

# Tulane University

Department of International Health and Development

## **Determinants of Support for Female Genital Circumcision among Ever-Married Women in Egypt**

**Chiho Suzuki  
Dominique Meekers**

Working Papers in  
International Health and Development

No. 5

2005



---

Department of International Health and Development  
Tulane University School of Public Health and Tropical Medicine  
1440 Canal Street, Suite 2200  
New Orleans, LA 70112  
ph. 504-988-3655 | fax 504-988-3653  
[www.sph.tulane.edu/~inhl](http://www.sph.tulane.edu/~inhl)

## **The Working Papers in International Health and Development Series**

The *Working Papers in International Health and Development* aim to provide limited but speedy circulation of recent research by Faculty members of Tulane's Department of International Health and Development. To facilitate rapid circulation of new research findings, papers in the series are released as-is, without editing. Papers released in the series are intended for subsequent publication in peer-reviewed journals.

### *Suggested Citation Format*

Plautz, Andrea, Dominique Meekers, and Gabriela Escudero. 2005. Trends in Family Planning and HIV Prevention in Nigeria. Working Papers in International Health and Development, No.3. New Orleans: Department of International Health and Development, Tulane University.

## **Acknowledgements**

Support for this study was provided by the United States Agency for International Development (USAID) through the Health Communication Partnership and under the terms of Cooperative Agreement No. GPH-A-00-02-00008-00. Additional core support was provided by Tulane's Department for International Health and Development.

An abbreviated version of this paper was presented at the Annual Meeting of the American Public Health Association, held in Philadelphia, PA, December 10-14, 2005.

## Abstract

**Objectives:** This study identifies the determinants of women's support for FGC, emphasizing the role of attitudes toward FGC and exposure to FGC-related media messages.

**Data and Methods:** We use data from the 2000 Egypt Demographic and Health Survey, which collected information on 15,573 ever-married women aged 15-49. Using logistic regression, we examine the determinants of (1) women's belief that FGC should be discontinued; and (2) women's intention to circumcise their daughters.

**Results:** After controlling for socio-demographic factors, women who were exposed to two or more FGC media messages were twice as likely as unexposed women to support discontinuing FGC (OR=2.1;p<.01). Furthermore, women who believe men want the practice discontinued are nearly 20 times as likely as others to want the practice discontinued (OR=19.1;p<.01).

The factors affecting women's intention to circumcise their daughters are similar. Women exposed to two or more messages are less likely than unexposed women to plan to circumcise their daughters (OR=.5;p<.01). Women who believe men want FGC discontinued are less likely than others to intend to circumcise their daughters (OR=.1;p<.01). However, women who believe that husbands prefer circumcised women are 3 times more likely than other women to plan to have their daughters circumcised (OR=3.1; p<.01).

**Conclusions:** Continuing and scaling up FGC-related media campaigns is key in reducing support for FGC. Since women's perception that men prefer circumcised women strongly influences their support for FGC, FGC media campaigns should also target men.

## **Determinants of Support for Female Genital Circumcision among Ever-Married Women in Egypt**

### **Introduction**

Female genital circumcision (FGC) is prevalent in many African countries, as well as some in the Middle East and Asia. The practice involves partial or total removal of the female genital organs. Due to the nature of the procedure, it can have severe health consequences. Women may experience severe pain and shock, and complications such as haemorrhage and infection can lead to death. Ulceration of the genital area and injury to adjacent tissue can lead to formation of cysts and abscesses, keloid scars, and urinary incontinence, painful sexual intercourse and dysfunction, and obstetric and gynecological complications (Gordon, 1991; Jones, Diop, Askew, & Kabore, 1999; WHO, 2000; Obermeyer, 2003). Because of these potential consequences, FGC has been a focus of international health research and programming for decades, and was recognized as a violation of human rights and a serious threat to women's health at the 1994 United Nations International Conference on Population and Development (Althaus, 1997; UNFPA, 2005).

Despite the global and national movements against FGC, the practice is still highly prevalent in Egypt. According to the Egypt Demographic and Health Survey carried out in 2000 (EDHS 2000), 97% ever-married women have been circumcised. In Egypt, girls undergo the procedure between the ages 6 and 10 (Assaad, 1980; Nahla & Sahar, 2000). Excision or clitoridectomy (cutting out the clitoris as well as parts or all of the labia minora) is the most commonly practiced form in Egypt (Gordon, 1991). Support for FGC remains strong. Over 80% of women have a daughter who is circumcised or intend to have their daughters circumcised, and 75% of women believe the practice should continue (El-Zanaty & Way, 2001).

