To what extent do familial and residential trajectories and premarital sexual initiation influence the timing of first marriage in Cameroon?

Abstract

Using retrospective data collected by the Cameroon Family and Health Survey, this article examines the determinants of marriage timing by gender with emphasis on differentials related to childhood family and residential status, transitions in living arrangement, and residential stability. Event history analyses indicate that, for women, living with biological parents *but* being cared for by other relatives or non relatives and living in a family headed by an uneducated parent during childhood are significantly associated with a younger age at first marriage. A transition in living arrangement is also associated with a faster transition into marriage. In contrast, the marital timing for men is more dependent upon the childhood residential status than on family status or transition. There is also evidence that the impact of childhood family status on the timing of first marriage is mediated by premarital sexual initiation.

Keywords: marital timing, familial and residential trajectories, premarital sexual initiation, gender differences, Cameroon, sub-Saharan Africa.

Introduction

The time when people wed has implications for population dynamics that justify tracking this trend in sub-Saharan Africa. Scholars in demography have been concerned with the implications of marriage timing for fertility patterns (Lesthaeghe et al. 1989; Rosero-Bixby 1996). Marriage is also assumed to be controlled by the society's expectations regarding individuals' roles as spouse and parents. Thus, changes in the timing of first marriage could provide insights into structural changes in societies' norms and rules. The contributing role of late marriage in HIV prevalence in sub-Saharan Africa (Bongaarts 2007) and Cameroon (Adair 2008) gives an additional reason for an inquiry into the factors affecting marital timing.

In sub-Saharan Africa, marriage is an institution of great significance for societies and for individuals (Bledsoe and Cohen 1993). It has traditionally been characterized by its precocity and universality − especially among women, but this generalization may no longer hold as changes in the social and economic contexts gradually alter the terms and conditions of marriage. DHS data also show slight declines in the proportions of women who marry before their late 20s in several settings (Mensch et al. 2005; Marston et al. 2009). The proportions of men married before age 30 have also declined, although this decline is considerably smaller than the one seen for women.

Numerous factors have been proposed in the literature in explaining the rise in age at marriage for both females and males, including rising educational attainment, expectations about employment, growth in urbanization and changes in the terms and conditions of marriage (NRC, 2005). Much of the empirical research on marriage timing continues however to concentrate on factors related to educational and employment status. The delay in first marriage has been

consistently found to be quite common for women with more advanced levels of schooling (Mensch et al. 2005). For men, the reduced access to formal jobs has primarily and significantly been linked to the delay in first marriage (Antoine et al. 1995; Calvès 2007; Bocquier et Khasakhala 2009).

The present study makes two contributions in the research on the determinants of marriage timing in sub-Saharan Africa. First, we offer a balance to previous studies that emphasize factors related to educational and employment status by exploring how familial trajectories affect individuals' entry into first marriage. There have been very few attempts so far to analyze the links between the familial trajectories and individuals' marital timing. Several studies from Europe and North America suggest that these links operate through two mechanisms. The first mechanism is related to the family status experienced during the childhood period. American and European literature reveal for instance that the pace of marital formation is slower among individuals from less advantaged family backgrounds in terms of parents' income and education (De Graaf et al. 2003; Wiik 2008), and among those from non intact or disrupted families (Li and Wojtkiewicz 1994; Wolfinger 2003; Sassler and Goldscheider 2004).

The second mechanism highlighted by American literature is related to the experience of a transition in the childhood living arrangement. This mechanism is however relatively less explored partly due to the little availability of biographical data on living arrangements that span the length of childhood and which also contain information on young adult outcomes. One notable work is the one of Teachman (2003). Using data from the National Survey and Family Growth, he quantified the impact of the number of transitions in childhood living arrangements on the timing of union formation by age among women, as well as the impact of the type of

transition experienced – i.e. following parental death, parental marriage, or parental marital dissolution. The findings reveal that each transition in childhood living arrangement is associated with an increase in the risk of first union formation (either cohabitation or marriage) of 13 per cent at each age.

The scant evidence available from sub-Saharan Africa reveals that parents' educational status and parents' survival status during childhood are two relevant factors that affect individuals' life course transitions including the timing of marriage. Using information on women' family status at age 15, Tambashe and Shapiro (1996) observed that having fathers with a university level of education led to a significant delay in first union in Kinshasa, Zaire. Likewise, the death of one or both parents, notably the death of the mother, affects women's marital timing negatively. Another work by Beegle and Kutrikova (2007) using a 13-year longitudinal study of women and men residing in the Kagera region of Tanzania revealed that the loss of a father before age 15 translates into a 13 percent increase in the probability of being married among women age 17-23. In contrast, neither the father's nor the mother's death affects men's marital timing.

The second contribution of the study is to advance the knowledge about the associations between the location of residence and individuals' marital timing by focusing on both measures of status and change. The previous works conducted in sub-Saharan African settings have considered the effects of the current residential status as well as those of the childhood residential status. Significant delays in marital timing have been associated with current urban status among women and men (Ikamari 2005; Obeng Gyimah 2008). Yet, the empirical evidence demonstrates less clear-cut results with regard to the childhood residential status. An

issue that has not yet been explored is how a change in the residential location can be linked to marital timing.

The following questions are of interest in the study: (1) To what extent do the living arrangement, the parents' educational status and the parents' employment status during childhood influence individuals' marital timing? (2) To what extent is the experience of a family transition during childhood linked to individuals' marital timing? And (3) To what extent are the residential status during childhood and the residential stability associated with marital timing? We also examine whether the effects associated with the childhood family status vary over the individual's life course. Entering into adulthood entails a number of significant transitions such as completing school, finding work, leaving the parental home, and finding a partner. These normative transitions also influence individuals' decisions to wed and their transition to wed. In this study, we particularly examine the relevance of engaging in premarital sexual activity as an individual's rational search of a partner and the potential mediational role of premarital sexual initiation in the relationships between the family status during childhood and the timing of first marriage.

Setting

The setting for the study is the Prefecture of Bandjoun, a semi-rural and developing area in the Western region of Cameroon (Kuate Defo, 2006). Its population was estimated at 65,021 inhabitants in 2005 (BUCREP 2010); close to 80 per cent of the residents belong to the Bamileke ethnic group. Bandjoun provides an interesting setting for exploring the trend in marriage timing. Here, the qualitative research suggests that the marriage is highly valued and represents a virtually universal experience among women and men (Kouinche et al. 1998).

Therefore, a significant change in the timing of marriage might be indicative of how new challenges faced by the younger generations are affecting their transition to adulthood.

