IMPACT OF A FEMALE GENITAL CUTTING ELIMINATION PROGRAM IN EASTERN NIGERIA

Prepared by

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LIST OF ACRONYMS

CAC – Community Action Cycle

EA – Enumeration Area

FGC – Female Genital Cutting

HCP – Health Communication Partnership

JHU/CCP – Johns Hopkins University Center for Communication Programs

LGA – Local Government Area

NGO – Non-government organization

USAID – United States Agency for International Development

I: BACKGROUND

Female genital cutting (FGC) is widely practiced among many ethnic groups in Nigeria. A 1999 survey put the prevalence at 59 percent in Enugu State and 76 percent in Ebonyi State. In these states, the most common forms of FGC are Type I (involving the removal of the prepuce, with or without removal of all or part of the clitoris) and Type II (that includes removal of the clitoris with partial or total excision of the labia minora) (RMS, 1999). Although these are the less invasive and the mildest forms of FGC, there is overwhelming consensus that FGC in any form is not beneficial to the victim and could lead to serious medical complications and negative social consequences.

In Enugu State, girls typically undergo FGC during infancy. While there have been considerable efforts to stop the practice of FGC in the past, support for the practice persists in many parts of the state. Against this background, the Health Communication Partnership (HCP), in collaboration with a number of Nigeria-based non-governmental organizations (NGOs), designed a multi-tiered and multi-media program that aims to contribute to the elimination of the practice in Enugu State. Funding for the program comes from the United States Agency for International Development (USAID). The Johns Hopkins Bloomberg School of Public Health, Center for Communication Programs (JHU/CCP) and Save the Children provided technical assistance for the design and implementation of the program

The program was implemented in three local government areas (LGA) of Enugu State: Uzo-Uwani, Isi-Uzo and Enugu South. A pre-intervention situation analysis revealed that FGC was a common practice in the intervention LGAs although it was admittedly more prevalent in Enugu South and Isi-Uzo than in Uzo-Uwani. The situation analysis also revealed that various cultural factors and beliefs underpin the practice. For example, women who have not undergone the procedure are generally believed to be unmarriageable, promiscuous and unclean. In contrast, the cutting of the clitoris is believed to reduce the natural tendency for promiscuity in women. This widespread belief about the link between FGC and chastity in women is probably the strongest factor helping to maintain the practice in many communities and reviving it in others. It is also

widely believed in the program LGAs that an “uncircumcised” woman puts the lives of her male children at risk. The belief in this regard is that if the head of the male child touches the clitoris of the mother during child birth, the child will die. Another important belief that helps to support the practice is that FGC makes the female genitals more beautiful.

The FGC program was designed to raise people’s awareness of FGC, increase community dialogue about the practice, address its cultural roots and facilitating factors, and mobilize community members to abandon the practice and advocate in favor of its elimination among their peers. The goal of this report is to present evidence of the impact of the program based on a multi-method approach.

II: THE FGC PROGRAM

The FGC program was a multi-tiered initiative implemented at three levels respectively: state, locality and hamlet.

State-level activities were designed and implemented by the National Association of Women Journalists (NAWOJ) and involved the use of mass media to provide strategically designed behavior change messages targeted towards the various segments of the Enugu State population. The specific state-level activities included radio phone-in programs, newspaper feature articles, covering of the activities at the other two project levels, and the celebration of Zero Tolerance Day.

As earlier mentioned, three LGAs (Uzo-Uwani, Isi-Uzo and Enugu South) characterized by a significant prevalence of FGC were selected to serve as the focus of project activities. In each LGA, one community was selected for the locality-level activities: Nimbo in Uzo-Uwani, Eha-Amufu in Isi-Uzo, and Obeagwu in Enugu South. These communities received targeted advocacy that included visits to traditional leaders and community viewing of "Uncut," an anti-FGC video intended to stir up public dialogue and action on FGC.

Within each of these communities, one hamlet was selected for focused hamlet-level community mobilization activities designed to reduce the practice of female genital circumcision and to improve women's reproductive health. The hamlet-level intervention was implemented with the assistance of an Enugu-based non-governmental organization: Women Action Research Organization (WARO). This component relied on a community action cycle (CAC) that seeks to mobilize community members and groups around the issue of FGC. Specifically, it involved the formation, building and strengthening of the capacity of core groups in each hamlet to address their own health concerns, among which are FGC-related health issues.

One of the initial activities under the program was to conduct a household baseline survey. The baseline survey was designed to generate formative information for fine-tuning the design of program activities, and to provide data against which the impact of the program could be measured. The survey was conducted in Enugu and Ebonyi

states in July/August 2003 based on a intervention-comparison group design. At the end of the program activities in September 2004, a follow-up survey was conducted in the same enumeration areas as the baseline survey. In this document, we attempt to assess the impact of the FGC program using data from both surveys.

III: METHODOLOGY

Data for analyzing the effects of the FGC program derived from two sources: a baseline survey that HCP conducted in Enugu and Ebonyi states in July/August 2003 and a follow-up survey implemented in the same states in September 2004. Detailed results from the baseline survey have been presented elsewhere (Babalola and Amouzou, 2004) The baseline survey provided pre-intervention data for the FGC program and served to provide a basis for assessing the impact of program activities. The follow-up data were intended to provide post-intervention information on relevant indicators. Comparing selected indicators from both surveys provides an indication of the effects of the program.

