

Female Genital Cutting, Reproductive Tract Infections and Perinatal Outcome in Burkina Faso.

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Abstract

Quantitative studies examining the association between female genital cutting (FGC) and adverse health outcomes are few and present mixed findings. Using women's self-reports from the 2003 Burkina Faso Demographic and Health Survey (INSD and ORC Macro 2004), this paper examined the association between FGC and reproductive tract infections (RTIs), perinatal deaths and low birth-weights.

Female genital cutting is a widespread phenomenon in Burkina Faso. The 2003 DHS survey estimated an FGC prevalence of 77% among interviewed Burkinabe women. The reason we decided to explore the health consequences of FGC in Burkina Faso was related to the fact that the existing body of quantitative research on Africa favours English speaking countries over francophone ones. Hence, this study aims at overcoming such bias by studying a country that has been rarely taken into account in the literature.

This analysis used self-reported data since we believe that it ensures an appropriate representation across all population groups, irrespective of their ethnicity, place of residence or economic status, including those who do not have access to health clinics. We acknowledge though, that women's self-reports can be subject to biases and that survey questions might not grasp health symptoms or conditions as accurately as clinical examinations (Obermeyer 2005). However, a clinic-based analysis was beyond the scope of this study.

Although clinically-observed data may ensure the accuracy of the information collected, studies have shown a high level of correspondence between women's self-reports and clinically verified experience of FGC (EFCS 1996; Morison *et al.* 2001; Snow *et al.* 2002). Nonetheless, it is important to bear in mind that the validity of self-reports may vary across regions and populations as other studies have warned (Adinma 1997; Odujinrin *et al.* 1989; Klouman *et al.* 2005).

Binary variables were created for each of the three health outcomes, which took values of 0 if women reported to have experienced the outcome and of 1 if women reported to not have experienced it. In the case of reproductive tract infections (RTIs), the presence of any their two main correlates - abnormal vaginal discharge or genital sores or ulcers - was used as a proxy to determine whether women had experienced such infections.

FGC was our main hypothesised predictor of the outcomes, and Burkinabe women who reported that they had been cut were recoded as 1, whilst those who reported being uncut were recoded as 0. Furthermore, a set of covariates that are assumed to be predictors of

adverse health outcomes which have been commonly used in the literature were used as controls in the multivariate analyses. With the exception of age, categorical variables were created for this set of physiological, socio-economic and socio-cultural factors. Physiological variables used included age, parity and body mass index (BMI). Socio-economic factors included education, economic status and place of residence whilst socio-cultural factors used were marital status and ethnicity. Finally, antenatal care and sexual partners in the past 12 months were used in the analyses of low birthweight and RTIs respectively.

Chi-squared tests and one-way ANOVAs were used to examine the relationship between continuous and categorical variables. Univariate and multivariate logistic models were then carried out to examine the relationship between the outcome and the predictors using Stata/SE version 9.0. Sample weights were used to take into account the complex stratification of the sample, so as to ensure that results were representative of the whole population. Furthermore, since many women in the three samples belonged to the same household, we assume that their behaviour will not be totally independent but rather somewhat related. To take this effect into account, the analysis was adjusted for potential clustering in each sample.

The study found that Burkinabe cut women are significantly more likely to experience correlates of reproductive tract infection (OR=1.54, 95% CI: 1.08, 2.21) than their uncut counterparts. Nonetheless, no significant association was found between FGC and perinatal deaths (OR=0.94, 95% CI: 0.69, 1.27) or low-weight births (OR=1.19, 95% CI: 0.81, 1.75). Such results were obtained after controlling for the whole set of covariates described above.

Our findings are consistent with the few studies in the literature which have examined the association between FGC and correlates of RTIs. They closely echo those of Jones *et al.* (1999), who found that Burkinabe cut women were significantly more likely to report at least one RTI symptom (abnormal vaginal discharge, ulceration, vegetation and irritation) than uncut women (OR=1.72). They also parallel those of Okonofua *et al.* (2002) who in Nigeria found that cut women were significantly more likely to report yellow bad-smelling vaginal discharge (OR=2.81), white vaginal discharge (OR=1.65) and genital ulcers (OR=4.38).

