Family Structure and Children’s Schooling in sub-Saharan Africa

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Abstract

To examine the effect of family structure on children’s schooling in sub-Saharan Africa, we employed Multi-level Modeling to analyse data from recent Demographic and Health Surveys (DHS) in 26 African Countries. In general, both polygyny and presence of a husband in the home detract from children’s education. After controlling for maternal education, children of single, never married mothers and those who are divorced or separated have educational disadvantage, suggesting the importance of maternal education for children’s educational outcomes. Males are more likely than females to have higher educational attainment, especially those in polygynous families. It is recommended that female education in general and the education of the girl-child in particular, be encouraged as a way of discouraging such negative cultural attitudes and practices as polygyny and bias in favour of boys’ education.

Keywords: Monogamy, Polygyny, Marital Status, Multi-level Regression, Patriarchy.

Résumé

Pour examiner l’effet de la structure familiale sur la scolarisation des enfants en Afrique subsaharienne, nous avons utilisé une modélisation multi-niveaux pour analyser les données des récentes enquêtes démographiques et sanitaires (DHS) dans 26 pays africains. En général, la polygynie et la présence d’un mari dans la maison nuisent à l’éducation des enfants. Après
avoir contrôlé l’éducation maternelle, les enfants des mères célibataires, jamais mariés et ceux qui sont divorcés ou séparés ont un désavantage éducatif, ce qui suggère l’importance de l’éducation maternelle pour les résultats scolaires des enfants. Les hommes sont plus susceptibles que les femmes d’avoir un niveau de scolarité plus élevé, en particulier ceux des familles polygynes. Il est recommandé que l’éducation des femmes en général et l’éducation des filles en particulier soient encouragées afin de décourager de telles attitudes et pratiques culturelles négatives comme la polygynie et le parti pris en faveur de l’éducation des garçons.

Mots-clés: Monogamie, Polygynie, État matrimonial, Régression à plusieurs niveaux, Patriarcat.

Introduction

Following worldwide family structural changes as a result of such socio-demographic processes as industrialization, urbanization and in recent years, the HIV/AIDS epidemic, family scholars in different contexts have sought to relate several child outcomes to these family structural changes. But, despite the decades-old empirical research on the relationship between family structure and child outcomes, there is hardly any consensus regarding the direction of the relationship in the existing literature. For instance, in the Western context, where there is a long history of this tradition of research, one strand of family scholarship has found that marriage and the presence of a father are good for the psycho-social development of children (e.g. Fagan, 2012; McLanahan and Sandefur, 1994; Sun & Li, 2011; Sweeney, 2010; Wilcox, Lippman, Whitney and Cid, 2009).

As far as educational outcomes are concerned, many cross-sectional and longitudinal studies in the Western context have suggested that the number of parents available to children has strong effects on educational outcomes. Children raised by two biological, married parents score higher on both mathematics and reading tests than children in other family types (Sun and Li, 2011; Formby and Cherlin, 2007; Cavanaugh, Schiller and Riegle-Crumb, 2006; Hofferth, 2006; McLanahan and Sandefur, 1994). Similar patterns exist for self-reported grades, educational expectations, high school completion, and enrolment in post-secondary schooling (Sun and Li, 2009; Heard, 2007; Sun, 2003; Ermisch and Francesconi, 2001).

Following this tradition of research in the West, many studies in Africa have associated positive child outcomes with the presence of two biological parents in the household. For example, some studies in South Africa have found that family structure is highly correlated with educational outcomes (e.g. Anderson, 2000; Case and Ardington, 2006). As a dimension of schooling, in Kenya, some studies have observed that children in two-parent households were 1.23 times more likely to be in the right grade for age compared to children in one-parent households. Moreover, children living with one or two biological parents were more likely to be enrolled in school, compared with children living with no biological parents (e.g. Abuya, Oketch, Mutisya, Ngware & Ciera, 2012;
In a study of black Africans in South Africa, Anderson (2000) found that family structure was highly correlated with educational outcomes. The strongest effects were seen for children living with neither of their genetic parents, who were less likely to be enrolled in school, had completed fewer grades, were older for their grade if enrolled, and had less money spent on their school fees and related transportation costs than children living with both biological parents (see also Case and Ardington, 2006; Cherian, 1989; 1994). While Africans aged 8 to 18 from female-headed households were more likely to be enrolled in school than those from male-headed households, children from female-headed households experienced less total educational mobility than do those from male-headed households (Nimubona and Vencatachellum, 2007). Among Coloureds and Asians, the odds of dropping out were 1.3 times and 1.5 times greater for children in female-headed households as for those of children living in male-headed households. Further, in their study of race differences in educational outcomes in post-apartheid South Africa, Heaton, Amoateng and Dufur (2014) found that contrary to existing research, children in female-headed households were at par with children in two parent families (the comparison group), while children in households without a mother had a substantial disadvantage.