Bandjoun also constitutes a setting where familial characteristics may hasten or impede individuals' entry into first marriage through their attractiveness as spouses or their experiences with activities that conflict with marriage. For women, indications of increased chances in the marriage market are associated with the respectability and fertility of the family whereas parents' willingness and ability to keep them in school cause a temporary pulling out from the marriage market. Because men are mostly valued as marriage partners for their ability to make money and to take care of the household expenses, their marital timing is more likely to be affected by the family's landholding or by the parents' aptitude to increase their wage labours' opportunities outside the home's agricultural work via schooling investment early in life.

Conceptual framework and hypotheses

A study of marriage timing in Africa cannot be undertaken without taken into account a gender perspective, because of socially differentiated expectations, norms and practices which are gendered in most African societies. This study makes use of the conceptual mechanisms highlighted in the American and European literature and the empirical evidence from sub-Saharan Africa to examine how the familial and residential trajectories and premarital sexual initiation affects age of marriage among women and men.

Childhood family status and marital timing

Two key dimensions of childhood family status are considered to affect age at marriage: the family structure type and parental resources. Being raised in non intact family structures – i.e.

different from the one with two married biological parents – is often viewed as a delaying factor of marital entry because it affects individuals' attitudes towards marriage and the desirability of marriage (Axinn and Thornton 1993; Clarkberg et al. 1995). There seems to be no reason to believe that this impact should differ by gender. Empirical findings in American settings point out that growing up in a non intact family structure is associated with a later marriage for both women and men (Li and Wojtkiewicz 1994; Sassler and Goldscheider 2004).

Parental resources, on the other hand, affects age at marriage through individuals' living and consumption aspirations, and through parents' ability to display marital age preferences for their children. The level of material comfort in parents' home is thought to increase children's living and consumption aspirations, thereby delaying their first partnership until they perceive that their own economic conditions are favourable to achieve those aspirations or until they find a suitable match to retain the socio-economic status of the parental family (Avery et al. 1992). Axinn and Thornton's (1992) analysis on the marital timing of women and men in the United States showed that higher parents' financial resources significantly decrease children's nest-leaving through marriage during the teenage years, but accelerate the process at older ages. They suggested that parents may use their financial resources to prevent marriage at ages that they assume to be inappropriate for their children, and to reinforce it at appropriate ages.

In sub-Saharan African settings, we mostly expect the family structure and parental resources to affect the age at first marriage through individuals' opportunities to partake in activities which compete with family responsibilities. The school enrolment is likely to have a stronger influence in this manner. Since children's education enhances their income-earning potential and constitutes a strategy to secure remittances for old age, most parents will oppose a marriage as

long as their children are enrolled and perform in school. For non biological parents, the future advantages from the education of non biological children may be viewed as lower and might reduce their willingness to invest heavily in them (Serra 2009). The empirical evidence from a number of countries attests that children who live with other relatives or non relatives are less likely to partake in educational activities (Pilon 2003).

We consider two hypotheses relating childhood family status to marital timing. First, individuals who live with *and* are cared for by their biological parents during childhood enter their first marriage at a later age than those who live with *or* are cared for by other relatives or non relatives. Second, the transition into first marriage is later for individuals with working parents (as opposed to retired or inactive parents) during childhood, and for individuals whose parents went to school. Because the family structure is more likely to be associated with women's than men's schooling enrolment in sub-Saharan African settings (Pilon 2003), we expect its impact to be more pronounced on women's marital timing than on men's marital timing.

Childhood residential status and marital timing

The literature on the link between the residential status and marital timing in sub-Saharan African settings focuses on the differentials in cultural surroundings, schooling and employment opportunities. It has been suggested that urban areas expose individuals to modern values that encourage later marriage and to a lesser control of kin (Singh and Samara 1996). In terms of schooling opportunities, living in urban areas is also tied to a higher access to formal education and a longer school period which both conflict with family responsibilities. For men in particular, empirical evidence suggests that, after school, the economic hardship and the restricted access to formal employment in urban areas is a deferring factor for union formation

(Antoine et al. 1995; Calvès 2007). The reduced financial opportunities appear to exert a significant delaying impact on male age at first marriage considering the fact that the payment of a dowry is still compulsory in most settings and the fact that men are traditionally responsible for providing the economic basis of the household.

This study focuses on the links between the childhood residential status and individuals' marital timing. The relevance of the childhood residential status for the marital timing of women and men has been addressed in previous works (Antoine et al. 1995; Calvès 2007). The major findings suggest that living out of a major city or in rural setting during childhood results in the acquisition of norms and values towards the importance of marriage and the ideals of the marriage timing which may shape the basis for negotiating the marital transition throughout life. Accordingly, we expect the transition into first marriage to be earlier for women and men who resided in a rural location during childhood.

Transitions in living arrangement, residential stability, and marital timing

The arguments related to the links between a transition in living arrangement and marital timing stem from the instability and change perspective. Within this perspective, a transition in living arrangement is a source of stress which can be linked to various short- and long-term behavioural outcomes. With respect to marital outcomes, this stress has been associated with negative attitudes towards marriage and positive attitudes towards nonmarital unions (Axinn and Thornton 1996). Alternatively, because children who experience changes in their childhood living arrangements are more likely to initiate sexual unions early, they may relatively have a greater pool of eligible partners they can marry. In congruence with this idea, Teachman (2003) found that the number of transitions in living arrangements significantly increases the risk of

union formation. His analysis reveals, however, that this impact holds true for cohabitational union and not for marriage.

A second mechanism of the link between a change in living arrangement and marital timing is related to the residential mobility it often leads to. It has been argued that children who experienced changes in geographic residence and neighbourhoods are more likely to feel disconnected to their community and may have a lesser need to conform to their cultural surroundings (Teachman 2003). By the same token, we believe that a strong connection to the community may positively affect individuals' attractiveness as spouses through family name. In the Bandjoun community where the choice of spouse often lies on the man's family for instance (Kouinche et al. 1998), it is likely that a higher family prestige within the community will result in frequent requests for a daughter's hand in marriage.

Thus, we expect the transition into first marriage to be earlier for individuals who experienced a transition in the childhood living arrangement. With regard to the empirical evidence from sub-Saharan African settings, we also expect the transition into first marriage to be later for individuals who experienced a parental death. Further, we anticipate that a residential stability will be associated with a younger age at first marriage.