To facilitate the design of programs that seek to reduce the negative consequences of FGC, it is important to understand the factors associated with support for the practice. This study uses survey data from Egypt to examine the effect of exposure to various communication messages regarding FGC on ever-married women's support for the practice, and on their intention to circumcise their daughters. Findings of the study will contribute to the development

of new communication campaigns and improvement of on-going efforts to discourage public support for FGC in Egypt.

### **Background**

The practice of female genital circumcision in Egypt dates back to the times of the ancient Pharaohs (Gordon, 1991). In accordance with the global movement toward eradication of the practice, a series of ministerial decrees have been issued over the years to prohibit FGC. Eventually, this led to the complete ban on the practice in 1996. This decree by the Health Minister prohibits all medical and non-medical practitioners from performing FGC, in either public or private facilities, except when certified by the head of a hospital's obstetric department for medical reasons (US State Department, 2001). Government-supported campaigns that highlight the harmful effects of FGC and discourage the practice have been rigorously carried out through traditional awareness-raising activities (e.g., community lectures, discussion groups and seminars), community leaders as advocates, community development projects, and through the popular media (Nahla & Sahar, 2000).

#### *Attitudes and Beliefs regarding FGC*

Despite the negative health consequences, FGC has been widely supported due to various perceptions and beliefs, which are deeply embedded in the social structure and fabric. First, in regions where FGC is practiced, the procedure is accepted as a custom or tradition (Olenick, 1998). It is believed to protect a girl's virginity and her family's honor, and ensures her prospects for marriage and motherhood. The experience is viewed as an integral part of a woman's life course (i.e., rite of passage), and thus her identity. In such cultural context, uncircumcised women are perceived to have maintained masculine characteristics, making them unfit for marriage. The practice is also perceived as a "cleansing" or purification ritual, and a symbol of womanhood (Assaad, 1980; Althaus, 1997; Yount & Balk, 2004). Furthermore, while it reduces women's sexual pleasure, women view it as a way to please men, thus protecting her from her

husband exercise his right to divorce or polygamy (Yount & Balk, 2004). A qualitative study among ever-married women conducted in Minia, Egypt, shows that the majority of women perceive FGC as (1) beneficial for girls, (2) a procedure to “cleanse” them to ensure purity, and to control sexuality, and (3) a condition that facilitates marriage (Yount, 2002). Finally, while FGC does not have its origin in Islam or Christianity, it is widely believed to be an important part of religion. Supporters of FGC cite religion and their desire to adhere to what they *believe* is their religious duty as justification for support (Gordon, 1991).

### **Theoretical Perspectives and Empirical Evidence**

To examine the factors associated with support for FGC, the study will draw on three theoretical models, and empirical evidence from past studies on this topic. These models are (1) Modernization Theory, (2) Feminist Theory, and (3) Social Effects Theory. Both modernization theory and feminist theory highlight factors associated with transformation of women’s social status and identity, and social effects theory focuses on the role of social interaction.

According to modernization theory, FGC provides women social acceptance and economic stability in patriarchal societies, which are based on land inheritance system. Thus, social transformation through rising levels of urbanization, women’s educational attainment, participation in the labor force, exposure to new ideas through communication as well as economic development, is expected to lead to change in attitudes regarding marriage and women’s status, and consequently lead to decline in support for FGC (McGarrahan, 1991; Yount, 2002; Yount & Balk, 2004).

Proponents of feminist theory follow broadly two schools of thought on FGC. One sees FGC as a manifestation of patriarchal control over women’s bodies and sexuality, and of women’s subordinate position in societies. The other interprets it as an avenue through which a woman establishes her social identity, consequently acquires protection and economic security through marriage, and ultimately gains some level of authority in the private sphere of the

family. Both schools argue that FGC can be eradicated when fundamental changes take place in opportunities for women, which enhances their political and economic power (Sargent, 1991; Yount, 2002; Yount & Balk, 2004).

Social effects theory posits that social influence and social learning play a key role in diffusion of a new behavior. An individual's decision to adopt a new behavior is influenced by interpersonal interactions between individuals, peers and reference groups (i.e., social influence), and by exposure to information from various sources, including mass media messages and advertisements and experiences or views of others with whom the individual interacts (i.e., social learning) (Montgomery & Casterline, 1996).