But, many researchers have challenged the notion of negativity associated with family types other than the two-parent type in both Western and non-Western contexts (see e.g. Anderson, 2000; Case and Ardington, 2006; Cosaro, 2003; Formby and Cherlin, 2007; Sibanda, 2004; Sun and L, 2011). Specifically, a number of studies in Africa have found that children are more likely to succeed in the educational arena if they are raised in female-headed households, compared with children raised in homes with their two biological parents (see e.g. Fuller and Liang, 1999; Lloyd and Blanc, 1996; Lloyd and Gage-Brandon, 1994; Wilcox et al., 2009).

The Study’s Rationale

From the brief review of the existing research on the relationship between family structure and child outcomes two fundamental problems that afflict this literature are manifest. Firstly, the tradition of research that underlies the notion that a two-parent family engenders positive child outcomes is based on a model of the family that is not universal. According to this concept of the family, kin groups do not play a central role in child care and familial obligations. Further, even though women often take on the major responsibility for childcare in this model of the family, egalitarian norms imply that women should be free to choose this role and that men should be supportive. Individualism implies that each partner has the right to pursue their own goals.

Secondly, and related to the first problem, this tradition of research of the relationship between family structure and child outcomes has predominantly emphasized one
dimension of family structure, namely, the presence of two biological parents in the home. But, because of the seemingly fundamental differences between Western and non-Western societies, it is not clear that the consequences of family structure will have the same impact in societies with different models of family. For example, the findings about the positive effects of marriage and the presence of a father on children in the West and to some extent other societies in Africa may not be generalizable to all contexts. Moreover, inconsistent findings may result for several reasons including the rapid pace of social change, the complex nature of family structures, and cross-cultural differences.

It is against this background of different customs and practices with regards to family life in general, and marriage in particular, that we undertake the present study. The study seeks to contribute to the existing literature by considering three dimensions of family structure, namely, marital status of the mother, presence of the father and whether a marriage is polygynous or monogamous on children’s schooling. We also consider different impacts for sons and daughters, and compare urban and rural areas. We focus on children’s schooling because education plays a major role in future life chances and because families have a significant impact on children’s schooling.

Review Of The Literature

Marriage has always been a central event defining the family as a major social institution in virtually all African social systems. This is mainly the reason for the near universal nature of marriages in African societies. While the institution of marriage takes diverse forms, the normative pattern involves the presence of a husband and a wife or wives with their children and in most cases other kin in the same household. However, in Africa, this model of the family has been changing following social changes wrought by the colonial project and other socioeconomic processes. For instance, the introduction of wage labour impelled men who were instrumental in the family production process to migrate to the emerging cities and towns to seek employment and formal education. The male-selective nature of the migratory labour system has impacted family structural change in such a way that often children live in de facto “single-parent” households headed mainly by females (e.g. Amoateng, 2009).1

But the regular cash remittances from absent fathers to their families in their places of origin makes such households resourceful in mitigating the negative influences their absence would have otherwise engendered (see e.g. Sibanda, 2004). Even though the cooperative nature of the family production process in households where husbands are present engender economies of scale, the simultaneous dependence of both children and mothers on the man’s limited resources in mainly agrarian economies in general tend to

1 Wilcox et al., (2009) found that in 1992, 21% of Rwandan households were headed by females, and by 2010, the percentage had risen to 33.3.
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divert family resources away from children's schooling.

