

The transition of adolescent girls to first sexual intercourse: Premarital or within a union? Evidence from four Sub-Saharan African countries

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Background

The overwhelming majority of researches and programs addressing adolescent girls reproductive health and HIV prevention in sub-Saharan African countries have focused primarily on premarital sex, deemed to be associated with unwanted pregnancy, unsafe abortion and high risks of sexually transmitted infection including HIV. This has often led to study adolescent sexual behavior as a dichotomy of sexual experience versus inexperience hiding therefore important differences among sexually experienced teenagers (Whitaker et al., 2000; Forste and David, 2002). Indeed, the transition of adolescent girls to first sexual intercourse is a crucial moment in their lives with each adolescent exhibiting a specific pathway. Therefore, going beyond this dichotomy and highlighting what role do individual and contextual factors play in adolescent girls' choice of a given pathway in her entry into sexual life could lead to a better understanding and mapping of teenagers' sexual behavior. As Zabin and Kiragu (1998: p.210) said, "when addressing health consequences of adolescent sexual behaviors in sub-Saharan Africa, and the changing social and cultural context in which they occur, sexual intercourse that occurs in early marriage and premaritally must both be considered".

Indeed, in terms of transition from childhood to adulthood, analyzing together premarital sex and first sex occurring with a union provides us with a larger view of the overall context in which this transition is taking place. The pathway followed by adolescents (that is, entering sexual life through premarital sex or through a union) is an important intermediate factor for their successful transition to adulthood and their future well-being. Adolescents' sexual and reproductive health trajectory, their readiness to play adult roles and responsibilities in the future for themselves and their countries depend on the support they receive from their families, communities and governments but also on how they are managing their entering into sexual life (Lloyd, 2005; Juarez and Legrand, 2005; Juarez et al., 2008).

Therefore, it is essential that policy makers and program designers, who have to allocate more and more scarce resources to more and more health needs, understand adolescents' behaviors on the basis of a thorough knowledge of factors leading them to choose one or another pathway in her life-course. This is the best way for building appropriate and efficient programs to strengthen adolescent girls' skills to enable them to face the challenging issues in their future lives.

Using data from nationally-representative survey of adolescents, we analyze first sex within a union and first sex outside union together to contribute to the understanding of main factors shaping adolescent's life-courses during their transition to adulthood in four sub-Saharan African countries: Burkina Faso, Ghana, Malawi and Uganda. More specifically, by studying together sexual abstinence until union and premarital sex, we aim to answer to the following questions: What might cause adolescent girls to engage in sexual life through premarital sex? Alternatively, what might motivate them to seek a "protective" option, that is, abstaining until union? What role do contextual factors, such as parental control, cultural and religious values or poverty, play in adolescent's choice of a given pathway in her life-course?

Data and methods

Data source

The National Adolescents Surveys described above are modeled on the Demographic and Health Surveys (DHS), but have two particular features that make them particularly appropriate for the purposes of the present analysis. They provide a unique opportunity to update the body of evidence on adolescent sexual and reproductive behavior in these four sub-Saharan African countries: first, they interviewed adolescents starting at 12 years of age (whereas the DHS only interviews respondents age 15 and above); and second, they included detailed questions on adolescents' characteristics and sexual behaviors.

The surveys were nationally representative and household-based with a two-stage stratified sample design based on the sample frame and the same clusters used by the National Statistical Offices for the Demographic and Health Surveys in the four countries. The sampling design entailed a first-stage systematic selection of census areas and a second stage selection of households within the selected census areas based on an updated household listing. All eligible 12 to 19 years old and de facto residents in each sampled household were included in the survey. Consent from a parent or caretaker was required for minor adolescents (12-17 years old) before the eligible adolescent was authorized to participate in the survey. A total number of 5,955 adolescents of 12-19 years old were surveyed in Burkina Faso (3,016 boys and 2,939 girls), 4,430 in Ghana (2,229 boys and 2,201 girls), 4,031 in Malawi (2,052 boys and 1,979 girls) and 5,112 in Uganda (2,510 boys and 2,602 girls). However, the present analysis is limited to adolescent girls.

Because the sample of young women aged 12-19 who have had their first sex within a union is small for each country (except for Burkina Faso) to allow separate analysis by country, we used pooled data for the four countries. We then added dummy country identifier variables in the regression model to capture country differences. To adjust for the differences in sample size across countries, pooled weights for each country were also generated and have been included in all multivariate analyses.

Methods of analysis

In this study, we use event history analysis to examine the influence of girl's socio-demographic characteristics as well as contextual factors (household wealth quintiles, parental control...), on her sexual transition, that is, the likelihood that she will leave virginity for either sexual life in union or outside union.

We then use a discrete-time multinomial logit regression to analyze the risks that an adolescent girl will become sexually active through a premarital sex or directly through a union all relative to the likelihood that she will remain sexually inactive. Thus, we examine two outcomes that measure adolescent's sexual transitions through her first sex: leaving virginity for sexual life within a union, leaving virginity for sexual life outside a union.