Previous studies provide empirical evidence on the effects of modernization and transformation of women's social status. Support for FGC tends to be associated with low parental education, rural residence, and early marriage (Williams & Sobieszczyk, 1997; Yount, 2002). In addition, there are indications that the prevalence of FGC is higher among younger women (El-Gibaly, Ibrahim, Mensch, & Clark, 2002). This suggests that the prevalence of FGC may be increasing rather than decreasing. Hence, it is particularly important to assess if FGC prevention programs are having the desired effect.

### **Data and Methods**

This study will examine the effects of FGC-related communication (both interpersonal and impersonal) and socio-economic development on women's support for FGC. Specifically, we hypothesize that level of exposure to FGC-related communication will be associated with women's desire to have FGC discontinued, and with a reduced intention to circumcise their daughters. Similarly, we expect female education and employment to be associated with reduced support for FGC.

### *Data Source*

The 2000 Egypt Demographic and Health Survey contains data on a nationally representative sample of 15,573 ever-married women aged 15-49 (El-Zanaty & Way, 2001). Our analysis excludes women who had missing values on the variables in the multivariate models, which reduces our working sample to 15,544 women.

### *Measures*

We use two indicators of women's support for FGC. Our first outcome measure is a dummy variable indicating whether women believe that FGC should be discontinued (yes vs. all other responses). Our second outcome measure is a dummy variable indicating whether women plan to circumcise their any of their daughters (yes vs. no/don't know). This latter variable is restricted to those women who had at least one uncircumcised daughter at the time of the survey. Based on our review of the theoretical models and previous studies, we examine the following predictors of women's support for FGC:

Exposure to FGC communication programs: Respondents were asked whether during the past year they had heard or seen anything about female circumcision: (1) on television; (2) on radio; (3) in the newspaper or magazine; (4) at community meeting; and (5) at the mosque or church. We classified respondents as having no exposure, low exposure (one source of exposure), or high exposure (two or more sources) to FGC-related media messages in the past year.

Attitudes and beliefs about FGC: FGC-related attitudes and beliefs were measured using six dichotomous variables indicating whether women believe (1) that men want this practice to be continued, (2) that circumcision is important part of religious tradition, (3) that a husband will prefer his wife to be circumcised, (4) that circumcision can cause severe complications, which

may lead to the girl's death, (5) that circumcision lessens sexual satisfaction for a couple, and (6) that FGC provides better hygiene.

Control variables: Socio-demographic control variables include women's age, region of residence, educational attainment, work status before marriage, current work status, age at marriage, her husband's educational attainment, frequency of exposure to mass media and household wealth.

General mass media exposure is measured based on the frequency of exposure to print media (newspapers/magazines), radio, and television (almost every day vs. less frequent). Respondents are defined as having high media exposure if they are exposed to all 3 media types almost every day, as having medium exposure if exposed to one or two media types almost every day, and as having low exposure if not having daily exposure to any of the three media types.

Household wealth was measured using the Relative SES Index (Okello-Ogojo, 2000), which measures an individual's socio-economic status relative to that of other individuals in the survey. Each individual is assigned a cumulative score that indicates the number of amenities and consumer durables (toilet facilities; type of water source; electricity; radio; television; refrigerator; and car) in her household. Respondents are then categorized into three groups of approximately equal size to represent low, medium, and high relative SES.

### *Statistical Methods*

Bivariate analyses were conducted to examine the association between characteristics of respondents, her exposure to media messages on FGC, her attitudes and belief regarding FGC, and the dependent variables. Logistic regression was used to estimate the effect of the intensity of exposure to media messages on FGC, while controlling for background variables and attitudes and beliefs regarding FGC. Four logistic regression models were analyzed for each outcome. The first model examines the effect of FGC media exposure; the second model examines the effect of attitudes and beliefs regarding FGC. Model three shows the effect of FGC media exposure after

controlling for the background variables (age, place of residence, educational achievement, work status before marriage, current work status, age at marriage, her husband's educational achievement, general exposure to mass media, and household wealth). The final model shows the net effect of FGC media exposure after controlling for attitudes and beliefs about FGC as well as the background variables. All analyses are based on weighted data.

In estimating the effect of exposure to FGC messages on the two outcomes, we were concerned that our key variable of interest, exposure to FGC messages, may be influenced by the same unobserved factors that determine the two outcomes of our study. The women who were exposed to FGC messages may have a propensity to believe that FGC should be discontinued, or to intend to circumcise their daughters. Such propensity was not measured, and therefore, cannot be accounted for in our model. In other words, the effect of exposure to FGC messages may be endogenous. If this were the case, the effect of the exposure would be over-estimated.

