Social and Psychological Aspects of Tubal Ligation in Zaire: A Follow-Up Study of Acceptors

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Social and Psychological Aspects of Tubal Ligation In Zaire: A Follow-Up Study of Acceptors

Only half of the Zairian acceptors had talked to others about their sterilization. To compensate for this lack of informal communication, future programs must be designed with a strong information-education-communication component.

By Jane T. Bertrand, Chibalonza Kashwantale, Djunghu Balowa, Nancy C. Baughman and Chirhamolekwa Chirwisa

Summary

A 1987–1988 survey of 453 Zairian women who had had a tubal ligation found that, on average, the women were 37 years old and had seven living children at the time of the operation. Ninety-two percent were married, and of these, 95 percent had consulted with their husbands before undergoing the procedure. Only 40 percent of the women had spoken with another woman who had undergone tubal ligation before having the operation themselves, and less than 25 percent had discussed their operation with other family members or friends. The two main reasons for having had the operation were "health" and "had enough children." Most of the women said they had experienced no change at all or a change for the better in their health, ability to do physical labor and marital relations. However, 14 percent admitted having some regret over the operation; regret was associated with having five or fewer children, feeling pressured into the decision, and believing their husband had tried to have children with another woman. Although the women who had undergone the operation were generally positive about the sterilization, they were reluctant to discuss it openly with friends and neighbors.

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Introduction

Voluntary surgical sterilization is currently the most widely practiced method of family planning in the world.[1] As permanent methods of contraception have grown in popularity, researchers have become increasingly interested in both their clinical and social aspects. As of 1985, over 200 studies had been conducted on the social and psychological aspects of sterilization in both developed and developing countries,[2] but only six pertained specifically to countries in Sub-Saharan Africa.

Some researchers have argued that the potential acceptance of permanent forms of contraception in Africa is very limited,[3] while others claim that interest in such methods is increasing.[4] Empirical data addressing this question are lacking. A number of knowledge, attitude and practice studies have been conducted to assess the potential acceptability of sterilization in specific African countries.[5] In addition, a few reports are available from selected African countries on the demographic characteristics of clients or on clinical aspects of the sterilization procedure.[6] However, little else is available on this topic.

The scarcity of information from Sub-Saharan Africa is particularly notable with regard to the social and psychological aspects of sterilization: Studies on sources of information, factors in the decision-making process, attitudes toward the quality of service, perceived consequences of tubal ligation on health and marital relations, and satisfaction (or regret) over the operation are lacking. The only published data on these topics come from focus-group research conducted in Zaire[7] and Kenya.[8] Yet because of the nature of focus groups, one cannot derive quantitative results on any of the variables studied.

This article is one of the first quantitative follow-up studies of acceptors of tubal ligation to focus on the social and psychological aspects of female sterilization in a Sub-Saharan country. However, it should be taken as a case study from one country; its results cannot necessarily be generalized to other parts of the African continent.

We must consider our findings in the context of the social and political climate for family planning in Zaire. The country is strongly pronatalist. Women aspire to have and do have, on average, at least six live births.[9] Zaire is typical of Sub-Saharan Africa in that fertility is highly valued.

John Caldwell and Pat Caldwell contend that traditional African religious values have helped to sustain high fertility in two ways.[10] First, in the traditional value system, fertility is equated with both virtue and spiritual approval, and reproductive failure or cessation of fertility is associated with sin. Second, filial piety and material homage to the older generation are emphasized, so that high fertility is rarely disadvantageous.

This pronatalist attitude is reinforced by a number of factors, including high rates of infant mortality, low levels of female education, the high social status associated with large families and the positive economic value of children, particularly in rural settings. While some change in attitudes has occurred, and young people in urban areas rarely aspire to the 10–12 children their parents may have had, few would voluntarily limit fertility to 2–3 children. Among the very poorest, one hears the claim that "children are our only wealth."

In 1972, President Mobutu Sese Seko publicly voiced support for the concept of birthspacing for health reasons. This led to the formation of a private family planning association (affiliated with the International Planned Parenthood Federation) in 1973 and to a government-supported national family planning program in 1983. These efforts were complemented by the work of Protestant missionary groups in selected sites throughout Zaire during the late 1970s and 1980s.

By 1990, modern contraceptives were

available from clinic-based programs in the principal cities of the country, as well as in a substantial number of rural health zones served by a large rural health project and other, pilot projects. The concept of birthspacing as a health intervention has been so widely promoted that *naissances désirables* (the local term for family planning, which means "desirable births") has become a household term in many parts of the country.