Based on an intervention-comparison group design, the surveys took place in Enugu (intervention) and Ebonyi (comparison) States. Three LGAs in Enugu State (Uzo-Uwani, Usi-Uzo and Enugu South) and three in Ebonyi State (Ikwo, Onicha and Ohaukwu) were selected to participate in the surveys. In each LGA, one community consisting of two or more enumeration areas (EAs) was randomly selected and all the households in each EA were listed. One hundred households were then randomly selected from each LGA and surveyed. During each survey, the procedure that fieldworkers followed in selecting the survey households was as follows:

1. Starting from any point, fieldworkers walked around the community to identify and list all the households resident there. In listing the households, the fieldworkers were instructed to specify the address and the name of the head of household;
2. The identified households were numbered sequentially;
3. One hundred households were randomly selected from the list of households in the community using the simple random sampling or ballot method.

Each of the selected households were visited and all eligible men and women (that is, aged between 18 and 59 years) were listed and targeted for interview

Two types of questionnaires were used to collect pertinent information from eligible respondents: household schedule and individual questionnaire.

The individual questionnaire was carefully designed to enable interviewers to collect pertinent information that HCP program staff require to understand perceptions

and behaviors of the population concerning FGC. Specifically, the individual questionnaire included pretested questions pertinent to the following: socio-demographic characteristics, media habits, knowledge and attitudes about FGC, perceived self-efficacy for refusing to practice FGC, personal experience with FGC, media habits and exposure to FGC information.

The household questionnaire served the purpose of situating the household and collecting basic information on household members. The questionnaire had three major components: identification, household composition table, and household characteristics, including household ownership of specific goods, and access to health facilities.

At baseline, 957 respondents (426 men and 531 women) were interviewed, while at follow-up 971 respondents (386 men and 585 women) were interviewed.

The survey followed standard ethical guidelines. The Institutional Review Board at the Johns Hopkins University approved the study. Verbal consent was obtained from the respondents prior to interviewing them. Moreover, respondents' confidentiality was protected by: face-to-face private interviews with no third party, appropriate training for interviewers, adequate field supervision, limited access to completed questionnaires, and no individual identifiers in the electronic data set.

IV: FINDINGS

A. Comparison of the socio-demographic characteristics of the respondents at baseline and at follow-up

Since identifying the impact of the program involves comparing selected indicators at baseline and at follow-up, it is important to establish the extent to which the two samples are equivalent. Table 1 compares selected socio-demographic indicators of the baseline and follow-up samples. As can be seen from the Table, the data do not reveal any significant differences between the two samples in education, age, religion, marital status, employment status, and children-ever-born. However, in Enugu, the baseline sample contained a significantly higher proportion of men compared to the follow-up sample. While the reason for this gender disparity is not clear, it is possible that there has been increased out-migration from the study LGAs in Enugu that disproportionately affect men more than women. To address this disparity, we will analyze the key behavioral and attitudinal indicators separately for each of the sexes.

Table 1: Selected indicators of socio-demographic characteristics by State of residence and by survey

Characteristics	**Enugu**		**Ebonyi**	
	Baseline	**Follow-up**	**Baseline**	**Follow-up**
Sex				
Percent male	40.9*	35.5	48.2	43.5
Age				
Mean age in years	33.7	34.4	34.3	34.4
Education				
Percent with secondary education or more	39.2	38.3	28.7	34.0
Religion				
Percent Protestant/Pentecostals	59.0	59.0	56.7	51.3
Marital status				
Single Married/living in union	54.8	57.9	68.9	65.4
Currently working	70.9	67.4	79.3	75.4
Mean number of children ever born	3.1	3.5	4.7	4.3
Number of respondents	484	454	473	517

Source: HCP FGC Baseline Survey, July/August 2003 and Follow-up Survey, Sept. 2004.
Significance of difference baseline and follow-up: * $p<0.05$

B. EXPOSURE TO PROGRAM ACTIVITIES

A variety of mass media and community activities were implemented under the FGC program in Enugu State. The activities include: (1) A series of participatory hamlet-based activities aimed at mobilizing community groups to put an end to FGC practice; (2) Advocacy visits to traditional leaders (Igwe's) at the locality and LGA levels, in partnership with women leaders identified during the Home and Abroad meetings; and (3) a state-wide print media effort to engage communities in discussion about FGC practice. Table 2 provides information on participation in the community activities and exposure to the mass media interventions in Enugu, the intervention State.

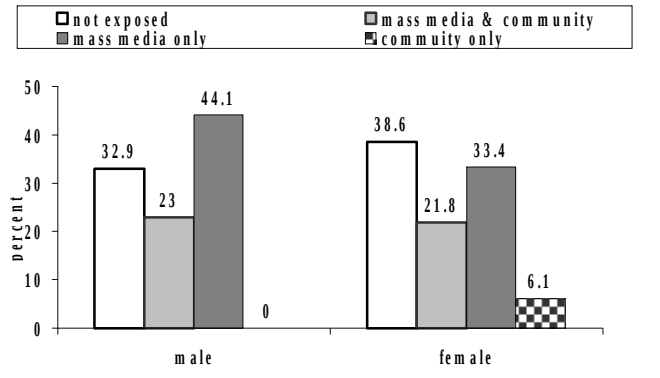
The data show that more than three-fifths of the respondents were exposed to at least one program material or participated in at least one program activity. The major source of exposure to the program is through the radio. Nonetheless, a few respondents participated in community events through which they learnt more about FGC or had the opportunity to mobilize community members to abandon FGC. As shown on Figure 1, quite a few of the respondents were exposed to both the mass media and the community-

Table 2: Percent reporting participation in or exposure to program activities and materials during last 12 months, by gender. Enugu State

Participation/Exposure Indicator	Percent Reporting	
	Male	Female
Participated in a community meeting which FGC was discussed	11.8	15.0
Watched a video or film on female genital cutting	2.4	2.7
Heard radio discussion program on FGC	65.2	54.3
Saw television program on FGC	6.8	5.8
Read newspaper article on FGC	6.2	3.1
Participated in training workshop/seminar on FGC in the community	8.1	15.3
Involved in an activity to mobilize own community to abandon FGC	12.4	16.0
Involved in an activity to mobilize another community to abandon FGC	1.9	9.5
Exposed to/Participate in Any Activity	67.1	61.4

Source: HCP FGC Follow-up Survey, September2004

Figure 1: Percent reporting participation in or exposure to project activities, by gender, Enugu State.