Results

Results show that puberty (defined as age at menarche) occurs later in Burkina Faso than in the other countries. Indeed, at age 15-17, 27% of Burkinabé adolescent girls are not pubescent yet while this percentage is between 11 and 19% in the other countries.

Although adolescent girls of 12-14 years old are not as ignorant on sexuality as one may think, results show that few of them reported having had sexual intercourse, which is to be expected, given the social stigma attached to sexual intercourse for very young adolescents. This is rather a good pattern because some studies have shown that initiating sex at a young age is positively associated with increased lifetime number of sexual partners and, consequently, increased chances of infection with STIs including HIV.

With regard to the context where first sex occurred, results show that 41% of adolescents' first sex occurred in union in Burkina while in the other countries the overwhelming majority of adolescents have had their first sex outside union. In addition, while 51% of 15-17 years old have ever been in union in Burkina Faso, only 4, 8 and 9% did so respectively in Ghana, Malawi and Uganda.

Median age at first premarital varied across countries ranging from 15 in Uganda to 16.3 in Burkina Faso while it is 15.8 and 15.9 respectively in Ghana and Malawi (*log-rank test*, $p < 0.001$). With regard to median age at first sex within union results show that delayed sex until union has the same pattern in Malawi and Uganda (figure 2) with a median age of 17.8 years while the lowest (16.9) and the highest (18.8) median are respectively for Burkina and Ghana, the two West African countries (*log-rank test*, $p < 0.001$). This confirms the fact that first sex within a union among adolescents is also synonymous of early marriage. Thus, while in Burkina 14% of adolescents have ever been in union this percentage is only 5% in Ghana.

Figure 1: Life table estimates of age at first sex in union and outside first union by country

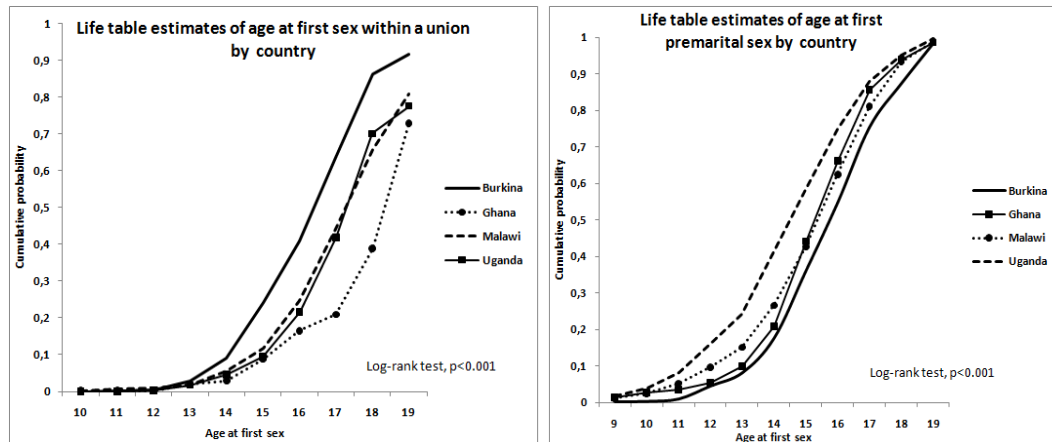
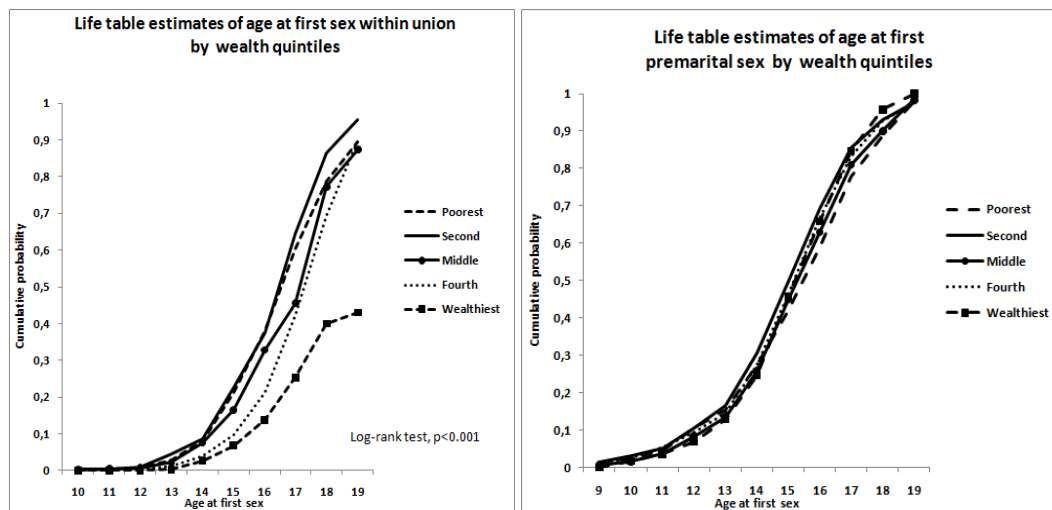


