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The Effect of Counseling on Sterilization Acceptance by High-Parity Women in Nigeria

"A sterilization rate of 13 percent among high-parity women . . . may not seem impressive when compared to the worldwide prevalence of voluntary female sterilization. However, it is notable among Nigerian women. . . ."

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Summary

To inform women of the risks associated with high parity and to increase understanding of birth control methods, especially voluntary surgical contraception, the University of Benin Teaching Hospital launched a family planning and education program for pregnant women who had had four or more previous deliveries. More than 1,000 high-parity women admitted for prenatal care during a 19-month period were randomly allocated either to a treatment group exposed to four individualized counseling sessions on family planning methods and the health risks associated with high parity or to a control group that received only the standard family planning information provided at the prenatal clinic.

Overall, 71 percent of the women in the treatment group were using an effective method of birth control at six weeks postpartum, compared with 51 percent of the women in the control group. About 40 percent of women in both groups had indicated at admission that they did not want more children, but women in the treatment group were significantly more likely to choose female sterilization as their postpartum contraceptive method than women in the control group—13 percent, compared with three percent. By age, the proportions sterilized in the treatment group ranged from four percent of those younger than 30 to 29 percent of those 35 and older; comparable proportions for the control group were two percent and nine percent, respectively. Six percent of women in the treatment group who had four living children underwent sterilization, compared with 46 percent of those with seven or more living children. Among control patients, the proportions were zero and five percent, respectively.

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Background

During pregnancy, women older than 35 and women who have had four or more children are at increased risk of hemorrhage and high blood pressure, two of the most common causes of maternal death in developing countries.[1] Because women in the developing world often start to have children in their late teens or early twenties and do not practice family planning to space their pregnancies, women often achieve high parity at a comparatively young age and are thus exposed to the dangers of high-risk pregnancies for many years. As a result, most women in regions where the total fertility rate is high face an elevated risk of maternal morbidity and mortality during their later childbearing years. It is, therefore, important for high-parity women to have access to a trouble-free, reliable method of contraception to protect them from potentially dangerous pregnancies.

Voluntary female sterilization is one of the most widely used methods of contraception, especially among women over the age of 35, in every region of the world except Sub-Saharan Africa. Among currently married women aged 35–44 practicing contraception, 43 percent in Asia, 42 percent in Latin America and 25 percent in the Middle East rely on sterilization. In contrast, only eight percent of comparable women in Sub-Saharan Africa have undergone sterilization.[2]

Nigeria has one of the lowest rates of female sterilization in the region: Less than one percent of older women practicing contraception are sterilized.[3] In part, this is because Nigerian family planning programs are new. Until recently, there was little demand for family planning programs as a result of the widespread traditional desire for large families. A majority of Nigerian women want another child immediately after or within a year of delivering their last baby.[4] The 1981–1982 Nigeria World Fertility Survey found that urban women aged 35–44 with four or more children still wanted an average of two more children; the total fertility rate in Nigeria was 6.3.[5]

Extended breastfeeding and postpartum abstinence have traditionally provided for birthspacing and protected Nigerian women from some high-risk pregnancies, but rapid urbanization and other social changes are fast eroding these traditional practices. Yet, public knowledge and utilization of family planning methods, especially sterilization, are still very low. Only 32 percent of Nigerian women aged 15–44 know of any method of contraception, modern or traditional. Furthermore, just seven percent have heard of voluntary surgical contraception.[6]

By contrast, in Kenya, Senegal and Zimbabwe—African countries with comparatively more exposure to family planning programs—at least 45 percent of women 15–44 know of female sterilization.[7] In those countries, family planning utilization is growing at a faster pace, reflecting the increased availability of services and of information and education programs.

