

Title: Cohabitation versus Marriage among Adolescent Girls in Urban Kenyan Slums: A Comparison of the Context of First Sex, Timing of Pregnancy and Experience of Sexual Violence.

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Abstract:

Though many African studies do not distinguish between cohabiting and married women, the literature in the developed world suggests there are clear differences between these types of unions. This study uses a unique dataset of adolescent girls residing in low-income, informal settlements (slums) in four Kenyan cities and towns: Nairobi, Kisumu, Nakuru and Thika. The study highlights vulnerabilities of girls in cohabiting relationships compared to married girls and sexually-experienced girls who have never entered a union. The key factors of interest include the timing and context of first sex, pregnancy the risk of sexual violence. In multivariate analysis cohabiting increased the odds of experiencing sexual violence in the previous year, as compared to girls not in a union, while marriage was protective. Results from a competing-risk survival analysis model showed that pregnancy increased the hazard of cohabitation but was not associated with entry into a marital union.

Background:

Studies in sub-Saharan African often combine married and cohabiting unions due to the difficulty in distinguishing local perceptions regarding these types of unions (Bledsoe & Cohen, 1993; Dadoo & Kelin, 2008; Marston et. al., 2009). However, research in developed countries demonstrates clear differences between marital and cohabiting unions (Seltzer, 2000). Understanding the differences in experiences and risks within the African context can have important implications for future studies and programs targeting adolescent girls and women.

Cohabitation can serve as a precursor to marriage or an alternative to marriage (Musick, 2007; Seltzer 2000). Cohabitants share some but not all of the benefits of marriage. Compared to married couples, they are less likely to pool financial resources, more likely to spend free time separately and less likely to agree on the future of the relationship (Waite, 1995). An increased risk of experiencing physical and sexual violence has also been documented in cohabiting unions (Berger et. al., 2012; Brown & Bulanda, 2008; Hardie & Lucas 2010; Madgol et. al., 1998). These studies indicate risk is due to higher levels of financial hardships and lower levels of relationship quality.

Few African studies have examined entry into cohabiting versus marriage, fertility and experience of violence by type of union, particularly among adolescents. Rates of cohabitation vary across Africa. They are more common in countries with low marriage rates and less common where marriage is prevalent. A cross-country comparison showed that living in a cohabiting union rather than marriage increased the risk of intimate-partner violence for women in Kenya, Rwanda and Zimbabwe (Hindin et al, 2008). However, after controlling for other factors, this effect was no longer significant for Kenya. According to the 2008/9 Kenya Demographic and Health Surveys, approximately 4% of Kenyan adults are in cohabiting unions (Child Trends, 2013). Dadoo and Klein (2008) used data from informal settlements in

Nairobi Kenya to examine rates of sexual exclusivity. Authors reported a cohabitation rate of 4.7% and found that marriage was associated with higher reports of sexual exclusivity than cohabitation. A qualitative study of men and women from Bungomba and Kwale, Kenya, demonstrated the change in marriage processes from formal marriages to “come we stay” cohabiting unions. Respondents indicated that this change is driven by premarital unplanned and premarital pregnancy and the lack of resources required for a formal marriage, including dowry and the cost of the ceremony (Wawery & Jensen, 2013).

This study uses a unique dataset of adolescent girls residing in low-income, informal settlements (slums) in four Kenyan cities and towns: Nairobi, Kisumu, Nakuru and Thika. The study describes differences between: 1) girls who have entered into cohabiting unions, 2) married girls, and 3) sexually-experienced girls who have never entered a union. The key factors of interest include the timing and context of first sex, pregnancy the risk of sexual violence.

Methods:

The data were collected by Population Council between August and December, 2013 as part of a baseline survey for an intervention program aimed at building social, health and economic assets for vulnerable adolescent girls. Two equivalent sites in each of the four cities/towns were selected and a household listing was conducted to identify girls ages 15-19. A total of 28,768 households were listed, 5,100 eligible girls were identified, and 3,255 interviews were conducted, with a response rate of 64%. The main reasons for non-response were refusal to consent to the interview, and inability to locate the respondent after three visits. After excluding 31 girls who were outside the age range of 15 to 19, the total sample included 3,224 interviews girls. The analytical sample for this study was 1,543 girls who had ever had sex.

Bivariate analysis was conducted to compare demographic characteristics, sexual behavior, fertility and sexual violence between three groups: 1) girls who were single (N=933), 2) girls who had ever entered a marital union (N=499) and 3) girls who had ever entered a cohabiting union (N=111). The Pearson’s Chi-Square test was used to compare differences between single and cohabiting girls and between married and cohabiting girls. Multivariate logistic regression models were used to estimate the association between union status and reporting of sexual violence in the previous year, after controlling for other factors. In bivariate and multivariate analysis, the survey design is taken into account with Stata’s survey analysis techniques. Using Stata’s `stcrreg` command (Fine & Gray, 1999), a competing-risk regression model was used to estimate cause-specific hazards for entry into a cohabiting union with marriage as a competing risk, and vice versa. Robust standard errors are calculated to account for clustering by site. Predictors included events that occurred before entry into a union, including the timing of first sex, first pregnancy, loss of a parent, and working for pay. Tests of the model assumptions showed none of these variables violated the model’s assumption of proportional sub-hazards.

