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DETERMINANTS OF COITAL FREQUENCY AMONG MARRIED WOMEN IN CENTRAL AFRICAN REPUBLIC: THE ROLE OF FEMALE GENITAL CUTTING

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Summary. This paper examines determinants of one aspect of sexual behaviour – coital frequency – among 2188 married women in the Central African Republic using a secondary analysis of data from the Demographic and Health Survey of 1994–95. Female genital cutting (or circumcision) is practised in the Central African Republic and self-reported circumcision status was included in the questionnaire enabling it to be examined as a possible determinant of coital frequency. Multiple logistic regression was used to find a subset of factors independently associated with coital frequency. Decreased coital frequency was found in those who had longer duration of marriage, those who were not the most recent wife in a polygamous marriage and those who had more surviving children. Coital frequency was higher in more educated women and those not contracepting because they wanted to get pregnant. After adjusting for confounders no association between female genital cutting and coital frequency was found. The extent to which women can control coital frequency in this culture is not known and fertility desires may override any negative effects of circumcision on sexual pleasure. It was therefore not possible to draw conclusions about how female genital cutting affects a woman's desire for sexual intercourse and consequently there is a need to develop research methods further to investigate this question.

Introduction

Female genital cutting (FGC) is a term used to describe traditional practices that involve the cutting of female genitalia. Other commonly used terms for these procedures are female circumcision, female genital mutilation (FGM) or female genital surgeries. It is estimated that around 130 million women world-wide have undergone FGC and that 2 million girls and women a year are subjected to these

operations (Toubia, 1996). Genital cutting is usually performed on children by traditional practitioners in non-sterile conditions.

The World Health Organization has classified these operations into four types (WHO, 1997). Type I involves the partial or total removal of the clitoris. Type II involves partial or total removal of the clitoris together with partial or total excision of the labia minora. Type III usually involves partial or total removal of the external genitalia and stitching or narrowing of the vaginal opening. Type IV is relatively rare and refers to other traditional genital surgeries such as pricking or stretching the clitoris and/or surrounding tissues. An estimated 85% of cutting operations are Type I or II with around 15% being the more severe Type III (Toubia, 1993). Female genital cutting tends to be practised in North-east Africa and in sub-Saharan Africa north of the equator. Type III circumcision (infibulation) is restricted mainly to Somalia, Djibouti, Eritrea and Sudan although it has been reported in Mali and northern Nigeria.

The World Health Organization and many groups campaigning against FGC argue that a woman's sexuality can be irreversibly damaged by FGC. Removing the clitoris and surrounding tissue is believed to reduce a woman's capacity for sexual enjoyment (Toubia, 1993) and may leave a woman with damaged nerve-endings and scar tissue that would make intercourse painful. The psychological trauma associated with the cutting operation could also lead to sexual problems (Butcher, 1999). Infibulation (Type III), which involves closure of the vaginal opening, can be a problem for both males and females, especially for a woman's first intercourse. If the closure is not too severe, gradual penetration may be possible, but otherwise the woman has to be cut open to allow intercourse. Both these scenarios obviously involve pain and possibly psychological trauma (Almroth *et al.*, 2001; Lightfoot-Klein, 1989a). However, empirical evidence on the effects of FGC on sexual health is extremely scarce. Sexuality and sexual pleasure are difficult areas to research, even in settings where discussion of sex is relatively open. In settings where FGC is practised it is likely to be more unacceptable and difficult to research sexuality. Indirect indicators, such as painful sex or coital frequency, are more acceptable alternatives that might give some indication of the effects on sexuality.

The Demographic and Health Surveys (DHS) are national surveys conducted in a standardized way in countries in the developing world. The main body of data is usually collected from women aged 15–49, and includes demographic characteristics of the woman (with some information on her husband), detailed data on fertility and reported morbidity in the woman and her children. In 1994 a DHS was conducted in the Central African Republic (CAR). An estimated 43% of married women in CAR are circumcised with the predominant type of cutting being Type II, i.e. the partial or complete removal of the clitoris and labia minora (Ndamobissi, Mboup & Nguelebe, 1995). Questions on circumcision status and coital frequency were included in the DHS questionnaire enabling a comparison of coital frequency between cut and uncut women. Assuming that women in CAR have some control over when and whether they have sexual intercourse with their partners, it is hypothesized that a finding of lower coital frequency among circumcised women would provide evidence in support of the argument that FGM damages a woman's sexual health.