According to a 1980 survey of women delivering at three hospitals in Benin, Nigeria, major reasons for not using contraception were spousal opposition, religious

values and fear of side effects.[8] Another study, at the University of Benin Teaching Hospital, found that women who had had more than four deliveries represented 20 percent of maternity patients but accounted for 55 percent of maternal deaths at the hospital.[9] On the basis of these studies and his own research and clinical experience in obstetrics and gynecology, the senior author of this article decided to launch a project in collaboration with Family Health International that would implement and evaluate a family planning information and education program for high-parity women. The program would attempt to inform these women of the dangers associated with multiple pregnancies and of the availability, safety and effectiveness of all methods of contraception. It would also stress the appropriateness of voluntary surgical contraception for high-parity women.

The setting for the project was University of Benin Teaching Hospital, a 450-bed referral hospital that serves a catchment area of approximately four million inhabitants. About 4,000 deliveries per year occur at the hospital, a 1981 obstetric surveillance study found that one-third of the deliveries were for a fourth-order birth or higher.

The project's goal was to demonstrate that taking the time to educate and inform women at risk of pregnancy complications because of high parity would increase the acceptability of postpartum family planning in a population otherwise reluctant to accept any method of contraception, especially surgical methods. Guidelines for the program were based on the premise that counseling must elicit an informed and free choice. The counselors' responsibility was threefold: They were to assess the readiness of the woman to end her fertility, provide complete information to the patient about the risk associated with surgical contraception and inform her of the availability of reversible methods. Women included in the study received no inducement to participate. Those who selected sterilization went through a careful informed-consent procedure that included information about the permanence of the method, ample time to reflect on their decision without external pressures and a witnessed signature.

The objectives of the evaluation component were to determine whether the program affected the demand for voluntary surgical contraception among high-parity women delivering at the University of Benin Teaching Hospital, whether counseling improved the understanding of and attitudes toward sterilization among these women, and whether the information and education increased the postpartum demand for all family planning methods by high-risk women.

Methods

In this study, a high-parity woman was defined as one who had had four or more previous deliveries and was at or beyond the 28th week of gestation. All high-parity women who were scheduled to deliver at the hospital and who had attended its prenatal clinic during a 19-month period were included in the study, except women for whom a physician had recommended sterilization for medical reasons. The study ran from September 1984 through March 1986.

By a random allocation process, high-parity women were assigned to one of two groups at the time of their initial visit to the prenatal clinic. One group became the treatment group and was exposed to an information and education program that included individualized counseling on family planning and the health risks associated with high parity. The second group became the control group.

Women in the treatment group were to receive information four times: at admission to the study (during the 29th to 35th weeks of gestation), during a prenatal visit after the 36th week of pregnancy, during hospitalization for delivery and at six weeks postpartum. Nurses conducted the first and third counseling sessions; physicians did the second and fourth. They were trained for the counseling by staff members from Family Health International according to a protocol developed with the Association for Voluntary Surgical Contraception and using materials provided by that organization.

The protocol called for the treatment group to receive information on the health effects of high parity and the benefits of family planning at the first, third and fourth sessions. Education regarding all methods of contraception was scheduled for the second and third sessions. Voluntary surgical contraception was presented in some detail, and the advantages and limitations of the method were discussed in the context of high-risk pregnancies. Those who expressed interest in sterilization received more in-depth counseling at the second, third and fourth sessions to ensure that they fully understood the permanence of the method and potential complications associated with the surgical procedure.

The control group received only the

Table 1. Percentage distribution of high-parity women at the University of Benin Teaching Hospital, by study group, according to various characteristics, Nigeria, 1984–1986