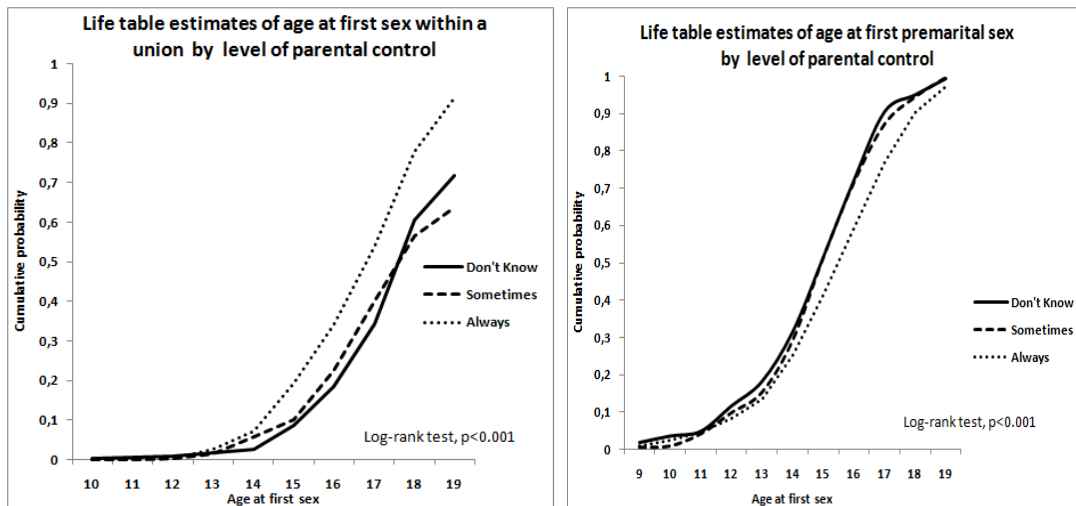
Figure 2 shows that age at first sex in union appears to vary by wealth status: adolescents from wealthiest households are clearly less likely to experience their first sex within a union compared to those from poorest households (*log-rank test, $p < 0.001$*). While 79% of girls from poorest and 86% of those from the second quintile households have experienced first sex in union at age 18, only 40% of wealthiest households did so at the same age (Figure 2). The median age at first sex in union is 17 for both the poorest and the second quintile households, 17.8 for the fourth quintile while at 19 less than the half of the wealthiest households' adolescents have experienced first sex in union. In other words, given that first sex occurring within a union at a younger age is synonymous of early marriage this result means that adolescents from wealthiest households are less likely to experience it. This conclusion is also valid with regard to residence. Indeed, the median age at first sex within a union in urban areas is 18.8 years and 17.3 years in rural areas (*log-rank test, $p < 0.001$*) which is consistent with the fact that early marriage is more common in rural than in urban areas.

Figure 2: Life table estimates of age at first sex in union and outside first union by wealth quintiles



Parental control has been used as a control variable. Indeed, parents' willingness to ensure adolescents' sexuality within marriage comes out through the monitoring and the supervision of adolescent's activities. For single adolescents parental supervision has been measured by the following direct question: "How much would you say your parents or caregivers really know where you go at night?" For married adolescents the question was: "Before you got married, how much would you say your parents or caregivers really knew where you went at night?" Responses to the question included "parents do not know"; "parents know sometimes" and "parents know always" that we consider respectively as low, medium and high level of parental control. Thus, figure 3 shows that first premarital sex as well as age at first sex within a union varies according to the level of parental control on adolescents. Thus, adolescents with high level of parental control experience first premarital sex later (median age of 16 years) than those with low parental control (median age of 15.4) (*log-rank test, $p < 0.001$*).

Figure 3: Life table estimates of age at first sex in union and outside first union by level of parental control



As for age at first sex within a union it appears to vary in an opposite direction compared to what we have seen with first premarital sex. Indeed, adolescents with high level of parental control experience first marital sex at younger age (median age of 17.3 years) than those with lower parental control (median age of 18.1) (*log-rank test, $p < 0.001$*).

Multivariate results show that adolescents who experience puberty later are significantly less likely to initiate premarital sex as well as first sex within a union. In line with what we have seen in the descriptive results, a high level of perceived parental monitoring is a factor strongly associated with adolescents' sexual activity in the expected direction. Thus, female adolescents with medium and high level of parental control are less likely to have premarital sex (respectively 25.5‰ and 13.4‰ of probability) compared to adolescents with low level of parental control (36.5‰ of probability).