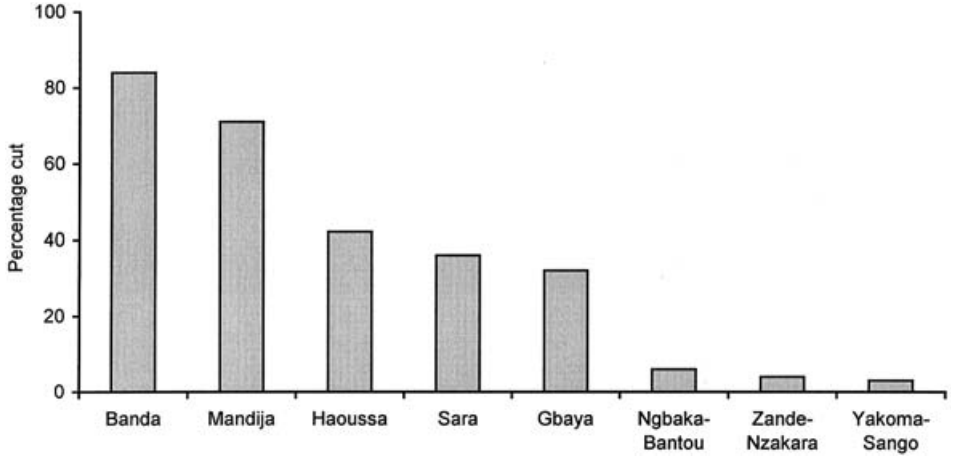

Fig. 1. Prevalence of female genital cutting for the eight largest ethnic groups in the Central African Republic.

Background information on the Central African Republic

The Gbaya, 30% of the population, and the Banda, 25%, are the two largest ethnic groups in CAR. Fifty-six per cent of women are Protestant, 34% Catholic, 9% Muslim and 1% subscribe to an indigenous belief system (Ndamobissi *et al.*, 1995). Seventy per cent of all women of reproductive age in CAR are currently married or in a consensual union, although 12% of the women in a union are not living with their partners. Nineteen per cent of women have never married, 2% are widowed, 0·6% are divorced and 8·5% are separated. Almost 52% of women have no education while 35% have had some primary education and 13% secondary education. Seventy per cent are illiterate. The total fertility rate in CAR is 5·1 and 46% of the population is under the age of 15. Forty-four per cent live in urban areas (23% in the capital city of Bangui; Ndamobissi *et al.*, 1995). The infant mortality rate is 103·4 per 1000 live births. Life expectancy is 41 years (Norwegian Council of Africa, 1997).

An estimated 43% of married women in CAR are circumcised, predominantly with Type II cutting. Eighty-eight per cent of circumcised women were cut between the ages of 5 and 14 years giving a median age at cutting of 10·8 years (Carr, 1997; Ndamobissi *et al.*, 1995). Figure 1 shows that the prevalence of FGC varies greatly between ethnic groups, being highest in the Banda and Mandija ethnic groups. Female genital cutting has been illegal in CAR since 1966 (Ordinance No. 66/16 of February 22nd 1966) and the government is active in anti-FGC campaigns to educate the public against it. However, it is not clear what impact these activities have had. Figure 2 shows FGC prevalence by age and suggests that there might be a slight trend for decreased prevalences over time (Carr, 1997).

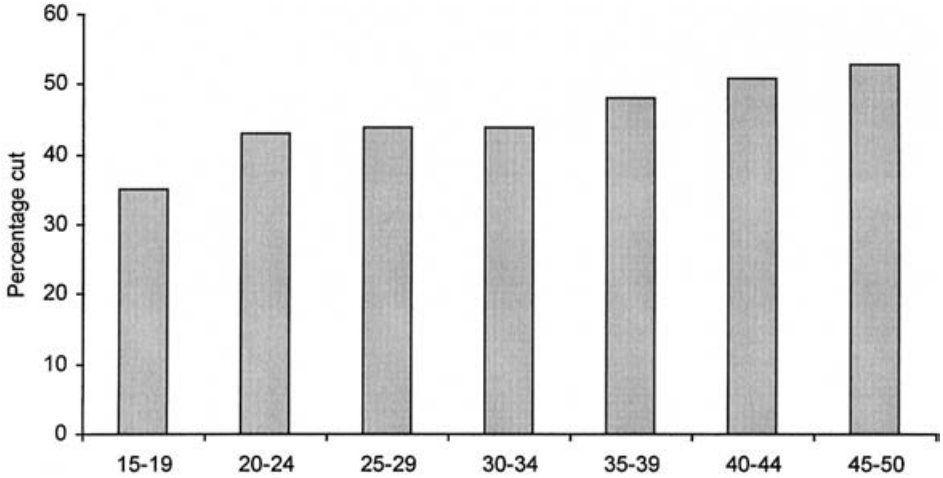

Fig. 2. Prevalence of female genital cutting in the Central African Republic by current age of respondent.