Nonetheless, the family planning movement is still in its infancy. Although the government voices support for birthspacing, it has stopped short of establishing an official population policy. A lack of infrastructure, combined with administrative difficulties, has diminished the potential effectiveness of efforts to increase access to modern methods. It is not uncommon, for example, for clinics to run out of contraceptives.

Data from several studies conducted in widely dispersed locations in Zaire since 1980 confirm that the population is generally aware of family planning. In some 10 sites studied to date, over 80 percent of the female respondents had heard of at least one modern contraceptive method; with one exception, two-thirds or more had heard of female sterilization.[11] Actual use of modern contraceptives is still very low among this population, however. According to the 1982–1984 prevalence survey, use of modern methods ranged from two percent to 11 percent of married women of reproductive age in the four urban and two rural sites studied; one percent of women at each of five of the sites had undergone tubal ligation.[12] There is evidence of a slightly higher prevalence of female sterilization in areas where the operation has been most readily available (Vanga, six percent in 1983; Matadi, eight percent in 1989).[13] However, these are clearly the exceptions and not the rule.

Methodology

• *Sampling*. Strict random sampling was not feasible in our study for three reasons: the large size of the country, communication difficulties resulting from the various languages and dialects spoken, and the lack of centralized data on sterilization procedures performed at various sites.

Instead, we first identified all hospitals and clinics in Zaire where at least 50 tubal ligation procedures were performed between January 1984 and December 1986 (i.e., 1–4 years prior to the study), and where the names and addresses of the clients were on record. A list of such institutions was drawn up, based on information obtained from local organizations working in family planning and from individuals familiar with health programs throughout Zaire; this informal approach was used in the absence of any official listing. Twelve such sites were identified, half of which were urban (cities of 100,000 inhabitants or more) and half rural (a 13th emerged, but too late to be included in this study).

At each site, a list containing the names and addresses of the eligible respondents was compiled; women who lived in remote areas were excluded for logistic reasons. Women whose last births were by cesarean section were also excluded, because their decision to have a tubal ligation may have been based on compelling medical reasons. In sum, the eligible respondents were women who had undergone tubal ligation approximately 1–4 years before the interview, who lived a reasonable distance from the selected hospital and whose last delivery was not by cesarean section.

• *Organization of Fieldwork*. The logistics of conducting the fieldwork were challenging for two reasons: The 12 sites were geographically scattered throughout this vast country, and nine different languages (or dialects) were spoken at the 12 sites under study. The questionnaire was developed in French by the Projet des Services des Naissances Désirables (PSND, the national family planning program), with technical assistance from Tulane University in the United States.

At each site, one supervisor and one female interviewer were selected to work on the study. These two-person teams were brought to Kinshasa (the capital city) for a two-week training course on general study procedures and interviewing techniques. This training took place in two shifts—the first in December 1987, the second in February 1988.

Once trained, the teams returned to their sites to translate the questionnaire into the local language and to pretest it. After necessary modifications, the interviewer attempted to contact all eligible respondents. The interviewing was conducted in private in the respondent's home. If a potential respondent was away from her home at the initial visit, the interviewer tried again later the same day or the next day (although this was not possible if an eligible respondent living in a fairly isolated area was traveling at the time of the first contact). The fieldwork schedule varied by site, with interviewing conducted during 1988.

Although the interviews were conducted in the local language at each site, the interviewers wrote the responses to open-ended questions in French. Moreover, the structure of the questionnaires (numbering and layout of questions) was identical for all sites. The questionnaires were verified in the field by the supervisor and then sent to Kinshasa for coding, editing and analysis at the PSND.

Of the 12 initial sites, 10 completed the data collection (i.e., attempted to contact all eligible respondents), one partially completed it and one did not provide data within the time limits of the study.

Sample Characteristics

A total of 453 women who underwent tubal ligation were interviewed from 11 sites throughout Zaire (Table 1, page 102). About one-third of these women had never attended school, and about one-half had attended or completed primary school or homemaker school. Only 15 percent had gone beyond primary school. Of the total group, 58 percent said they were able to read.

Most acceptors were either Protestant (57 percent) or Catholic (34 percent). The proportion of respondents who were Protestant is higher than the proportion of total Zairians who are Protestant. This reflects the fact that many of the sterilization programs in Zaire have been developed in conjunction with Protestant mission hospitals.

Just over 60 percent of the women reported having some type of remunerative work, which could include agricultural work or selling items in a marketplace. Ninety-two percent were married or living in union, and six percent were previously married; only two percent had never been married. Of the 415 women married or in a union, 77 percent were in monogamous unions, compared with 23 percent in polygamous unions. The husband's level of education was, on average, much higher than the wife's (not shown): Only nine percent of husbands had never attended school, and 32 percent had attended secondary school or gone further.

