

Family Structure and Children's School Enrollment in Sub-Saharan Africa

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## ***Abstract***

*We used Hierarchical Linear Modeling (HLM) to analyze data from recent Demographic and Health Surveys (DHS) in 27 sub-Saharan African Countries to examine the effect of family structure, measured by marital status, including polygyny on children's school enrollment in the selected countries. Children with married mothers are expected to have 5.78 years of schooling by age 18. Thus children are somewhat better off if their mother either did not marry (.048 years more schooling) or is widowed (.135 more years of schooling). Children with divorced/separated mothers are similar to children with married mothers. Children have the highest educational attainment if the mother is widowed or in a monogamist marriage with an absent husband. Children have the highest educational attainment if the mother is widowed or in a monogamist marriage with an absent husband. Children have slightly more education if the mother has never married than if she is currently married with a monogamist husband who is present, and slightly less education if the mother is divorced or separated. Children with mothers in polygamous marriages have the lowest educational attainment, especially when husbands are present in the household. The present study has demonstrated that as sub-Saharan African societies transit from agrarian-based economies to modern ones, the institution of the family changes in tandem with such changes in adapting to changes in the broader society. As families become more monogamous and urbanized with more educated members, especially the female members, the values of formal education are likely to be passed on to the next generations.*

## **Background**

Western industrialized literature is replete with studies that indicate 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; Wallerstein and Blakeslee, 1989; Wilcox, Lippman, Whitney and Cid, 2009). The flipside of this long-standing research finding is that spending time in single-parent families reduces the educational attainment of children (Amato and Keith, 1991; Astone & McLanahan, 1991; Biblarz & Raftery, 1999; Cherlin, 2008; Ermisch & Francesconi, 2001; Evenhouse & Reilly, 2004; Frisco, Muller & Frank, 2007; Haurin, 2007; Heard, 2007;

McLanahan and Sandefur, 1994; Schiller, Khmelkov & Wang, 2002; Sun & Li, 2011; Sweeney, 2010). Fagan (2012) observed that children of divorced parents who subsequently cohabited with another man fared significantly more poorly on literacy tests than children of continuously married parents. Moreover, a substantial body of research has found that during the early childhood years divorce has negative consequences for children such as behavioral adjustment (Pett, Wampold, Turner & Vaughan-Cole, 1999); attachment security (Nair & Murray, 2005); parent-reported academic difficulties (Allison & Furstenberg, 1989); and emotional well-being, self-esteem, and sociability (Peretti & Di Vitorrio, 1993).

This research is based on a model of the family that is not universal. The nuclear family is the norm so that broader kin groups do not play a central role in child care and familial obligations. Although women often take on the major responsibility for childcare, 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. Marital disruption is generally due to personal dissatisfaction with the relationship. It is not clear that consequences of family structure will have the same impact in societies with different models of family. In particular, several features of the African family including labor migration, mortality due to HIV/AIDS, greater importance of broader kin groups, and different expectations regarding gendered obligations after marriage suggest that marriage patterns may have different implications for children. This paper considers three dimensions of family structure, namely marital status of the mother, presence of the father and polygyny on the schooling of children. 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 education.

While the international community has always recognized the important role of education in the development of children, families and whole communities (e.g. Buchmann & Hannum, 2001; Mankiw, Romer & Weil, 1992), efforts to promote education has occupied center stage among academic researchers, policy makers and non-governmental organizations alike since the United Nations Millennium Development initiative in 2000<sup>1</sup>. Despite these strides in promoting school enrollment however, there is still much to be done as the percentage of children who are enrolled in school is markedly lower, especially, in sub-Saharan Africa. According to a recent estimate by the UN, less than 55 percent of secondary school-age children are enrolled in a secondary school in the region

[http://www.un.or/millenniumgoals/2008highlevel/pdf/newsroom/Goal\\_percent202\\_percent20FNAL.pdf](http://www.un.or/millenniumgoals/2008highlevel/pdf/newsroom/Goal_percent202_percent20FNAL.pdf).