Methods

The determinants of coital frequency, including FGC, were studied using a subset of data from the 1994–1995 DHS. The population was stratified into five health authority regions plus the capital city, Bangui, and by place of residence (urban, rural, Bangui and other towns). The selection procedure for the sample was by two-stage random sampling. The sample was not self-weighting, necessitating the use of weighted analysis to give nationally representative statistics in the DHS report. Of 6159 households selected, 5583 were visited from which 5551 (99·4%) were included in the survey. Of the 5551 surveyed households, 6005 women were identified as eligible for the survey sample, of which 5884 (98%) were successfully surveyed.

To study the determinants of coital frequency a subset of women was chosen. The sample was restricted to those currently married or in a union where both partners were residing together. It was felt that it would be culturally more acceptable for women in this group to report on coital frequency and therefore that this selection would optimize the validity of the responses. Women who reported abstaining from sex either postpartum (as is the tradition) or for other reasons were excluded from the study. Because of small numbers, women who reported an extramarital relationship were also excluded ($n=47$). Finally, to study the association between FGC and coital frequency adjusting for ethnic group the sample was restricted to those women belonging to ethnic groups where the prevalence of self-reported FGC was between 15% and 85% (Fig. 1). Obviously, women who gave no answer to the question on coital frequency ($n=4$) could not be included in the analysis.

Figure 3 describes assumed links between the different variables included in the analysis. The more immediate determinants of coital frequency are hypothesized to be three-fold: the quality of a woman's relationship with her partner (which includes her autonomy within that relationship), her fertility desires and her circumcision status. The more distal determinants are the sociodemographic risk factors that may affect

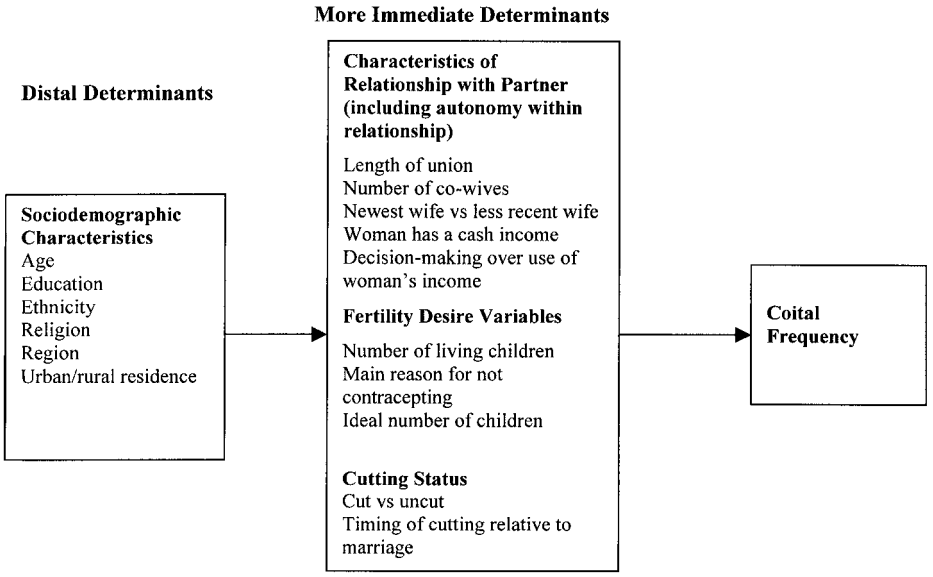

Fig. 3. Conceptual framework representing hypothesized links between different determinants and coital frequency.

the more immediate determinants but may also affect coital frequency independently. Data were collected on each of these potential determinants in the DHS.

Statistical analysis

Two variables were used to indicate the main outcome, i.e. coital frequency. The first was the reported number of times sexual intercourse took place within the preceding 4 weeks. The second variable was binary, categorized as 'high' coital frequency (sexual intercourse five or more times in the preceding 4 weeks) and 'low' coital frequency (fewer than five times). This variable can also be thought of as categorizing coital frequency into approximately 'more than once a week' versus 'once a week or less'.

The distribution of coital frequency in the last 4 weeks was examined using a histogram. The association between each possible determinant and coital frequency was then described by creating tables comparing average coital frequency and proportion with 'high' coital frequency across levels of each determinant. Ninety-five per cent confidence intervals were calculated for the crude odds ratios using logistic regression models which adjusted for the two-stage sampling scheme.