All these results contrast with Morison *et al.* (2001) who found no relationship between FGC and suffering at least one of the following correlates of genital infection (abnormal vaginal discharge, itching, irritation or bad odour) among Gambian women (OR= 0.94). However, they did not control for data on exposure and sexual behaviour such as the number of sexual partners in the past 12 months, since they feared this would discourage women from participating in the study.

Jones *et al.* (1999) in their study of Burkina Faso did not control either for the number of sexual partners the woman had in the past 12 months and this study has shown that this factor is an important predictor of whether Burkinabe women report a genital infection symptom. Other characteristics being equal, a Burkinabe woman who has had more than

one sexual partner in the past 12 months is twice as likely to report an RTI symptom than women who have only had one sexual partner in the past 12 months.

With regards to perinatal deaths, our results are in line with those of Morison *et al.* (2001) who found no relationship between FGC and stillbirths in the Gambia and those of Hakim (2001) who in Ethiopian hospitals found that perinatal mortality rates were similar for cut and uncut women. More than 80% of women in each of these two studies had been subject to FGC type II. The WHO (2006) multi-national study disaggregated FGC by type and found that the risk of suffering an impatient perinatal death increased with the severity of the cutting and the association was the strongest in the case of FGC type III.

As Baker *et al.* (1993) point out, cut women who are more at risk of experiencing perinatal deaths are those who have suffered the most extreme form of genital cutting, that is, infibulations. They are likely to present the most severe scars and forms of soft-tissue dystocia which are likely to prolong the second stage of labour and result in fetal asphyxia or death. However, this type of FGC is very rarely practiced in Burkina Faso and this might be the reason why neither our study nor the ones by Morrison *et al.* (2001) and Hakim (2001) found any association between FGC and perinatal mortality.

What Hakim (2001) found though, was that the Type II cut women he analysed had a prolonged second stage of labour compared with non-cut women. This contrasts with the findings of Essen *et al.* (2005) who found that Type III cut immigrants from the Horn of Africa living in Sweden experienced a shorter second stage of labour than Swedish women. It must be taken into account though, that deinfibulation and subsequent delivery was carried in a setting with high obstetric standards, which are likely to be available to a minority of the population in developing countries. In this same line, a previous study by Essen *et al.* (2002) showed that there was no association between FGC and perinatal deaths comparing Type III cut Ethiopian and Eritrean immigrants in Sweden with women from the local population, but again these women delivered in settings with advanced obstetric care systems.

Research has been mostly focusing on small numbers of cut immigrants delivering in Western countries (Berardi *et al.* 1985; Press *et al.* 1993, Essen *et al.* 2002; Essen *et al.* 2005), with authors recommending that such cut patients need advanced obstetric care when delivering. The few studies that have discussed at the beginning of this section are the most relevant analyses that have quantitatively assessed the relationship between FGC and perinatal deaths in developing country clinics. Even though their findings and ours point in the same direction, more research is needed, given that only the wealthier strata of societies in developing countries have access to clinics for delivery. Our sample included 38.3% of whom were classified as poor, 71.3% of whom had their last delivery at home and thus are more likely to have had their previous deliveries at home, yet no relationship was found between FGC or economic status and perinatal deaths. Nonetheless, given that Hakim (2001) found that a prolongation of labour can occur among type II cut patients which can result in adverse consequences on the child's survival, and given the variety of findings when examining the association between FGC

and other health outcomes, emerging research should target the most deprived, those who have neither economic nor physical access to clinics for obstetric care, or those who have only the most basic obstetric services available.

Our findings confirm those of the Press *et al.* (1993) and those of the WHO (2006), who found no significant association between female genital cutting and low birthweight. Press *et al.* (1993) found no differences comparing deliveries of Israeli women with those of Ethiopian immigrants, whilst the WHO (2006) disaggregated FGC by type and found that our hypothesis does not hold for any type of FGC. Thus, female genital cutting might not have a direct impact on infant outcome, measured as low birthweight, but as most studies focus on infant survival it was meaningful reaffirming that such rarely explored link did not exist.

Although the findings of this study echo those of the few previous analyses in the literature, further research on the associations between FGC and adverse health outcomes is crucially needed since results are very likely to vary according to the type of cutting and socio-demographic factors of the sample analysed, as well as according to the type of data collected. This are preliminary findings that will require further analysis and investigation.