Source: HCP FGC Follow-up Survey, September2004

Male: n=161
Female: n=293

based activities. Although there is no significant difference in the overall program exposure by gender, the data show that women were less likely than men to report exposure to the program through mass media. In contrast, men were somewhat less likely to have participated in community-based activities. Marital status is another variable that is associated with differences in participation in community activities. Specifically, the ever-married respondents were significantly more likely than their never-married peers to have participated in the community-based activities. Finally, overall exposure was significantly higher among non-Catholics (72.3%) than among Catholics (51.2%) due essentially to a higher exposure to the mass media activities among the former.

C. FGC IDEATION

We will now examine the impact of the program on those knowledge and attitudinal variables, collectively referred to as ideation, that have been empirically documented to influence behavior. As an explanation of behavior change, ideation has been defined as "new ways of thinking that diffuse within a culture" (Kincaid, 2000). The concept has its genesis in demographic literature where it first appeared in the 1980s as an alternative to the classical demographic transition theory (Lesthaeghe, 1983; Cleland, 1985; Cleland and Wilson, 1987). The ideation model recognizes that behavior change results from a shift in value orientations transmitted through a variety of channels including intergenerationally through the child-rearing process and intragenerationally through mass media and social interactions. Implicit in this description is the assumption that to change behavior, it is important to start by addressing gaps in the ideational variables that underlie the specific behavior.

In this section, we will examine the following variables: knowledge, perceived benefits of FGC, perceived problems associated with FGC, discussion about FGC with significant others, beliefs about FGC, perceived social support for FGC, personal advocacy in favor of FGC abandonment, and perceived self-efficacy. In discussing each variable, we will highlight the change in level between baseline and follow-up in each of the study states.

In addition we will focus on the follow-up data and examine the impact of exposure to program activities on selected ideational variables using the propensity score matching (PSM) technique. There is consensus among program evaluator that the golden rule in estimating causation is through randomization, that is, randomly assigning subjects into treated and untreated categories. Unfortunately in many instances, randomization is infeasible either on practical or ethical grounds. For example, in the case of the FGC program in Enugu State, while the intervention was limited to the focus LGAs, every member of the target communities has the potential to become exposed to the interventions. It is possible to measure only exposure and outcomes. We do not know what would have happened to the exposed had they not been exposed. Likewise, we do not know what would have happened to the unexposed had they been exposed. This is the counterfactual dilemma.

PSM is the observational equivalent of randomization, which is becoming increasing popular in program evaluation (Rosenbaum & Rubin, 1983; Heckman, Ichimura & Todd, 1997; Lechner, 1999; Bryson, Dorsett & Purdon, 2002). As a program evaluation technique, PSM is based on the idea of comparing the outcomes of program participants with the outcomes of "equivalent" non-participants. Since the two groups are comparable on all observed characteristics except program participation, the differences in the outcomes are attributed to the program. Based on this logic, we estimated the propensity to become exposed to the FGC program using education, literacy, place of residence, age, religion, media exposure, marital status and children-ever-born as predictors. Separate propensity models were estimated for men and women. We then used this propensity score as a basis for comparing the exposed and unexposed, and estimating the impact of the program in Enugu State.

We expect that the use of these two analytic methods – comparing the change in key indicators between baseline and follow-up in Enugu (intervention) and Ebonyi (non-intervention) States; and application of the PSM technique on Enugu data – will help to strengthen our claims about program impact.

Perceptions about the problems and benefits of FGC

At baseline as well as at follow-up, an overwhelming majority of the respondents in both states reported awareness of FGC. It is, however, interesting to note that awareness of FGC either stagnated or significantly declined in Ebonyi; it improved significantly in Enugu (Table 3). For example, among Enugu men, the proportion reporting awareness of FGC increased by a significant 12 percentage points compared to a decrease of about 3 percent points among their Ebonyi peers.

Table 3: Selected indicators of knowledge about FGC by state and by survey

Men

Indicator	***Enugu***			***Ebonyi***		
	Baseline n=162	***Follow-up n=161***	***Percent point change***	***Baseline n=225***	***Follow-up n=217***	***Percent point change***
Reported awareness of FGC	81.8	93.8	+12.0***	94.3	91.5	-2.8
Believed that there are benefits to FGC	46.9	24.2	-22.7***	42.3	34.7	-7.6‡
Believed that FGC could cause problems for the girl	29.6	34.2	+4.6	55.3	33.8	-21.5***

Women

Indicator	***Enugu***			***Ebonyi***		
	Baseline n=252	***Follow-up n=293***	***Percent point change***	***Baseline n=239***	***Follow-up n=292***	***Percent point change***
Reported awareness of FGC	88.5	93.2	+4.7*	97.1	92.1	-5.0*
Believed that there are benefits to FGC	42.1	24.6	-17.5***	33.9	28.4	-4.5
Believed that FGC could cause problems for the girl	33.3	35.8	+2.5	60.6	52.0	-8.6*

Source: HCP FGC Baseline Survey, July/August 2003 and Follow-up Survey, Sept. 2004.
Significance of difference baseline and follow-up: ‡ p<0.1, * p<0.05, *** p<0.001

In both study states, many of the respondents believed that there were benefits to FGC. At baseline and at follow-up in Enugu, the most frequently mentioned benefits of

FGC included easy delivery and the prevention of sexual promiscuity. In Ebonyi, the benefits most often mentioned in both surveys were social acceptance and enhancing marriage prospects.