Multiple logistic regression models were then fitted to examine how the proportion of women reporting 'high' coital frequency varied across each possible determinant, adjusted for the others. The binary variable, 'high' frequency versus 'low', was chosen for the multivariate analysis because the distribution of the data on actual frequency of intercourse was highly skewed, violating the assumptions for ordinary multiple

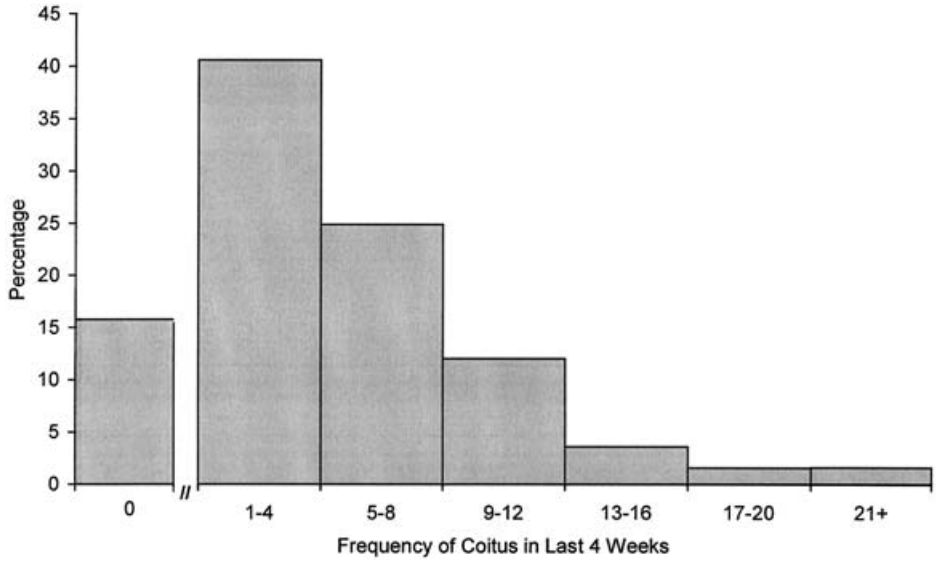

Fig. 4. Distribution of coital frequency in the last 4 weeks.

regression. Variances were calculated in accordance with the two-stage sampling method used. Because of the large number of variables considered as possible determinants of coital frequency, the model-fitting procedure was complex. As a first stage, separate logistic regression models were derived for each set of determinants in the conceptual framework (Fig. 1). For each of these models all variables that were significantly associated with coital frequency in the univariate analysis (described above) were entered into the model. Variables were then eliminated from the model if they did not contribute significantly to the model ($p<0{\cdot}05$) and did not substantially alter the odds ratio (OR) for the association between FGC and coital frequency. The second stage involved making a combined model for all the determinants. First all variables included in any of the logistic models using the more immediate determinants were entered into this model. Backward elimination was then used as before to exclude variables not contributing significantly to the model and not altering the OR for the association of FGC with coital frequency. For the final model the more distal determinants were added to the model with backward elimination being used to obtain the most parsimonious model, as before.

Stata 6 (StataCorp, 1999) was used to conduct the descriptive analysis and to fit the logistic regression models.

Results

A total of 2188 women met the criteria for entry into the analysis for this paper. Figure 4 shows that over half the women reported a coital frequency of 4 times or less in the last 4 weeks, with only approximately 7% reporting a coital frequency of

13 or more. One woman who reported a coital frequency of 60 in the last 4 weeks was not included in the histogram but was included in the analysis.

Sociodemographic determinants of coital frequency

The univariate analysis showed reported coital frequency decreasing with age (test for trend $p<0{\cdot}001$) and increasing with level of education (Table 1). Religious denomination was also associated with coital frequency with Muslim women reporting lower frequencies than Catholic women (OR = 0·73, $p = 0{\cdot}030$). Coital frequency varied significantly between regions, being highest in RS I and lowest in RS III and the capital. There was also a significant difference between ethnic groups with coital frequency being highest in the Banda ethnic group and lowest in the Sara. Rural women reported higher coital frequency than urban women did (OR = 1·45, $p = 0{\cdot}006$). After adjusting for other determinants of coital frequency only level of education and region of residence remained as independent determinants. Ethnic group was included in the model with residence to examine whether differences in prevalence between ethnic groups explained the differences seen between regions. They did not.