Results:

Among all girls in the study sample, based on lifetable estimates, the probability of marriage by age 19 is 38% and the probability of cohabiting by age 19 is 10.1%.

Within the analytical sample of 1,543 sexually-experienced girls, 61% of girls had never entered a union, 32% had married and 7% had entered a cohabiting union. Three-quarters of the girls were between the ages of 17 and 19, most were Christian, and about half had ever worked for pay. Married girls were significantly more likely to be out-of-school at the time of the survey (99%), than cohabiters (79%) and girls who were not in a union (60%). Compared to cohabiters, married girls had lower educational attainment, were less likely to have water piped into their residence, less likely to own a mobile phone and less likely to be living with a parent or relative at the time of the survey. Cohabiters did not differ significantly from girls who had never been in a union in regards to religion, orphan-hood status, household assets, educational attainment and area of residence. However, they were less likely to be residing with a parent and more likely to be residing with a husband or boyfriend as compared to girls who had never been in a union.

In the bivariate analysis, girls who had cohabited did not differ significantly from the other two groups in regards to the mean age at first sex, and the age difference with the first sexual partner. Compared to married girls (2%), cohabiters (14%) were more likely to have had their sexual debut after they entered the union rather than before, more likely to report having no sexual partners in the past year (14% cohabit; 5% married), less likely to have wanted their first sexual encounter (39% cohabit; 51% married). Non-union girls were similar to cohabiters in having a wanted first sex, but they were more likely to have had their first sex to show love to a partner, less likely to have had sex because their friends were doing it or because they were curious, and more likely to have used a condom the first time. Married girls (79%) were significantly more likely to have been pregnant than cohabiters (44%) and non-union girls (22%), but more likely to have wanted the pregnancy (8% cohabit; 39% married) less likely to have become pregnant before the entered the union. There was no significant difference in pregnancy intention between non-union girls and cohabiters. Sexual violence, including unwanted sexual touching, unwanted attempted sex, being forced to commit sexual acts and forced sex, was more prevalent among cohabiters (24%) than no-union (17%) and married girls (7%).

The multivariate analysis examined the association between union status and risk of sexual violence controlling for age, education, religion, orphan-hood, socioeconomic status (owning a phone and piped water to residence), age at first sex, partner's age difference at first sex, whether first sex was wanted sexual partners in the past year, number of children. Compared to girls not in a union, the odds of experiencing sexual violence were 51% less for married girls ($OR=0.488$, $p<0.05$) and 73% greater for cohabiters ($OR=1.729$, $p<0.01$). Only one other factor was significantly associated with sexual violence in the multivariate model: the odds of sexual violence were 2 times ($OR=2.197$, $p<0.05$) greater for girls who did not want their first sexual encounter relative to those who did. To account for the fact that the episode of sexual violence experienced during the past year might actually be the girl's first sexual encounter, the model was re-estimated with a sub-sample of girls whose age at first age was less than their age at the time of the survey. The results were similar to those described above.

The multivariate competing risk model accounted for the timing of pregnancy, first sex, loss of a father and/or mother, beginning work for pay, religion, and completion of primary education. Results show that having a pregnancy before entry into union is significantly associated with cohabitation, but not marriage. The hazard of cohabitation (with marriage as a competing risk) for girls who had been

pregnant was 2.1 times that of girls who had not been pregnant (SRH = 2.134, $p < 0.001$). Based on the model, the cumulative incidence of cohabitation by age 19 for girls who had a prior pregnancy was about 14%, compared to 6% for girls who had not been pregnant¹. Having lost a father also significantly increased the hazard of cohabitation, which was 60% greater than that for girls who had not lost a parent. Alternatively, having lost a mother significantly increased the hazard of marriage, which was 50% greater than for girls who did not lose a parent (SRH = 1.507, $p < 0.001$). The hazard of marriage (with cohabitation as a competing risk) was also 67% greater for girls who had their sexual debut before entry into a union (SRH = 1.673, $p < 0.001$). While work and education had no effect on the hazard of cohabitation, there was a significant interaction in their effect on the hazard of marriage. For girls who did not work, having a primary education was associated with a 60% lower hazard of marriage than for girls with less than primary education (SRH = 0.404, $p < 0.001$). For girls who worked, the hazard of marriage for girls with a primary education was 30% lower than for girls with less than primary school education (SRH = $1.750 * 0.404 = 0.707$, $p < 0.05$).

