand for Health: A Theoretical and Empirical Investigation.* New York: Columbia University Press for the National Bureau of Economic Research.

Grossman, M. 2008. "The Relationship between Health and Schooling." *Eastern Economic Journal,* 34:3, pp. 281-92.

Hanushek, Eric A. and Dennis Kimko. 2000. "Schooling, Labor Force Quality, and the Growth of Nations." *American Economic Review*, 90:5, pp. 1184-1208.

International Monetary Fund. 2001. *Republic of Sierra Leone Interim Poverty Reduction Strategy Paper.* Freetown: Sierra Leone.
  http://www.imf.org/external/np/prsp/2001/sle/01/063101.pdf (Accessed July 19, 2010).

Jensen, Robert and Emily Oster. 2009. "The Power of TV: Cable Television and Women's Status in India." *The Quarterly Journal of Economics*, 124:3, pp. 1057-1094.

Kessler, D., and S. D. Levitt. 1999. "Using Sentence Enhancements to Distinguish Between Deterrence and Incapacitation." *Journal of Law and Economics*, Vol. XLII, pp. 343-63

Knowles, Stephen, Paula K. Lorgelly, and P. Dorian Owen. 2002. "Are Educational Gender Gaps a Brake on Economic Development? Some Cross-Country Empirical Evidence." *Oxford Economic Papers*, 54:1, pp. 118-149.

Lagerlöf, Nils-Petter. 2003. "Gender Equality and Long-Run Growth." *Journal of Economic Growth*, 8:4, pp. 403-26.

Lleras-Muney, Adriana. 2005. "The Relationship between Education and Adult Mortality in the United States." *Review of Economic Studies,* 72:1, pp. 189-221.

Mocan, Naci and Duha Altindag, 2012. "Education, Cognition, Health Knowledge and Health Behavior." NBER working paper No: 17949.

Osili, Una Okonkwo and Bridget Terry Long. 2008. "Does female schooling reduce fertility? Evidence from Nigeria." *Journal of Development Economics,* Volume 87, pp. 57-75.

Psacharopoulos, George. 1994. "Returns to investment in education: A global update." *World Development*, 22:9, pp. 1325-1343.

Schultz, T. Paul. 2002. "Why Governments Should Invest More to Educate Girls." *World Development,* 30:2, pp. 207-225.

Statistics Sierra Leone and ICF Macro. 2009a. *Sierra Leone Demographic and Health Survey 2008*. Calverton, Maryland, USA: Statistics Sierra Leone and ICF Macro. http://www.measuredhs.com/pubs/pdf/FR225/FR225.pdf (Accessed September 13, 2012).

Statistics Sierra Leone and ICF Macro. 2009b. *Sierra Leone Demographic and Health Survey 2008: Key Findings*. Calverton, Maryland, USA: SSL and ICF Macro. http://www.measuredhs.com/pubs/pdf/SR171/SR171.pdf (Accessed April 17, 2012).

Truth, Sierra Leone. 2004a. "Witness to Truth: Final Report of the Truth and Reconciliation Commission for Sierra Leone." Vol. 2, Chapter 1: "Executive Summary". http://www.sierraleonetrc.org/ (Accessed June 24, 2013)

Truth, Sierra Leone. 2004b. "Witness to Truth: Final Report of the Truth and Reconciliation Commission for Sierra Leone." Appendix 1: "Statistical Appendix o the Report of the Truth and Reconciliation Commission of Sierra Leone". http://www.sierraleonetrc.org/ (Accessed June 24, 2013)

Truth, Sierra Leone. 2004c. "Witness to Truth: Final Report of the Truth and Reconciliation Commission for Sierra Leone." Volume 1 Appendices. http://www.sierraleonetrc.org/ (Accessed June 24, 2013)

UNDP. 2007. *Sierra Leone Human Development Report.* Freetown: UNDP. http://hdr.undp.org/en/reports/nationalreports/africa/sierraleone/sierraleone_nhdr_20 071.pdf (Accessed July 22, 2010).

UNESCO Institute for Statistics. 2011. *Global Education Digest 2011: Comparing Education Statistics Across the World.* UNESCO, Montreal: UIS. http://www.uis.unesco.org/Library/Documents/global_education_digest_2011_en.pd f (Accessed April 17, 2012).

Weber, Max. 1964 [1922]. *The Sociology of Religion*. Boston: Beacon.

