

## MARRIAGE STRUCTURE AND CONTRACEPTION IN NIGER

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**Summary.** Analysis of the 1992 Niger Demographic and Health Survey showed that although roughly two-thirds of both polygamous and monogamous women approve of birth control, polygamous wives are less likely than monogamous wives to discuss family size or birth control with their husband or to plan on using birth control. The study suggests that characteristics of polygamous couples have caused polygamous women to be more resistant to birth control use than monogamous women. The polygamous women tended to be married to older men who had not gone to primary school and who desired more children than monogamous husbands. The influence of marital structure is not significantly associated with intention to use birth control when the husband's age and the wife's ideal number of children were controlled for in the multivariate logistic regression model suggesting that background social factors may be more influential. In fact, educational level and age at first marriage were significantly associated with attitudes towards birth control and also with marital structure.

### Introduction

It has been clearly shown that increased use of birth control reduces the number of births, closely spaced pregnancies and unsafe abortions and thereby improves maternal and child health (Davanzo, Parnell & Foege, 1991). Currently, however, only 4% of women in Niger use a method of traditional or modern contraception (Demographic and Health Survey, 1993). This study examines how marital structure affects attitudes towards family planning among women in Niger. Understanding the differences in roles and attitudes of men and women in African polygamous and monogamous marriages can affect the design and success of family planning programmes.

Niger is a socioeconomically poor country with a high birth rate of 52 per 1000 and fertility rate of 7.1. However, the people of Niger do not view the birth rate as excessive because children are highly valued in the culture and are wanted for agricultural labour and to support their parents in old age. Moreover, with an infant mortality rate of 138–158 per 1000 births, women must become pregnant often to ensure the survival of a sufficient number of children (Demographic and Health Survey, 1993). Improvement in the health and socioeconomic status of the country's population could provide an

underlying shift in this demand for children. In the meantime, efforts to increase contraceptive prevalence must be undertaken to slow the rate of population growth and to improve maternal and child health.

Polygamy, defined as a publicly declared union in which the husband has at least two wives (Demographic and Health Survey, 1993), has existed for centuries in Niger. Historically, polygamy has been popular in Niger because having more than one wife is seen as a status symbol demonstrating wealth and social prestige. The modern trend in West Africa, however, is towards monogamy. This is partly due to urbanization. While wives may be economic assets as agricultural labour on farms, in the urban areas only rich men can afford more than one wife.

None the less, today approximately one-third of marriages in Niger are polygamous. Researchers have studied the relationship between polygamy and fertility and have found that as societies shift to monogamy, fertility rates tend to decline. There has been speculation that competition between co-wives (Aborampah, 1987; Ahmed, 1986; Olusanya, 1971) may result in polygamous wives being less likely to use birth control (Hollerbach, 1980). Some studies, however, have found lower fertility for polygamous wives because of a lower frequency of coitus, a higher rate of divorce, and a closer observance of post-partum abstinence (Aborampah, 1987; Adewuyi, 1988; Ahmed, 1986; Isaac, 1980; Shaikh, Aziz & Chowdhury, 1987). There has not been a clear consensus on the issue in the literature, probably because of the complexity of sociodemographic and cultural influences.

This analysis will focus on differences between polygamous and monogamous spouses with regard to approval of birth control, desired family size, communication between spouses and intention of using birth control. These factors will be examined as they relate to several sociodemographic and behavioural characteristics including age, education, literacy, wife's employment outside the home, urban or rural residence, parity, age at first marriage and coital frequency.

This study will add important information to the literature on polygamy and family planning. Most previous studies on this issue have examined polygamy as it relates to fertility alone, not to attitudes towards birth control. This study will also look at urban and rural differences between polygamous and monogamous spouses. Moreover, research on polygamy and contraception has never been documented on the population of Niger.

## Methods

The data for this study are from the 1992 Niger Demographic and Health Survey (DHS) which gathered information on fertility, contraception and maternal and child health. The data were collected between March and June, 1992. A total of 235 clusters were randomly selected from the 4479 zones used in the 1988 National Census to be representative of the country's demographic mix and proportional to the size of each zone. The number of households in each cluster varied from 10 to 45.