To address the issue of endogeneity, we followed Bollen et al. (Bollen, Guilkey, & Mroz, 1995). First, we identified a variable that was associated with exposure to FGC messages, but not with the outcome: frequency of TV viewing. We used this variable as an instrumental variable to predict exposure to FGC messages. Since the variable measuring exposure to FGC messages was a count variable (ranging from 0 to 5), poisson regression model was used at this stage. We then estimated the error term from this model, and included it in the model predicting the two outcomes, along with the actual value of exposure, to assess whether the coefficient of the estimated error term was significantly associated with the outcomes of the study. The t-test revealed that in both cases the error term was not significantly associated with either of the two outcomes. Thus, exposure to FGC messages was not an endogenous variable, and a single stage model appropriate.

## **Study Limitations**

This study has several limitations. First, due to the cross-sectional nature of the data, causality cannot be established between the factors identified and the two outcomes. Second, data on women's intention to circumcise their daughters refer to women with an uncircumcised daughter and can be generalized only to this specific group. Nevertheless, this study is one of the few analytical studies that use a nationally representative sample to examine the correlates of women's support for FGC in Egypt, with a specific focus on the effect of FGC-related communication messages. It provides valuable input for on-going communication efforts to eradicate FGC, and improves our understanding of the factors that determine women's support for FGC.

## **Results**

Table 1 describes the characteristics of the sample. Women were distributed equally across the six age groups (14-18% in each category), and between urban and rural residence (44% vs. 56%, respectively). Women marry early in Egypt; the majority were married before age 20 (63%). Over 40% of women had no education, 18% had completed primary education, and almost 40% had achieved secondary education or above. Women's participation in the labor force, both before and after marriage, remains limited in Egypt. Few women worked before they were married (16%), or were currently working (17%). A large proportion of women were in the medium household wealth group (48.1%). Husbands' educational achievement was higher than that of women. Only 30% of husbands had no education, and over 10% had tertiary education. Exposure to mass media (i.e., newspapers/magazine, radio and TV) was high. The vast majority of women are exposed to one or two of the three mass media almost every day (82.5%).

Table 1 shows that support for FGC remains strong. Only 15% of ever-married women indicated clear opposition to continuation of the practice. Over 80% of women with one or more uncircumcised daughters plan to circumcise her/them. Most women perceive FGC as an important part of religion (72.6%), and believe that husbands prefer a circumcised wife (67.1%).

One in three women (29%) were concerned that FGC can cause complications that can lead to a girl's death, but few were concerned about its consequences for pregnancy and childbirth (7.8% and 7.6%, respectively).

Table 2 shows the percentage of ever-married women who reported exposure to FGC messages in the past year. Exposure was very high. Only 26% of women reported no exposure; over 40% reported exposure through at least two media sources. The majority of women were exposed to FGC messages via TV (72.7%), followed by radio (36.8%), and newspaper/magazines (20.4%). Exposure through community meetings and religious institutions (i.e., mosque/church) were low (less than 4%).

To determine the net impact of the intensity of exposure to FGC-related messages on women's belief that FGC should be discontinued, while controlling for social and demographic variables as well as those related to attitudes and beliefs regarding FGC, four multivariate logistic models were tested. The first model in Table 3 examines the effect of the intensity of media exposure, with no control variables. Women with low exposure to FGC-related messages were 1.8 times as likely as women with no exposure to believe that FGC should be discontinued. Those with high exposure to FGC-related messages were 5.1 times as likely as those with no exposure to want FGC discontinued. Model 2 examines the effect of women's attitudes and beliefs regarding FGC, after controlling for other factors. While all variables were statistically significant, women who believe that men want the practice to discontinue were 23 times as likely as women who do not believe that to express opposition to the practice.

Model 3 examines the effect of exposure of FGC-related messages on women's support for the practice, after controlling for the socio-demographic variables. The results show that the strong effect of high FGC media exposure was only partially explained by these background variables. After controls, women who had high FGC media exposure were 2.5 times more likely than women with no exposure to favor discontinuing FGC. Model 4 examines the effect after controlling for both socio-demographic variables and FGC-related attitudes and beliefs. The effect of exposure to FGC messages remained significant, providing support for social effects

theory. The effect of women's perception of male support for FGC also remains strong. Women who believe that men want FGC discontinued were 19.1 times as likely as other women to oppose FGC.