World Bank. 2007. *Education in Sierra Leone: Present Challenges, Future Opportunities* United Nations. African Human Development Series. World Bank: Washington, D.C. http://www.sierraleoneportal.net/rainbow/Portals/_EduSL/Documents/CSR_eBook%20(Sierra%20Leone).pdf (Accessed July 15, 2010).

World Health Organization. 2013. *Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner sexual violence.* World Health Organization: Geneva, Switzerland. http://apps.who.int/iris/bitstream/10665/85239/1/9789241564625_eng.pdf (Accessed June 23, 2013).

World Health Organization. 2010. *Manual for early infant male circumcision under local anaesthesia.* World Health Organization: Geneva, Switzerland. http://whqlibdoc.who.int/publications/2010/9789241500753_eng.pdf (Accessed April 17, 2012).

World Health Organization. 2008. *Eliminating Female Genital Mutilation: An Interagency Statement*. Department of Reproductive and Health Research. World Health Organization: Geneva, Switzerland. http://www.un.org/womenwatch/daw/csw/csw52/statements_missions/Interagency_Statement_on_Eliminating_FGM.pdf (Accessed April 17, 2012).

Appendix 1

Preference questions as appearing in the SLDHS

1. If you could go back to the time you did not have children and could choose exactly the number of children to have in your whole life, how many would that be? Or for those with no living children, the following question was asked: If you could choose exactly the number of children to have in your whole life, how many would that be?

2. Is a wife justified in refusing to have sex with her husband when she is tired or not in the mood?

3. Have you ever used any (any of the contraceptive methods)?

4. I don't want to know the results, but have you ever been tested to see if you have AIDS?

5. Husband and wives do not always agree in everything. If a wife knows her husband has a disease that she can get during sexual intercourse, is she justified in refusing to have sex with him?

6. Sometimes a husband is annoyed or angered by the things that his wife does. In your opinion, is a husband justified in hitting or beating his wife in the following situations: if she refuses to have sex with him? (Other situations were given to the respondent as well)

7. Do you think that this practice (female genital cutting) should be continued, or should it be stopped?

Table Appendix A-0
The Impact of Schooling on Preferences – Ordinary Least Squares (OLS) Regressions –
Females

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Dependent variable:						
	Modern contraceptives	Tested for AIDS	Desired number of children	Wife justified in refusing sex when tired	Wife justified in refusing sex with STD husband	Wife beating justified in refusing sex	Stop Female Genital Mutilation
Schooling	0.025***	0.019***	-0.067***	0.014***	0.011***	-0.015***	0.022***
	(0.003)	(0.003)	(0.012)	(0.004)	(0.004)	(0.003)	(0.004)
Christian	0.053**	0.053***	-0.281***	-0.009	0.008	-0.001	0.146***
	(0.024)	(0.016)	(0.085)	(0.025)	(0.033)	(0.023)	(0.027)
Temne	0.007	0.025	0.124	0.004	0.052	0.056*	-0.036
	(0.027)	(0.021)	(0.116)	(0.032)	(0.032)	(0.030)	(0.035)
Mende	-0.029	0.064**	-0.062	-0.105***	-0.029	-0.056*	-0.020
	(0.029)	(0.028)	(0.135)	(0.036)	(0.042)	(0.033)	(0.037)
Urban	-0.008	0.016	-0.176	-0.019	-0.000	-0.012	0.090***
	(0.021)	(0.018)	(0.133)	(0.031)	(0.033)	(0.037)	(0.032)
Married	-0.048**	0.042**	0.414***	-0.011	-0.042	0.081***	-0.043**
	(0.022)	(0.020)	(0.104)	(0.029)	(0.028)	(0.028)	(0.020)
Employed	0.042**	0.009	0.107	-0.050*	-0.044	0.026	-0.016
	(0.018)	(0.016)	(0.104)	(0.027)	(0.031)	(0.023)	(0.024)
Radio	-0.015	0.005	-0.036	0.033	0.012	0.009	-0.020
	(0.015)	(0.014)	(0.111)	(0.023)	(0.025)	(0.024)	(0.023)
Fridge	-0.037	0.015	-0.063	0.011	0.044	-0.039	0.067
	(0.036)	(0.031)	(0.132)	(0.042)	(0.049)	(0.031)	(0.048)
TV	0.079**	-0.005	-0.111	0.050	-0.021	-0.061	-0.012
	(0.037)	(0.032)	(0.187)	(0.059)	(0.057)	(0.043)	(0.042)
Wealth 1	-0.022	-0.021	0.175	0.063*	0.034	-0.015	-0.048*
	(0.022)	(0.022)	(0.167)	(0.034)	(0.038)	(0.038)	(0.027)
Wealth 2	-0.012	0.020	0.262	0.060	0.035	0.033	-0.035
	(0.023)	(0.021)	(0.186)	(0.041)	(0.040)	(0.035)	(0.028)
Wealth 4	0.021	0.017	-0.139	0.026	0.003	-0.077**	-0.013
	(0.019)	(0.020)	(0.149)	(0.033)	(0.038)	(0.035)	(0.037)
Wealth 5	0.052	0.032	-0.322*	0.023	0.027	-0.076	-0.012
	(0.032)	(0.036)	(0.193)	(0.055)	(0.051)	(0.048)	(0.048)
District FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,661	2,615	2,661	2,624	2,640	2,655	2,661
R-square	0.222	0.156	0.207	0.114	0.081	0.141	0.220