Determinants of coital frequency relating to marriage characteristics

Coital frequency decreased significantly (test for trend $p<0{\cdot}001$) with duration of marital union (Table 2). Women in polygamous unions reported lower coital frequency than women in monogamous unions (OR = 0·73, $p = 0{\cdot}006$) and coital frequency decreased significantly as the number of co-wives increased (test for trend $p<0{\cdot}001$). Within polygamous marriages the most recent wives reported higher coital frequency than co-wives who were not the most recent wives (OR = 0·69, $p = 0{\cdot}010$). There was no difference in coital frequency associated with age difference between partners. There was little difference in coital frequency between women who had an income and those who did not ($p>0{\cdot}05$). However, coital frequency was higher where decisions were made jointly about how the woman's money was spent than when the woman decided alone (OR = 1·48, $p = 0{\cdot}001$). After adjusting for other determinants, length of union and wife order remained as significant determinants of coital frequency, as did the variable characterizing decisions on the wife's income.

Fertility desires as determinants of coital frequency

There was an inverse relationship (test for trend $p<0{\cdot}001$) between the total number of surviving children a woman had and coital frequency (Table 3). Women not contracepting because they wanted to get pregnant had a higher coital frequency than other groups of women. Both of these determinants remained significant in the adjusted analysis. Women who reported that the number of children they had met or exceeded their ideal had a lower coital frequency than other groups of women.

Table 1. Sociodemographic determinants of coital frequency (CF)

	n	Mean	%CF ≥ 5[a]	Crude OR	95% CI[b]	Adjusted OR[c]	95% CI[b]
Age							
15–19	235	7·2	55	1			
20–24	383	6·4	50	0·85	0·61–1·16		
25–29	420	6·3	49	0·82	0·58–1·15		
30–34	392	5·7	44	0·66	0·48–0·92		
35–39	308	5·3	40	0·58	0·41–0·81		
40–44	224	5·0	35	0·47	0·31–0·72		
45–49	229	3·5	23	0·28	0·17–0·43		
Education							
None	1360	5·4	40	1		1	
Primary	670	6·3	49	1·38	1·14–1·67	1·30	1·07–1·59
Secondary	158	6·2	49	1·41	0·99–1·99	1·74	1·19–2·54
Religion							
Catholic	725	6·0	46	1			
Protestant	1207	5·7	44	0·89	0·74–1·07		
Muslim	256	5·1	38	0·72	0·53–0·97		
Ethnicity							
Haoussa	121	5·1	39	1			
Sara	172	4·6	34	0·75	0·48–1·17		
Gbaya	792	5·4	39	0·99	0·66–1·50		
Mandjia	223	5·6	43	1·15	0·66–2·01		
Banda	833	6·3	50	1·46	0·97–2·21		
Region							
RS I	347	7·7	56	1·00		1	
RS II	464	5·2	39	0·50	0·35–0·71	0·51	0·34–0·75
RS III	313	4·0	31	0·34	0·24–0·50	0·34	0·24–0·52
RS IV	455	6·4	53	0·88	0·64–1·23	0·80	0·57–1·12
RS V	297	6·0	45	0·64	0·45–0·91	0·59	0·41–0·85
Capital	312	4·7	34	0·40	0·26–0·63	0·39	0·24–0·63
Residence							
Urban	743	5·3	38	1			
Rural	1445	5·9	47	1·45	1·12–1·88		

[a]Percentage of women who had coitus five or more times within 4 weeks of interview.
[b]95% confidence interval for odds ratios.
[c]Adjusted odds ratios are only shown for variables included in the final model (in which case they are adjusted for all the other variables included in the model).

Circumcision status as a determinant of coital frequency

The cut women in the study had a higher coital frequency than uncut women (Table 4, $p<0·001$). However, this effect disappeared in the multivariate analysis. When models were fitted with cutting status and each other determinant separately they revealed that region was the main confounder of the relationship between cutting

Table 2. Determinants of coital frequency (CF) relating to marital characteristics