Characteristics	All women (N=1,012)	Treatment group (N=509)	Control group (N=503)
Age			
20–24	4.5	5.7	3.4
25–29	30.3	28.3	32.4
30–34	37.8	39.9	35.8
35–39	21.3	21.6	21.1
≥40	5.0	4.1	6.0
Unknown	0.9	0.4	1.4
Ethnicity			
Edo	53.3	51.9	54.7
Ibo	14.6	14.3	14.9
Ishan	10.4	11.2	9.5
Other	21.5	22.2	20.9
Unknown	0.2	0.4	0.0
Education			
None	16.4	17.3	15.5
Primary	52.4	49.9	54.9
Secondary	17.0	17.5	16.5
Postsecondary	14.1	15.1	13.1
Unknown	0.1	0.2	0.0
Religion			
Protestant	42.5	45.0	40.0
Catholic	27.2	26.9	27.4
Traditional	24.5	22.4	26.6
Other	5.2	5.1	5.4
Unknown	0.6	0.6	0.6
Previous deliveries			
4	26.3	26.9	25.6
5	30.3	28.9	31.8
6	21.9	24.8	19.1
≥7	21.3	19.3	23.5
Unknown	0.1	0.2	0.0
Living children			
0–3	9.6	9.2	9.9
4	32.9	34.0	31.8
5	30.3	29.3	31.4
6	16.1	17.9	14.3
≥7	11.0	9.4	12.5
Unknown	0.1	0.2	0.0
Infant deaths			
0	70.3	70.5	70.0
1	22.5	23.2	21.9
≥2	7.1	6.1	8.2
Unknown	0.1	0.2	0.0
Cesarean sections			
None	92.6	92.1	93.0
1	6.1	6.3	6.0
≥2	1.1	1.2	1.0
Unknown	0.1	2.0	0.0
Planned method			
Sterilization	8.2	9.4	7.0
Pills/injectables	45.8	45.2	46.3
IUD	16.4	17.1	15.7
Other*	16.8	18.3	15.5
None	11.9	9.0	14.7
Unknown	0.9	1.0	0.8
Total	100.0	100.0	100.0

*Includes condoms, contraceptive foams and jellies, abstinence, breastfeeding, rhythm and withdrawal.

standard family planning information usually provided at the clinic. Although all the methods of contraception available at the hospital were discussed, the information did not stress the increased risks associated with high parity. The staff providing this counseling had received no special training in information and education procedures and did not follow a standard protocol. The information they provided on surgical contraception was incomplete and did not address the major fear of women in the Benin region: that sterilization in this lifetime would make them infertile in subsequent reincarnations.

At the time of their enrollment in the study, women in both the treatment and the control groups were interviewed to obtain information on their social and demographic characteristics, as well as on their knowledge of contraceptive methods, contraceptive use and desire for additional children. Sterilizations were performed at delivery or immediately postpartum. Women from both groups were also interviewed at six weeks postpartum to obtain information on delivery outcomes, contraceptive plans and attitudes toward sterilization. Hospital records were checked to identify sterilized women who failed to return for their postpartum visit. Women who were not interviewed at six weeks and who did not have a sterilization record were assumed not to have been sterilized.

More than 99 percent of those admitted to the study were interviewed at admission. Almost 90 percent of the women in the treatment group received counseling all four times; only two did not attend any sessions. In addition, more tnan 90 percent of the women were interviewed at six weeks postpartum. A patient's failure to return for prenatal visits and at six weeks postpartum was the primary reason that patients missed counseling sessions or did not have a follow-up interview.

Patient Characteristics

More than 1,000 high-parity women were admitted for prenatal care during the study period. Baseline social, demographic and reproductive health characteristics are presented in Table 1 (page 67). There were no significant differences between the treatment and control groups with regard to any of the characteristics surveyed. Neither were any differences found between women who returned at six weeks postpartum and those who failed to return. Since the random allocation succeeded in creating similar treatment and control groups, and since the women who did not complete follow-up were similar to those who did, we feel confident in attributing any differences in sterilization rates to the information and education program.

Women in the study had a mean age of 31, and 90 percent were aged 25–39. However, five percent of the women pregnant with their fifth-order birth or higher were aged 20–24, and five percent were 40 or older. More than half came from one ethnic group, the Edo; 15 percent were Ibo, 10 percent Ishan and the remaining 22 percent came from at least 10 other smaller ethnic groups. The high-parity women who deliver at the teaching hospital in Benin are urbanized and better educated than are most Nigerian women. Almost 85 percent of the women had had at least a primary education, and 14 percent had had some postsecondary schooling. Forty-three percent of the high-parity women were Protestant, 27 percent were Catholic and 25 percent followed a traditional religion.