### **The Context**

Families have been a central aspect of African culture and because of this children's education took a backseat in the past compared to familial duties, especially for daughters. More recently, however, changes in school enrollment rates have occurred. For instance, in countries like Kenya, Malawi, Rwanda, Tanzania, and Uganda there have been great improvements in school enrollment as evidenced by the fact that in 1992, 47% of Tanzanian children were enrolled in primary school, and in 2010, the enrollment rate jumped to 76.8% (Bommier & Lambert, 2000). Interestingly, these changes in school enrollment in the region have been concurrent with structural changes in domestic organization, especially, the institution of the family. A family structural change in sub-Saharan Africa that has affected the living arrangements of children is the HIV/AIDS epidemic. Monasch and Boerma (2004) have noted

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<sup>1</sup> Through these efforts to promote education, primary school enrollment in the developing world increased from 83% in 2000 to 88% in 2006 ([http://www.un.or/millenniumgoals/2008highlevel/pdf/newsroom/Goal\\_percent202\\_percent20FNAL.pdf](http://www.un.or/millenniumgoals/2008highlevel/pdf/newsroom/Goal_percent202_percent20FNAL.pdf))

the increasing prevalence of non-traditional family structures in sub-Saharan Africa where children are increasingly living in single-parent households, either headed by the father or the mother. Specifically, they have observed that in sub-Saharan Africa, 9% of children aged 15 years do not have at least one parent. Lloyd and Blanc (1996) found that in five of the seven countries they examined, 27–28% of youth aged 6–14 years were not living with a biological parent, while in Kenya and Namibia the corresponding figures were 20% and 51% respectively.

Despite the devastating effect of the HIV/Aids epidemic on the living arrangements of children, the communalist culture of African societies has ensured that children are taken care of by other members of extended families or in some cases are fostered to other kin. This communal and familial response to the epidemic explains the virtual absence of child-headed households in many African societies. For example, in their study, Desmond, Richter, Makiwane & Amoateng (2003) found that while the death of parents and caregivers has left many children vulnerable in South Africa, the proportion of child-headed households is not high and the proportion of households with no adults is even smaller. Thus, children's headship of households could be attributed to temporary, permanent or functional absence of adult household members.

### **The Rationale for the Present Study**

The concomitant changes in family structure and school enrollment has led to a flurry of study that has examined the relationship between family structure and children's educational attainment in the region. For example, in a study of black Africans in South Africa, Anderson (2000) found that family structure was highly correlated with educational outcomes (see also Case and Ardington 2006; Cherian 1989, 1994). In Kenya, Abuya, Oketch, Mutisya, Ngware & Ciera (2012) 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. On the other hand,

those living with their guardians were less likely to be in the right grade for age; the odds of being at the right grade for age decreased by 18% for children without their biological parents. Moreover, children living with one or two biological parents in Kenya were more likely to be enrolled in school, compared with children living with no biological parents<sup>2</sup>. However, a number of studies in sub-Saharan Africa have also 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). Also, Wilcox et al. (2009) found in their study that children in Kenya and Nigeria were not advantaged if they lived with two biological parents, compared with children living in a single parent home.

Unlike the existing literature in Western contexts, there appears to be inconsistent findings regarding the impact of two-parent family on children in sub-Saharan Africa. 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 sub-Saharan Africa may not be generalizable to all contexts. Inconsistent findings may result for several reasons including the rapid pace of social change, the complex nature of family structures, and cross-cultural differences. In order to address these deficiencies, we examine several countries in sub-Saharan Africa, using data gathered since 2000, and include multiple dimensions of family structure.

## **Marital status**

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<sup>2</sup>In fact, such studies corroborate studies of Asian countries which suggest that children in single-parent families do as well or better than children in two-parent families because extended family members tend to reach out to single mothers and provide them with extra financial and social resources to make up for the loss of a father due to divorce or death (Hyunjoon, 2007; Suet-Ling, 1996).