Moreover, many writers have observed that the increasing instability in both conjugal and affinal relationships that have been occasioned by migration and other factors has led to cooperation between sibling groups which go beyond the residential group. According to these writers these circumstances have engendered co-operation among especially sisters who are single, divorced, or widowed. Thus, increasing numbers of women are heading their own households not only because of the absence of a husband due to their participation in the migratory labour system, but because they are choosing to remain unmarried due to increase in such cooperation (e.g. Niehaus, 1994).

In such a context, we suspect that the positive relationship between two-parent families and children's schooling might be different due the new cultural context and the related new variety of family norms and practices. The choice to remain single could not be entirely divorced from the obligations women assume upon marriage to the broader lineage of the husband, especially, in patrilineal societies; without a doubt, such obligations make marriage a competing activity to pursuits such as education and participation in the wage labour force. Moreover, women tend to establish large social networks which cushion the effects of the absence of a partner, while they tend to be more child-centered. Because of this, in this study, we hypothesize that children of single, divorced and widowed women will have higher educational attainment than their counterparts whose mothers are married (e.g. Niehaus, 1994). Moreover, because of the cash remittances they send to their families, we hypothesize that children in de facto “single-parent” households will have more schooling than children in households where the husband is present.

Polygyny constitutes one of the most distinctive features of marriage patterns in Africa. Even though this marriage type is declining in frequency in Africa, it is still widely practiced in some areas (Gyimah, 2009; Westoff, 2003). According to all Demographic and Health Surveys conducted in Africa since 2000, the percentage of married women aged 15-49 years with at least one co-wife varies from 11.4% in Zimbabwe, 26.5% in the Ivory Coast to 53% in Guinea. For married men, the percentage with two or more wives ranges from 4.9% in Zimbabwe, 14.1% in Mozambique to 37.7% in Guinea (www.measuredhs.com).

Even though both monogamy and polygyny in Africa cut across lineage systems, polygyny has historically been associated with patrilineal, patrilocal, gerontocratic, and pronatalist agrarian cultures that limit women's access to land, inheritance, support from kin and sources of formalized power (e.g. Bledsoe, 1993; Smith-Greeway & Trinitapoli, 2014). As a marital union, polygyny has been linked to such negative child outcomes as high child mortality as a result of resource constraints, paternal investment, and selectivity (e.g. Chojnacka, 1980; Hames, 1996; Mulder, 1992). The negative aspects of polygyny deal with resource availability for the family. This theory essentially argues that because polygynous families inherently have greater numbers of women and children,
their resources are diluted at a higher rate. Because of this dilution of resources, the education of the children in polygynous homes is compromised because the diminished resources do not allow education to be prioritized for all children, especially, girls (Omariba, 2007; Tenikue & Verheyden, 2010).
Blanc (1996) also argues that because a typical polygynous marriage involves a man marrying women much younger than him, this age difference creates a gender hierarchy between a more experienced male and a less experienced female. Consistent with this view of polygyny, in a study in the Cote d’Ivoire, Goulda, Moava and Simhona (2012) found that children in polygynous families were less educated, even after controlling for parental education and household income. Moreover, Smith-Greenway and Trinitapoli (2014) found evidence that polygyny elevated the survival disadvantage for infants in polygynous families as compared to non-polygynous families. However, other studies have associated polygyny with enhanced child survivorship, primarily through factors such as longer breastfeeding patterns and longer inter-birth intervals, as well as co-wife social and economic cooperation (e.g. Amankwa, 1997; Amankwa et al., 2001; Amey, 2002; Blanc, 1996; Chisholm & Burbank, 1991). As far as monogamy is concerned, because it is linked to such attributes like urban residence, education, and a smaller spousal age gap it has been found to represent a more empowered section of the female population (Agadjanian & Ezeh, 2000; Dodoo, 1998; Gage-Brandon, 1993; Hollos & Larsen, 1997).