As for reproductive health characteristics, 43 percent of the women had six or more previous deliveries, and 21 percent had seven or more. Only seven percent of the women, however, had ever had a cesarean section. In spite of the high parity, 10 percent of the women currently had fewer than four living children, and only half of those who had borne seven or more children had that many living children. Overall, 30 percent of the women had experienced the loss of at least one child in its first year of life, and seven percent had seen two or more children die as infants.

The women in the study were more knowledgeable about family planning than are most Nigerian women. Forty-five percent of them knew about female sterilization, and more than 85 percent knew about injectables, IUDs and oral contraceptives (not shown). In addition, 32 percent had used oral contraceptives at some point, 11 percent had used the IUD and seven percent had used injectables. As Table 1 shows, 87 percent planned to use a contraceptive method after delivery, including eight percent who said at their first prenatal visit that they planned to be sterilized.

Table 2 contains information on the women's attitudes toward their current pregnancy and whether they desired more children. Fifty-five percent of the women said they wanted their current pregnancy as well as more children, 30 percent said they wanted the current pregnancy but no more children and 11 percent said they wanted neither the current pregnancy nor more children. The latter proportion increased with the number of living chil-

Table 2. Percentage distribution of high-parity women, by study group and number of living children, according to desire to limit family size

Group and no. of living children	N	Wanted current pregnancy and more children	Wanted current pregnancy but no more children	Didn't want current pregnancy or more children	Not sure	Total
TOTAL						
All	1,011*	54.7	30.0	11.3	4.0	100.0
0–3	97	82.5	15.5	0.0	2.0	100.0
4	333	70.3	21.9	2.7	5.1	100.0
5	307	55.7	32.6	8.8	2.9	100.0
6	163	33.1	39.9	22.7	4.3	100.0
≥7	111	13.5	45.9	36.9	3.7	100.0
TREATMENT						
All	508*	57.0	30.3	9.6	3.1	100.0
0–3	47	91.5	6.4	0.0	2.1	100.0
4	173	69.9	24.9	1.7	3.5	100.0
5	149	60.4	30.9	5.4	3.3	100.0
6	91	30.8	41.8	24.2	3.2	100.0
≥7	48	16.7	50.0	33.3	0.0	100.0
CONTROL						
All	503	52.5	29.8	12.9	4.8	100.0
0–3	50	74.0	24.0	0.0	2.0	100.0
4	160	70.6	18.8	3.8	6.8	100.0
5	158	51.3	34.2	12.0	2.5	100.0
6	72	36.1	37.5	20.8	5.6	100.0
≥7	63	11.1	42.9	39.7	6.3	100.0

*Excludes one woman who refused to be interviewed.

dren, so that slightly more than one-third of the women with seven or more children said that they did not want the current pregnancy. Only among women expecting at least their seventh child did more than half report that they did not want any more children.

Unless women were to change their minds, these data indicate that only 40 percent would be candidates for female sterilization, and fewer than 25 percent of women with four living children might be interested. Among those who did not want any more children, almost half (48 percent) said they could not afford more children, and 14 percent gave health reasons.

Data collected at six weeks postpartum indicate that most women in the study delivered vaginally; only three percent had a cesarean section. Among 97 percent of the women, the baby was still alive at the time of the interview; among two percent, the child had died after a live birth. The remainder of the women experienced a miscarriage or a stillbirth. One woman was known to have died, and 84 did not return at six weeks.

Counseling Results

Women in the treatment group were more likely to choose sterilization than were women who received no special information—13 percent, compared with three percent. The difference was statistically significant ($p<0.001$). The proportion of women sterilized is presented in Table 3, according to various social, demographic and reproductive characteristics. In every category, women in the treatment group were more likely than women in the control group to undergo sterilization. This was especially true among counseled women in the 30–34 age-group and those with seven or more living children, both of whom were about 10 times more likely than controls to choose sterilization.