Comparing baseline and follow-up data regarding the proportion that perceived a benefit to FGC, we find that there has been a decline in this indicator between the two surveys, although the magnitude of the decline is different in both states. At baseline, almost half of the men and more than two-fifths of the women in Enugu believed that there were benefits to FGC. As shown on Table 3, in Enugu State, there has been a marked decline in this indicator since the baseline. The observed decline is significant for both men and women. Among men, the indicator declined by almost 50 percent while among women it declined by more than 40 percent. In contrast, in Ebonyi, the prevalence of the belief has not changed significantly since the baseline.

The PSM results show no significant effects of the intervention on the indicator for believing there are benefits to FGC among men after controlling for observed socio-demographic characteristics that are susceptible to influence program participation and knowledge about FGC. In contrast, there is evidence that the program led to a significant decline in the prevalence of this belief among women (Table 4). After adjusting for observed characteristics, exposure to the campaign is associated with almost a 20 percent point increase in the prevalence of the belief among women.

Table 4: Results of the estimation of the effects of program participation/exposure on selected indicators of knowledge about FGC, Enugu State, 2004

Indicator	***Men***			***Women***		
	Exposed Group[1]	***Matched control group***[2]	***PSM-adjusted effects***[3]	***Exposed Group***[1]	***Matched control group***[2]	***PSM-adjusted effects***[3]
Believed that there are benefits to FGC	25.0	31.4	-6.4	21.2	40.9	-19.7***
Believed that FGC could cause problems for the girl	46.3	9.5	36.5***	48.0	12.6	35.5***

Notes:
[1]Observed level (percent) of the indicator among exposed respondents.
[2]Level of the indicator among a statistically matched group – indicates the level that would have been observed among the exposed had they not been exposed.
[3]In percentage points. Indicate how being exposed affects the indicator compared to not being exposed after adjustment for observed characteristics through PSM.
Significance: *** $p<0.001$

About 46 percent at baseline and almost two-fifths of the respondents at follow-up perceived that FGC could lead to problems for the girl. In both surveys, the problems most often mentioned in Enugu included medical problems and difficulty during childbirth and bleeding/hemorrhage. In addition to the problems mentioned by their Enugu peers, the respondents from Ebonyi also mentioned physical pain.

There are differences between Enugu and Ebonyi in the magnitude and direction of the change in the belief that FGC could lead to problems for the girl (Table 3). In Enugu, there has been a slight increase in the proportion holding this belief among men and women. In contrast, in Ebonyi, proportionally fewer men and women at follow-up perceived that FGC could lead to problems than at baseline. In Ebonyi State, the decline in the prevalence of this belief was particularly large among men (21.5 percent points).

Results of the PSM (Table 4) suggest that the program was particularly successful in increasing the understanding that FGC could cause problems for the girl. In other words, although overall in Enugu State, the prevalence of this belief has not changed conspicuously since the baseline, among the exposed, the program has nonetheless helped to improve understanding of the potential dangers associated with FGC.

Perceptions about the position of religion on FGC

At baseline and follow-up, the respondents were asked whether they believed that their religion required them to practice FGC. The baseline data showed that the belief that FGC is a religious requirement was more widespread in Enugu than in Ebonyi (Table 5). At follow-up, the reverse is clearly the case. The follow-up data show that the prevalence of the perception that religion requires FGC has declined considerably among men and women in Enugu State. Although there has also been a noticeable decline in this variable in Ebonyi State, especially among women, the magnitude of the change is smaller than in Enugu.

Table 5: Percent that believed that FGC is required by their religion, by state and by survey

Gender	*Enugu*			*Ebonyi*		
	Baseline n=162	***Follow-up n=161***	***Percent point change***	***Baseline n=225***	***Follow-up n=217***	***Percent point change***
Men	41.4	8.1	-33.3***	24.0	19.6	-4.4
Women	24.6	5.8	-18.8***	23.0	11.3	-11.7***

Source: HCP FGC Follow-up Survey, Sept. 2004.
Significance of difference baseline and follow-up: *** p<0.001

The PSM results show that the program has indeed helped to reduce the prevalence of the belief that religion requires FGC, significantly among men. The data show that the proportion of Enugu men exposed to the program that reported the perception that religion requires FGC was 4.6 percent compared to an estimated 31.0 percent that would have reported the perception had they not been exposed. These findings translate into an adjusted effect of 26.4 percent points, significant at 0.001 level. The data do not show any significant impact among women.

Perceptions about community support for FGC

At baseline, only about two-fifths of the respondents (40.6% in Enugu and 38.2% in Ebonyi) believed that most women in their community favored the discontinuation of FGC. At follow-up, the indicator increased to 53.5% in Enugu but declined to 21.5% in Ebonyi. As shown in Table 6, among men and women, the change in this indicator between baseline and follow-up is in the opposite direction in Enugu compared to Ebonyi. Similarly, the perception that most men in the community favor the discontinuation of FGC has become more widespread in Enugu since the baseline but less common in Ebonyi (Table 6).