Despite the fact that many traditional African societies have modernized as evidenced by their declared determination to promote and protect the rights of the child, the inertia of the pre-capitalist African social systems still ensures that in many of these countries children are seen as resources of the family (Rwezaura, 1998). In fact, many scholars have noted that this notion of the child in African social systems is motivated by economic considerations, especially, poverty and father absence (e.g. Andvig, 2001; Basu, 1999). In the African context, this notion of the child as a family asset is reinforced by the ideology of patriarchy which disadvantages females and especially, the girl-child, as far as education is concerned. For example, Egbo (2000) has argued that patriarchy and racism were unfortunately sustained by the colonial project whose educational systems rather accentuated the existing gender discrimination in traditional African social systems. And Huisman (2009) has observed that because child care is often provided by school-age children, especially school age girls, it lowers the educational attainment of females in many African countries.

For example, Lloyd and Gage-Brandon (1994) observed that in Ghana girls with younger siblings were less likely to be enrolled in school than are boys and that girls also have higher dropout rates. These mainly traditional attitudes towards girls’ education are selective of people in rural and polygynous unions as compared to the modernizing attitudes of people in urban and monogamous unions. In recent years, especially, through the educational reforms several African countries have embarked upon to reverse the colonial legacy, there has been an overall educational progress, particularly for girls (Lloyd and Hewett, 2009). According to them, the gender gap in especially, in sub-Saharan Africa, which was very wide in the early days of independence, has narrowed steadily and consistently, mainly due to steady gains in educational achievement for girls. Lloyd and Hewett (2009) have observed that while over the previous 30 years
primary school completion rates for boys have risen quite slowly, from 48 to 60 percent, over the same period, girls’ primary school completion rates have risen steadily, almost doubling from 30 to 56 percent.

However, because of the historical and cultural biases towards female participation in formal education, we hypothesize that boys will have more schooling than girls in the present study. Specifically, because of the limited resources vis-à-vis the numbers of women and children in polygynous families, girls will have less schooling than boys in polygynous families compared to monogamous families.

The absence of a father through either participation in the labour force or non-marriage and its concomitant female household headship are likely to mitigate the conventional cultural bias against the education of the girl-child. Since women who are single either through husband absence as a result of migration or non-marriage tend to be educated, we do not expect to find any difference between boys and girls who live in households headed by females in terms of schooling. In other words, in such households decisions about who attends schools would be based on such rational factors as ability as opposed to cultural norms which mainly disadvantage the girl-child.

The transition of African societies from pre-capitalist, agrarian modes of production to capitalist modes of production did not result in the wholesale transformation of such societies. The colonial social and economic policies which sought to keep the colonies as suppliers of raw materials for the metropolitan countries in Europe resulted in unbalanced development in the colonies as socioeconomic amenities. In this model of development, amenities such as schools, clinics, recreational facilities and modern transportation systems were concentrated in the urban centres and the emerging towns and cities, while the rural areas were largely neglected.

Specifically, rural education in many African countries is often synonymous with disadvantages for learning. Indeed, the available evidence suggests that, in the latter half of the 1990s, primary school pupils in rural areas consistently underperformed their urban counterparts by substantial margins in the region (e.g. Kulpoo, 1998; Michaelowa, 2004; Voigt, 1998). Even though polygyny cuts across geographical areas in many African countries, it is more prevalent in rural areas because of the general lack of educational and other socioeconomic opportunities as well as the cultural lag experienced in these areas. Monogamously married couples are more likely to live in the same household with only their biological children in urban areas compared to rural areas where husbands and wives often live in separate homesteads².

This living arrangement in urban areas is likely to engender children’s education regardless of gender since the family resources would not be spread too thin over several

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² Even though the norm in urban areas is the co-residence of couples and their biological children, many scholars have observed that African cultures put a high premium on communal ethos and because of this, people of African descent prefer to live in households that include members of the extended family even in the face of rapid modernization and urbanization throughout sub-Saharan Africa (see e.g. Caldwell 1968; Oppong 1974).
women and children. In terms of marital status, because of their liberalizing attitudes and lifestyles, urban areas tend to be selective of young, single and divorced women whose lack of obligations to a husband’s kin group, allow them to participate in both formal education and wage labour. Because of this rural/urban variation in the prevalence of polygyny, monogamy, marital status, and presence of the father in the household, we hypothesize that children who reside in urban areas will have more schooling than their counterparts in rural areas. The present study will examine the effect of family structure as measured by marital status of the husband, the presence of father in the household and polygyny status of the mother on schooling by children in 25 countries in Africa that have been participating in the Demographic and Health Surveys programme since 2000.