	n	Mean	%CF ≥ 5[a]	Crude OR	95% CI[b]	Adjusted OR[c]	95% CI[b]
Length of union (years)							
0–4	399	7·1	56	1		1	
5–9	430	6·1	49	0·78	0·58–1·05	0·81	0·59–1·13
10–14	415	5·9	45	0·67	0·51–0·90	0·73	0·52–1·01
15–19	343	5·4	43	0·62	0·47–0·84	0·72	0·50–1·03
20+	601	4·6	31	0·40	0·30–0·55	0·44	0·31–0·64
Number of co-wives							
Monogamous	1585	6·0	45	1			
1 co-wife	456	5·3	42	0·84	0·65–1·07		
2+ co-wives	147	3·7	28	0·44	0·29–0·68		
Wife order within polygamous marriage							
Monogamous	1585	6·0	45	1		1	
Newest co-wife	267	5·4	44	0·90	0·68–1·18	0·90	0·67–1·20
Not newest	336	4·5	35	0·62	0·48–0·80	0·70	0·54–0·92
Age difference between partners							
Same age	91	5·9	46	1			
Spouse younger	236	6·2	45	1·04	0·62–1·74		
Spouse older	1857	5·6	43	0·98	0·65–1·48		
Woman's labour status							
Unemployed	304	5·5	41	1			
Unpaid	250	4·9	36	0·84	0·56–1·25		
Paid	1634	5·9	45	1·25	0·95–1·64		
Decision-maker on use of woman's income							
Woman	867	5·4	42	1		1	
Partner	163	5·9	47	1·16	0·81–1·65	1·25	0·85–1·84
Jointly	594	6·5	50	1·49	1·17–1·87	1·48	1·17–1·88
No income	556	5·3	39	0·87	0·70–1·08	0·89	0·71–1·11

[a]Percentage of women who had coitus five or more times within 4 weeks of interview.
[b]95% confidence interval for odds ratios.
[c]Adjusted odds ratios are only shown for variables included in the final model (in which case they are adjusted for all the other variables included in the model).

and coital frequency. Adjustment for ethnic group, religion, education and rural–urban residence had very little effect on the association between cutting status and coital frequency. The confounding effect of region occurred because the three regions with the highest coital frequencies (RS I, RS IV and RS V) had the highest proportions of circumcised women (73%, 96% and 93% respectively) compared with RS II, RS III and the capital (16%, 42% and 57% respectively). Within each region there was no significant association between cutting status and coital frequency, except for Region I in which coital frequency was higher in cut women. Within Region I adjustment for other variables, such as ethnic group, rural–urban residence and level of education, did not affect the association between cutting status and coital frequency.

Table 3. Fertility desires as determinants of coital frequency

	n	Mean	%CF ≥ 5[a]	Crude OR	95% CI[b]	Adjusted OR[c]	95% CI[b]
No. of living children							
None	428	7·4	56	1·00		1	
1	397	6·1	45	0·65	0·49–0·88	0·69	0·51–0·94
2–4	829	5·6	44	0·62	0·49–0·80	0·75	0·57–0·98
5–14	534	4·4	32	0·37	0·28–0·48	0·60	0·43–0·84
Contraceptive use							
None (wants pregnancy)	792	6·4	50	1·00		1	
None	858	5·3	39	0·71	0·57–0·89	0·90	0·70–1·15
Contracepting	173	4·9	36	0·57	0·38–0·85	0·60	0·39–0·93
Pregnant	365	5·8	44	0·83	0·63–1·09	0·77	0·56–1·05
Number of living children compared with ideal number desired							
Non-numeric ideal	428	5·9	42	1·00			
Less than ideal	1601	5·9	46	1·06	0·82–1·38		
Ideal	82	3·9	29	0·52	0·31–0·88		
More than ideal	77	3·9	29	0·52	0·30–0·90		

[a]Percentage of women who had coitus five or more times within 4 weeks of interview.
[b]95% confidence interval for odds ratios.
[c]Adjusted odds ratios are only shown for variables included in the final model (in which case they are adjusted for all the other variables included in the model).

When looking at the timing of cutting relative to marriage, the unadjusted analysis showed that those who were cut 5 years or more before marriage had a slightly higher coital frequency than those who were cut within 5 years of marriage, but the difference was not significant (OR = 1·13, $p = 0·312$).

Discussion

Validity of data

The DHS question on coital frequency that asks how many times intercourse has taken place in the last 4 weeks was used. Questions on coital frequency may cause embarrassment (possibly leading to non-participation and consequent selection bias) and may be subject to recall bias (Westoff, 1974; Trussell & Westoff, 1980). A 1992 evaluation of surveys of sexual behaviour in rural Senegal showed that retrospective recall of coital frequency over a 4-week period yielded much higher estimates than those obtained with a 7-day recall, although this was more serious for men (Enel, Lagarde & Pison, 1994; Lagarde, Enel & Pison, 1995). Rounding may result from the time reference of 4 weeks. The figure a respondent gives may reflect a partially stereotyped response of once a week multiplied by four, with account not being taken