Childhood family status, premarital sexual initiation, and marital timing

There is a paucity of research on the link between premarital sexual initiation and the timing of first marriage. Some theoretical arguments have been proposed in the American settings about the conditions under which a premarital sexual initiation could serve as an accelerating factor for marriage (Chen Yen-hsin and Landale 2009; Crissey 2005). The links between individuals'

involvement in premarital relationships and the timing of first marriage has been little investigated in sub-Saharan African settings. Clark and al. (2009) used data on young people aged 15 to 24 years in rural Malawi to investigate the relationships between marital aspirations and measures of partnership formation. They suggest that the desire to find a suitable marriage partner is an important motivation for beginning sexual partnerships. They also found evidence that the age at marriage is significantly associated with the odds of becoming sexually active. We hypothesize that premarital sexual initiation will accelerate the marital timing among women and men, and that childhood family status will be associated with individuals' marital timing through the likelihood of premarital sexual initiation.

Data and methods

We use data from the Cameroon Family and Health Survey (CFHS), a series of surveys conducted by the Population Observatory in Socio-clinical Epidemiology (POSE). The surveys are designed to collect relevant biographical information on men and women in relation to demographic and health behaviours, disease aetiology, and respondents' characteristics among other subjects. For the purposes of this study, we exploited the data from the 1996-1997 survey conducted in Bandjoun. The unique feature of this survey wave is that it gathered retrospective life history information on individuals' family arrangements and residential location. The Bandjoun-CFHS is a representative survey of the population of Bandjoun aged 10 years or older in 1996-1997. A total of 2,381 individuals aged 10 years and older were selected and interviewed between December 1996 and March 1997. Exhaustive information on the sampling procedure and data collection are available elsewhere (Kuate Defo and Lepage 1997; Kuate Defo 2005, 2006). Respondents were asked about various aspects of their family and residential environment at age 6, age 12, the time of sexual initiation (for those who had had sexual

relations), the time of first pregnancy (for ever pregnant women), the time of first use of reproductive health services, and the time of survey. This information is used to create measures of childhood family and residential status and transitions.

The analysis reported here is for the respondents aged 44 years old or less at the time of the survey. Because we mainly used family and residential living arrangements at age 6 and 12 to test the influences of childhood statuses, we excluded individuals aged below 12. The final sample resulted in 1,642 individuals aged 12-44, including 839 females and 748 males. No case of missing information on the age at first marriage was observed among this sample during the data processing. Descriptive and multivariate analyses are performed separately by sex.

We began by computing age-specific probabilities of first marriage and the median age at first marriage using single-decrement life tables. The 1998 Cameroon Demographic and Health Survey (CDHS) data and the 1996-1997 CFHS data were analyzed and compared with cohort data. The weight provided by the CDHS was taken into account in the computation. For this part of the analysis, only respondents aged 15-44 in the CFHS data were considered to allow a comparable picture of marriage timing. The probability of marriage by specific ages measures the risk of entry into first marriage during each interval $x, x + \Delta x$ for individuals who remained single at age x. We grouped individuals by birth cohorts. To mark out the trend of first marriage at specific ages, the following age-specific probabilities of first marriage were calculated: first marriage probability before age 15, in ages 15-19, 20-24, and 25-29. The overall probability of first marriage by age 29 and the median age of first marriage were also computed.

Discrete-time logit models were then used to predict the hazard of entry into first marriage. The outcome variable is the timing of first marriage. The questions used in the marital section were:

"Have you ever been married?" and "What age were you at your first marriage?" Respondents provided information on their age at first marriage in completed years. We created an event history file of person-year records with a number of intervals corresponding to the number of years during which each respondent is observed before entering into marriage or being censored. The value of the dependent variable over the last interval is 1 if the event has happened and 0 otherwise.

Three models are considered. The first model predicts the hazard of entry into first marriage using indicators of family and residential status during childhood. Three variables are used to test the effects related to the family status: the living arrangement, the parents' educational status and the parents' employment status when the respondent was 12. The living arrangement is indicated by: having lived with and being cared for by biological parents; having lived with biological parents and being cared for by other relatives or non relatives; having lived with and being cared for by other relatives or non relatives; and having lived with other relatives or non relatives and being cared for by biological parents. The reference category consists of individuals who have lived with and been cared for by their biological parents. The parents' educational attainment is indicated by whether the principal parent or guardian went to school (dummy coded 1 if yes and 0 otherwise). The parents' employment status is indicated by whether the principal parent or guardian worked in the agricultural sector, worked in other sectors, or was retired or inactive. Note that the information gathered on parents' education and employment status has been reported by respondents. The childhood residential status is measured by a variable indicating whether, at age 12, the respondent was living in a rural location, a small urban centre, or in a major city.

The second model includes the measures of transitions. The measure of family transition indicates whether the respondent's living arrangement at age 6 was different from the one at age 12. The experience of a parental death during childhood is indicated by a dummy variable (coded 1 if the respondent experiences the death of his or her father, mother, or both parents regardless of whether the parent resided with the respondent at time of death and 0 otherwise). The last measure of transition is related to the residential stability and indicates if the respondent had always lived in Bandjoun.

The third model tests the association between premarital sexual initiation and individuals' marital timing. It is also used to test if premarital sexual initiation mediates the association between childhood family status and individuals' marital timing. The model adds a variable indicating whether the respondent experiences premarital first sex. Information on respondent's age at first sexual intercourse was reported in completed years. To capture premarital sexual initiation, the age at first sexual intercourse had to be lower than the age at first marriage by at least one year. The model also includes a measure of the age at premarital sexual initiation (a discrete variable with three categories: $\leq$ 15 years old; 16 to 19 years old and $\geq$ 20 years old) and a measure of the age difference with the first sexual partner. For women, we also add a variable indicating whether the respondent had a premarital birth. Premarital birth significantly limits the odds that a woman forms a stable union in sub-Saharan African settings (Klein Hattoti and Larsen 2007).

Each model also includes dummies for exposure to first marriage: 10 parameters of exposure for women: (<=15; 16; 17; 18; 19; 20; 21; 22; 23-24; 25+), and 8 parameters for men (<=18; 19-20; 21; 22-23; 24-25; 26-27; 28-29; 30+). To account for the time trend in marital timing, we create

a dummy for age-cohort membership: those aged 12-29 versus 30-44 years. In order to determine if the effects of childhood living arrangement and parental resources change as individuals complete their educational career, these models also include measure of school leaving indicating whether the respondent was no longer attending school at age 12 (dummy coded 1 if yes and 0 otherwise). Five other variables were added to account for the cultural factors affecting the timing of first marriage in sub-Saharan African settings: the marital status (polygyny versus monogamy); the mother's number of children ever born, the religious affiliation and attendance, and the exposure to new ideas. Polygyny is a distinctive feature of marital regimes in sub-Saharan Africa which is characterized by a large age gap between spouses. It can be associated with a younger age at marriage among women in view of the fact that women who marry earlier are to be in polygamous unions with older co-spouses (NRC 2005). We control for this impact for women only by adding a measure which indicates whether or not the respondent was involved in a polygamous marriage at the time of the survey. The pace of marriage is found to be relatively slow for individuals from larger families (Tambashe and Shapiro 1996). The religious affiliation is a sociocultural proxy of the rules and norms regarding marriage. Religious communities also shape families' choices regarding schooling, particularly for girls. Religious affiliation has been reported to be linked to women and men's marital timing in sub-Saharan African settings, its impact being more pronounced for men than women (Antoine et al. 1995; Bocquier and Khasakhala 2009). The exposure to new ideas is controlled using a measure of involvement in clubs and associations. The measures of religious affiliation and involvement in clubs were created as time-varying measures using retrospective information collected at age 6, age 12, and the time of survey.