Data And Methods

Data for this analysis is taken from recent Demographic and Health Surveys (DHS) in 25 African Countries taken since 2000. We use DHS because it provides comparable measures of key variables of interest including a household roster with each child’s age and education, marital status including never married, currently married or in a consensual union, widowed or divorced/separated, polygyny status of the mother and presence of the mother’s partner, polygyny status of the husband and presence of the husband. We use all of the countries that include information on polygyny and have a minimum of five percent of children in a polygynous household. If a country has more than one DHS survey, we use the most recent data. We selected all children aged 5 to 18 who are co-resident with their mother. Using mother’s marital status and presence of a husband we create a marital status variable with 7 categories. We also include a dummy variable for urban residence, and a control for maternal education coded 0 for no education, 1 for some primary, 2 for complete primary, 3 for some secondary, 4 for complete secondary and 5 for post-secondary schooling.

The dependent variable is years of schooling completed by the child, reported in single years. Because we include age as an independent variable, coefficients for other variables reflect deviations from the average schooling of same age children. We also coded child’s age to range from -13 for 5-year olds to 0 for 18-year olds so that coefficients for marital status and other dummy variables reflect schooling expected by age 18. To account for similarities within a country and to assess variability across countries, we estimate multi-level models. We also considered fixed effects for country as a way to adjust for cross-country differences in ages of school enrollment. Coefficients from the fixed effects are very similar to those reported here. Thus we opt for random effects models because they allow us to examine cross-national variation in the magnitude of effects.
<table>
<thead>
<tr>
<th>Country</th>
<th>Survey year</th>
<th>Sample size</th>
<th>Mean child education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cote D'Ivoire</td>
<td>2011-12</td>
<td>8126</td>
<td>1.9</td>
</tr>
<tr>
<td>Cameroon</td>
<td>2011</td>
<td>13604</td>
<td>2.7</td>
</tr>
<tr>
<td>Ghana</td>
<td>2008</td>
<td>4250</td>
<td>2.5</td>
</tr>
<tr>
<td>Malawi</td>
<td>2010</td>
<td>26698</td>
<td>2.3</td>
</tr>
<tr>
<td>Mozambique</td>
<td>2011</td>
<td>12504</td>
<td>1.2</td>
</tr>
<tr>
<td>Namibia</td>
<td>2006-7</td>
<td>5504</td>
<td>3.1</td>
</tr>
<tr>
<td>Rwanda</td>
<td>2010</td>
<td>13415</td>
<td>1.9</td>
</tr>
<tr>
<td>Tanzania</td>
<td>2010</td>
<td>10846</td>
<td>2.6</td>
</tr>
<tr>
<td>Uganda</td>
<td>2011</td>
<td>9928</td>
<td>1.9</td>
</tr>
<tr>
<td>Zambia</td>
<td>2007</td>
<td>7428</td>
<td>2.2</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>2010</td>
<td>17086</td>
<td>1.7</td>
</tr>
<tr>
<td>Burundi</td>
<td>2010</td>
<td>9389</td>
<td>2.5</td>
</tr>
<tr>
<td>Congo Democratic Republic</td>
<td>2007</td>
<td>9995</td>
<td>2.6</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>2011</td>
<td>14070</td>
<td>2.0</td>
</tr>
<tr>
<td>Gabon</td>
<td>2012</td>
<td>8422</td>
<td>3.4</td>
</tr>
<tr>
<td>Guinea</td>
<td>2012</td>
<td>7954</td>
<td>1.9</td>
</tr>
<tr>
<td>Kenya</td>
<td>2008-9</td>
<td>8444</td>
<td>3.2</td>
</tr>
<tr>
<td>Niger</td>
<td>2012</td>
<td>9223</td>
<td>1.6</td>
</tr>
<tr>
<td>Nigeria</td>
<td>2008</td>
<td>33384</td>
<td>2.3</td>
</tr>
<tr>
<td>Senegal</td>
<td>2010-11</td>
<td>14601</td>
<td>2.1</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>2008</td>
<td>7374</td>
<td>2.6</td>
</tr>
<tr>
<td>Swaziland</td>
<td>2006-7</td>
<td>4987</td>
<td>3.8</td>
</tr>
<tr>
<td>Benin</td>
<td>2011-12</td>
<td>16599</td>
<td>2.6</td>
</tr>
<tr>
<td>Congo (Brazzaville)</td>
<td>2011-12</td>
<td>10819</td>
<td>3.2</td>
</tr>
</tbody>
</table>
Results