Table 6: Perceptions about community support for FGC, by state and by survey

Indicator	***Enugu***			***Ebonyi***		
	Baseline n=162	***Follow-up n=161***	***Percent point change***	***Baseline n=225***	***Follow-up n=217***	***Percent point change***
Men						
Most men in the community favor the discontinuation of FGC	32.1	43.7	+11.6*	27.3	24.4	-3.1
Most women in the community favor the discontinuation of FGC	35.8	39.1	+3.8	38.9	23.4	-15.5***
Women						
Most men in the community favor the discontinuation of FGC	41.7	53.5	+11.8**	23.6	16.7	-6.6*
Most women in the community favor the discontinuation of FGC	43.6	61.5	+17.9***	37.5	20.1	-17.4***

Source: HCP FGC Follow-up Survey, Sept. 2004.
Significance of difference baseline and follow-up: *** p<0.001

PSM analysis of the follow-up data in Enugu shows that the program has helped to increase perceived social support for the discontinuation of FGC. For example, as shown on Table 7, among the female respondents, exposure to the program resulted in

Table 7: Results of the estimation of the effects of program participation/exposure on perceptions about community support for abandonment of FGC, Enugu State, 2004

Indicator	*Men*			*Women*		
	Exposed Group[1]	***Matched control group***[2]	***PSM-adjusted effects***[3]	***Exposed Group***[1]	***Matched control group***[2]	***PSM-adjusted effects***[3]
Perceived that most men favor discontinuation of FGC	47.2	18.7	+28.5***	59.8	33.5	26.3***
Perceived that most women favor discontinuation of FGC	42.6	16.8	+25.8***	69.3	38.1	31.2***

Notes:
[1]Observed level (percent) of the indicator among exposed respondents.
[2]Level of the indicator among a statistically matched group – indicates the level that would have been observed among the exposed had they not been exposed.
[3]In percentage points. Indicate how being exposed affects the indicator compared to not being exposed after adjustment for observed characteristics through PSM.
Significance: *** p<0.001

more than a 30 percentage point increase in perceived support for FGC discontinuation on the part of the women in their community.

Personal approval FGC

In both surveys, the respondents were asked if they personally approved or disapproved of FGC. At baseline, 29.8 percent in Ebonyi and 35.2 percent in Enugu

Table 8: Percent that approve of FGC, by state and by survey

Gender	*Enugu*			*Ebonyi*		
	Baseline	***Follow-up***	***Percent point change***	***Baseline***	***Follow-up***	***Percent point change***
Men	32.7	22.5	-10.2*	30.3	29.7	-0.6
Women	36.9	21.5	-15.4***	29.4	27.1	-2.3

Source: HCP FGC Follow-up Survey, Sept. 2004.
Significance of difference baseline and follow-up: *** p<0.001

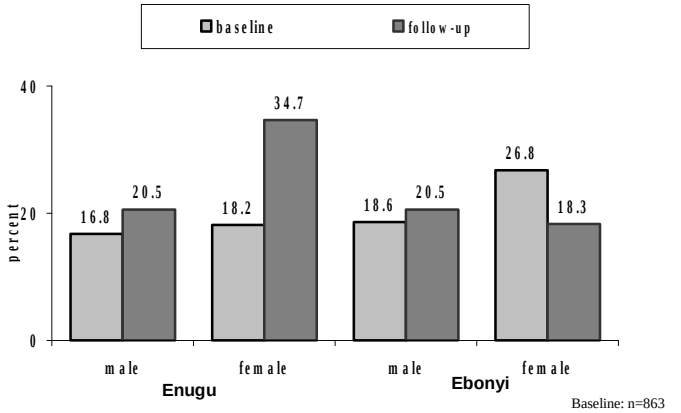
approved of the practice. The follow-up data showed that this indicator had declined significantly to 21.9 percent in Enugu but remained practically at the same level in Ebonyi (28.3%). The significant decline in the prevalence of favorable attitudes towards the practice of FGC cuts across the sexes, although the magnitude of the decline is greater among women compared to men (Table 8).

Results of the PSM analysis show that the program has positively and significantly impacted this attitude among men and women. The magnitude of program impact on the indicator is considerably larger among women (35.9 percentage point increase) than among men (24.5 percentage points).

Personal advocacy about FGC

Both the baseline and the follow-up tools included a question on whether the respondent had ever encouraged someone not to practice FGC. This was the indicator used to measure personal advocacy in favor of abandoning FGC. The trend in this indicator differs between Enugu and Ebonyi. As with most indicators examined in this report, personal advocacy appears to have become more prevalent since the baseline in Enugu (from 17.7% to 29.6%), but change has not been in the expected direction in Ebonyi (from 22.9% to 19.2%). As shown in Figure 2, it is among Enugu women that personal advocacy in favor of not practicing has increased most significantly. A similar pattern is observed regarding personal advocacy during the last 12 months. Among Enugu women, the proportion reporting that they encouraged someone not to practice during the last 12 months increased from 16.3 percent at baseline to 25.8 percent at follow-up: $z=2.67$, $p<0.01$. This indicator increased only insignificantly among Enugu men (from 11.8% to 15.2%), decreased among Ebonyi women (from 13.2% to 9.8%) and remained at the same level (around 10.1%) among Ebonyi men.

Figure 2: Percent reporting ever encouraging someone not to practice FGC by gender, state and survey.



Baseline: n=863
Follow-up: n=895

Source: HCP FGC Baseline Survey, July 2003 and Follow-up Survey, September2004

The follow-up data provide evidence to support that the program has been successful in promoting personal advocacy in favor of not practicing FGC. The PSM results indicate that, among men and women, program exposure resulted in a significant increase in the proportion reporting ever encouraging someone not to practice FGC (Table 9). The data further show that for both indicators of advocacy, ever advocating and advocating within the last 12 months, the impact was considerably greater among women than among men.