In total, 5500 households were selected with a response rate of 95%, resulting in 5242 households in the survey. In these households, 6750 women, aged 15–49, were identified as being eligible for the study; 6503 women were studied with success, giving a response rate of 96%. Among the 1843 husbands of eligible women selected for the study, 1570 were interviewed giving a response rate of 85%. Among the women, 1789

were matched with husbands interviewed in the survey. Forty-nine of these women were excluded from this sample because their husbands listed wives who were not interviewed. In total, 1740 wives were selected for this sample, and 1470 men were in the sample on the basis that every woman they identified as being their wife was interviewed in this study. There were 270 more wives than husbands because 513 wives were polygamous.

Eighteen sociodemographic and reproductive health variables were selected from the interviews with the wives and husbands for this analysis. Age, education, literacy, locality, parity and age at first marriage provided background demographic information. The preferred number of children, communication between spouses, attitudes towards birth control, and intention to use birth control were used as key outcome variables. Statistical analysis for this study was conducted using the software package Stata Release 3.1 (Stata Corporation, 1993).

## Results

A total of 1227 monogamous wives and 513 polygamous wives were selected for the study sample. Twenty-seven of the polygamous women had two co-wives and 216 had one co-wife. In total, 1470 husbands were selected for the study sample. Sixty-four per cent of the couples lived in rural areas. The number of polygamous and monogamous couples does not differ significantly ( $p=0.375$ ) between urban and rural residence. Ninety-eight per cent of the women in the study sample were Muslim, 1% were Christian and less than 1% were Animist.

Only 4% of Nigerian women in any age group have a prior history of contraception with any method, traditional or modern. The major reasons women gave for not using birth control include a desire for more children (29.3%), lack of information about birth control (8.5%), difficulty in becoming pregnant (5.0%), and infertility due to menopause or previous hysterectomy (4.3%). Only 21.5% of the women stated that they plan on using a birth control method at some point in the future. Only 18% of the women and 28% of the men in this sample attended primary school. However, both polygamous and monogamous husbands who attended primary school wanted fewer children than those who did not attend primary school.

Polygamous wives were significantly older (32.3 years vs 28.7), were less likely to have been to primary school or to work outside the home, were more parous (5.3 births vs 4.2), were married at a slightly younger age (14.4 years vs 14.7), and were married to older men (46.4 years vs 39.5) who were less likely to have gone to primary school than monogamous husbands (all significant at  $p<0.05$ ). There were no significant differences between the two groups with regard to female literacy, urban/rural residence or coital frequency.

Table 1 illustrates differences between polygamous and monogamous wives with regard to several factors related to desired family size and birth control. When asked for the ideal number of children they would have during their lives, polygamous wives and husbands expressed a desire for a larger mean number of children than monogamous wives and husbands (husbands: 16.2 vs 11.7; wives: 8.6 vs 8.0; both  $p<0.001$ ). Polygamous couples were significantly less likely to discuss family size (12.9 vs 18.3%;  $p<0.01$ ) or birth control use (16.3 vs 22.3%;  $p<0.01$ ). Polygamous wives

**Table 1.** Comparison of several factors related to desired family size and birth control, between polygamous and monogamous wives (Demographic and Health Survey, Niger, 1992)

	Polygamous <i>n</i> = 513 <i>n</i> (%)	Monogamous <i>n</i> = 1227 <i>n</i> (%)	Statistic <i>p</i> value*
Ideal number of children for wife			
0–5	85 (20.7)	263 (25.1)	$Z = 3.48$
6–9	141 (34.3)	396 (37.8)	$p < 0.001$
> 10	185 (45.0)	390 (37.2)	
Ideal number of children for husband			
0–5	24 (6.7)	152 (15.3)	$Z = 6.10$
6–9	45 (12.5)	216 (21.8)	$p < 0.001$
> 10	291 (80.8)	625 (62.9)	
Wife discusses family size with husband			
Yes	66 (12.9)	224 (18.3)	$\chi^2 = 7.50$
No	444 (87.1)	998 (81.7)	$p < 0.01$
Wife discusses birth control with husband			
Yes	83 (16.3)	274 (22.3)	$\chi^2 = 10.98$
No	426 (83.7)	953 (77.7)	$p < 0.01$
Wife approves of birth control			
Yes	339 (66.3)	848 (69.4)	$\chi^2 = 1.56$
No	172 (33.7)	374 (30.6)	$p = 0.21$
Husband approves of birth control			
Yes	138 (58.7)	766 (65.3)	$\chi^2 = 3.62$
No	97 (41.3)	408 (34.8)	$p = 0.06$
Wife plans on using birth control			
Yes	80 (18.8)	294 (28.8)	$\chi^2 = 15.96$
No	345 (81.2)	727 (71.2)	$p < 0.001$