Table 1 shows the countries included, sample sizes and average schooling for children. Average schooling ranges from 3.8 years in Swaziland to 1.2 years in Mozambique. Table 2 shows the distribution of marital status and characteristics of mothers in the sample. The most common living arrangement pattern for children is to be with mother and father in a monogamous marriage (52% overall). The centrality of marriage to the institution of the family in African societies is evidenced by the fact that 84% of the mothers in the sample have ever married compared with only 16% who are single and never married. There are also a significant number of children whose fathers are not present in the household (10%) or whose mothers are married to a polygamist husband (20%).

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>% of Cases</th>
<th>Mean Maternal Education (0-6 scale)</th>
<th>% Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never Married</td>
<td>15.9</td>
<td>2.14</td>
<td>50</td>
</tr>
<tr>
<td>Currently married, husband present, monogamist</td>
<td>52.5</td>
<td>1.14</td>
<td>30</td>
</tr>
<tr>
<td>Currently married, husband absent, monogamist</td>
<td>6.38</td>
<td>1.44</td>
<td>36</td>
</tr>
<tr>
<td>Currently married, husband present, polygamist</td>
<td>16.1</td>
<td>.55</td>
<td>20</td>
</tr>
<tr>
<td>Currently married, husband absent, polygamist</td>
<td>3.5</td>
<td>.95</td>
<td>28</td>
</tr>
<tr>
<td>Widowed</td>
<td>3.5</td>
<td>1.10</td>
<td>30</td>
</tr>
<tr>
<td>Divorced/separated</td>
<td>2.1</td>
<td>1.13</td>
<td>29</td>
</tr>
</tbody>
</table>

Table 3 shows the results of a simple model with age and dummy variables for marital status as the only independent variables. Children with married mothers are expected to have 5.4 years of schooling by age 18. This table suggests that children are better off if their mother is widowed (.3 more years of schooling). Children with divorced/separated mothers or mothers who never married are similar to children with married mothers. The bulk of African societies tend to be patrilineal and such societies more often than not tend to be patri-local. In patrilineal cultures, marriage entails absorbing the woman into the husband’s kin group with a great deal of familial responsibilities to the husband’s larger kin group. This situation means that marriage and other pursuits like education and wage employment become competing activities for a married woman.
Thus, the absence of marriage frees a woman to pursue activities like higher education so their children are not disadvantaged by a single mother.

### Table 3. Differences in Children’s Education, simple marital status

<table>
<thead>
<tr>
<th>Category</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant (implicit category is currently married)</td>
<td>5.408*</td>
</tr>
<tr>
<td>Age</td>
<td>.428*</td>
</tr>
<tr>
<td>Never married</td>
<td>-.021</td>
</tr>
<tr>
<td>Widowed</td>
<td>.310*</td>
</tr>
<tr>
<td>Divorced/separated</td>
<td>.070*</td>
</tr>
</tbody>
</table>

Table 4 shows the results for children’s educational attainment after we take into account polygyny and presence of the husband in the household. The results suggest that marital status and husband presence each impact children’s schooling. Children have the highest schooling if the mother is widowed or is in a monogamous marriage with an absent husband. Children have slightly less schooling if the mother has never married than if she is currently married with a monogamist husband who is present and slightly less schooling if the mother is divorced or separated. Children with mothers in polygynous marriages have the lowest schooling, especially when husbands are present in the household. In general, it appears that both polygyny and the presence of a husband in the home detract from children’s schooling.

The next model adds controls for maternal education, urban residence and child’s gender. Children tend to have more education if their mothers are more educated, if they live in urban areas and if they are male. In this model children whose mothers never married are noticeably worse off. This is because mothers who have never married are more educated. Once mother’s education is taken into account, these children have an educational disadvantage.