Table 9: Results of the estimation of the effects of program participation/exposure on personal advocacy not to practice FGC, Enugu State, 2004

Indicator	*Men*			*Women*		
	Exposed Group[1]	***Matched control group***[2]	***PSM-adjusted effects***[3]	***Exposed Group***[1]	***Matched control group***[2]	***PSM-adjusted effects***[3]
Ever encouraged someone not to practice FGC	25.0	9.8	+15.2*	44.6	13.7	+31.0***
Encouraged someone not to practice FGC during last 12 months	17.6	9.8	+7.8	35.0	6.5	+28.5***

Notes:
[1]Observed level (percent) of the indicator among exposed respondents.
[2]Level of the indicator among a statistically matched group – indicates the level that would have been observed among the exposed had they not been exposed.
[3]In percentage points. Indicate how being exposed affects the indicator compared to not being exposed after adjustment for observed characteristics through PSM.
Significance: *** p<0.001

Perceived self-efficacy to resist pressure to perform FGC

The perceived self-efficacy to perform an action has been widely documented in behavior change literature as a prerequisite to actually performing the behavior. To assess

Table 10: Selected indicators of perceived self-efficacy to resist pressure to perform FGC, by gender, survey and state.

Self-efficacy indicator	Enugu			Ebonyi		
	Baseline	***Follow-up***	***Percent point Change***	***Baseline***	***Follow-up***	***Percent point Change***
Men						
Definitely could resist pressure from spouse	71.8	88.0	+16.2**	50.9	40.4	-6.5
Definitely could resist pressure from (grand)mother	74.1	83.2	+9.1*	50.7	44.4	-6.3
Definitely could resist pressure from (grand)mother-in-law	74.7	83.8	+9.1*	54.4	47.5	-6.9
Definitely could resist pressure from religious leader	71.6	80.7	+9.1‡	48.8	43.5	-5.3
Women						
Definitely could resist pressure from spouse	57.2	72.4	+15.2**	39.9	42.4	+2.5
Definitely could resist pressure from (grand)mother	52.0	74.7	+22.7***	44.3	39.7	-4.6
Definitely could resist pressure from (grand)mother-in-law	52.4	75.1	+22.7***	39.7	39.7	0.0
Definitely could resist pressure from religious leader	51.2	73.4	+22.2***	41.0	38.6	-2.4

Source: HCP FGC Baseline Survey, July/August 2003 and Follow-up Survey, September 2004.
Significance of change: ‡ p<0.1, ***p<0.001

the perceived self-efficacy not to perform FGC, the respondents were asked to indicate the extent to which they were confident that they would be able to resist pressure from specific significant others to perform the practice. The responses were recorded on a Likert-scale of "definitely could resist," "probably could resist," and "definitely could not resist."

At baseline, the perceived self-efficacy to resist pressure to perform FGC was already significantly higher in Enugu than in Ebonyi. For example, at baseline, 62.7 percent of the ever-married respondents in Enugu reported that they definitely could resist pressure from their spouse to practice FGC compared to only 44.7 percent in Ebonyi. The follow-up data revealed significant increases in the perceived self-efficacy indicators in Enugu but not in Ebonyi (Table 10). In Enugu, while the increases cut across the sexes, they are considerably greater among women than among men. Nonetheless, it is interesting to note that at follow-up as at baseline, perceived self-efficacy for resisting the pressure to perform FGC was generally higher among Enugu men than among their female peers. In Ebonyi, the differences between the sexes were not statistically significant.

The follow-up data provide strong evidence of the impact of the program on the perceived self-efficacy to resist pressure to perform FGC. The PSM results (Table 11) consistently show that, had the respondents exposed to the program not been exposed, they would have exhibited significantly lower levels of perceived self-efficacy to resist pressure to perform FGC. For example, among women, the program led to a very significant 41.8 percentage point increase in the perceived self-efficacy to resist pressure from a spouse to perform FGC. Similarly impressive results were obtained among women concerning the perceived self-efficacy to resist pressure from their mother-in-law or religious leader. In respect to all the indicators of perceived self-efficacy, the program appears to have had considerably greater impact among women than among men. This is not surprising considering that the indicators were at a relatively lower level among women at the baseline compared to men, thereby leaving larger room for improvement.

Table 11: Results of the estimation of the effects of program participation/exposure on selected indicators of perceived self-efficacy to resist pressure to practice FGC, Enugu State, 2004

Indicator	*Men*			*Women*		
	Exposed Group[1]	***Matched control group***[2]	***PSM-adjusted effects***[3]	***Exposed Group***[1]	***Matched control group***[2]	***PSM-adjusted effects***[3]
Definitely could resist pressure from spouse	92.6	74.4	18.2**	83.8	42.0	41.8***
Definitely could resist pressure from (grand)mother	94.4	73.2	21.3***	87.7	48.4	39.3***
Definitely could resist pressure from (grand)mother-in-law	95.4	73.2	22.2***	88.3	48.4	39.8***
Definitely could resist pressure from religious leader	93.6	69.8	23.8***	85.5	48.2	37.3***

Notes:
[1]Observed level (percent) of the indicator among exposed respondents.
[2]Level of the indicator among a statistically matched group – indicates the level that would have been observed among the exposed had they not been exposed.
[3]In percentage points. Indicate how being exposed affects the indicator compared to not being exposed after adjustment for observed characteristics through PSM.
Significance: *** p<0.001

D. PRACTICES ABOUT FGC

At both the baseline and the follow-up, the survey tool included pre-tested and culturally appropriate questions on personal experiences with FGC. Women were asked whether or not they had ever had FGC and both sexes were asked about their daughters' FGC status and personal intentions to perform FGC on daughters yet to undergo the procedure. Since the respondents were already above the age at which FGC is normally performed in the study community, we did not expect to see a change between baseline and follow-up in the proportion of female respondents that had personally experienced the practice. We however hypothesized that the program would have an impact on the FGC status of female children that were not yet cut before the onset of program interventions.