\*Unadjusted for possible cluster effects. The *p* values given were calculated from the  $\chi^2$  test with categorical variables and the rank-sum test with variables originally measured continuously.

were also significantly less likely to state that they have plans to use birth control in the future (18.8 vs 28.8%;  $p < 0.001$ ). There were no significant differences between the two groups with regards to approval of birth control. Overall, 68.5% of the wives and 63.4% of the husbands approve of birth control.

Stratifying by urban or rural residence resulted in few differences between polygamous women. The 621 urban polygamous women were still more likely to be older, to not have been to primary school, to be more parous, to have married at a younger age, and to be married to older men. Urban polygamous women and their husbands were also more likely to want more children and less likely to discuss family size or birth control use (all significant at  $p < 0.05$ ). Urban polygamous women were less likely to plan on using birth control (28.2 vs 44.4%,  $p < 0.01$ ). Urban husbands' attitudes towards birth control did not differ significantly between polygamous and monogamous men ( $p = 0.1$ ).

Among the 1119 rural women, polygamous wives were also significantly more likely to be older, to not work outside the home, to be more parous, and to be married to older men who had not gone to primary school. Rural polygamous husbands gave a significantly larger number for the ideal number of children they want than rural monogamous husbands (15.2 vs 12.3,  $p < 0.05$ ). Rural polygamous wives were significantly less likely to plan on using birth control than monogamous wives (14.5 vs 21.2%,  $p = 0.01$ ).

Table 2 compares polygamous and monogamous wives by sociodemographic characteristics and selected variables related to family size and birth control among women who approve of birth control use. The combined Mantel–Haenszel odds ratio for each variable shows no significant differences between polygamous and monogamous women who approve of birth control. However, among women who have had only 0–2 births, who were married at age 16 or older, who have frequent coitus (6–30 times per month), or who want only 0–5 children during their lives, significantly more monogamous wives approve of birth control than polygamous wives.

Table 3 shows that only 18.8% of polygamous wives and 28.8% of monogamous wives plan on using birth control. Polygamous wives were significantly less likely to plan on using birth control (OR = 0.59, CI = 0.45–0.77). This relationship remains significant after adjustment for each husband or wife characteristic. The probability of planning on using birth control decreases with wife's age for both polygamous and monogamous women. When stratifying by wife's or husband's age, there is a weaker protective effect from polygamy (OR = 0.65, CI = 0.49–0.86; OR = 0.72, CI = 0.54–0.95).

Table 4 illustrates that the probability of a woman planning on using birth control decreases as the number of children she or her husband wants increases. Women who discussed family size or birth control with their husbands were more likely to plan on using birth control. Among monogamous women whose husbands approved of birth control, 36.6% planned on using birth control and 40.7% of monogamous women who approved of birth control themselves plan on using it.

Table 5 demonstrates the agreement between husband's and wife's ideal number of children. The weak degree of agreement among polygamous couples ( $kappa = 0.0002$ ) is difficult to interpret because husbands report the total number of children they would like from all of their co-wives combined. Among monogamous couples, however,  $kappa = 0.06$ , indicating poor agreement between spouses over the ideal number of children.