Once controls are added for maternal education, urban residence and gender, the differences among children with married mothers associated with polygyny and husband’s presence are diminished, but not completely eliminated. Maternal education is the most important driving force. It appears that part of the reason for the disadvantage associated with husband presence and polygyny is because women in these arrangements are less educated. They are also less likely to live in urban areas, although this is not as important as education. It is not possible with cross-sectional data to determine whether husband presence detracts from the wife’s education or more educated women are better situated to leave their husbands.

In the third model, we examine interactions between gender and mother’s marital status. Males have an educational advantage of .13 years. We are particularly interested in the possibility that this advantage is accentuated when husbands are present and
in polygynous marriages. Results are generally consistent with this expectation. The male advantage is greatest in polygynous marriages when the husband is present. Male advantage is also accentuated in polygynous marriages even if the husband is not present, but not to the same degree. In contrast, male advantage is completely eliminated if the mother is widowed or divorced/separated. The finding that is most inconsistent with our hypothesis is that the male advantage is slightly greater if the mother has never married.

The fourth model considers interactions by urban/rural residence. In general, effects of marital status are greater in urban areas. Urban children are particularly disadvantaged by divorce and non-marriage. Perhaps the diminished role of extended kin in urban settings accentuates the importance of marriage. The effects of husband absence tend to be negative in urban areas. It is possible that the husband’s role is more critical when wage labour is more common. Effects of polygyny are small in rural areas, but larger and negative in urban areas.

### Table 4. Difference in Children’s Education, detailed marital status

<table>
<thead>
<tr>
<th></th>
<th>5.403*</th>
<th>5.053*</th>
<th>5.072*</th>
<th>5.019*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant (implicit category is currently married, husband present, monogamist)</td>
<td>5.403*</td>
<td>5.053*</td>
<td>5.072*</td>
<td>5.019*</td>
</tr>
<tr>
<td>Age</td>
<td>.422*</td>
<td>.428*</td>
<td>.428*</td>
<td>.428*</td>
</tr>
<tr>
<td>Never married</td>
<td>-.107*</td>
<td>-.395*</td>
<td>-.433*</td>
<td>-.210*</td>
</tr>
<tr>
<td>Currently married, husband absent, monogamist</td>
<td>.036*</td>
<td>-.057*</td>
<td>.019</td>
<td>-.053*</td>
</tr>
<tr>
<td>Currently married, husband present, polygamist</td>
<td>-.176*</td>
<td>-.125*</td>
<td>-.099*</td>
<td></td>
</tr>
<tr>
<td>Widowed</td>
<td>.264*</td>
<td>.271*</td>
<td>.328*</td>
<td>.247*</td>
</tr>
<tr>
<td>Divorced/separated</td>
<td>-.035</td>
<td>-.077*</td>
<td>-.026</td>
<td>.013</td>
</tr>
<tr>
<td>Maternal education</td>
<td>.270*</td>
<td>.270*</td>
<td>.270*</td>
<td></td>
</tr>
<tr>
<td>Urban residence</td>
<td>.063*</td>
<td>.063*</td>
<td>.179*</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>.134*</td>
<td>.097*</td>
<td>.134*</td>
<td></td>
</tr>
<tr>
<td>Interactions:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male*Never married</td>
<td>.075*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The last issue we consider is cross-national variability in the effects of marital status. We estimate a random effects model which includes estimates of the cross-national variance in each of the coefficients for marital status. Results are shown in Table 5. In this model, coefficients have larger standard errors making them less likely to be statistically significant. The variances of the coefficients for most variables are substantially smaller indicating that effects of these statuses tend to be similar across countries. But several variances are statistically significant, indicating some variation across countries in the effects of family structure. In short, the conclusions made above appear to be generally applicable to the countries included in this analysis even though there is some cross national variability.
Table 5. Random effects parameters showing cross-national variance in effects of marital status