Consistent with previous studies, the effects of socio-economic development (measured by urban residence, women's and husbands' education) on support for FGC, remained significant after controls. Women who had achieved higher education and above were 1.8 times as likely as uneducated women to oppose FGC. Similarly, women whose husband had achieved higher education were 1.5 times as likely as women whose husband had no education to oppose the practice. On the other hand, the effect of household wealth status was no longer significant after controls. Women who live in the rural areas of Lower Egypt were less likely to express opposition to FGC as those who live in urban Governorates (OR=0.6).

Table 4 shows the factors associated with women's intention to circumcise their uncircumcised daughters. The first model shows that women with low and high exposure to FGC-related messages were less likely than women not exposed to intend circumcising their daughters (OR=0.6 and 0.2, respectively). The second model examines the effect of each of the variables related to women's attitudes and beliefs regarding FGC. All variables were statistically significant, except women's belief that FGC reduces sexual satisfaction. Similar to the findings related to women's belief that FGC should be discontinued, perceived male support for FGC has a significant effect on women's intention to circumcise their daughters. Women who believe that men want the practice to discontinue were significantly less likely than other women to express intention to circumcise her daughters (OR=0.1). Women who believe that husbands prefer circumcised women were more likely than others to express intention to circumcise her daughters (OR=3.8). Furthermore, the belief that FGC is an important part of religion had a significantly positive effect on the outcome (OR=4.8).

Model 3 examines the effect of level of exposure to FGC-related messages on women's intention to circumcise her daughters, after controlling for socio-demographic variables. After controls, women who had low exposure to FGC messages were 0.7 times as likely as those who

had no exposure to intend to circumcise their daughters. Similarly, women who had high exposure to FGC messages were only 0.5 times as likely as those who had no exposure to intend to circumcise their daughters.

Model 4 shows that this effect of exposure to FGC messages on intention to circumcise persists even after controlling for FGC-related attitudes and beliefs, but only among women who reported high intensity exposure to FGC messages (OR=0.5). The positive effect of belief that FGC is an important part of religion and that husband prefers circumcised women on the outcome remained strong with odds ratios of 4.6 and 3.1 respectively. Women who believe that men want the practice discontinued were significantly less likely than others to intend to circumcise their daughters (OR=0.1). Socio-economic development has a significant net effect on intention to circumcise. Women who achieved secondary level education or above were less likely as those who had no education to intend to circumcise their daughters (OR=0.7), and women whose husband achieved higher education were less likely as those whose husband had no education to intend to circumcise their daughters (OR=0.6). Furthermore, women living in rural areas (both Lower Egypt as well as Upper Egypt) were more likely to intend to circumcise her daughters compared to women living in Urban Governorates (OR=2.3 and 1.7 respectively). On the other hand, the effect of women's age at marriage, women's employment status (before marriage as well as current employment status), and household wealth status had no significant effect on the outcome in this population.

The effect of age on circumcision intentions is noteworthy. Model 4 indicates that older women are less likely than younger women to intend to circumcise her daughters, after controlling for all other variables. This generational difference is consistent with previous studies in Egypt (Carr, 1997; El-Gibaly et al., 2002) and elsewhere (Williams & Sobieszczyk, 1997) that suggest that there may be an increasing trend in conservative views among younger generations. Moreover, older women, the vast majority of whom were circumcised, may have become aware of the consequences of FGC as they experienced marriage and childbirth (Yount & Balk, 2004). This cumulative experience may have made them reluctant to expose their daughters to the same

painful experiences. The “medicalization” of FGC (increased use of medical personnel and anaesthetics) may have made FGC less traumatic for younger women (El-Gibaly et al., 2002). Consequently, they may be less reluctant to expose their own daughters to the same experience.

### **Discussion and Conclusions**

Female genital circumcision has received much attention in the recent decades particularly in terms of programming, and increasingly in the area of research. In countries such as Egypt where the practice remains highly prevalent, communication campaigns advocating eradication of the practice have been rigorously pursued. This study has used the 2000 Egypt Demographic and Health Survey to examine the effect of exposure to FGC-related communication messages on ever-married women’s support for the practice. The results show that change in women’s status and identity through socio-economic development, combined with exposure to new ideas through a variety of communication channels, help reduce support for the practice. It also shows that women’s support for FGC is strongly influenced by their perception that men prefer circumcised wives.