Results

Descriptive results

Descriptive results for the outcome and predictor variables are presented in Table 1. Overall, 35.4 per cent of women and 14.8 per cent of men marry for the first time in the observation period. The measures of childhood family status show that 62.5 per cent of women and 67.1 per cent of men were living with *and* were cared by their biological parents (the mother, the father, or both). Other relatives or non relatives who may not be living with the child may also contribute to child rearing costs: 9.3 percent of women and 10.3 percent of men reported that they were living with their biological parents when they were 12, but that their needs for schooling or clothing were met by other relatives or non relatives. The findings for parental resources indicate that 57.6 per cent of women and 48.7 per cent of men grew up with a household head who never went to school. About one quarter of women and men lived with household heads who were farmers. The results for residential status show that, among women, 67.7 per cent resided in a rural area at age 12, 23.7 per cent resided in a small urban centre and 8.6 per cent resided in one of the two major cities (i.e. in Yaoundé or Douala). Among men, the percentages are 69.5, 19.7 and 10.8 respectively.

[Insert Table 1]

In general, 22.1 per cent of women and 14.8 per cent of men experienced a transition in living arrangement during childhood. Few women (2.5 per cent) and men (3.1 per cent) experienced a parental death. Also, 38.1 per cent of women and 26.1 per cent of men have always lived in Bandjoun. Half of men and 47.6 per cent of women engaged in sexual activity before marriage. Also, 10.3 per cent of women had a premarital birth.

With regard to the control variables, the descriptive results indicate that both subsamples of respondents are mostly composed of individuals below the age of 30. Nearly 11 per cent of women reported to be involved in a polygamous marriage at the time of the survey. Both women and men come from high-fertility backgrounds, with a mean number of mother's children of 6.4 among women and 6.5 among men. More than 80 per cent of women and men reported to be Christian. On average, 22.1 per cent of women and 25.7 per cent of men reported to be involved in community groups.

[Insert Table 2]

Table 2 reports estimates of age-specific probabilities of first marriage for women. According to the nationally representative trends from CDHS, the probability of first marriage by age 29 is slightly lower among the younger generations of women (0.90 for those aged 15-29 compared to 0.95 for those ages 30-44). The increase in median age at first marriage is 1.4 years. The findings for the CFHS sample indicate lower probabilities of marriage before age 15 for both generations of women (as compared to the CDHS-West/Littoral and CFHS national samples), and a remarkable difference of 4.0 years between the median age for those aged 30-44 and those aged 15-29.

[Insert Table 3]

Comparatively to women, there do not seem to be important changes in the median age at first marriage among birth cohorts among the CFHS national and the CDHS-West/Littoral samples of men. As can be seen in Table 3, the difference between the two birth cohorts is 1.3 years among the CFHS national sample and 1.6 years among the CDHS-West/Littoral sample. Nonetheless, the results point out important differences in the age-specific probabilities of first marriage after age 20: for both samples, the probabilities of first marriage in ages 20-24 and in

ages 25-29 for men aged 30-44 are more than two times the probabilities for those aged 15-29. A similar tendency can be observed in the CFHS sample.

Multivariate results

Table 4 presents the results for the discrete-time logistic regression models for the timing of first marriage among women. Results for Model 1 with only measures of childhood family status and childhood residential status, exhibit the hypothesized effects. Except for women who lived with and were cared for by other relatives or non relatives, not living with and being cared for by the biological parents is associated with a later age at first marriage. After all controls, the odds are 1.64 ($p<0.001$) for women who lived with biological parents and were cared for by other relatives or non relatives, and 1.59 ($p<0.05$) for those who lived with other relatives or non relatives and were cared for by biological parents. Also, women who grew up with a household head who went to school exhibit a lower age at first marriage (odds=0.70; $p< 0.05$). The results for the parents' employment status contradict our hypothesis. Conversely to our hypothesis, having had working parents during childhood (as opposed to retired or inactive parents) is associated with an earlier transition into marriage. As expected, having lived in a small urban centre and having lived in a major city during childhood are associated with an older age at marriage (odds=0.99 and 0.80, respectively).

[Insert Table 4]

The pattern of results regarding the childhood status remains generally the same in Model 2 which adds the measures of transitions. Net of these factors, however, the effect associated with living with other relatives or non relatives and being cared for by biological parents become not significant. The results of Model 2 also indicate that, as expected, a transition in living arrangement during childhood significantly advances the process of forming a first marriage

among women. A transition in living arrangement during childhood multiplies the odds of entry into marriage by 1.39 ($p<0.1$). The results point out weak differentials in marital timing with the experience of a parental death during childhood and with a residential stability within the life course.

Model 3 considers whether premarital sexual initiation advances the process of first union formation. Conversely to our hypothesis, premarital sexual initiation does not accelerate the process of marriage among women. The results indicate that a premarital sexual initiation significantly decreases the hazard of first marriage across all cohorts (odds=0.59, $p<0.1$). The delaying effect is more pronounced among women aged 30-44 (odds=0.48; $p<0.05$). However, compared to those who had their first premarital sexual intercourse by age 15 or younger, women who initiated premarital sex between age 16 and age 19 (odds=0.55; $p<0.001$) and those who did so at age 20 or after (odds=0.19; $p<0.001$) marry significantly later. Also, an age difference of 3-5 years and of 6 years and more with the first sexual partner is associated with an increase in the hazard of first marriage (odds are 1.74 and 1.82, respectively). Experiencing a premarital birth also appears to matter for marital formation, with a significant reduction in the odds of marriage (odds=0.46; $p< 0.001$).