Table 6 illustrates the results from two multiple logistic regression models in which women's intention of using birth control is the outcome. Model I has the best fit with a Hosmer–Lemeshow  $\chi^2$   $p$  value = 0.24 and the Linktest  $p$  value = 0.391. Polygamous women were less likely than monogamous women to plan on using birth control, although this relationship is not significant (OR = 0.82, CI = 0.61–1.12). As the husband's age increases (OR = 0.97, CI = 0.96–0.99) the likelihood of the woman intending on using birth control decreases. The odds of a woman planning on using birth control decrease to 0.74 of the previous odds for every 10-year increase in her husband's age. Further, as the wife's ideal number of children increases (OR = 0.89, CI = 0.86–0.93), the likelihood that she intends to use birth control decreases.

Model II contains variables commonly found in the literature. With a log likelihood

**Table 2.** Comparison of polygamous and monogamous wives, by number and percentage of women who approve of birth control, by selected sociodemographic characteristics (Demographic and Health Survey, Niger, 1992)

	Polygamous <i>n</i> = 339 <i>n</i> (%)	Monogamous <i>n</i> = 848 <i>n</i> (%)	Stratum- specific odds ratio (CI)	Mantel- Haenszel odds ratio (CI)
Crude rate	339 (66.3)	848 (69.4)		0.87 (0.70–1.08)
Wife's age (years)				
15–24	60 (62.5)	292 (70.9)	0.70 (0.44–1.11)	0.89 (0.71–1.11)
25–34	145 (69.7)	342 (71.6)	0.92 (0.65–1.32)	
35–49	134 (64.7)	214 (64.5)	0.99 (0.69–1.42)	
Wife went to primary school				
Yes	39 (81.3)	161 (88.5)	0.53 (0.23–1.2)	0.92 (0.73–1.14)
No	300 (64.8)	687 (66.1)	0.95 (0.76–1.2)	
Wife literacy				
Yes	16 (84.7)	29 (93.6)	0.47 (0.13–1.68)	0.92 (0.74–1.15)
No	318 (65.4)	313 (67.1)	0.97 (0.75–1.17)	
Wife works outside home				
Yes	136 (67.0)	303 (71.8)	0.79 (0.55–1.13)	0.86 (0.69–1.07)
No	203 (65.9)	545 (68.2)	0.91 (0.68–1.20)	
Locality				
Urban	140 (80.5)	378 (85.5)	0.72 (0.46–1.12)	0.89 (0.71–1.11)
Rural	199 (59.1)	470 (60.3)	0.95 (0.73–1.22)	
Parity				
0–2	66 (57.9)	297 (70.1)	0.60 (0.39–0.91)	0.86 (0.69–1.08)
3–5	115 (66.9)	284 (70.0)	0.86 (0.59–1.25)	
>6	158 (70.2)	267 (68.1)	1.11 (0.78–1.57)	
Wife's age at first marriage				
8–13	112 (62.9)	248 (64.4)	0.98 (0.68–1.41)	0.92 (0.73–1.16)
14–15	140 (69.7)	309 (67.2)	1.13 (0.79–1.61)	
>16	74 (69.2)	257 (80.3)	0.55 (0.34–0.90)	
Coital frequency (per month)				
0–3	116 (68.6)	272 (62.8)	1.31 (0.90–1.91)	0.86 (0.69–1.08)
4–5	104 (63.0)	246 (69.7)	0.73 (0.50–1.07)	
6–30	117 (67.2)	326 (76.4)	0.64 (0.44–0.94)	
Husband's age (years)				
17–34	36 (73.5)	351 (72.7)	1.05 (0.54–2.01)	0.96 (0.76–1.21)
35–44	110 (65.9)	241 (70.5)	0.81 (0.55–1.21)	
45–90	193 (65.4)	256 (64.5)	1.04 (0.76–1.42)	
Husband went to primary school				
Yes	40 (81.6)	180 (86.5)	0.62 (0.28–1.36)	0.93 (0.75–1.16)
No	299 (64.9)	668 (65.9)	0.96 (0.76–1.21)	

**Table 3.** Comparison of polygamous and monogamous wives, by number and percentage of women who plan on using birth control, by several sociodemographic characteristics (Demographic and Health Survey, Niger, 1992)