Notes: Standard errors in parentheses are clustered at the birth-year*district level. Statistical levels of significance are: * indicates p<0.1, ** indicates p<0.05, *** indicates p<0.01. Regressions are weighted by sample weight from the SLDHS. Constant term is not reported.

Table Appendix A-1
The Impact of Schooling on Preferences – Instrumental Variables Regressions – Females
(Control Group: Females 12-16 in 2001)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Dependent variables						
	Modern contracep-tives	Tested for AIDS	Desired number of children	Wife justified in refusing sex when tired	Wife justified in refusing sex with STD husband	Wife beating justified in refusing sex	Stop Female Genital Mutilati-on
Schooling	0.073**	0.096***	-0.019	0.041	0.091*	-0.055	0.026
	(0.037)	(0.031)	(0.156)	(0.038)	(0.051)	(0.046)	(0.034)
Christian	0.019	-0.016	-0.412***	-0.006	-0.045	0.054	0.197***
	(0.037)	(0.031)	(0.129)	(0.034)	(0.049)	(0.037)	(0.038)
Temne	-0.021	0.083**	0.073	0.019	0.029	0.097**	-0.043
	(0.033)	(0.037)	(0.123)	(0.039)	(0.039)	(0.039)	(0.040)
Mende	-0.006	0.012	-0.094	-0.042	-0.045	-0.034	-0.013
	(0.037)	(0.041)	(0.158)	(0.045)	(0.059)	(0.041)	(0.042)
Urban	-0.049	-0.046	-0.034	-0.036	-0.130*	-0.046	0.035
	(0.042)	(0.043)	(0.212)	(0.057)	(0.067)	(0.059)	(0.054)
Married	0.120	0.289***	0.609	0.101	0.230	0.038	-0.010
	(0.103)	(0.095)	(0.444)	(0.111)	(0.144)	(0.131)	(0.094)
Employed	0.103**	0.118***	0.288	-0.008	0.054	-0.045	-0.020
	(0.050)	(0.043)	(0.201)	(0.049)	(0.067)	(0.057)	(0.049)
Radio	-0.015	-0.033	-0.119	0.031	-0.007	0.003	-0.007
	(0.019)	(0.021)	(0.134)	(0.029)	(0.036)	(0.035)	(0.029)
Fridge	-0.038	-0.043	0.028	-0.068*	0.010	-0.018	0.061
	(0.035)	(0.042)	(0.152)	(0.036)	(0.054)	(0.045)	(0.055)
TV	0.023	-0.091	-0.276	0.106*	-0.073	-0.010	-0.032
	(0.063)	(0.056)	(0.204)	(0.061)	(0.085)	(0.067)	(0.057)
Wealth 1	-0.046*	-0.007	0.220	-0.086*	-0.096*	-0.028	-0.027
	(0.026)	(0.036)	(0.197)	(0.048)	(0.053)	(0.048)	(0.037)
Wealth 2	-0.033	0.025	0.382*	0.037	0.022	0.010	-0.043
	(0.021)	(0.033)	(0.207)	(0.045)	(0.048)	(0.043)	(0.037)
Wealth 4	-0.044	-0.049	0.004	0.007	-0.038	0.004	-0.002
	(0.038)	(0.045)	(0.185)	(0.047)	(0.065)	(0.055)	(0.045)
Wealth 5	-0.044	-0.104*	-0.137	-0.067	-0.064	0.015	0.006
	(0.061)	(0.063)	(0.277)	(0.075)	(0.091)	(0.076)	(0.069)
District FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
First stage (F-stat.)	13.064	12.243	13.064	12.772	12.952	12.860	13.064
Observations	1,953	1,918	1,953	1,935	1,941	1,951	1,953