It is pertinent to note that previous research in the field of FGC has suggested that in the context of publicized policy and programmatic efforts to eliminate the practice, the increased visibility given to the practice may lead to reluctance on the part of some women to admit that they had undergone the procedure. This is the denial hypothesis. For example a study in Navrongo, northern Ghana, found that as a result of recent legislation against FGC and an active elimination intervention, many (more than 60%) women

denied having had FGC after previously reporting that they had experienced the procedure (Frontiers in Reproductive Health, 2002). However, one recent study that examined the validity of self-reports in Nigeria found a high level of agreement (more than 90%) between clinic exams and self-report (Larsen and Okonofua 2002; Snow et al. 2002). The same study further found that women are more likely to report ignorance of their status if they were not cut. Nonetheless, since FGC is typically done during the pre-adult years, a sharp decline in the proportion reporting that they have undergone FGC within a short time may actually point to biases in the self-report status.

In this section, we will examine intentions to perform FGC on daughters. However, we will start by looking at change between baseline and follow-up in reported personal experiences about FGC among the female respondents in order to verify the denial hypothesis and to provide some indication about the validity of the reported FGC-related behavioral intentions.

Personal experience with FGC

As expected, the prevalence of self-reported FGC has not changed significantly since the baseline in any of the LGAs in Enugu (Table 12). The data indicate a significant decline in the practice in Ebonyi, due mainly to an apparent decrease in prevalence in Ohaukwu LGA. There is no reason to believe that this apparent decline is indicative of real decline in FGC. The most probable explanation is bias in self-reported FGC status for some obscure reasons in Ohaukwu.

Table 12: Percent of female respondents that have ever undergone FGC, by LGA, state and survey

LGA/State	Baseline	Follow-up
Enugu State	66.9	67.0
Uzo Uwani	23.5	29.5
Isi-Uzo	75.7	83.0
Enugu South	88.1	81.6
Ebonyi State	84.7	76.9*
Ikwo	78.7	73.3
Onicha	88.7	88.3
Ohaukwu	86.7	70.9*

Source: HCP FGC Baseline Survey, July/August 2003 and Follow-up Survey, September 2004.
Significance of change between baseline and follow-up: *p<0.05

The baseline data revealed a clear decline in the practice of FGC in Uzo Uwani LGA when we compared the older generation (aged 35 years and above) and the younger cohorts (aged less than 35 years). A similar pattern was found in the three study LGAs in Ebonyi State. The follow-up data confirm this trend. For

example, the FGC prevalence rate was 6.7 percent among the respondents aged less than 35 years in Uzo Uwani compared to 43.7 percent among their older peers.

Concerning the timing of FGC, both the baseline and the follow-up data show that the procedure is done almost invariably during infancy in Enugu. In Ebonyi, the timing of the practice was considerably less uniform. For example, the follow-up data showed that while less than one-fifth of the women in Ebonyi reportedly underwent the procedure during infancy, the majority (62.4%) were cut during adolescence or late childhood.

The baseline data revealed that many of the women that had undergone FGC did not know the type of cutting that they had: almost two-fifths (39.1%) of the baseline women that had undergone FGC did not know whether the procedure they underwent involved removal of flesh or not. The baseline data further showed that Enugu women were considerably more likely than their Ebonyi peers to be ignorant of the form of FGC that they had experienced. Interestingly, the follow-up data show a significant decrease in the proportion of women in Enugu that reported ignorance of the type of FGC that they underwent: from 66.1% to 38.2%. The data do not show a similar trend in Ebonyi.

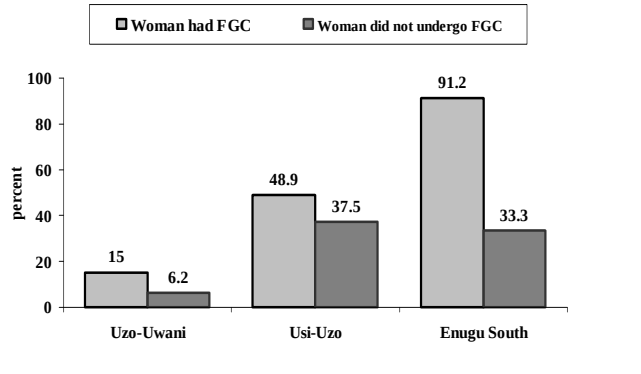
The experience of daughters

During both the baseline and the follow-up surveys, the respondents that had at least one living daughter were asked to specify the FGC status of their daughters and whether they intended to perform FGC on their daughters that had not yet undergone the procedure. The baseline data showed that, among women with living daughters, almost half (47.8%) in Enugu and less than two-fifths (37.1%) in Ebonyi, reported that at least one daughter had undergone FGC. The follow-up data revealed an FGC prevalence level similar to what was observed at the baseline: 50.9 percent in Enugu and 34.1 percent in Ebonyi. Considering that the timing of FGC is generally later in Ebonyi than in Enugu, it would be erroneous to deduce from these results that the prevalence of FGC among daughters is lower in Ebonyi than in Enugu. For example, the follow-up data show that more than nine-tenths (93.1%) of the daughters that underwent FGC in Enugu had the procedure during infancy, compared to only less than one-fifth of their Ebonyi counterparts.

The baseline data revealed a strong correlation between mother's FGC status and the FGC experience of their daughters. We again find this tendency at the follow-up. For example in Enugu, 62.6 percent of the women who had undergone FGC, compared to only 11.6 percent of their peers that had not experienced it, reported that at least one of their daughters had undergone the procedure.