	Polygamous <i>n</i> = 80	Monogamous <i>n</i> = 294	Stratum- specific odds ratio (CI)	Mantel- Haenszel odds ratio (CI)
Crude rate	80 (18.8)	294 (28.8)		0.59 (0.45–0.77)
Wife's age (years)				
15–24	19 (25.0)	118 (34.5)	0.62 (0.36–1.07)	0.65 (0.49–0.86)
25–34	38 (22.6)	132 (34.1)	0.59 (0.39–0.88)	
35–49	23 (12.7)	44 (15.1)	0.81 (0.48–1.38)	
Wife went to primary school				
Yes	11 (31.4)	64 (52.0)	0.54 (0.26–1.11)	0.61 (0.46–0.8)
No	69 (17.7)	230 (25.6)	0.62 (0.46–0.83)	
Wife literacy				
Yes	4 (25.0)	29 (61.7)	0.33 (0.10–1.04)	0.60 (0.46–0.79)
No	74 (18.2)	245 (26.1)	0.62 (0.47–0.83)	
Wife works outside home				
Yes	35 (20.5)	105 (30.6)	0.63 (0.41–0.96)	0.58 (0.44–0.76)
No	45 (17.7)	189 (27.9)	0.55 (0.39–0.79)	
Locality				
Urban	38 (28.2)	149 (44.4)	0.55 (0.37–0.83)	0.59 (0.45–0.78)
Rural	42 (14.5)	145 (21.2)	0.62 (0.43–0.90)	
Parity				
0–2	14 (14.3)	101 (27.8)	0.45 (0.25–0.82)	0.58 (0.44–0.77)
3–5	27 (19.7)	108 (32.4)	0.51 (0.32–0.81)	
>6	39 (20.5)	85 (26.2)	0.76 (0.50–1.15)	
Wife's age at first marriage				
8–13	24 (15.2)	66 (19.5)	0.77 (0.46–1.27)	0.61 (0.47–0.81)
14–15	37 (22.3)	124 (31.6)	0.61 (0.41–0.92)	
>16	18 (21.4)	95 (38.0)	0.48 (0.27–0.83)	
Coital frequency (per month)				
0–3	30 (22.6)	112 (30.6)	0.62 (0.40–0.97)	0.59 (0.45–0.78)
4–5	20 (14.5)	86 (30.1)	0.43 (0.25–0.72)	
6–30	30 (19.7)	95 (26.2)	0.73 (0.46–1.15)	
Husband's age (years)				
17–34	16 (39.0)	140 (36.1)	1.19 (0.64–2.22)	0.72 (0.54–0.95)
35–44	25 (19.2)	85 (30.1)	0.53 (0.33–0.87)	
45–90	39 (15.4)	69 (20.0)	0.72 (0.47–1.10)	
Husband went to primary school				
Yes	12 (30.8)	69 (50.0)	0.64 (0.32–1.28)	0.61 (0.47–0.81)
No	68 (17.7)	225 (25.5)	0.61 (0.45–0.82)	

**Table 4.** Comparison of polygamous and monogamous wives, by number and percentage of women who plan on using birth control, by selected factors related to desired family size and birth control (Demographic and Health Survey, Niger, 1992)

	Polygamous <i>n</i> = 80 <i>n</i> (%)	Monogamous <i>n</i> = 294 <i>n</i> (%)	Stratum- specific odds ratio (CI)	Mantel- Haenszel odds ratio (CI)
Crude rate	80 (18.8)	294 (28.8)		0.59 (0.45–0.77)
Ideal number of children for wife				
0–5	20 (28.2)	85 (42.1)	0.64 (0.37–1.13)	0.67 (0.51–0.91)
6–9	29 (24.0)	113 (33.0)	0.65 (0.41–1.03)	
> 10	23 (14.9)	62 (18.5)	0.75 (0.45–1.25)	
Ideal number of children for husband				
0–5	5 (29.4)	42 (35.9)	0.69 (0.25–1.90)	0.53 (0.38–0.75)
6–9	6 (15.4)	58 (32.8)	0.42 (0.17–1.02)	
> 10	40 (16.4)	142 (26.6)	0.54 (0.37–0.79)	
Wife discusses family size with husband				
Yes	17 (32.7)	69 (38.3)	0.78 (0.42–1.44)	0.61 (0.46–0.80)
No	63 (16.9)	223 (26.7)	0.57 (0.42–0.78)	
Wife discusses birth control with husband				
Yes	29 (50.0)	132 (65.0)	0.66 (0.47–0.93)	0.64 (0.48–0.84)
No	51 (13.9)	162 (19.8)	0.58 (0.35–0.96)	
Husband approves of birth control				
Yes	55 (23.8)	229 (36.6)		
No	23 (12.9)	55 (15.6)		
Wife approves of birth control				
Yes	75 (28.6)	277 (40.7)	0.59 (0.44–0.79)	0.60 (0.45–0.80)
No	5 (3.1)	13 (3.9)	0.83 (0.30–2.28)	