These findings have significant programmatic implications. First, the evidence that high levels of exposure to FGC-related media messages is key to reducing support for FGC suggests that communication campaigns should be continued and – if possible – scaled up. The finding that awareness of the health risk of FGC is associated with lower support for FGC suggests that messages that focus on the serious health consequences are likely to be particularly effective. Evidence from elsewhere indicates that a strong emphasis on the health consequences, supported by the Government as well as non-governmental organizations, is essential in easing concerns that failure to circumcise will leave their daughters “different,” affect their female identity, and their marriage prospects (Caldwell, Orubuloye, & Caldwell, 2000). Second, women’s support for FGC is strongly influenced by their perception that men prefer to marry a circumcised wife. Therefore, FGC prevention campaigns must aim to change men’s perception and support for the

practice to be effective. Furthermore, to counter the effect of beliefs that FGC is an important part of religion, obtaining the support of the religious community in advocating against FGC is critical. Third, the finding that education has a significant effect on FGC support suggests that FGC communication campaigns should be conducted in tandem with other program aimed at increasing socio-economic development and education.

## References

- Althaus, F. A. (1997). Female Circumcision: Rite of Passage or Violation of Rights? International Family Planning Perspectives, 23(3), 130-133.
- Assaad, M. B. (1980). Female Circumcision in Egypt: Social Implications, Current Research, and Prospects for Change. Studies in Family Planning, 11(1), 3-16.
- Bollen, K. A., Guilkey, D. K., & Mroz, T. A. (1995). Binary Outcomes and Endogenous Explanatory Variables: Tests and Solutions with an Application to the Demand for Contraceptive Use in Tunisia. Demography, 32(1), 111-131.
- Caldwell, J. C., Orubuloye, I. O., & Caldwell, P. (2000). Female genital mutilation: Conditions of decline. Population Research and Policy Review, 19, 233-254.
- Carr, D. (1997). Female Genital Cutting: Findings from the Demographic and Health Surveys Program. Calverton, MD: Macro International Inc.
- El-Gibaly, O., Ibrahim, B., Mensch, B. S., & Clark, W. H. (2002). The decline of female circumcision in Egypt: evidence and interpretation. Social Science and Medicine, 54, 205-220.
- El-Zanaty, F., & Way, A. (2001). Egypt Demographic and Health Survey 2000. Calverton, MD and Ministry of Health and Population, Egypt: National Population Council ORC Macro.
- Gordon, D. (1991). Female Circumcision and Genital Operations in Egypt and the Sudan: A Dilemma for Medical Anthropology. Medical Anthropology Quarterly, 5(1), 3-14.
- Jones, H., Diop, N., Askew, I., & Kabore, I. (1999). Female Genital Cutting Practices in Burkina Faso and Mali and Their Negative Health Outcomes. Studies in Family Planning, 30(3), 219-230.
- McGarrahan, P. (1991). The Violence in Female Circumcision. Medical Anthropology Quarterly, 5(3), 269-270.
- Montgomery, M. R., & Casterline, J. B. (1996). Social Learning, Social Influence, and New Models of Fertility. Population and Development Review, 22(Supplement), 151-175.

- Nahla, A.-T., & Sahar, H. (2000). Critical Analysis of Interventions Against FGC in Egypt. New York: The Population Council.
- Obermeyer, C. M. (2003). The Health Consequences of Female Circumcision: Science, Advocacy, and Standards of Evidence. Medical Anthropology Quarterly, 17(3), 394-412.
- Okello-Ogojo, F. (2000). Knowledge, Attitudes and Practices Related to Malaria and Insecticide Treated Nets in Uganda - Baseline Survey: December 1999-January 2000. Washington, DC : Commercial Market Strategies.
- Olenick, I. (1998). Female Circumcision is Nearly Universal in Egypt, Eritrea, Mali and Sudan. International Family Planning Perspectives, 24(1), 47-49.
- Sargent, C. (1991). Confronting Patriarchy: The Potential for Advocacy in Medical Anthropology. Medical Anthropology Quarterly, 5(1), 24-25.
- UNFPA. (2005) Frequently Asked Questions about Female Genital Cutting [Web Page]. URL [http://www.unfpa.org/gender/faq\\_fgc.htm#25](http://www.unfpa.org/gender/faq_fgc.htm#25) [2005, March 14].
- US State Department. (2001) Egypt: Report on Female Genital Mutilation (FGM) or Female Genital Circumcision (FGC) [Web Page]. URL <http://www.state.gov/g/wi/rls/rep/crfgm/10096.htm> [2005, March 14].
- WHO. (2000) Female Genital Mutilation [Web Page]. URL <http://www.who.int/mediacentre/factsheets/fs241/en/> [2005, March 3].
- Williams, L., & Sobieszczyk, T. (1997). Attitudes Surrounding the Continuation of Female Circumcision in the Sudan: Passing the Tradition to the Next Generation. Journal of Marriage and the Family, 59, 966-981.
- Yount, K. M. (2002). Like Mother, Like Daughter? Female Genital Cutting in Minia, Egypt. Journal of Health and Social Behavior, 43, 336-358.
- Yount, K. M., & Balk, D. L. (2004). A Demographic Paradox: Causes and Consequences of Female Genital Cutting in Northeastern Africa. M. T. Segal, V. Demos, & J. J. Kronenfeld (Eds.), Gender Perspectives on Reproduction and Sexuality (pp. 199-249). Oxford: Elsevier Ltd.