Budlender, Chobokoane and Simelane (2004) have observed that in South Africa, despite the fact that marital status is of interest to a variety of disciplines in the social sciences, the variety of marriage forms and the range of cultures and religions have rendered analytical work on marriage and marital status very problematic. Supporting this view, Smith-Greenway and Trinitapoli (2014) have observed that the known relationships between family structure and child well-being in sub-Saharan Africa vary according to the broader marital and cultural context. In Western context, where this genre of research has a long history, the evidence overwhelmingly seems to favor the two-parent family type as far as children's schooling is concerned. This relationship between a two-parent family and children's schooling in the West could be due to the pooling of resources between the husband and the wife who is likely to be educated participate in the labor force. For example, Fagan (2012) found that children of divorced parents who then cohabited with another man fared significantly more poorly on literacy tests than children of continuously married parents.

We suspect that this positive relationship between two-parent families and children's educational attainment might be different in sub-Saharan Africa due the cultural context and the variety of family norms and practices, especially, polygyny. Marriage type, as a family structure, has not been investigated as thoroughly as other family structures in the existing literature. The de facto single-parent families that have proliferated in those sub-Saharan African countries is not only due to the entrenched migratory labor system but to the generate state of conjugal relationships. Writing about this state of affairs, In fact, on South Africa, many writers have noted the increasing instability in both conjugal and affinal relationships leading to cooperation between sibling groups which go the residential group. Under the circumstances, co-operation among sisters in particular has been observed to have assumed particular importance for women

who are single, divorced, or widowed. Thus, increasing numbers are heading their own households not because of external factors such as the absence of a husband due to participation in the migratory labor system, but because they are choosing to remain unmarried (Niehaus, 1994; Stadler, 1994).

This choice to remain single could not be entirely divorced from the obligations women assume upon marriage to the broader patrilineal lineage of the husband, making marriage a competing activity to pursuits such as education and participation in the wage labor force. Because of the obligations of marriage and because of the large social networks women tend to establish which in turn cushion the effects of the absence of a partner, and also because women tend to be more child-centered, in this study we expect children of single, divorced and widowed women to have higher rates of school enrollment than their counterparts who are married.

It is our contention that by focusing on marital status, including the differential reasons for marriage, obligations associated with the institution in sub-Saharan Africa, the migratory labor system which is well entrenched in the region and largely accounts for father absence and loss from the HIV/AIDS epidemic, we will be able to demonstrate that the conventional negative association between family structure and children's well-being might not be generalizable to all contexts<sup>3</sup>.

On the question of marital status, This is not only because of the juxtaposition of different marriage types with their varying cultural expectations for married couples with regards to their rights and obligations to one another, their offspring and to their respective kin groups, but also in terms of the relative power of the married couples.

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<sup>3</sup> In fact, studies that have been done both in developed and developing societies have challenged this notion of negativity associated with family types other than the two-parent type (see e.g. Anderson, 2000; Case and Ardington, 2006; Cosaro, 2003; Formby and Cherlin 2007; Harris, 1998; Sibanda, 2004; Sun and Li, 2011).



In view of the fact that polygamy has historically been associated with patrilineal cultures in sub-Saharan Africa and patrilineal cultures tend to be male-dominant, married women in such societies are absorbed into the lineage groups of their husbands with implications of a wide range of obligations (Washing clothes, fetching water from the stream, firewood from the forest etc.) to lineage group. Thus marriage tends to be a competing activity to such other activities as wage employment and formal education, rendering the wives and their offspring dependent upon the resources of their husbands. We therefore expect that the school enrollment rate of children of married mothers will be lower than those of children whose mothers are single, never married, widowed or divorced.