Notes: Standard errors in parentheses are clustered at the birth-year*district level. Statistical levels of significance are: * indicates p<0.1, ** indicates p<0.05, *** indicates p<0.01. The FPE cohort consists of those who were 12 to 16 in 2001 while those who were 12 to 16 in 2001 form the control group. Instrument: interaction of FPE cohort and R, where R is the logarithm of total funding allocated for primary school education for every 100 teachers in each district in 2004. Regressions are weighted by sample weight from the SLDHS.

Table Appendix A-2
The Impact of Schooling on Preferences – Instrumental Variables Regressions – Females
(Includes Females 12-14 in 2001 With a Treatment Value of 0.5)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Dependent variables						
	Modern contracep-tives	Tested for AIDS	Desired number of children	Wife justified in refusing sex when tired	Wife justified in refusing sex with STD husband	Wife beating justified in refusing sex	Stop Female Genital Mutilati-on
Schooling	0.090**	0.097***	-0.260*	0.050	0.098**	-0.069	0.064*
	(0.039)	(0.030)	(0.152)	(0.037)	(0.045)	(0.046)	(0.038)
Christian	-0.014	-0.006	-0.140	-0.037	-0.084*	0.064	0.127***
	(0.041)	(0.033)	(0.156)	(0.039)	(0.051)	(0.045)	(0.042)
Temne	0.008	0.092***	0.077	0.019	0.064**	0.055	-0.019
	(0.032)	(0.026)	(0.113)	(0.030)	(0.032)	(0.034)	(0.033)
Mende	-0.038	0.028	-0.043	-0.069**	-0.052	-0.038	-0.024
	(0.030)	(0.030)	(0.123)	(0.034)	(0.042)	(0.031)	(0.032)
Urban	-0.051	-0.047	-0.006	-0.049	-0.114**	0.005	0.046
	(0.039)	(0.034)	(0.189)	(0.043)	(0.054)	(0.052)	(0.046)
Married	0.118	0.244***	-0.063	0.069	0.178	-0.026	0.062
	(0.094)	(0.076)	(0.373)	(0.092)	(0.110)	(0.111)	(0.091)
Employed	0.118***	0.105***	-0.036	0.001	0.044	-0.038	0.037
	(0.045)	(0.034)	(0.177)	(0.042)	(0.051)	(0.050)	(0.041)
Radio	-0.029*	-0.024	0.020	0.024	-0.018	0.017	-0.024
	(0.016)	(0.017)	(0.096)	(0.022)	(0.027)	(0.026)	(0.022)
Fridge	-0.095*	-0.067	0.204	-0.064	-0.033	0.040	0.018
	(0.056)	(0.047)	(0.218)	(0.049)	(0.071)	(0.067)	(0.056)
TV	0.047	-0.070	-0.002	0.061	-0.062	-0.050	-0.048
	(0.044)	(0.044)	(0.160)	(0.051)	(0.055)	(0.047)	(0.042)
Wealth 1	-0.020	-0.017	0.146	0.003	0.007	-0.020	-0.029
	(0.022)	(0.026)	(0.146)	(0.033)	(0.038)	(0.037)	(0.025)
Wealth 2	-0.017	0.014	0.235	0.035	0.020	0.004	-0.015
	(0.020)	(0.023)	(0.154)	(0.034)	(0.037)	(0.033)	(0.025)
Wealth 4	-0.035	-0.042	0.038	-0.011	-0.045	-0.030	-0.017
	(0.030)	(0.034)	(0.157)	(0.038)	(0.047)	(0.045)	(0.042)
Wealth 5	-0.062	-0.103*	0.056	-0.060	-0.098	0.011	-0.046
	(0.066)	(0.061)	(0.278)	(0.072)	(0.087)	(0.080)	(0.073)
District FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
First stage (F-stat.)	15.302	14.413	15.302	15.882	15.179	15.149	15.302
Observations	3,709	3,637	3,709	3,664	3,681	3,702	3,709

Notes: Standard errors in parentheses are clustered at the birth-year*district level. Statistical levels of significance are: * indicates p<0.1, ** indicates p<0.05, *** indicates p<0.01. Instrument: interaction of FPE cohort and R, where R is the logarithm of total funding allocated for primary school education for every 100 teachers in each district in 2004. Regressions are weighted by sample weight from the SLDHS.