Within the treatment group, the older a woman was and the more children she had, the more likely she was to choose sterilization. This association probably reflects the counseling on increased health risks among high-parity and older women. Among women in the control group, only those 35 or older were significantly more likely to be sterilized; parity had no effect. Regardless of study group, the proportions choosing sterilization were small among women who had four or fewer children, not counting the current delivery.

In both groups, there was little variation by ethnicity, education and religion in the proportion of women who chose to be sterilized. Women who delivered by cesarean section, however, were more likely to obtain a sterilization than were women who delivered vaginally: Half of the women in the treatment group and a quarter of those in the control group who delivered by cesarean section obtained sterilizations, compared with 12 percent and three percent, respectively, of those who delivered vaginally. Two of the six women in the treatment group who had cesareans and opted for sterilization had had three prior cesarean deliveries and would have been strongly advised by their obstetrician to select a permanent method of contraception. According to the protocol, they should not have been included in this study. If they are excluded from the analysis, the overall sterilization rate declines slightly (to 12.6 percent), but the difference between the groups remains significant.

Almost 80 percent of the women in the treatment group who said that they planned to be sterilized went through with the operation. This was true for only 43 percent of the control group. Unless they have a solid understanding of sterilization, women who express interest in the procedure may not feel strongly enough to follow through on their desire. The proportion of women in the treatment group who were sterilized was lower among those who had planned to use a clinical method than among those who had planned to use other methods. Perhaps women who are knowledgeable about other effective methods are less likely to choose sterilization.

In both groups, women who wanted neither the current pregnancy nor more children were the most likely to choose sterilization, with 39 percent of the treatment group and 11 percent of the control group doing so. Among women who wanted the current pregnancy but no more children, 23 percent of the treatment group chose sterilization, as did six percent of the control women. A few women (nine in the treatment group and one in the control group) who said at admission to the program that they wanted more children also decided to be sterilized; three of these women had indicated at admission that they planned to be sterilized. Three other women had cesarean sections for this delivery and had medically indicated sterilizations; the remaining four may have changed their minds about having more children.

Sixty-six women in the treatment group underwent sterilization following childbirth. Although 63 women reported at the end of the first counseling session that they wanted to be sterilized, only 45 of those women carried through with their decision. An additional 24 women selected sterilization at later counseling sessions, and 21 of them actually had the operation. Although 68 percent of the women who chose sterilization made their decision in the first counseling session, the later sessions may have been of greater benefit than implied by these data: More women might have changed their minds if there had been only one counseling session early in the prenatal period. The later sessions may

Table 3. Percentage of women who underwent sterilization, by various characteristics, according to study group

Characteristic	Treatment		Control	
	%	N	%	N
Total	**13.0**	**509**	**3.4**	**503**
Age				
<30	3.5	173	1.7	180
30–34	11.8	203	1.1	180
≥35	27.5	131	8.8	136
Unknown	0.0	2	0.0	7
Ethnicity				
Edo	12.9	264	3.3	275
Ibo	12.3	73	4.0	75
Ishan	10.5	57	4.2	48
Other	14.8	115	2.9	105
Education				
None	15.9	88	2.6	78
Primary	11.8	254	2.5	276
Secondary	14.6	89	6.0	83
Postsecondary	11.7	77	4.5	66
Unknown	0.0	1	0.0	0
Religion				
Catholic	13.1	137	3.6	138
Protestant	14.8	229	2.5	201
Traditional	11.4	114	4.5	134
Other/unknown	3.4	29	3.3	30
Living children				
0–3	4.3	47	4.0	50
4	5.8	173	0.0	160
5	8.7	149	5.7	158
6	20.9	91	4.2	72
≥7	45.8	48	4.8	63
Unknown	0.0	1	0.0	0
Type of delivery				
Vaginal	12.2	460	2.8	436
Cesarean	50.0	12	26.7	15
Miscarriage	0.0	2	0.0	0
Unknown	11.4	35	1.9	52
Contraceptive plan at admission				
Sterilization	79.2	48	42.9	35
Pills, injectables, IUD	4.1	317	0.3	312
Other/unknown	14.3	98	0.0	82
None	2.2	46	1.4	74
Family limitation desires				
Didn't want pregnancy/ didn't want more	38.8	49	10.8	65
Wanted pregnancy/ didn't want more	23.4	154	6.0	150
Wanted pregnancy/ wanted more	3.1	290	0.4	264
Unknown	12.5	16	0.0	24