Table 4. FGC as a determinant of coital frequency

	n	Mean	%CF ≥ 5[a]	Crude OR	95% CI[b]	Adjusted OR[d]	95% CI[b]
FGC							
Uncut	842	5·1	39	1		1	
Cut	1346	6·1	47	1·43	1·13–1·81	1·16	0·88–1·52
Timing of cutting							
Within 5 years of marriage	611	6·0	45	1			
>5 years prior to marriage	735	6·2	48	1·13	0·89–1·42		

[a]Percentage of women who had coitus five or more times within 4 weeks of interview.
[b]95% confidence interval.
[c]Adjusted odds ratio as cutting status was always included in the final model (adjusted for all the other variables included in the model).

for menstruation (Westoff, 1974). Finally, different expressions for sexual activity may render the respondent's answers ambiguous, i.e. whether what they understand to be sexual activity is actually coital intercourse. In the CAR DHS the term 'rapport sexuel' was used to define sexual intercourse, but this term connotes a range of different understandings. This analysis has been conducted assuming that any biases in answers on coital frequency would not be different for cut and uncut women. It has also been assumed that possible reporting differences by other determinants, such as ethnic group, will be accounted for by the logistic regression model used.

There may be misclassification in cutting status of women. Studies in Egypt and the Gambia showed high levels of agreement between reported status and what was found on clinical examination (Egyptian Fertility Care Society, 1996; Morison *et al.*, 2001) while studies in Nigeria found poor agreement (Adinma, 1997). The homogeneity of cutting type and the older age at cutting in CAR are similar to the Gambia and unlike Nigeria where there is great heterogeneity in type and age of cutting. Fairly low levels of misclassification might therefore be expected. In any case, it seems unlikely that rates of misclassification would vary across the different determinants of coital frequency and thus bias the results.

Limitations of the analysis

Unmarried women were excluded from the analysis and it is possible that sexual problems due to circumcision might affect marital status. Similarly, whether cut women might extend the period of postpartum abstinence to avoid intercourse was not looked at. Women who reported extramarital affairs were also excluded, as their number was too low to include them in the analysis. Future research examining these issues using DHS data may provide useful information on the effects of FGC on sexuality. This analysis focused on married women who were residing with their partner. No data were available on short-term travel away from home, either by the man or the woman, and this would obviously affect coital frequency.

Determinants of coital frequency

This study examined the effect of cutting on coital frequency in a sub-sample of married Central African women using logistic regression analysis. A number of variables thought to affect coital frequency were incorporated into the regression model.

Coital frequency decreased with increasing age and increasing length of union, and was lower for wives in polygamous unions who were not the most recent wife. These findings are consistent with those of Carael (1995), who also found that age, polygamous union and duration of union were associated with decreased coital frequency in non-industrialized settings. Coital frequency decreased as the number of surviving children increased and was highest among women not contracepting because they wanted more children. This indicates that in this setting, desire for children is a strong motivation for having intercourse. Coital frequency increased with higher levels of education and was highest in relationships where decisions were made jointly about how any income from the woman was spent. This may indicate that coital frequency is higher in relationships with a greater level of communication.

Type II genital cutting as a determinant of coital frequency was examined and higher coital frequency was found among circumcised women. However, this was found to be the result of confounding by region and the effect disappeared after adjustment using multivariate regression. Ethnic group and the prevalence of cutting status were both strongly associated with region. However, the significant differences between the regions and the strong confounding effect remained even after adjusting for differences in ethnic group distribution.

It is hypothesized that if married women in CAR have some degree of control over coital frequency then it might be lower in cut women through two mechanisms. The first possible mechanism is that cutting makes sex more painful or uncomfortable. In the Type II cutting which is practised in CAR, the clitoris and labia minora are partially or completely removed. If the introitus is scarred or Bartholins glands marred by cutting away the labia minora, the vaginal walls may become narrowed, inflexible and dry, and might therefore tear more easily. This might lead to recurrent pain and possibly increased risk of infection. However, in the Gambia, where Type II cutting is also predominant, a survey of reproductive morbidity in around 1500 rural women found that cut women were not significantly more likely than uncut women to have vulval tumours (such as Bartholin's cysts and excessive keloid formation) on clinical examination or to report painful sex (Morison *et al.*, 2001). The second mechanism by which Type II cutting might reduce coital frequency is if it reduces the desire for sex. The clitoris and other tissues in the genital area that are removed by Type II cutting are thought to be crucial for women to enjoy sex and experience orgasm. As mentioned previously, sexual enjoyment and desire are difficult and controversial to research. Several case studies have described deleterious effects of FGC on ability to enjoy sex, but most of these are for women who have been infibulated (Lightfoot-Klein, 1989a; Knight *et al.*, 1999). For the reduction operations few data are available, and the only quantitative data found by the authors was from a survey in Egypt where 94% of women reported that they enjoyed sex. Obermeyer (1999) reviewed the somewhat scant data available on the effects of reduction operations (Types I and II) and infibulation on sexual health. This study concluded

that there was sufficient evidence of cut women enjoying sex to cast doubt on the assertion that FGC unequivocally functions to destroy sexual pleasure. It also suggested that there may be fundamental differences between cultures regarding the link between genital organs and sexual enjoyment and that the emphasis on the clitoris as the centre of sexual enjoyment in the 'West' may be a social construction rather than an indisputable physiological reality.