### **Polygyny**

Polygyny constitutes one of the most distinctive features of marriage patterns in Africa. Even though this marriage type is declining in frequency in sub-Saharan Africa, it is still widely practiced in some areas (Caldwell & Caldwell, 1990; Gyimah, 2009; Westoff, 2003). In several regions of Africa, including Tanzania, Ethiopia, Mozambique and Uganda, Islam is the dominant religion, and where Islam is more prominent, polygyny is more prevalent. According to all Demographic and Health Survey conducted in sub-Saharan Africa since 2000, the percentage of married women aged 15-49 with at least one co-wife varies from 11.4% in Zimbabwe, to 26.5% in Ivory Coast, to 53% in Guinea. For married men, the percentage with two or more wives ranges from 4.9% in Zimbabwe, to 14.1% in Mozambique, to 37.7% in Guinea ([www.measuredhs.com](http://www.measuredhs.com)).

Even though the both monogamy and polygyny in Africa cut across lineage systems, polygyny has historically been associated with patrilineal, patrilocal, gerontocratic, pronatalist agrarian societies that limit women's access to land, inheritance, support from kin and sources of

formalized power (e.g. Goody, 1973; Smith-Greeway & Trinitapoli, 2014; White & Burton, 1988). Upon marriage, a woman is absorbed into the husband's lineage group a situation which engenders fierce competition amongst the co-wives around a husband's investment in the education, health and attainment of their children, especially the sons whose birth secures the husband-wife bond and who care for them in their old age (Bledsoe, 1993).

On the other hand, monogamy, because it is linked to such attributes like urban residence, education, and a smaller spousal age gap has been found to represent a more empowered section of the female population (Dodoo, 1998). Thus, monogamy is often viewed as a sign of modernity and has been associated with more egalitarian gender relations (Agadjanian and Ezeh, 2000; Gage-Brandon, 1993; Hollos and Larsen, 1997).

As a marital union, polygyny has been linked with such negative child outcomes as high child mortality through resource constraints, paternal investment, and selectivity (e.g. Chojnacka, 1980; Hames, 1996; Mulder, 1992). The negative aspects deal with resource availability for the family. It 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 the polygynous home is compromised because the diminished resources do not allow education to be prioritized for all children (Omariba, 2007).

Pressure on resources can lead to discrimination between children, mostly through uneven distribution of schooling and child labor (Tenikue & Verheyden, 2010). Also, a typical polygamous situation involves a man marrying women much younger than him. Blanc (1996) argues that this age difference creates a gender hierarchy, between a more experienced male and a less experienced female. Moreover, often this age difference involves a less educated female in comparison to her male spouse which further supports this hierarchy and creates an unequal

environment (Omariba, 2007). Consistent with this view of polygyny, in a study in the Cote d'Ivoire, Goulda, Moava and Simhona (2012) found that children in polygynous households are less educated, even after controlling for parental education and household income. According to the authors, educated men are using their income to acquire fewer high quality women in order to produce high quality children, while wealthy men with less human capital are using their wealth to acquire more wives and children with less education. Smith-Greenway and Trinitapoli (2014) found evidence that polygyny elevated the survival disadvantage for infants in polygynous families as compared to non-polygynous families. Desai (1992) has argued that because it dilutes families' per capita resources through a large number of wives and siblings, polygynous families experience poorer health compared to monogamous families.

On the other hand, some studies have associated polygyny with enhanced child survivorship, primarily through factors such as longer breastfeeding patterns and inter-birth intervals, as well as co-wife social and economic cooperation (e.g. Amankwa, 1997; Amankwa et al., 2001; Amey, 2002). Amankwa et al. (2001), for example, contend that polygyny represented indigenous population adaptation with presumed positive effects on maternal and child health. Another argument in favor of polygyny is that it may foster female autonomy. Specifically in West Africa, polygyny and male/female legal hierarchy are combined with a surprisingly high degree of economic autonomy and independence among the wives (Blanc, 1996).