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Standard error</th>
<th>Random-effects variance</th>
<th>Standard error of variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>5.302*</td>
<td>.139</td>
<td>.462*</td>
<td>.134</td>
</tr>
<tr>
<td>Never married</td>
<td>-.093*</td>
<td>.026</td>
<td>.009*</td>
<td>.003</td>
</tr>
<tr>
<td>Currently married, husband absent, monogamist</td>
<td>.037</td>
<td>.028</td>
<td>.011</td>
<td>.006</td>
</tr>
<tr>
<td>Currently married, husband present, polygamist</td>
<td>-.050</td>
<td>.047</td>
<td>.048*</td>
<td>.015</td>
</tr>
<tr>
<td>Currently married, husband absent, polygamist</td>
<td>-.057</td>
<td>.048</td>
<td>.049*</td>
<td>.016</td>
</tr>
<tr>
<td>Widowed</td>
<td>.116*</td>
<td>.047</td>
<td>.037*</td>
<td>.014</td>
</tr>
<tr>
<td>Divorced/separated</td>
<td>-.059*</td>
<td>.026</td>
<td>.007*</td>
<td>.004</td>
</tr>
</tbody>
</table>

Note: age, maternal education, urban residence and gender included.

Conclusion

Since the inception of the colonial project domestic organization, especially, family structure, in sub-Saharan African societies has undergone rapid transformation as a result of the introduction of such modernizing influences as rapid urbanization, wage labour, formal education, exposure to the mass media and in recent years the HIV/AIDS epidemic. In the past, the institution of the family was defined by patterns such as early and universal marriage, high rates of polygyny within the context of agrarian economies, high levels of fertility and its concomitant large households, and virtual absence of divorce. However, the changes wrought by these modernizing influences have engendered family structural changes such as conjugal instability leading to increasing incidence of single-parent households headed mainly by females, while changes in educational outcomes such as school enrollment and educational attainment have also been observed (e.g. Bommier & Lambert, 2000; Lloyd and Hewett, 2009; Niehaus, 1994).
Even though the increasing rates of schooling in sub-Saharan Africa in recent years could be a function of the declining importance of family duties in societies that are transitioning from agrarian economies to modern industrial ones, the paucity of empirical evidence on schooling in the region only makes it speculative. It is within this context of change and continuity in the domestic organization of sub-Saharan African societies that we undertook the present study to examine the relationship between family structure and schooling in the region. We focused on the effect of family structure as measured by marital status, presence of the husband and polygyny on children's schooling, while we used place of residence and gender as control variables.

As the study has shown, marriage is the normative context for childbearing and rearing in the region as three-quarters of children of children live with mothers who are married. Children are somewhat better off educationally if their mothers are in a monogamous union, while they are worse off if their mothers have never married, divorced or separated. In general, both polygyny and presence of a husband in the home detract from children's education. The disadvantage associated with husband presence and polygyny is because women in these arrangements are less educated, have cultural attitudes that are less in favour of girls’ education and are less likely to live in urban areas. Of course, some of the disadvantage associated with husband presence may actually be an advantage to households where the husband is employed elsewhere and remitting income to the household. Unfortunately, DHS did not include information on remittances.

Moreover, polygyny dilutes the resources available to households because of the large numbers of wives and children and thus forces families to make judicious selection of who stays in school and who helps on the farm and in the domestic sphere; in fact, this is the economic context of the cultural bias against female education in many sub-Saharan societies. The cultural bias against the education of girls as opposed to boys is evidenced by the fact that males are more likely than females to have higher educational attainment, especially, in polygynous, rural and female-headed families. While urban residence and single status are both positively associated with children's educational attainment, children of never married women in urban areas are disadvantaged suggesting the importance of the conjugal unit in the face of such modernizing forces as urbanization and the limited role played by the larger kin group in the lives of such women and their offspring in the urban setting.

The present study has underscored the fact that family structure is multidimensional and to this effect societies with different norms regarding gendered responsibilities in marriage, husband presence and plural marriage may have different trajectories for children in regard to their life chances. In sub-Saharan Africa, for example, gender matters more in some familial contexts even though as the present study has demonstrated, urbanization is altering these patterns. In conclusion, we cannot assume that the implications of family structure for children are invariant across societies or even within societies, given societal differences in the changes in norms about the ways
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in which families provide resources for children. The present study has underscored the critical importance of encouraging female education in general and education of the girl-child in particular, as a means of discouraging such “negative” cultural practices as polygyny and emphasis on education of boys.

References