of  $-781.28$ , Hosmer–Lemeshow  $p$  value =  $0.22$  and a Linktest  $p$  value =  $0.12$ , this model is not as good a fit as Model I. Polygamous women were still less likely to plan on using birth control, with borderline significance (OR =  $0.75$ , CI =  $0.56$ – $1.01$ ). The odds of planning on using birth control decrease to  $0.6$  of the previous odds for every 10-year increase in the wife's age. Rural women (OR =  $0.49$ , CI =  $0.38$ – $0.65$ ) and women whose husbands do not approve of birth control (OR =  $0.48$ , CI =  $0.36$ – $0.64$ ) have half the odds of planning on using birth control. Husband's or wife's attendance at school, wife's age at marriage and coital frequency were not significantly related to the outcome.



**Table 5.** Examination of degree of agreement using *kappa* coefficient between wife's desired number of children and her husband's desired number of children, by polygamous and monogamous marriages (Demographic and Health Survey, Niger, 1992). Unadjusted for multiple responses for polygamous husbands

Polygamous ( <i>n</i> = 513)				Monogamous ( <i>n</i> = 1227)				Total ( <i>n</i> = 1740)			
Wife	Husband			Wife	Husband			Wife	Husband		
	0-5	6-9	> 10		0-5	6-9	> 10		0-5	6-9	> 10
0-5	6	7	58	0-5	63	59	105	0-5	69	66	163
6-9	8	11	86	6-9	44	87	186	6-9	52	98	272
> 10	8	18	111	> 10	27	56	246	> 10	35	74	357
Agreement = 5.43%				Agreement = 17.18%				Agreement = 14.08%			
Expected = 5.45%				Expected = 12.39%				Expected = 10.45%			
<i>kappa</i> = -0.0002				<i>kappa</i> = 0.06				<i>kappa</i> = 0.04			

### Discussion

There were some methodological considerations to take into account before interpreting the implications of these findings. First, coital frequency, which was neither different between polygamous and monogamous women nor significant when other factors were controlled for, may not have been accurately measured. The data for the 1992 Niger study were collected during the rainy season when coital frequency decreases due to work in the fields. Secondly, because African women are somewhat reluctant to discuss their sexuality, there may be misreporting of the frequency of sexual intercourse. Further, this analysis contains no information on abortion and AIDS, both of which seriously impact the reproductive patterns of the population of Niger. Finally, infertility was one of the main reasons given for not using birth control in this study; it may be wise to exclude infertile women from the study sample in future analyses.

The results of this study support previous research on polygamy which has shown that polygamous women tend to be older, to live in rural areas, to be less educated, younger at first marital cohabitation and to have been divorced (Chojnacka, 1978; Johnson & Elmi, 1989; Sichona, 1993). A higher percentage of monogamous women than polygamous women in this study worked outside the home. Interestingly, this study found no differences between polygamous and monogamous women with regards to literacy levels and urban or rural residence. Although this study did corroborate other studies in finding that polygamous women were more parous (Frank & McNicoll, 1987), there was no significant difference between the two groups in terms of coital frequency. However, polygamous wives stated that they wanted more children.