According to this view, each of the wives has her own land and household in addition to control of their own business and earnings. This autonomy is only socioeconomic and in no way encompasses legal, sexual, or procreative autonomy. Another positive side effect is the co-wife cooperation of child caring. Children from polygynous families are more likely to be watched

over by multiple adults compared to their counterparts from monogamous homes (Omariba, 2007). Available anthropological evidence in polygynous cultures also suggests that co-wives often cooperate in providing social and economic support to each other, which could bear positively on the health and survival of their children (Chisholm & Burbank, 1991). Moreover, it has been suggested that the rivalry and competition among co-wives, which often characterize polygynous marriages, may also motivate each mother to make considerable efforts to guarantee the survival of her children (Amey, 2002). Given inconsistent findings regarding the impact of polygyny, it is important to include it as a dimension of family structure.

### **Husband Presence**

Marriage has always been a central event defining the family as a major social institution in most African social systems and this explains the near universal nature of marriages in sub-Saharan African societies (Adegboyega, 1994). Even though the institution took diverse forms, it always involved the presence of a husband and a wife or wives with their children and in most cases other kin in the same household. However, this conventional living arrangement changed with the onset of the colonial project and its introduction of wage labor and formal education. The introduction of wage labor impelled men who were instrumental in the household production process to migrate to the emerging cities and towns to seek employment<sup>4</sup> Thus, the developments led to the institutionalization of a migratory labor system in the many countries in Sub-Saharan Africa, especially, in the Southern African sub-region.

The male-selective nature of this phenomenon has impacted family structural change in such a way that often children live in *de facto* “single-parent” households. In fact, it is estimated that about one-fifth (20%) of married persons live apart from their spouses as a result of this

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<sup>4</sup>In the case of places like South Africa, this took the form of land dispossession to force Blacks in the countryside to seek employment in the cities and towns as evidenced by the landmark 1913 Land Act.

labor mobility amongst black Africans in South Africa (Amoateng, 2009), while only about 36 percent of children live with both of their biological parents. Thus, migratory labor has resulted in a growing number of female-headed households as evidenced by the finding that in 1992, 21% of Rwandan households were headed by females, and by 2010, the percentage had risen to 33.3 (Wilcox et al, 2009).

However, 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. For example, Sibanda (2004) has observed that children from households that received remittances were 0.5 times less likely to drop out of primary school compared to those from households with no remittances. Even though the cooperative nature of the household 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 tend to divert household resources away from children's schooling. Thus, in this study, we expect children in households where the husband is not present to have higher school enrollment rates than children in households where the husband is present.

### **Gender Differences**

Even though traditional African societies have evolved to an extent where many sub-Saharan African countries have declared their determination to promote and protect the rights of the child, the resilience of the economic and social forces of the pre-capitalist African social systems still ensures that children are seen as resources of the family (Rwezaura, 1998). Many scholars have observed that this notion of the child in African social systems is motivated by economic considerations, especially, poverty and father absence (e.g. Basu, 1999; Andvig, 2001).

For example, Andvig (2001) has noted that child labor in sub-Saharan Africa is the most extensive in the world and that at least 95 percent of this labor takes place in private households. According to ILO statistics, 41 percent of children between 5 and 14 years of age are registered as working in the region, almost twice the Asian rate (Ashagrie, 1998).

In the African context, this notion of the child as a family asset is reinforced by the ideology of patriarchy to disadvantage women and especially, the girl-child as far as education and school enrollment are concerned. 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. For example, Lord Lugard, a colonial administrator and the first British Governor of Nigeria, described the early British philosophy of education as follows:

The chief function of government primary and secondary schools is to train more promising boys from the village schools as teachers for those schools and as clerks for the native courts as interpreters (in Nduka, 1964, p.21).