Table 1: Sample Characteristics (ever-married women aged 15-49, N=15,525)

Characteristics	%
<b>Age</b>	
15-24	18.4
25-29	18.3
30-34	17.3
35-39	17.2
40-44	14.0
45-49	14.8
<b>Region</b>	
Urban Governates	19.2
Lower Egypt, urban	12.5
Lower Egypt, rural	31.4
Upper Egypt, urban	11.4
Upper Egypt, rural	24.0
Frontier Governates	1.3
<b>Education</b>	
No education	43.3
Primary	18.3
Secondary or higher	38.4
<b>Work status</b>	
% Who worked before marriage	15.9
% Currently working	16.8
<b>Age at marriage</b>	
Below 15	12.6
15-19	50.5
20 or later	36.9
<b>Frequency of Mass Media Exposure</b>	
Low	9.1
Medium	82.5
High	8.4
<b>Husband's education</b>	
No education	30.2
Primary	30.5
Secondary	26.0
Tertiary	13.3
<b>Household wealth</b>	
Low	23.0
Medium	48.1
High	28.9
<b>FGC Support</b>	
% who believe FGC should be discontinued	15.0
% who intend to circumcise their daughters (N=8,107)	81.5
<b>FGC-related attitudes and beliefs (% who agree)</b>	
Men want FGC discontinued	12.4
Husband prefers circumcised wife	72.6
Important part of religious tradition	67.1
Can cause complications and lead to girl's death	29.1
Prevents adultery	51.4
May cause women to have problems becoming pregnant	7.8
Lessens sexual satisfaction for a couple	37.0
Makes childbirth more difficult	7.6
Better hygiene	28.6

Table 2: Percentage of women who were exposed to FGC messages from various sources in the past one year, and percentage with various levels of exposure in the past year (N=15,525)

Variables	%
<b>Source of Exposure to FGC Messages in the Last 12 Months</b>	
TV	72.7
Radio	36.8
Newspaper/Magazine	20.4
Community Meeting	3.3
Mosque/Church	3.9
<b>Intensity of Exposure to FGC message in the last 12 Months</b>	
No Exposure	26.2
Low Exposure	33.2
High Exposure	40.6

Table 3: Relative odds of believing that FGC should be Discontinued

	OR	Model 1 SE	Model 2 OR	Model 2 SE	Model 2 OR	Model 2 SE	Model 4 OR	Model 4 SE
<b>FGC exposure (past 12 months)</b>								
None	-	-	-	-	-	-	-	-
Low	1.8**	0.2			1.6**	0.1	1.4**	0.2
High	5.1**	0.5			2.5**	0.2	2.1**	0.2
<b>FGC Attitudes/Beliefs</b>								
Better hygiene			0.2**	0.0			0.2**	0.0
Important part of religion			0.2**	0.0			0.2**	0.0
Can cause complications/death			3.6**	0.3			2.9**	0.2
Men want FGC to discontinue			23.0**	2.5			19.1**	2.1
Husband prefers circumcised wife			0.3**	0.0			0.4**	0.0
Reduces sexual satisfaction			1.4**	0.1			1.0	0.1
<b>Age</b>								
15-24					-	-	-	-
25-29					0.8	0.1	0.7*	0.1
30-34					1.0	0.1	0.8	0.1
35-39					1.2	0.1	1.1	0.1
40-44					1.2	0.1	1.0	0.1
45-49					1.4*	0.2	1.2	0.2
<b>Region</b>								
Urban Governates					-	-	-	-
Lower Egypt – Urban					0.5**	0.1	0.9	0.1
Lower Egypt – Rural					0.3**	0.0	0.6**	0.1
Upper Egypt – Urban					0.7**	0.1	1.0	0.1
Upper Egypt – Rural					0.5**	0.1	0.8	0.2
Frontier Governates					1.1	0.3	1.2	0.2
<b>Education</b>								
None					-	-	-	-
Primary					1.3*	0.2	1.2	0.2
Secondary or higher					2.5**	0.3	1.8**	0.3
<b>Work status before marriage</b>								
Did not work					-	-	-	-
Worked					1.2*	0.1	1.0	0.1
<b>Currently Working</b>								
Not working					-	-	-	-
Working					0.9	0.1	0.8	0.1
<b>Age at marriage</b>								
Below 15					-	-	-	-
15-19					1.3	0.2	1.2	0.2
20 or later					1.6**	0.2	1.3	0.2
<b>Husband's education</b>								
None					-	-	-	-
Primary					1.0	0.1	1.0	0.1
Secondary					1.4**	0.2	1.2	0.2
Higher					2.6**	0.3	1.5*	0.3
<b>Household wealth</b>								
Low					-	-	-	-
Medium					1.1	0.1	1.1	0.2
High					1.9**	0.2	1.3	0.2
<b>Mass media exposure</b>								
Low					-	-	-	-
Medium					0.8	0.1	0.9	0.2
High					1.1	0.2	1.4	0.3
N		15525		15525		15525		15525
F-statistic		175.54(2,249)		378.92(6,245)		62.64(25,226)		82.87(31,220)
P-value		<0.001		<0.001		<0.001		<0.001