The Impact of Schooling on Preferences: Schooling Interaction with Exposure to War Violence
Instrumental Variables Regression – Females

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Use modern contracep- tive	Tested for AIDS virus	Desired number of children	Wife justified in refusing sex when tired	Wife justified in refusing sex with STD husband	Wife beating justified in refusing sex	Stop Female Genital Mutilation
Schooling x log (Violence since Age 2)	0.013**	0.012***	-0.045*	0.008	0.014**	-0.013*	0.013**
	(0.007)	(0.004)	(0.024)	(0.006)	(0.007)	(0.007)	(0.006)
log (Violence since Age 2)	-0.116***	-0.122***	0.068	0.071	-0.008	0.009	0.023
	(0.031)	(0.042)	(0.238)	(0.061)	(0.074)	(0.057)	(0.039)
Christian	-0.013	-0.010	-0.043	-0.048	-0.078	0.070	0.081
	(0.052)	(0.034)	(0.196)	(0.050)	(0.061)	(0.057)	(0.053)
Temne	0.025	0.042	0.049	0.018	0.081**	0.033	-0.014
	(0.036)	(0.026)	(0.137)	(0.035)	(0.037)	(0.039)	(0.040)
Mende	-0.048	0.046	0.004	-0.112***	-0.051	-0.036	-0.038
	(0.038)	(0.033)	(0.172)	(0.038)	(0.049)	(0.040)	(0.042)
Urban	-0.079	-0.051	0.086	-0.062	-0.094	0.067	0.018
	(0.051)	(0.034)	(0.251)	(0.052)	(0.064)	(0.064)	(0.059)
Married	0.104	0.185***	-0.151	0.085	0.167	-0.088	0.112
	(0.106)	(0.069)	(0.403)	(0.100)	(0.111)	(0.114)	(0.101)
Employed	0.091**	0.057**	-0.084	-0.016	0.029	-0.032	0.037
	(0.044)	(0.028)	(0.177)	(0.043)	(0.049)	(0.047)	(0.038)
Radio	-0.038*	-0.016	0.049	0.019	-0.021	0.035	-0.043
	(0.020)	(0.020)	(0.122)	(0.027)	(0.031)	(0.031)	(0.028)
Fridge	-0.122*	-0.068	0.260	-0.039	-0.074	0.062	-0.022
	(0.073)	(0.048)	(0.278)	(0.062)	(0.085)	(0.088)	(0.078)
TV	0.042	-0.041	0.027	0.027	-0.068	-0.022	-0.049
	(0.054)	(0.045)	(0.201)	(0.066)	(0.063)	(0.055)	(0.050)
Wealth 1	-0.001	0.000	0.094	0.077**	0.064	-0.039	-0.025
	(0.029)	(0.028)	(0.177)	(0.037)	(0.043)	(0.044)	(0.032)
Wealth 2	-0.014	0.018	0.265	0.059	0.033	0.034	-0.035
	(0.024)	(0.025)	(0.191)	(0.041)	(0.042)	(0.038)	(0.028)
Wealth 4	-0.031	-0.036	0.046	-0.003	-0.064	-0.022	-0.063
	(0.035)	(0.034)	(0.197)	(0.045)	(0.053)	(0.054)	(0.052)
Wealth 5	-0.064	-0.084	0.101	-0.046	-0.129	0.052	-0.128
	(0.084)	(0.065)	(0.350)	(0.090)	(0.103)	(0.100)	(0.094)
District FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
First stage (F-stat.)	14.112	13.492	14.112	15.073	14.135	13.815	14.112
Observations	2,661	2,615	2,661	2,624	2,640	2,655	2,661

Notes: Standard errors in parentheses are clustered at the birth-year*district level. Statistical levels of significance are: * indicates p<0.1, ** indicates p<0.05, *** indicates p<0.01. The sample comprises the FPE cohort (those born during the period 1990 to 1993) and those females born during the period 1980 to 1985. Instrument: interaction of FPE cohort and FPE input, where FPE input is calculated as the logarithm of total funding allocated for primary school education for every 100 teachers in 2004. Regressions are weighted by sample weight from the SLDHS. "Violence since Age 2" stands for exposure to the number of war atrocities.