Including the variables related to premarital sexual experience has consequences for the effects of family statuses during childhood. By comparing the results for Model 2 and Model 3, we observe that the effect of "living with biological parents and cared for by other relatives or non relatives" becomes insignificant, whereas the effect of "living with other relatives and cared for by biological parents" gains in statistical significance. There are also indications that some of the effects of the household head's employment status during childhood are mediated by

premarital sexual experiences. The accelerating effects associated with having lived with working parents remain: the effect becomes significant for women who grew up with a household head who was farmer. It is also worth mentioning that the measures related to premarital sexual initiation explain some of the effects of childhood residential status. In Model 2, the residence in small urban centres and in major cities reduces the odds of marriage. In Model 3, the effect is reverse: the odds ratios appear to be higher and even statistically significant among women who grew up in major cities, suggesting that women who resided in urban environments during childhood may initiate sex at a younger age (by age 15 or younger) which in turn accelerates the process of marriage.

[Insert Table 5]

Table 5 shows the results for the discrete-time logit regressions among men. In general, the estimates in Model 1 and 2 indicate that the measures of childhood family status and transitions are not significantly associated with marital timing among men. Results from Model 1 and 2 lend no support to the hypothesis that individuals who live with and are cared for by their biological parents during childhood enter their first marriage at a later age than those who live with or are cared by other relatives or non relatives. Indeed, men who lived with their biological parents but were cared for by other relatives or non relatives exhibit a slightly higher odds of marriage (odds=1.19 in Model 1 and odds= 1.08 in Model 2). Although not significant, the odds of first marriage is effectively reduced with the household head's schooling experience (odds=0.73 and 0.77 in Model 2). Another finding is that men whose household heads worked in other sectors during childhood start their life as a couple later than men whose household heads were retired.

The parameter estimates for the childhood residential status show that, among men, having lived in a small urban centre or in one of the major cities of Yaoundé and Douala accelerated the process of marriage entry. The odds ratio is increased by twofold for those who resided in a small urban centre (odds=1.98; $p<0.001$ in Model 1 and odds=2.30; $p<0.001$ in Model 2). These results are not consistent with our hypothesis positing that the transition into first marriage will be earlier for individuals who resided in a rural location during childhood. However, they are consistent with a setting where men are mostly valued as marriage partners based on financial criteria. Given that the best schooling infrastructures are located in small and major urban areas, it is expected that men who grew up in those areas will have higher human capital potential and higher wage labor opportunities outside the home's agricultural work.

With regard to the measures of transitions, Model 2 indicates that a transition in living arrangement (odds=1.29) and parental death (odds= 1.42) are related to a rapid transition into marriage among men. Similarly, having always lived in Bandjoun is associated with an increase in the odds of first marriage but the effect appears to be significant (odds=1.43). The results for Model 3 indicate that having initiated premarital sex is associated with a 1.56 increase of the odds of marriage across all cohorts but with a decrease of 0.28 among men aged 30-44.

Discussion and conclusions

The descriptive results based on analysis with cohort data highlighted that women and men in Cameroon experience changes in the age at first marriage, as noted across much of sub-Saharan Africa (Mensch et al. 2005; Marston et al. 2009). But most importantly, we observed with the cohort data gathered in Bandjoun that age at first marriage is drastically higher among the younger cohorts. Indeed, we found a difference of 4.0 years between the median age for those

aged 30-44 and those aged 15-29. Besides, the probability of first marriage in ages 15-19 is four times lower among the younger cohorts (0.16 as compared to 0.64 for the older cohorts). Because Bandjoun is a semi-rural area with relatively high social values regarding the importance of marriage, the changes in the marital timing occurring there may augur significant transformations in marital behaviours in similar settings in Cameroon and in West Africa.

The multivariate analyses provide new evidence on the associations between the family and residential environments, and individual's marital timing using both measures of status and transitions. Starting with the parental resources, we found that comparatively to women whose parents never went to school, those whose parents have schooling experience marry later. This effect is stronger for women than for men. Regarding parents' employment status, the results indicate that women from families headed by farmers marry at relatively younger ages. The level of material comfort at home, parents' ability to financially help for the establishment, and parents' marital age preferences for their children have been proposed in previous research as possible mechanisms between parental socioeconomic status and children's marital timing (Axinn and Thornton 1992; South 2001; Wiik 2008). In this study, the rapid pace of marriage among women from families headed by parents engaged in farm activities (mostly a subsistent agriculture) can be explained by a household strategy to reduce the number of dependents. Another plausible explanation is that the parents engaged in farm activities are less likely to have schooling experience, thereby less likely to have educational aspirations for their daughters.

We also added to the literature by showing that the childhood living arrangements are important determinants of women's marital process. The results highlight that, with the possible exception of living with and being cared for by other relatives or non relatives, the odds of marriage for

women increase with not staying *and* not being cared for by biological parents. The main finding regarding the impact of childhood living arrangement is that women marry at relatively younger ages when the person who is paying for the rearing costs is not part of the household. This finding provides some credence to the argument that the fear of wasting the rearing investment (notably the educational investment) may be one of the reasons why most parents or guardians oppose an early marriage of daughters in less developed settings (Lindstrom and Brambila Paz 2001). Parents or guardians might express no need to oppose a veto to an early marriage if they are not the ones making such an investment. Turning to men's marital timing, the main conclusion that emerges from the findings is that their odds of marriage are not significantly influenced by the childhood family status.

More detailed studies should be conducted to allow the investigation of the precise mechanisms through which familial and residential trajectories affect marriage in sub-Saharan African settings. The determining power on women and men' marital timing attributed to the educational status (Obeng Gyimah 2008; Ikamari 2005; Mensch et al. 2005) gave us reasons to suggest that the effects of childhood family statuses are mediated by individuals' participation in schooling activities. To get some indication of this intervening effect, we ran our models with a variable related to the schooling status included. Not surprisingly, we observed that women and men who left school by age 12 marry earlier. More detailed biographical data on school enrolment status (also on educational attainment) that span a wider length of individual's life course would likely deeper this line of inquiry. It would also be interesting to explore if the effects of family statuses during the childhood period are mediated by individuals' employment status achieved in the course of life.

Our investigation regarding the extent to which the measures of family transitions could be linked to marital timing provides mixed results. A transition in living arrangement increases the odds of first marriage by about 1.3 for both women and men but the effect is significant for women only. This finding is consistent with the arguments in American literature that family instability during childhood is a salient determining factor of adult outcomes including union formation (Teachman 2003). However, we should bear in mind that this study analyzed the transition in living arrangement in term of a change in the parental structure rather than a change in various dimensions of the living arrangements as the case in American literature. The significant result for women may suggest that moving between biological parents and other relatives or non relatives affecting life course educational outcomes, and resulting in prompt marriage. Conversely to previous studies (Tambashe and Shapiro 1996; Beegle and Kutrikova 2007), we found no significant associations between a parental death and women's marital timing. No significant result was found for men either.