One point worth noting in these findings is that not all the girls born to women who have had FGC undergo the procedure. It is pertinent to mention that the fact that the prevalence of FGC is generally lower among daughters than among their mothers, in a place, like Enugu State, where FGC is done predominantly during infancy, testifies to the decline of the practice over the years. In Enugu State, the follow-up data show that the disparity between the FGC status of mothers and that of their daughters varies by LGA. As the data presented in Figure 3 show, in Enugu South almost all the women who had experienced FGC reported that at least one of their daughters had also undergone the procedure, testifying to the stability of the practice in this LGA. In contrast, the relatively small proportion of "cut" women that also reported that their daughters were "cut" in Uzo Uwani suggests that the practice is fast disappearing in this community. There is no attempt here to attribute the apparent intergenerational decline of FGC in Uzo Uwani to the FGC program efforts that are evaluated in this report. Indeed, considering that the data on daughters cover girls of various ages and that FGC predominantly takes place during infancy in this community, the situation in Uzo-Uwani reflects a change that took place over the years. In fact, the baseline data also revealed a similar pattern.

Figure 3: Percent reporting that at least one daughter had undergone FGC by personal FGC status, Enugu State, follow-up data.



Source: HCP FGC Follow-up Survey, September2004

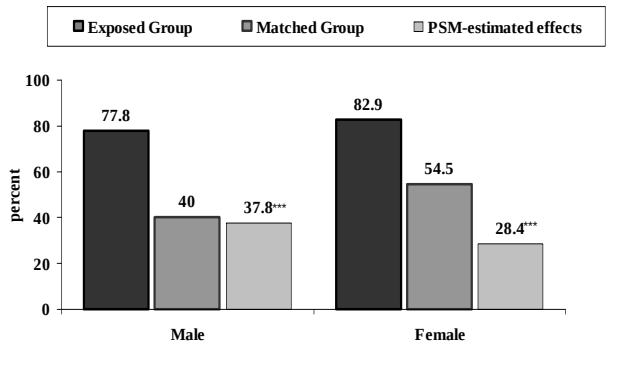
n=166

FGC Intentions

Declared intention not to practice FGC is one of the expected key outcomes of the FGC program. The baseline data have shown that the intention to continue the practice of FGC was relatively strong. At baseline, about three-fifths of the respondents indicated the intention not to have FGC performed on their daughters that had yet to undergo the procedure. The baseline data further revealed a significant difference between Ebonyi (64.1%) and Enugu (56.6%) in future intentions not to "circumcise" daughters.

The follow-up data indicate a clear change in this indicator. The proportion reporting the intention not to perform FGC on their daughters increased significantly from 60.5 percent at baseline to 70.6 percent at follow-up: z=4.44, p<0.001. A closer look at the data however reveals that the positive change occurred only in Enugu, whereas the situation has practically remained the same in Ebonyi (Table 13). The data show that the increase in the intention not to perform FGC on daughters is significant for both men and women in Enugu. Furthermore, the data show that the baseline pattern has been reversed and the intention not to perform FGC is now significantly more widespread in Enugu than in Ebonyi.

Figure 4: Percent reporting the intention not to perform FGC on daughters among the exposed and statistically matched groups, and PSM-estimated effects, Enugu State, follow-up data.



Source: HCP FGC Follow-up Survey, September2004

Male: n=150
Female: n=270

Table 13: Percent that declared the intention not perform FGC on their daughters, by state and by survey

Gender	*Enugu*			*Ebonyi*		
	Baseline	***Follow-up***	***Percent point change***	***Baseline***	***Follow-up***	***Percent point change***
Men	53.4	72.7	+19.3***	63.9	66.3	+2.4
Women	58.7	76.3	+17.6***	64.2	66.9	+2.7

Source: HCP FGC Baseline Survey, Jul/Aug 2003 and Follow-up Survey, Sept. 2004.
Significance of difference baseline and follow-up: ** p<0.01, *** p<0.001

The follow-up data further show that, among both men and women in Enugu, the program has helped to increase the intention not to practice FGC. The results of the PSM

analysis displayed in Figure 4 indicate that exposure to the FGC program resulted in considerable increases in the intention not to perform the procedure, among both sexes. Whereas the observed program effect is significant for both men and women, the magnitude of the effect is larger among men. The data further show that although the program did not result in universal intention not to perform FGC among the respondents exposed to the program, the indicator is considerably high among this group.

V: SUMMARY AND IMPLICATIONS OF FINDINGS

In this report, we have examined the impact of a FGC elimination program in Enugu State using data from baseline and follow-up surveys and applying the PSM technique to follow-up data. The data show that, almost invariably, all the pertinent program-related indicators examined showed stability or worsening of the situation in Ebonyi, but a net improvement in Enugu. Moreover, the PSM analysis invariably indicate that the program has resulted in significant improvement in FGM-related ideation, including the perceived self-efficacy to resist the pressure to perform FGC, personal approval of FGC, perceived social support for the abandonment of FGC, and perceptions about the problems and benefits associated with FGC. In addition, the data provide strong evidence that exposure to the program has led to more widespread intentions not to perform FGC.

The programmatic implications of the findings in this report are clear. First, the huge success demonstrated by the program activities shows that the strategic approach adopted in the program is a best practice that could be replicated in other communities where FGC is a problem. The program is based on an effective approach that empowers community members to understand the problems associated with FGC and to take appropriate steps in promoting its elimination within their community. It is recommended that HCP prepares a detailed and easy-to-read document that describes the process involved in the design and implementation of the Enugu FGC program. Such a document should be widely distributed among local and international organizations involved in promoting the abandonment of FGC.

Second, considering that the desired attitudes and behaviors concerning FGC are not yet universal in the program communities, there is need for continued efforts along this line in the focus communities. Experience from other public health fields has shown that in the absence of continued efforts, part of the gains achieved through previous strategic communication efforts may be lost after some time. In the focus communities, the FGC program has helped to build the required capacity for mobilizing the population in favor of eliminating the practice of FGC. Nonetheless, the capacity needs to be sustained through periodic retraining and supervision, and the change agents in the

community need to be motivated to continue advocating in support of abandoning the practice of FGC.

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