World Health Organization

Research summary

Photo: WHO

Estimating the obstetric costs of female genital mutilation in six African countries

Introduction

A seminal study by WHO from 2006[1] documented for the first time that female genital mutilation (FGM) is associated with increased risk for birth complications, affecting both mother and child. The risk increased commensurate with the severity of the procedure.

Building on these prior estimates of obstetric risks linked to FGM, a study was conducted estimating the cost to the health system of obstetric complications due to female genital mutilation in the same six African countries (Burkina Faso, Ghana, Kenya, Nigeria, Senegal and Sudan) in which the original study was carried out.

Methods

A demographic model depicted six cohorts of 100 000 15-year-old girls who survived age 45. Cohort members were modelled to have various degrees of FGM, to undergo childbirth according to each country's mortality and fertility statistics, and to have their deliveries attended by a medical doctor at the frequency observed in the relevant country. The risk of obstetric complications was estimated based on the WHO study of 28 393 women from 2006. The costs of each complication were estimated in purchasing power parity dollars (I$) for 2008 and discounted at 3%. The model also tracked life years lost owing to fatal obstetric haemorrhage. Multivariate sensitivity analysis was used to estimate the uncertainty around the findings.

Calculations entailed unit costs associated with caesarean section, maternal haemorrhage, extended maternal hospital stay, infant resuscitation, inpatient perinatal death and episiotomy.

Classification of female genital mutilation

Type I: Partial or total removal of the clitoris and/or the prepuce (clitoridectomy).

Type II: Partial or total removal of the clitoris and the labia minora, with or without excision of the labia majora (excision).

Type III: Narrowing of the vaginal orifice with creation of a covering seal by cutting and appositioning the labia minora and/or the labia majora, with or without excision of the clitoris (infibulation).

Type IV: All other harmful procedures to the female genitalia for non-medical purposes, for example: pricking, piercing, incising, scraping and cauterization.

[1] WHO Study Group on Female Genital Mutilation and Obstetric Outcome (2006). Female genital mutilation and obstetric outcome: WHO collaborative prospective study in six African countries. *Lancet*, 367:1835-1841. (http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(06)68805-3/abstract)

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Results

The study found that on average, a girl of 15 years who undergoes FGM Type III will lose nearly one-quarter of a year of life and impose on the medical system a cost of I$ 5.82 over her lifetime. The other types of FGM also reduce survival and lead to monetary losses over each woman's lifespan, but to a lesser extent.

The annual costs of FGM-related obstetric complications in the six African countries studied amounted to I$ 3.7 million and ranged from 0.1% to 1% of government spending on health for women aged 15–45 years. In the current population of 2.8 million 15-year-old women in the six African countries, a loss of 130 000 life years is expected owing to FGM's association with obstetric haemorrhage. This is equivalent to losing half a month from each lifespan.

Female genital mutilation is defined as the partial or total removal of the female external genitalia or other injury to the female genital organs for nonmedical reasons.

Policy recommendations

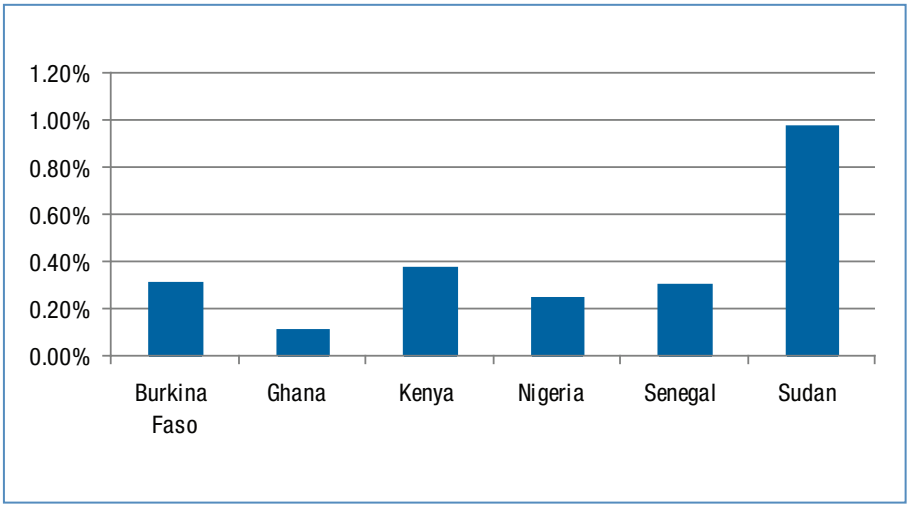
As FGM violates a series of human rights, financial concerns are not the main motivation to work towards its abolition.

However, as efforts to combat FGM have been traditionally underfunded, knowing that investment in the prevention of FGM also contributes to savings in the health system, including through a prevention of birth complications, should contribute to increased funding to support measures for the prevention of FGM.

If the health system were to spend as much as I$ 5.82 per FGM Type III prevented or I$ 2.50 per FGM Type II prevented, the value of avoided obstetric complications would entirely offset the costs of prevention.

Furthermore, the abandonment of FGM would also benefit societies, families and individuals through reduction of other costs not measured here, including the costs of treating other FGM-related complications.

Figure 1. Annual government spending for female genital mutilation as a proportion of spending on all women aged 15–45 years in six African countries.



References

Adam T, Bathija H, Bishai D, Bonnenfant YT, Darwish M, Huntington D, Johansen E. Estimating the obstetric costs of female genital mutilation in six African countries. *Bulletin of the World Health Organization,* 2010, 88:281-288. The full research article is available here: http://www.who.int/bulletin/volumes/88/4/09-064808/en/index.html

Acknowledgements

This research summary is based on research conducted by: David Bishai Associate Professor, and Yung-Ting Bonnenfant, Research Coordinator, Johns Hopkins Bloomberg School of Public Health Baltimore, MD USA; Manal Darwish, Lecturer Assiut University, Assiut, Egypt; Taghreed Adam, Alliance for Health Policy and Systems Research, Geneva, Switzerland; and Elise Johansen, Heli Bathija, and Dale Huntington, Department of Reproductive Health and Research, World Health Organization.

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