With regard to the effects associated to childhood residential status, the findings agree with the work of Bocquier and Khasakhala (2009): as compared to women who resided in rural areas during childhood, the marital process is delayed for women who resided in major cities. Our result here is, however, not significant. Similarly, we found that the odds of marriage are quite similar for those who resided in small urban areas. The same effects were predicted for men, but the results pointed out a different causal direction. Unlike the previous findings (Antoine et al. 1995; Calvès 2007), we found that the urban residence during childhood advances the process of marriage among men. In Bandjoun community, a man is specially valued in the marriage market because of his ability to support his wife financially (Kouinche et al. 1998). Residing in an urban centre during childhood can accelerate the process of marriage among men by increasing

their chances to have access to best schools, thereby increasing their chances of having high-income jobs outside the home's agricultural work.

To what extent can residential stability be associated with marital timing in sub-Saharan African settings? Our results tend to indicate that residential stability is linked to a higher odds of marriage among men. An implication for this finding is that a residential stability could be related to a higher pressure to conform to cultural surroundings among men, notably to the paramount importance of being married in order to be considered as a respectable community member. Similarly, perhaps men benefit from being known in the community in their search for spouse. This line of investigation should be enriched with additional analyses based on nationally representative samples of women and men.

The mediational role of premarital sexual initiation in the relationships between the childhood family status and the timing of first marriage is supported to a certain extent. We found that premarital sexual initiation is associated with a significant reduction in the odds of marriage among women, a result which contradicts the conclusions in the work by Clark et al. (2009). Based on in-depth qualitative interviews and quantitative analyses, the authors concluded that hoping to marry sooner is highly correlated to premarital sexual initiation for both sexes. Our results regarding men's marital timing are more in favor of these conclusions. A potential explanation for the difference in findings for women between Clark's et al (2009) study and ours is that their worked considered only young women (aged 15-24), whereas we used a wider age range (women aged 12-44). According to our results, it seems reasonable to suppose that the age at sexual initiation, the age difference with the first sexual partner and the experience of a premarital birth are also important factors which contribute to shape women's marital timing. It

could be that the marital process in accelerated for women who initiated sex at younger age (i.e. at 15 or younger), who did so with a much older partner and those who did not experience a premarital birth. We also find that the effects of family statuses during childhood on women' marital timing are quite dependent of their premarital sexual experience. In particular, the accelerating impact associated with growing up with biological parents while cared for by other relatives or non relatives become less pronounced once individuals' premarital sexual experience is taken into account. We conclude by pointing to the fact that further research should be done in order to fully examine the conditions under which a premarital sexual initiation could serve as an accelerating factor for marriage, and the conditions under which it could postpone/deter the entry into marriage.

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Table 1 Descriptive statistics for variables by gender, CFHS 1996-1997

Variable	Description	Women 12-44	Men 12-44
First marriage	Whether the respondent experienced first marriage between time t and t+1 (1 = yes)	35.4	14.8
Variables for Model 1 : Childhood family and residential status			
Childhood living arrangement	Combined measure of the living arrangement and support when the respondent was 12		
Have lived with and was cared for by biological parent(s) (ref.)		62.5	67.1
Have lived with biological parent(s), and was cared for by other relatives or non-relatives		9.3	10.3
Have lived with and was cared for by other relatives or non relatives[#]		20.3	15.9
Have lived with other relatives or non relatives[#], but was cared for by biological parent(s)		7.9	6.7
Parent went to school	Parent/guardian's[§] educational status when the respondent was 12 years old		
Yes		42.4	51.3
No (ref.)		57.6	48.7
Parent's employment status	Parent/guardian's[§] employment status when the respondent was 12 years old		
Worked in the agricultural sector		23.2	23.5
Worked in other sectors		50.4	50.3
Was retired or inactive (ref.)		26.4	26.2
Childhood location of residence	Location of residence when the respondent was 12 years old		
Rural (ref.)	Resided in a rural location	67.7	69.5
Small urban centre	Resided in a small city	23.7	19.7
Major city	Resided in Yaoundé or Douala	8.6	10.8
Variables for Model 2 : Transitions in living arrangement and residential stability			
Experienced a transition in living arrangement during childhood	Yes if the respondent' s living arrangement at age 6 was different from the living arrangement at age 12		
Yes		22.1	14.8
No (ref.)		77.9	85.2
Experienced a parental death during childhood	Yes if the respondent experienced the death of one or both biological parent(s)[¶]		
Yes		2.5	3.1
No (ref.)		97.5	96.9
Always lived in Bandjoun (the survey area)	Proxy of respondent's ties with his/her community		
Yes		38.1	26.3
No (ref.)		61.9	73.7

Table 1 (Continued)

Variable	Description	Women 12-44	Men 12-44
Variables for Model 3 : Mediating effects of premarital sexual initiation			
Premarital sexual initiation	Whether the respondent experienced first premarital sexual intercourse between time t and t+1 (1 = yes)	47.6	50.5
Age at premarital sexual initiation	Respondent's age at premarital sexual initiation		
≤ 15 years old (ref.)		15.5	18.8
16-19 years old		28.4	25.4
≥ 20 years old		3.7	6.3
Age difference with first sexual partner	Age difference respondent's age at premarital sexual initiation		
Younger / same age (ref.)		3.6	38.9
1 to 5 years older		29.8	10.6
6 or more years older		14.2	1.0
Premarital birth	Whether the respondent had a premarital birth between time t and t+1 (1 = yes)	10.3	NA
Other variables			
Age cohort (years)	Respondent's cohort membership		
12 - 29		83.6	85.2
30 - 44 (ref.)		16.4	14.8
The respondent has left school	Yes if the respondent was no longer attending school at age 12		
Yes		6.3	3.6
No (ref.)		93.7	96.4
Involved in a polygamous marriage	Yes if the respondent reported being in a polygamous marriage at the time of survey		NE
Yes (ref.)		10.7	
No		89.3	
Mother's number of children	Mean number	6.4	6.5
Religiosity†	Respondent's religious affiliation and attendance		
Non-Christian (ref.)		6.5	15.3
Christian, attend religious activities		45.9	35.6
Christian, don't attend religious activities		47.6	49.1
Involved in clubs†	Proxy of exposure to new ideas		
Yes		22.1	25.7
No (ref.)		77.9	74.3
Number of person-year observations		6,706	6,955
Number of persons		839	748

Notes: # None of the two biological parents was present in the household

§ Refer to the principal parent/guardian (the head of the household)

¶ Regardless of whether the parent resided with the respondent at time of deaths

†Time-varying variables; NA = not admissible; NE = Not estimated

Table 2 Probability of first union at specific ages, and median age at first marriage for women: Comparative analyses with the CDHS and the CFHS data

