

Female Genital Mutilation (FGM): Explaining the occurrence of a harmful practice with computational simulations of social groups

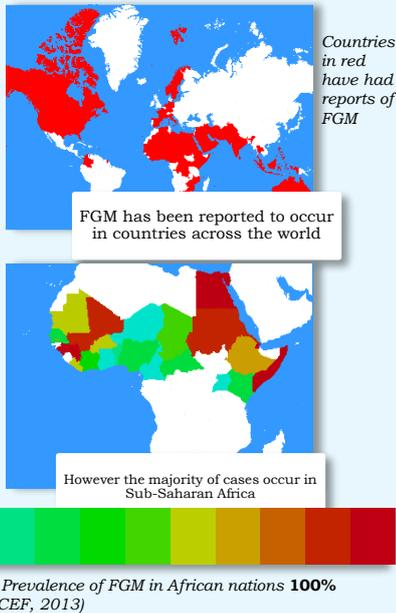
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FGM: what is the problem and how big is it?

200 Million women and girls around the world have been subjected to FGM. Victims of FGM have parts of their genitalia cut off for non-medical reasons. There are different types of FGM, but no type is safe. Many victims suffer long term health problems. Some have died during the procedure. The United Nations has been campaigning for decades to eradicate FGM. Yet, due to population growth in Africa, the number of women subjected to FGM is expected to increase (UNICEF, 2016)!

Where is FGM practised?



Understanding the puzzling persistence of FGM.

- Our re-analysis of existing survey data from Senegal highlighted some puzzling aspects of the persistence of FGM.
- We used data collected as part of national household surveys in Senegal (2011) by the Demographic and Health Survey (DHS) Program
- We grouped survey respondents together based on the community where they lived, to estimate rates of FGM in communities across Senegal.

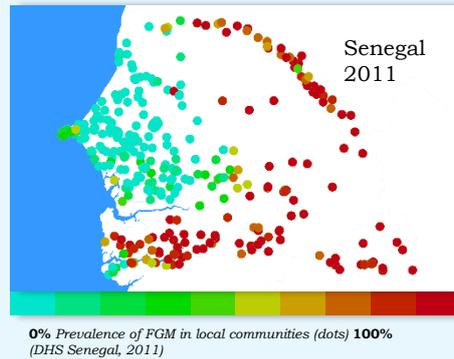
This is what we learned:

FGM is not explained by ethnicity.

The prevalence of FGM is not consistent within Ethnic groups (UNICEF 2013):

- The Wolof in the Diourbel region of Senegal do not practise FGM, yet 35% of Wolof women are cut in the Matam region
- 2% of Peulh women in the Diourbel region are cut versus 95% of Peulh women in Sedhiou region.

FGM is not about nationality.



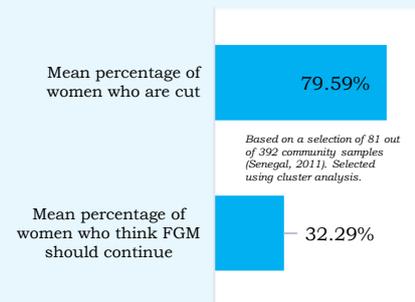
Rates of FGM vary dramatically between communities and areas within Senegal.

FGM is unpopular with men and women.

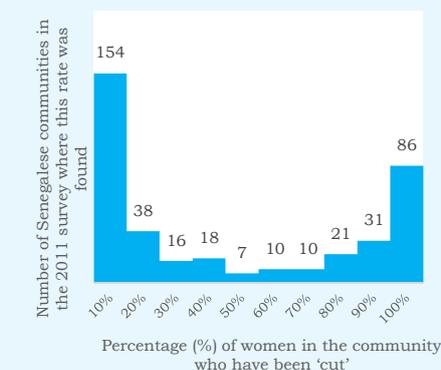
- 81% of Senegalese Women say FGM should not continue.
- 79% of Senegalese Men say the same thing.

(UNICEF, 2016)

FGM is practised in local communities where most residents don't think it should continue.



FGM tends to be either ubiquitous or absent in local communities.



A community phenomena.

The data show that FGM is localised to specific community settlements and that it persists at high levels in them, in some cases, even when it is unpopular.

A Social Norm?

A popular explanation for the persistence of FGM is that it is a social norm (Mackie, 2015). This means that it is perpetuated by social pressure.

"I practise FGM because others around me do so and I think they expect it of me"
Fictional quote

FGM is a taboo subject, it is rarely talked about. Therefore people may even infer social pressure to practise FGM when, in reality, others are going along with the norm (just like them).

Q. Could social norm theory account for the persistence of FGM within local communities in Senegal, even where it is unpopular?

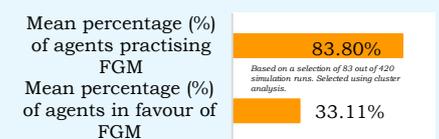
A. We used a computer simulation of social norm theory to find out.

A computational simulation of social norm theory.

We simulated village populations using a technique called agent-based modelling. This involved **representing villagers as software-agents** interacting in a virtual environment (according to the rules of social norm theory).

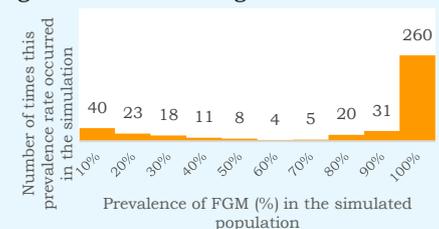
Social norm theory can explain the persistence of FGM when it is unpopular.

Our simulation of social norm theory reproduced the observed relationship between the popularity of FGM and its prevalence in communities in Senegal.



Social norm theory can explain why FGM tends to be either ubiquitous or absent in local communities.

Our simulation of social norm theory generated this finding.



Implications for preventing FGM.

We showed that social norm theory was able to explain aspects of the persistence of FGM in Senegal. This adds empirical support and rationale for popular charitable interventions which focus on shifting social norms to prevent FGM.

References:
1. MACKIE, G., MONETTI, F., SHAKYA, H. & DENNY, E. 2015. What are Social Norms? How are They Measured? UNICEF/University of California, San Diego, Center on Global Justice
2. UNICEF 2013. Female Genital Mutilation/Cutting: A statistical overview and exploration of the dynamics of change. New York: UNICEF.
3. UNICEF 2016. Female genital mutilation/cutting: a global concern. New York: UNICEF.
4. Demographic and Health Survey Program: <http://www.dhsprogram.com>