Table 4. Percentage distribution of women who had heard of sterilization, by attitude toward the operation, according to when questioned and treatment group

Attitude	At admission	Six weeks postpartum		
	All patients	Treatment group		Control group
		Sterilized	Not sterilized	
N	456	66	414	383
Operation is safe				
Agree	30.9	100.0	61.1	20.4
Disagree	17.8	0.0	31.4	30.0
No opinion	51.3	0.0	7.0	49.6
Unknown	0.0	0.0	0.5	0.0
Women are as strong as before				
Agree	22.4	98.4	62.1	19.8
Disagree	20.8	0.0	13.3	14.4
No opinion	56.8	1.6	24.2	65.8
Unknown	0.0	0.0	0.5	0.0
No change in sex drive				
Agree	30.5	91.9	64.0	18.3
Disagree	6.4	3.2	4.1	6.8
No opinion	63.1	4.8	31.4	74.9
Unknown	0.0	0.0	0.5	0.0
Woman's status does not change				
Agree	38.8	96.8	66.9	23.8
Disagree	8.1	1.6	18.8	6.8
No opinion	51.1	1.6	13.8	69.5
Unknown	2.0	0.0	0.5	0.0
Total	100.0	100.0	100.0	100.0

Note: Women who did not complete the baseline interview or who did not return at six weeks postpartum are excluded. The 17 women in the control group who were sterilized are also excluded.

have provided additional information to reinforce the original decision and helped some women who were unsure to make a decision.

At six weeks postpartum, women in the treatment group who had decided against sterilization were asked why. Thirty-three percent said they wanted more children, and 28 percent said they had done so because of fear of the operation or its complications. Another 16 percent said they did not want the operation because they believed sterilization might persist through reincarnation, six percent said their husband objected to sterilization and three percent said they preferred a reversible method. The remaining women gave a variety of reasons.

Understanding Sterilization

Counseling improved the understanding of female sterilization. At admission, only 45 percent of the women in the study had heard of the operation. Most of those who had heard of it did not understand the procedure, and they described it as an operation where the womb is tied or the womb is turned. Only seven percent understood sterilization to be having the fallopian tubes tied.

At six weeks postpartum, however, all of the treatment patients said they had heard of sterilization, and these women, especially those who had chosen sterilization, were the most well-informed about the operation. At six weeks postpartum, 61 of the 62 women in the treatment group who underwent sterilization and returned for the checkup correctly described the operation; almost 90 percent of counseled women who were not sterilized also gave a correct description. In comparison, 90 percent of women in the control group also said they had heard of sterilization, either during their admission interview or by talking with counseled women at the hospital. They still had a limited understanding of the surgery, however, with almost 90 percent describing it as tying or turning the womb.

Women who said they had heard of sterilization were asked about their attitudes toward it, and the results are shown in Table 4. At admission, between half and three-quarters of the women had no opinion or held an unfavorable opinion about whether the operation was safe, weakened women, changed women's sex drive or changed their status. By six weeks postpartum, attitudes toward the operation had improved among all counseled women. This improvement was especially great among those who were sterilized, but women in the treatment group who did not undergo the operation also had much more positive attitudes toward it than did those who were not counseled. For example, slightly more than 60 percent of those in the treatment group who were not sterilized said they believed the operation was safe, compared with 20 percent of women in the control group. Nonetheless, they were not as convinced as women who had the operation that there would be no ill effects. Women in the control group were just as uncertain about the operation at six weeks postpartum as they were at admission.