Findings from this study indicate that girls who enter cohabiting unions have increased vulnerabilities as compared to married or unmarried girls. This is evidenced by their greater reporting of unwanted sex, and unwanted pregnancy, the greater prevalence of pre-marital pregnancy, and the greater risk of experiencing sexual violence after cohabitation. Implications of the results and potential explanations will be discussed in the full paper.

¹ This excludes girls who became pregnant within the same year as their entry into union, as the timing could not be determined.

Multivariate Logistic Regression Results Predicting Experience of Sexual Violence in the Previous Year, Sexually Experienced Girls, Age 15-19

	Full Sample (N=1529)		If First Sex Occurred Before Current Age (N=1274)	
	OR	[95% CI]	OR	[95% CI]
Age (Ref=15-17):				
18	1.114	0.661 – 1.877	1.342	0.581 – 3.100
19	0.762	0.319 – 1.825	0.883	0.306 – 2.549
Education (Ref=Some Primary):				
Primary complete	0.708	0.255 – 1.966	0.789	0.283 – 2.198
Some secondary	0.827	0.394 – 1.740	0.851	0.358 – 2.022
Secondary complete	0.951	0.374 – 2.414	0.959	0.372 – 2.468
Religion (Ref=Catholic):				
Protestant	0.876	0.682 – 1.168	0.758*	0.599 – 0.958
Other	1.284	0.774 – 2.124	1.232	0.709 – 2.139
Orphan-hood (Ref=Both Alive):				
Mother deceased	1.732	0.471 – 6.365	1.641	0.431 – 6.248
Father deceased	0.893	0.732 – 1.090	0.819	0.502 – 1.336
Both deceased	1.378	0.765 – 2.479	1.337	0.724 – 2.469
Owns Phone	0.208	0.440 – 1.183	0.830	0.546 – 1.261
Water Piped into Residence	1.171	0.832 – 1.649	1.131	0.869 – 1.471
Age at First Sex	1.021	0.899 – 1.160	1.008	0.880 – 1.155
First Partner's Age Difference (Ref=<0 to 2):				
3 to 4	0.896	0.597 – 1.618	0.810	0.431 – 1.523
5 to 90	0.927	0.326 – 2.637	0.854	0.266 – 2.738
Sexual Partners in Past Year: (Ref=None):				
1	0.938	0.449 – 1.961	0.935	0.472 – 1.855
2+	2.343†	0.993 – 5.528	1.942	0.726 – 5.199
Number of Children: (Ref=None):				
1	0.621	0.336 – 1.149	0.577†	0.332 – 1.004
2+	0.267	0.026 – 2.757	0.255	0.027 – 2.244
First Sex: (Ref=Wanted):				
Unwanted	2.197*	1.129 – 4.273	1.896*	1.099 – 3.269
Undecided	1.503	0.790 – 2.858	1.400	0.603 – 3.249
Union Status (Ref=No union):				
Ever married	0.488*	0.275 – 0.868	0.526*	0.324 – 0.856
Ever cohabited	1.729**	1.374 – 2.175	1.860**	1.532 – 2.258

***p < .001; **p < .01; *p < .05; †<0.10

Multivariate Competing Risk Regression Results Predicting Cumulative Incidence of Cohabitation & Marriage, Sexually Experienced Girls, Age 15-19 (N=1,543)

	Cohabitation (Marriage = competing)		Marriage (Cohabitation = competing)	
	SRH	[95% CI]	SRH	[95% CI]
Pregnant: time-varying (Ref=No)				
Yes	2.134***	1.392 – 3.269	1.155	0.792 – 1.682
Had Sex: time-varying (Ref=No)				
Yes	1.053	0.756 – 1.467	1.673***	1.445 – 1.936
Orphan-hood: time-varying (Ref=Both Alive)				
Mother deceased	0.659	0.237 – 1.835	1.507***	1.305 – 1.741
Father deceased	1.601**	1.191 – 2.153	1.077	0.855 – 1.358
Both deceased	1.041	0.417 – 2.602	1.178	0.925 – 1.501
Religion: (Ref=Catholic)				
Protestant	0.754†	0.546 – 1.041	1.296†	0.978 – 1.717
Other	0.472	0.154 – 1.449	1.580	0.841 – 2.970
Work for pay: time-varying (Ref=No)				
Yes	1.244	0.700 – 2.213		
Primary education + (Ref=No)				
Yes	1.191	0.547 – 2.589		
Work for pay * Primary education			1.750*	1.059 – 2.892
Work for pay (Primary education =0)			0.905	0.663 – 1.234
Primary education (Work=0)			0.404***	0.317 – 0.516

***p < .001; **p < .01; *p < .05; †<0.10