Huisman (2009) has argued that because child care is often provided by school-age children, especially school age girls, it lowers the female school enrollment rate in many sub-Saharan African countries. Thus, all too often it is girls who lose out from the short-term pressures for additional income or one less mouth to feed, a situation which leads to girls either not going to school at all or dropping out of school to enter marriage. In Ghana, Llyod and Gage-Brandon (1994) observed that girls with younger siblings were less likely to be enrolled in school than are boys and 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. Because of these historical and cultural

attitudes towards female participation in formal education, we expect the enrollment rates of males to be higher than their female counterparts in the present study.

### **Rural/Urban Differences**

The so-called transition of African societies from pre-capitalist, agrarian modes of production to capitalist modes of production through colonialism did not result in the wholesale transformation of such societies. The reason for this was the colonial social and economic policies which sought to keep the colonies as suppliers of raw materials for the metropolitan countries in Europe<sup>5</sup>. These policies sought to concentrate such socioeconomic amenities as schools, clinics, recreational facilities and modern transportation systems in the urban centers, while the rural areas were largely neglected. Moreover, as the first British Governor of Nigeria indicated in the quote above, the village schools were meant to give the barest minimum of education to the natives to man the local government system which served the interests of the colonialists.

Thus, essentially, as far as socioeconomic development is concerned, there is a glaring bifurcation between rural and urban areas with the latter being the beneficiaries of superior amenities. Specifically, rural education in many sub-Saharan African countries is often synonymous with disadvantages for learning. Indeed, the available evidence suggests that, in the latter half of the 1990s, primary school students in rural areas consistently underperformed their urban counterparts by substantial margins in the region (e.g. Kulpoo, 1998; Michaelowa, 2004; Voigts, 1998). Even though polygyny cuts across geographical areas in many sub-Saharan

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<sup>5</sup> In fact, in places like South Africa, the colonialists sought to control the urbanization that was triggered by such urban-based policies through the infamous Influx Control Act.

African countries, it is more prevalent in rural areas because of the general lack of educational and other socioeconomic opportunities in rural areas. Because of this rural/dichotomy in terms of the prevalence of polygyny and educational and other socio-economic opportunities, we expect school enrollment rates to be higher amongst children who reside in urban areas compared to their counterparts in rural areas.

## **Data and Methods**

Data for this analysis is taken from recent Demographic and Health Surveys (DHS) in 27 African Countries. 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 polygamy-of the mother and presence of the mother's partner. We selected all children aged 5-18 who could be matched with a mother. Using mother's marital status (never married, currently married or in a consensual union, widowed or divorced/separated), polygamy status of the husband and presence of the husband, we create a marital status variable with 7 categories.

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 education 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 educational differences expected by age 18. To account for similarities within a country and to assess variability across countries, we estimate Hierarchical Linear Models (HLM).

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Table 1 about here



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## **Results**

Table 1 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 monogamist marriage (43% overall). The centrality of marriage to the institution of the family in sub-Saharan 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 (17%) or whose mothers are married to a polygamist husband (17%).

Table 2 shows the results of the Hierarchical Linear Models with age and dummy variables for marital status as the only independent variables. Children with married mothers are expected to have 5.78 years of schooling by age 18. This table suggests that children are somewhat better off if their mother either did not marry (.048 years more schooling) or is widowed (.135 more years of schooling). Children with divorced/separated mothers are similar to children with married mothers. The bulk of Sub-Saharan African societies tend to be patrilineal and such societies more often than not tend to be patrilocal. In other words, marriage entails absorbing the woman into the husband's kin group with a great deal of familial responsibilities to the larger kin group. This situation means that marriage and other pursuits like education and or wage employment become competing activities for a married woman. Thus, the absence of marriage frees a woman to pursue activities like higher education which also translates into better educational outcomes for their offspring.