The program also had an important effect on contraceptive use after delivery. At admission, half of the women had never used a contraceptive method, but almost 90 percent said they planned to use a method after delivery. At six weeks postpartum, counseled women were significantly more likely than those in the control group to have followed through on their intentions ($p<0.001$), as is shown in Table 5. Seventy-one percent of the counseled women were using a medical or barrier method of contraception. In contrast, 51 percent of control women were using one of these methods.

Table 5. Percentage distribution of women using a contraceptive method at six weeks postpartum, by method, according to study group

Method	Treatment group (N=480)	Control group (N=453)
Clinical	70.5	50.8
Sterilization	13.8	3.8
Pill/injectable	35.2	27.8
IUD	19.6	17.0
Barrier	1.9	2.2
Traditional	14.5	18.6
None	14.1	28.9
Unknown	0.9	1.7
Total	100.0	100.0

Note: This table excludes women who were not sterilized and who did not return for the sixth week interview, because their contraceptive use is unknown.

Conclusions

The information and education program had a significant impact on a woman's decision to utilize a contraceptive method postpartum. In addition, counseled women of every ethnic and religious group were more likely to request sterilization. The study suggests that the current low rates of voluntary female sterilization may be due, in part, to a lack of knowledge and understanding of sterilization, since half of the women admitted to the program had never heard of the operation, and most of those who had did not understand what it entailed.

A sterilization rate of 13 percent among high-parity women counseled four times about the health impact of multiple births and the benefits of family planning may not seem impressive when compared to the worldwide prevalence of voluntary female sterilization. However, it is notable among Nigerian women for several reasons. First, the rate is almost twice as high as the seven percent sterilization rate among high-parity women at the same hospital in 1981.[11] Second, there is a strong preference for large families in Nigeria, where childbearing is of great social importance. Women may, therefore, be reluctant to choose a permanent method despite the risk to their health of further childbearing. Finally, one-fourth of the women in this study had experienced the death of a child during infancy, and 10 percent of them had experienced infant death following their most immediate previous pregnancy.

In this setting, consideration needs to be

given to the cost-effectiveness of counseling women with less than a minimum number of children. Sixty-two percent of women in the treatment group who chose sterilization had six or more children, not including the current pregnancy, and 82 percent had five or more living children. If women with fewer than five children had been counseled only once, the number of counseling sessions would have decreased by a third, and the number of sterilizations would have decreased by no more than 10 percent, assuming rates similar to those in the control group.

Even women with five or more children may not need to have as many as four counseling sessions. Women who decide to be sterilized on their first visit may need only one additional session to be provided with more detailed information. Sessions should be conducted as early as possible after the 20th week of gestation to enable the couple to think through this important decision.

Another way to decrease the costs of the program could be to see only once those women who say at admission that they want more children, since this was the most common reason for not having the operation. If such women had had only one session, the number of sterilizations in the treatment group would have decreased by a maximum of 14 percent, and the number of counseling sessions would have declined by 44 percent.

While either strategy to limit the number of sessions would decrease program costs, it might also decrease the number of women who choose some other method of contraception. Some postpartum counseling on contraception is undoubtedly needed for all women.

One-fourth of women said they chose not to undergo sterilization because of fear or dislike of surgery. Therefore, the program obviously needs to emphasize the safety of the operation in order to allay these fears. Overall, the program had an impressive impact on women's knowledge and attitudes toward female sterilization. Improvement in these areas may translate into an increased demand for sterilization services later, either among those exposed to the program or among those with whom they share information.

A good counseling program, however, must be designed to help women understand all methods of family planning. This will enable them to make well-informed, well-considered decisions about their fertility. The process should not attempt to persuade a couple to select a particular method, such as sterilization. If the process has been respectful of individual preferences, the chances that the couple will regret the sterilization decision will be minimized. Satisfied clients can then become advocates for family plannning, and their support will increase demand for services and help to reduce maternal mortality.