	Probability at specific ages					Median age	N
	< 15	15 – 19	20 – 24	25 – 29	by 29		
CDHS 1998 (National)							
15-29	0.1331	0.3824	0.2957	0.1814	0.8982	17.9	3,373
30-44	0.2062	0.5568	0.5054	0.4291	0.9437	16.5	1,794
CDHS 1998 (West/Littoral)							
15-29	0.0572	0.3038	0.2625	0.1556	0.8302	19.9	926
30-44	0.1028	0.5673	0.4541	0.4578	0.9272	17.5	467
CFHS 1996-1997							
15-29	0.0018	0.1536	0.2413	0.1522	0.7566	21.9	560
30-44	0.0290	0.6350	0.5147	0.4286	0.9565	17.9	138

Notes: Data are generated from single-decrement life table

The CDHS data encompasses all unions including informal ones, whereas the CFHS data include only formal unions. The comparative results presented here should be interpreted with this dissimilarity in mind.

The weight provided by the CDHS was taken into account in the computation.

Table 3 Probability of first union at specific ages, and median age at first marriage for men: Comparative analyses with the CDHS and the CFHS data

	Probability at specific ages					Median Age	N
	< 15	15 – 19	20 – 24	25 – 29	by 29		
CDHS 1998 (National)							
15-29	0.0048	0.0956	0.1789	0.1582	0.6925	25.7	1,460
30-44	0.0000	0.1149	0.3925	0.4466	0.7450	24.4	757
CDHS 1998 (West/Littoral)							
15-29	0.0025	0.0516	0.1007	0.1485	0.5892	27.5	408
30-44	0.0000	0.0837	0.3255	0.5286	0.6916	25.9	227
CFHS 1996-1997							
15-29	0.0000	0.0063	0.0421	0.1486	0.4911	−	480
30-44	0.0180	0.0455	0.2095	0.4382	0.6126	27.4	111

Notes: Data are generated from single-decrement life table

The CDHS data encompasses all unions including informal ones, whereas the CFHS data include only formal unions. The comparative results presented here should be interpreted with this dissimilarity in mind.

The weight provided by the CDHS was taken into account in the computation

− Less than 50 percent of the respondents were first married by age 29

Table 4 Discrete-time logistic regression models for the timing of first marriage among women, odds ratios (OR) and 95-per-cent confidence intervals (CI) of the influences of familial trajectories, residential trajectories, and premarital sexual initiation, CFHS 1996-1997

	Gross effects		Model 1		Model 2		Model 3	
	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)
Measures of status								
Childhood living arrangement								
Have lived with and was cared for by biological parent(s) (ref.)	1.00		1.00		1.00		1.00	
Have lived with biological parent(s), and was cared for by other relatives or non relatives	1.54	(1.20-1.97)***	1.64	(1.13-2.37)***	1.61	(1.10-2.34)**	1.43	(0.92-2.19)
Have lived with and was cared for by other relatives or non relatives [#]	0.85	(0.64-1.12)	0.98	(0.62-1.51)	0.85	(0.52-1.37)	1.04	(0.61-1.75)
Have lived with other relatives or non relatives[#], and was cared for by biological parent(s)	1.16	(0.83-1.60)	1.59	(1.02-2.48)**	1.32	(0.82-2.12)	1.64	(0.99-2.68)*
Parent went to school (ref. = No)	0.52	(0.41-0.64)	0.70	(0.51-0.93)**	0.68	(0.50-0.92)**	0.64	(0.45-0.89)**
Parent's employment status								
Worked in the agricultural sector	1.35	(1.04-1.73)**	1.31	(0.89-1.90)	1.31	(0.89-1.89)	1.45	(0.96-2.16)*
Worked in other sectors	0.97	(0.76-1.23)	1.19	(0.84-1.68)	1.20	(0.84-1.70)	1.34	(0.89-2.01)
Was retired or inactive (ref.)	1.00		1.00		1.00		1.00	
Childhood location of residence								
Rural (ref.)	1.00		1.00		1.00		1.00	
Small urban centre	0.93	(0.73-1.17)	0.99	(0.71-1.39)	0.93	(0.65-1.32)	1.17	(0.80-1.70)
Major city	0.92	(0.66-1.27)	0.80	(0.45-1.43)	0.72	(0.39-1.32)	1.62	(0.91-2.85)*
Measures of transitions								
Experienced a transition in living arrangement during childhood (ref. = No)	0.91	(0.71-1.16)			1.39	(0.94-2.03)*	1.10	(0.71-1.69)
Experienced a parental death (ref. = No)	1.11	(0.64-1.92)			1.01	(0.42-2.41)	0.97	(0.39-2.37)
Always lived in Bandjoun (ref. = No)	1.72	(1.42-2.08)***			0.88	(0.65-1.17)	1.21	(1.86-1.70)

Table 4 (Continued)

	Gross effects		Model 1		Model 2		Model 3	
	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)
Effects of premarital sexual initiation								
Premarital sexual initiation (ref = No)	0.66	(0.55-0.79)***					0.59	(0.34-1.02)*
Cohort 30-44 years old × premarital sexual initiation	2.02	(1.64-2.48)***					0.48	(0.25-0.89)**
Age at premarital sexual initiation (ref.: ≤ 15 years old)								
≤ 15 years old (ref.)	1.00						1.00	
16-19 years old	0.77	(0.58-1.01)*					0.54	(0.36-0.81)***
≥ 20 years old	0.51	(0.29-0.86)**					0.19	(0.09-0.36)***
Age difference with first sexual partner								
Younger / same age (ref.)	1.00						1.00	
1 to 5 years older	1.19	(0.63-2.22)					1.74	(0.88-3.42)
6 or more years older	1.63	(0.86-3.07)					1.82	(0.92-3.61)*
Premarital birth (ref = No)	0.74	(0.54-0.99)**					0.46	(0.29-0.72)***
Other variables								
Age cohort (ref. = 30 – 44 years old)	0.26	(0.22-0.31)***	0.30	(0.2-0.40)***	0.29	(0.21-0.39)***	0.24	(0.14-0.39)***
The respondent has left school (ref. = No)	1.71	(1.31-2.21)***	1.34	(0.85-2.11)	1.33	(0.84-2.09)	1.38	(0.87-2.19)
Involved in a polygamous marriage (ref. = Yes)	3.47	(3.02-3.97)***	2.53	(1.87-3.42)***	2.57	(1.89-3.49)***	2.75	(1.98-3.82)***
Mother's number of children	1.01	(0.96-1.04)	1.00	(0.98-1.10)	1.04	(0.99-1.10)	1.05	(0.98-1.12)
Religiosity† (ref. = Non Christian)								
Christian, attend religious activities	0.63	(0.47-0.84)***	0.41	(0.26-0.63)***	0.41	(0.26-0.63)***	0.51	(0.29-0.88)**
Christian, don't attend religious activities	0.60	(0.44-0.80)***	0.51	(0.32-0.80)***	0.51	(0.32-0.79)***	0.60	(0.34-1.07)*
Involved in clubs† (ref. = No)	0.89	(0.70-1.11)	1.00	(0.71-1.39)	0.99	(0.70-1.38)	0.94	(0.64-1.35)
- 2 log-likelihood				1781.6		1778.2		1663.5
Number of person-year observations		6,706		6,706		6,706		6,706
Number of persons		839		839		839		839