(-) reference group; \* p<.05; \*\*p<.01

Table 4: Relative odds of intention to circumcise daughters

	Model 1		Model 2		Model 3		Model 4	
	OR	SE	OR	SE	OR	SE	OR	SE
<b>FGC exposure (past 12 months)</b>								
None	-	-			-	-	-	-
Low	0.6**	0.1			0.7**	0.1	0.8	0.1
High	0.2**	0.0			0.4**	0.1	0.5**	0.1
<b>FGC Attitudes/Beliefs</b>								
Better hygiene			3.3**	0.4			2.9**	0.4
Important part of religion			4.8**	0.5			4.6**	0.5
Can cause complications/death			0.4**	0.0			0.5**	0.0
Men want FGC to discontinue			0.1**	0.0			0.1**	0.0
Husband prefers circumcised wife			3.8**	0.4			3.1**	0.3
Reduces sexual satisfaction			0.9	0.1			1.1	0.0
<b>Age</b>								
15-24					-	-	-	-
25-29					1.3	0.2	1.4	0.3
30-34					0.9	0.1	0.9	0.2
35-39					0.7*	0.1	0.6*	0.1
40-44					0.4**	0.1	0.4**	0.1
45-49					0.2**	0.0	0.2**	0.0
<b>Region</b>								
Urban Governates					-	-	-	-
Lower Egypt – Urban					1.8**	0.3	1.2	0.2
Lower Egypt – Rural					3.9**	0.6	2.3**	0.4
Upper Egypt – Urban					1.8**	0.3	1.4	0.3
Upper Egypt – Rural					2.7**	0.6	1.7**	0.3
Frontier Governates					0.3	0.2	0.3**	0.1
<b>Education</b>								
None					-	-	-	-
Primary					0.8	0.1	0.8	0.1
Secondary or higher					0.5**	0.1	0.7*	0.1
<b>Work status before marriage</b>								
Did not work					-	-	-	-
Worked					0.9	0.1	1.0	0.2
<b>Currently Working</b>								
Not working					-	-	-	-
Working					1.0	0.1	0.9	0.1
<b>Age at marriage</b>								
Below 15					-	-	-	-
15-19					0.8	0.1	0.8	0.2
20 or later					0.7	0.1	0.9	0.2
<b>Husband's education</b>								
None					-	-	-	-
Primary					1.0	0.1	1.1	0.2
Secondary					0.7*	0.1	1.0	0.2
Higher					0.4**	0.1	0.6**	0.1
<b>Household wealth</b>								
Low					-	-	-	-
Medium					1.1	0.2	1.0	0.2
High					0.6**	0.1	0.8	0.1
<b>Mass media exposure</b>								
Low					-	-	-	-
Medium					1.1	0.2	1.0	0.2
High					0.8	0.2	0.7	0.2
<hr/>								
N		8105		8105		8105		8105
F-statistic		109.35(2,249)		255.06(6,245)		51.43(25,226)		59.95(31,220)
P-value		<0.001		<0.001		<0.001		<0.001

(-) reference group; \* p&lt;.05; \*\*p&lt;.01