One interpretation of the current study's results is, therefore, that within the cultural context of CAR, the removal of the clitoris and other genital organs during traditional surgeries does not in fact function to increase painful sex and/or lessen sexual desire compared with uncut women. However, another possible explanation is that the strong drive to produce children overrides other considerations, such as sexual pain or pleasure, in the desire to have intercourse. This would be consistent with the very strong associations seen between coital frequency and fertility characteristics in this study. A third explanation is that women in CAR have little choice in frequency of coitus. Polygamy is common in the study setting and within that system the husband is expected to 'take turns' with each of his wives. However, the higher coital frequency among new wives, and decreases in coital frequency with length of union, suggest that this system is not strictly adhered to and that there is some choice in frequency of intercourse, but it is not clear to what extent any choice would be the woman's. Wolffe, Blanc & Gage (2001) studied the negotiation of sex in two rural districts in Uganda using large surveys in each district and qualitative methods. The survey data showed that 60% of both men and women thought that men had more influence over whether to have sex. Around a third (32% of women and 38% of men) thought the man and woman had equal influence while 8% of women and 3% of men thought the woman had more influence. Urban residence and education both enhanced a woman's ability to negotiate sex. In trying to ascertain norms for sexual negotiation 61% of women and 71% of men said that a married woman can refuse sex with her husband if she is 'tired or not in the mood' although continued refusal would be considered a serious problem to the marriage. In general, verbal communication to initiate sex was not acceptable for women but qualitative data gave examples of the ways in which women non-verbally signal their wish for sex. Another example of non-verbal ways of communicating desire for sex is described by Lightfoot-Klein (1989b) for Sudan. There women squat naked over embers, wrapped in a tent-like robe so that their skin absorbs volatile oils of burning spices, sandalwood, frankincense and myrrh (called a 'smoke ceremony'). This signals to the partner the woman's desire and receptivity for sexual intercourse. These studies show that while men generally have more influence over sex in African settings, women can and do initiate and refuse sex under a variety of circumstances. Still, it is not possible to gauge the extent to which women determine coital frequency in CAR, and therefore the extent to which coital frequency might decrease if cutting made sex more painful or less pleasurable. It is therefore impossible within the limitations of this study to know to what extent each of the above factors contributes to the lack of association between FGC and coital frequency.

While an association between the Type II FGC practised in CAR and decreased coital frequency would have provided quite strong evidence for a negative impact of this type of FGC on women's desire for sexual intercourse, the lack of association is

more difficult to interpret. The possible explanations for the lack of association found in this study show that coital frequency may not be an indicator of a woman's desire for sexual intercourse in order to attain sexual pleasure. This problem will complicate all research on this topic as aspects of the culture, such as the extent to which a woman has control of coital frequency and whether pleasure or fertility desires are the main motivation for intercourse, are likely to be common in all settings where FGC is practised. Qualitative research is likely to be the most useful tool for investigating these aspects further. Well-designed studies on the effects of FGC on reproductive morbidity are also needed as these will provide indirect evidence on possible effects on sexuality. The damage to health and sexuality will depend greatly on the type of cutting performed. The lack of association found in this study was for Type II cutting. Consequences to health and sexuality of Type III cutting are likely to be more severe.

Conclusion

This analysis has contributed detailed, empirical knowledge on determinants of reported coital frequency, among married women in the Central African Republic. Decreased coital frequency was found in those who were older, had longer duration of marriage, were not the most recent wife in a polygamous marriage and had more surviving children. It was higher in more educated women and in non-contraceptors who reported wanting more children. After adjusting for confounders no association between female genital cutting and coital frequency was found. This might be because women do not control coital frequency, fertility desires override any pain or lack of pleasure from intercourse, or because FGC does not greatly affect desire for intercourse in women. It was therefore not possible to draw conclusions about the role of FGC and how it affects a woman's sexuality, and consequently there is a need to develop research methods to investigate this question.

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