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Resumen

A efectos de informar a las mujeres de los riesgos de la alta paridad y hacer que se comprendan mejor los métodos de regulación de la fecundidad, el Hospital Académico de la Universidad de Benín ha emprendido un programa de planificación familiar y educación para embarazadas que hayan dado a luz cuatro o más veces. Durante un período de 19 meses, más de 1.000 mujeres de esta categoría que habían acudido para recibir asistencia prenatal fueron asignadas al azar, o bien a un grupo terapéutico a cuyas integrantes se les ofrecieron cuatro sesiones de asesoramiento individual acerca de métodos anticonceptivos y los peligros que suponía para la salud una alta paridad, o bien a un grupo de control que sólo recibió la información sobre planificación familiar que la clínica prenatal ofrece habitualmente.

En términos generales, a las seis semanas post-parto, utilizaba algún método anticonceptivo eficaz el 71 por ciento de las mujeres del grupo terapéutico, contra el 51 por ciento de las del grupo de control. Cerca del 40 por ciento de las integrantes de ambos grupos habían indicado, a la entrevista inicial, que no querían tener más hijos, pero las del grupo terapéutico se manifestaban significativamente más propensas que las del grupo de control a optar por la esterilización femenina como método anticonceptivo post-parto—13 por ciento contra tres por ciento. Según la edad, la proporción de esterilizadas del grupo terapéutico variaba del cuatro por ciento para las menores de 30 años al 28 por ciento para las de 35 años o más. En el grupo de control, las cifras correspondientes eran, respectivamente, del dos y nueve por ciento. En el grupo terapéutico, decidió esterilizarse el seis por ciento de las mujeres que tenían cuatro hijos vivos, frente al 46 por ciento de las que tenían siete o más. Entre las del grupo de control, los respectivos porcentajes fueron de cero y cinco por ciento.

Résumé

Afin d'informer les femmes des risques que comporte une parité élevée et d'améliorer leur compréhension des moyens anticonceptionnels, surtout la stérilisation chirurgicale, l'Hôpital Académique de l'Université de Bénin a lancé un programme de planning familial et d'éducation destiné aux femmes enceintes ayant déjà eu au moins quatre accouchements. Pendant une période de 19 mois, plus de 1,000 femmes à parité élevée, venues recevoir des soins prénatals, ont été placé de façon aléatoire soit dans un groupe thérapeutique dans lequel on leur offrit quatre cours sur les méthodes de contraception et les risques que comporte une parité élevée, soit dans un groupe de contrôle où ne leur était donnée que l'information standard dispensée pendant les consultations prénatales.

En général, 71 pour cent des femmes du groupe thérapeutique utilisaient une méthode de contraception efficace à la sixième semaine post-natale, comparé à 51 pour cent des femmes du groupe de contrôle. Dès leur entrée au programme, près de 40 pour cent des participantes des deux groupes avaient mentionné ne plus vouloir d'enfant, mais après l'accouchement, celles du groupe thérapeutique étaient sensiblement plus susceptibles que celles du groupe de contrôle d'opter pour la stérilisation comme méthode contraceptive—13 contre trois pour cent. Selon l'âge, la proportion de femmes stérilisées du groupe thérapeutique s'échelonnait entre quatre pour cent de celles ayant moins de 30 ans à 28 pour cent de celles ayant 35 ans ou plus. Dans le groupe de contrôle, les chiffres correspondants étaient de deux et neuf pour cent respectivement. Dans le groupe thérapeutique, six pour cent des femmes ayant eu quatre enfants décidèrent de se faire stériliser, ce chiffre étant de 46 pour cent parmi les femmes qui avaient eu sept enfants ou plus. Dans le groupe de contrôle, les pourcentages respectifs étaient de zéro et de cinq pour cent.