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Table 2 about here  
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Table 3 shows the results for children's educational attainment after we take into account polygamy and presence of the husband in the household. The results suggest that marital status and husband presence each impact children's education. Children have the highest educational attainment if the mother is widowed or in a monogamist marriage with an absent husband. Children have slightly more education if the mother has never married than if she is currently married with a monogamist husband who is present, and slightly less education if the mother is divorced or separated. Children with mothers in polygamist marriages have the lowest educational attainment, especially when husbands are present in the household. In general, it appears that both polygamy and presence of a husband in the home detract from children's education.

The next model adds controls for maternal education, urban residence and child's gender. 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. The same is the case, but to a lesser degree, for children with divorced/separated mothers. That is, they have some advantage because their mothers are more educated. The effect of widowhood is similar in the two models.

Once controls are added for maternal education, urban residence and gender, the differences among children with married mothers associated with polygamy and husband presence are diminished, but not completely eliminated. Maternal education is the most important driving force. It appears that part of the reason for disadvantage associated with

husband presence and polygamy 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 had an educational advantage of .14 years. We are particularly interested in the possibility that this advantage is accentuated when husbands are present and in polygamous marriages. Results are generally consistent with this expectation. The male advantage is greatest in polygamist marriages when the husband is present. Male advantage is also accentuated in polygamist 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 greater if the mother has never married, relative to each other marital arrangements except polygamy. This finding is a reflection of the general conservative cultural bias in favor of male education as opposed to female education in many sub-Saharan African societies.

The fourth model considers interactions by urban rural residence. In general, effects of marital status are greater in urban areas, whether negative in the case of no marriage and disruption, or positive in the case of divorce. Perhaps the diminished role of extended kin in urban settings accentuates the importance of marriage. The effects of husband absence are negative in rural areas, positive in urban areas. It is possible that the husband's role is more critical in agricultural settings. Effects of polygamy are small in rural areas, but large negative in urban areas.

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Table 3 about here

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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 4. In this model, coefficients have larger standard errors making them less likely to be statistically significant. The variances of the coefficients for never married, currently married/husband absent/monogamist, and currently married/husband absent/polygamist are not statistically significant, indicating that effects of these statuses tend to be similar across countries.

But results suggest that the consequences of widowhood, divorce/separation and married/husband present/polygamist do vary across countries. Even in these cases, however, the size of the random-effects variance is not particularly large. In short, the conclusions made above appear to be generally applicable to the countries included in this analysis.

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Table 4 about here

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### **Discussion and Conclusion**

Since the inception of the colonial project domestic organization in sub-Saharan African societies has undergone rapid transformation as a result of such modernizing influences as rapid urbanization, wage labor, 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 modernizing influences have engendered family structural changes such as conjugal and affinal instability leading to increasing incidence of single-parent households headed mainly by females.

Even though the increasing rates school enrollment in sub-Saharan Africa in recent years could be a function of the declining importance of family duties in societies that are transiting from agrarian economies to modern industrial ones, the paucity of empirical evidence on the subject 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 school enrollment in the region. We focused on the effect of such structural aspects of the family as divorce, marriage type (polygamy vs. monogamy), family size, and the presence of a husband, while we used family wealth, and place of residence as control variables in the present study. Besides being nearly universal, marriage forms the context for childbearing and rearing in the region as three-quarters of children of children live with mothers who are married.

The results in the study generally support the transformation in the region's domestic organization as a result of changes induced by modernizing influences such as formal education and urbanization. The fact that children have slightly more education if the mother has never married than if she is currently married with a monogamist husband who is present, demonstrate the influence of education on children's educational attainment since single, never married mothers have more educational attainment than their counterparts in other marital statuses. Furthermore, the saliency of the impact of these modernizing influences is demonstrated by the

finding of the positive influence of urban residence and monogamous marriage, another marker of modernity, on children's educational attainment.

The finding that both polygamy and presence of a husband in the home detract from children's education is a reflection of the fact that polygamy is selective of people who have conservative cultural attitudes towards formal education in general and the fact that women in these arrangements are less educated. Also, polygamy dilutes the resources available to households because of the large number of and children and thus forces families to make judicious selection of who goes to school and who helps on the farm. In fact, this is the economic context of the cultural bias against female education in many sub-Saharan societies.