Notes: † Time-varying variable
Level of significance: * p<0.1; ** p<0.05; *** p<0.001 ref. = reference

Model 1: Measures of status + other variables; Model 2: Measures of statuses + measures of transitions + other variables
Model 3: Measures of status + measures of transitions + variables related to premarital sexual initiation + other variables
Each model also includes 10 dummies for exposure to first marriage (10 parameters of exposure: <=15 [referent segment]; 16; 17; 18; 19; 20; 21; 22; 23-24; 25+).

Table 5 Discrete-time logistic regression models for the timing of first marriage among men, odds ratios (OR) and 95-per-cent confidence intervals (CI) of the influences of familial trajectories, residential trajectories, and premarital sexual initiation, CFHS 1996-1997

	Gross effects		Model 1		Model 2		Model 3	
	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)
Measures of status								
Childhood living arrangement								
Have lived with and was cared for by biological parent(s) (ref.)	1.00		1.00		1.00		1.00	
Have lived with biological parent(s), and was cared for by other relatives or non relatives	1.48	(0.95-2.31)*	1.19	(0.55-2.54)	1.08	(0.48-2.40)	1.09	(0.49-2.43)
Have lived with and was cared for by other relatives or non relatives [#]	1.23	(0.81-1.85)	0.82	(0.47-1.42)	0.73	(0.38-1.38)	0.72	(0.37-1.38)
Have lived with other relatives or non relatives[#], but was cared for by biological parent(s)	0.64	(0.28-1.45)	0.46	(0.17-1.24)	0.42	(0.15-1.14)	0.40	(0.13-1.18)*
Parent went to school (ref. = No)	0.44	(0.30-0.63)***	0.73	(0.45-1.17)	0.77	(0.47-1.24)	0.71	(0.41-1.21)
Parent's employment status								
Worked in the agricultural sector	0.79	(0.51-1.19)	0.82	(0.45-1.45)	0.88	(0.49-1.58)	1.02	(0.55-1.87)
Worked in other sectors	0.65	(0.45-0.92)**	0.72	(0.43-1.19)	0.75	(0.45-1.24)	0.88	(0.49-1.55)
Was retired or inactive (ref.)	1.00		1.00		1.00		1.00	
Childhood location of residence								
Rural (ref.)	1.00		1.00		1.00		1.00	
Small urban centre	1.93	(1.39-2.66)***	1.98	(1.22-3.20)***	2.30	(1.37-3.85)***	2.19	(1.28-3.72)***
Major city	0.83	(0.44-1.55)	1.16	(0.47-2.82)	1.36	(0.53-3.45)	1.35	(0.49-3.68)
Measures of transitions								
Experienced a transition in living arrangement during childhood (ref. = No)	1.21	(0.80-1.81)			1.29	(0.66-2.50)	1.30	(0.66-2.55)
Experienced a parental death (ref. = No)	1.68	(0.93-3.02)*			1.42	(0.65-3.09)	1.56	(0.69-3.49)
Always lived in Bandjoun (ref. = No)	1.39	(1.01-1.91)**			1.43	(0.89-2.28)	1.34	(0.78-2.27)

Table 5 (Continued)

	Gross effects		Model 1		Model 2		Model 3	
	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)
Effects of premarital sexual initiation								
Premarital sexual initiation (ref. = No)	2.08	(1.34-3.24)***					1.56	(0.26-9.15)
Cohort 30-44 years old × premarital sexual initiation	5.08	(3.66-7.04)***					0.28	(0.04-1.77)
Age at premarital sexual initiation (ref. = ≤ 15 years old)								
≤ 15 years old (ref.)	1.00						1.00	
16-19 years old	1.51	(0.93-2.42)*					1.21	(0.61-2.38)
≥ 20 years old	2.67	(1.64-4.32)***					1.30	(0.65-2.60)
Age difference with first sexual partner								
Younger / same age (ref.)	1.00						1.00	
1 to 5 years older	0.96	(0.61-1.50)					0.49	(0.73-3.05)
6 or more years older	0.41	(0.05-2.88)					0.20	(0.01-2.77)
Other variables								
Age cohort (ref.= 30 - 44 years old)	0.11	(0.07-0.16)***	0.45	(0.26-0.77)***	0.43	(0.25-0.74)***	0.14	(0.02-0.84)**
The respondent has left school (ref. = No)	1.43	(0.73-2.76)	1.80	(0.79-7.07)	1.98	(0.83-4.74)	1.93	(0.76-4.86)*
Mother's number of children	0.97	(0.90-1.04)	0.98	(0.91-1.07)	0.99	(0.91-1.07)	0.97	(0.88-1.06)
Religiosity† (ref. = Non Christian)								
Christian, attend religious activities	0.70	(0.42-1.15)	0.83	(0.42-1.61)	0.79	(0.41-1.51)	0.67	(0.34-1.29)
Christian, don't attend religious activities	1.00	(0.64-1.55)	0.91	(0.50-1.65)	0.84	(0.46-1.51)	0.68	(0.37-1.24)
Involved in clubs† (ref. = No)	0.79	(0.53-1.18)	0.85	(0.49-1.45)	0.81	(0.46-1.40)	0.89	(0.50-1.57)
- 2 log-likelihood			838.0		835.6		825.5	
Number of person-year observations	6,955		6,955		6,955		6,955	
Number of persons	748		748		748		748	

Notes: † Time-varying variable

Level of significance: * p<0.1; ** p<0.05; *** p<0.001 ref. = reference

Model 1: Measures of status + other variables; Model 2: Measures of statuses + measures of transitions + other variables

Model 3: Measures of status + measures of transitions + variables related to premarital sexual initiation + other variables

Each model also includes 8 dummies for exposure to first marriage (8 parameters of exposure: <=18[referent segment]; 19-20; 21; 22-23; 24-25; 26-27; 28-29; 30+).