Approximately two-thirds of both the polygamous and monogamous women surveyed in this study *approve* of birth control, yet very few currently *use* birth control (only 4%) or state that they *plan on using it* in the future (21.5%). Polygamous wives were significantly less likely to plan on using birth control (18.8%) than monogamous wives (28.8%). Among the urban women, polygamous wives wanted more children, were less likely to discuss family size or birth control, and were less likely to plan on

**Table 6.** Comparison of two logistic regression models with wives who plan on using birth control as the dependent variable (Demographic and Health Survey, Niger, 1992)

Variables	Model I OR (CI) <i>p</i> value	Model II OR (CI) <i>p</i> value
Polygamous (crude)	0.59 (0.45–0.77)	
Polygamous	0.82 (0.61–1.12) <i>p</i> = 0.217	0.75 (0.56–1.01) <i>p</i> = 0.06
Husbands age	0.97 (0.96–0.99) <i>p</i> < 0.001	—
Wife's ideal no. children	0.89 (0.86–0.93) <i>p</i> < 0.001	—
Wife's age		0.96 (0.94–0.97) <i>p</i> < 0.001
Locality	—	0.49 (0.38–0.65) <i>p</i> < 0.001
Husband OKs birth control	—	0.48 (0.36–0.64) <i>p</i> < 0.001
Husband's school	—	1.06 (0.73–1.53) <i>p</i> = 0.768
Wife's school	—	0.98 (0.67–1.45) <i>p</i> = 0.914
Wife's age at marriage	—	1.03 (0.99–1.09) <i>p</i> = 0.142
Coital frequency	—	0.99 (0.98–1.00) <i>p</i> = 0.183
Interactions	—	—
Log likelihood	–750.05	–781.28
Hosmer–Lemeshow <i>p</i> value	<i>p</i> = 0.24	<i>p</i> = 0.22
Linktest <i>p</i> value	<i>p</i> = 0.39	<i>p</i> = 0.12

Model I contains variables that caused the combined Mantel–Haenszel Odds Ratio to change from the crude Odds Ratio by >10%, in addition to the polygamous variable.

Model II contains variables that were frequently found in the literature related to the subject of this study.

using birth control than their monogamous counterparts. Likewise, rural polygamous women were less likely to plan on using birth control than rural monogamous women. Among rural men, the polygamous husbands also stated that they wanted more children than their monogamous counterparts.

Previous research has concluded that men play a large and perhaps dominating role in the decision to use birth control and in determining the number of children the couple will have (Fayorsey, 1989; Khalifa, 1979, 1988; Mbizvo & Adamchak, 1991; Ohenebasakyi & Takyi, 1997; Terefe & Larson, 1993). In fact, even women who desire

family planning may not use a method if their husband does not approve (Hollerbach, 1980; Muhawenimana, 1988; Saraswathi & Gupta, 1985) because they are not prepared to challenge men's authority in making family planning decisions. In this study, the polygamous women tended to be married to older men who had not gone to primary school and who desired more children than monogamous husbands. Both polygamous and monogamous men who attended primary school were more likely to approve of birth control and want fewer children. This study found that polygamous wives were less likely than monogamous wives to discuss family size or birth control with their husbands. Also, women whose husbands do not approve of birth control had half the odds of planning on using birth control. This suggests that family planning programmes should promote joint decision-making, especially between polygamous couples.

Social factors may be more influential than marital structure in potential birth control use. The study findings suggest that characteristics of polygamous couples have caused polygamous women to be more resistant to birth control use than monogamous women. The influence of marital structure is not significantly associated with the intention to use birth control when the husband's age and the wife's ideal number of children were controlled for in the multivariate logistic regression model. The 'wife's ideal number of children' is of course influenced by a variety of factors.

Compared with marital structure, background social factors such as education, work outside the home and age at first marriage were more influential on attitudes towards and intention to use birth control. This suggests that women should be offered more educational opportunities and income-generating activities to provide them with economic and social independence from men.

The results of this study suggest that in regions where polygamy is common, family planning programmers should recognize that sociodemographic, behavioural and attitude differences might lead polygamous women to be more resistant to birth control use. The most likely groups of contraceptive acceptors in Niger are urban women who are in monogamous marriages and who have been to primary school. By providing access to contraception to these women, family planning programmes could enjoy a high probability of success, which might ripple into increased government and popular support for limiting family size.

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