In conclusion, the present study has demonstrated that as sub-Saharan African societies transit from agrarian-based economies to modern ones, the institution of the family is bound to transform in tandem with such changes in adapting to changes in the broader society. As families become more monogamous and urbanized with more educated members, especially the female members, the values of formal education are likely to be passed on to the next generations.

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**Table 1. Distribution of Marital Status and characteristics of mothers**

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	% of cases	Mean maternal education (0-6 scale)	% urban
<b>Never Married</b>	16.1	2.07	51
<b>Currently married, husband present, monogamist</b>	43.2	1.23	32
<b>Currently married, husband absent, monogamist</b>	14.3	1.46	36
<b>Currently married, husband present,</b>	14.4	.55	20

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<b>polygamist</b>			
<b>Currently married, husband absent,</b>	3.2	.96	28
<b>polygamist</b>			
<b>widowed</b>	3.5	1.08	31
<b>Divorced/separated</b>	5.3	1.28	38

**Table 2. Differences in Children's Education, simple marital status**

<b>Constant (implicit category is currently</b>	5.781*
<b>married)</b>	
<b>Age</b>	.474*
<b>Never married</b>	.048*
<b>widowed</b>	.135*
<b>Divorced/separated</b>	.002

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**Table 3. Difference in Children's Education, detailed marital status**

<b>Constant (implicit category is currently married, husband present, monogamist)</b>	5.826*	5.539*	5.569*	5.537*
<b>Age</b>	.474*	.474*	.475*	.473*
<b>Never married</b>	.025*	-.136*	-.189*	-.071*
<b>Currently married, husband absent, monogamist</b>	.036*	-.007*	-.040*	-.059*
<b>Currently married, husband present, polygamist</b>	-.132*	-.040*	-.130*	-.020

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<b>Currently married, husband absent, polygamist</b>	-.077*	-.051*	-.102*	-.046
<b>Widowed</b>	.116*	.123*	.185*	.062*
<b>Divorced/separated</b>	-.019	-.061*	-.018	-.052*
<b>Maternal education</b>		.112*	.112*	.111*
<b>Urban residence</b>		.329*	.329*	.337*
<b>Male</b>		.137*	.090*	.138*
<b>Interactions:</b>				
<b>Male*Never married</b>			.104*	
<b>Male*Currently married, husband absent, monogamist</b>			.068*	
<b>Male*Currently married, husband present, polygamist</b>			.177*	
<b>Male*Currently married, husband absent, polygamist</b>			.101*	
<b>Male*Widowed</b>			-.124*	
<b>Male*Divorced/separated</b>			-.088*	
<b>Urban*Never married</b>				-.125*
<b>Urban*Currently married, husband absent, monogamist</b>				.134*
<b>Urban*Currently married, husband present, polygamist</b>				-.095*
<b>Urban*Currently married, husband absent, polygamist</b>				-.019
<b>Urban*Widowed</b>				.201*
<b>Urban*Divorced/separated</b>				-.027

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**Table 4. Random effects parameters showing cross-national variance in effects of marital status**

<b>Variable</b>	<b>Coefficient</b>	<b>Standard error</b>	<b>Random-effects variance</b>	<b>Standard error of variance</b>
<b>Constant</b>	5.483*	.163	.708*	.204
<b>Never married</b>	-.087*	.025	.009	.005
<b>Currently married, husband absent, monogamist</b>	.043	.030	.013	.007
<b>Currently married, husband present, polygamist</b>	-.054	.047	.048*	.015
<b>Currently married, husband absent, polygamist</b>	-.048	.032	.011	.008
<b>Widowed</b>	.107*	.043	.032*	.013
<b>Divorced/separated</b>	-.034	.032	.017*	.007

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