Calculations from data collected indicate that the average age at first pregnancy was 17.6 and the average age at sterilization was 36.9. By the time of their sterilization procedure, acceptors had had an average of 8.5 live births. Over half had experienced the death of at least one child, bringing to 7.3 the average number of living children. As Table 1 shows, 64 percent of the respondents had 5–8 living children. Almost all respondents (98 percent) had at least one son and at least one daughter. In addition, 52 percent had at least one other (foster) child in their care.

About three-quarters of the women had undergone the sterilization postpartum, while about one-quarter had had an interval procedure (not shown). The proportion of postpartum versus interval cases differed markedly by site. On average, women wait-

Table 1. Among women who had had a tubal ligation, number and percentage distribution of background characteristics, Zaire, 1984–1986

Characteristic	N	%
Total	**453**	**100.0**
City/town (site)		
Kananga	47	10.4
Karawa	74	16.3
Kaziba	31	6.8
Kikwit	11	2.4
Kimpese	57	12.6
Kinshasa	23	5.1
Lubumbashi	45	9.9
Matadi	51	11.3
Nyankunde	42	9.3
Oicha	30	6.6
Vanga	42	9.3
Education		
None	153	33.8
1–3 years primary	92	20.3
4–6 years primary	101	22.3
Homemaker school	40	8.9
1–2 years secondary	31	6.8
3–6 years secondary	33	7.3
Beyond secondary	3	0.7
Literate		
Yes	263	58.1
No	190	41.9
Religion		
Protestant	256	56.5
Catholic	156	34.4
Kimbanguiste	14	3.1
Muslim	5	1.1
Other/None	22	4.8
Remunerated work		
Yes	280	61.8
No	169	37.3
No information	4	0.9
(continued)		
Marital status		
Currently married/in union	415	91.7
Monogamous	321	70.9
Polygamous	94	20.8
Previously married	29	6.3
Never-married	9	2.0
Age at interview		
20–24	2	0.4
25–29	2	0.4
30–34	55	12.1
35–39	133	29.4
40–44	165	36.4
45–49	51	11.3
≥50	6	1.3
Don't know	39	8.6
No. of living children		
0–2	9	2.0
3–4	35	7.7
5–6	102	22.5
7–8	187	41.3
9–10	100	22.1
≥11	20	4.4
Sex of living children		
At least one son	445	98.2
No sons	8	1.8
At least one daughter	445	98.2
No daughters	8	1.8
Number of foster children		
0	216	47.7
1	82	18.1
2	79	17.4
≥3	76	16.8

ed 3.3 days between delivery and the operation; however, five percent had it the same day they delivered. One-half of the postpartum group decided to have their babies at the hospital so they could have the tubal ligation done at that time. One-quarter of women who had had an interval procedure said their hospital stay was less than 24 hours, one-fifth had to stay 25–47 hours and over one-half, 48 hours or more. Two respondents reported that the operation had failed and that they had subsequently become pregnant.

Making the Decision

Sixty percent of the women reported that their last pregnancy was wanted, while 10 percent said that it was mistimed and 30 percent said it was not wanted.

Half of the acceptors had first learned about tubal ligation from medical personnel: a nurse (20 percent), some other health worker (21 percent) or a doctor (nine percent). Among other sources of information were another woman who had had a tubal ligation (17 percent), a friend (14 percent), their husband (seven percent) or some other family member (seven percent). Less than four percent had first heard of sterilization through the mass media. In fact, the proportion who had ever seen or heard about tubal ligation in the media was low, with 22 percent citing the radio as the most common media source for information. About 19 percent indicated that they had ever seen or heard about tubal ligation on posters and less than nine percent each cited brochures, television or newspapers.

The vast majority of married women (95 percent) discussed the operation with their husbands before having it done. This is not surprising, considering that most hospitals in Zaire require the husband's signed consent before the procedure can be done. Ninety-five percent reported that their husbands supported the idea and one percent said their husbands were indifferent. Among the four percent of husbands who did not support the idea, the main objection was a desire for more children.

Forty percent of the women talked to at least one other sterilized woman before having their own operation. On average, one or two women were consulted, and 93 percent of the women who were consulted described their experience in positive terms.

Most of the respondents had also discussed tubal ligation with a doctor (73 percent) or a nurse (69 percent). They perceived these health personnel to be favorable to tubal ligation in almost all cases. Some 25–28 percent each had discussed the operation with a friend, an older brother or their mother, and lesser proportions had discussed it with older relatives such as a father, aunt, uncle or in-law. In the majority of these cases, the person who was contacted responded favorably to the idea of sterilization, but most women did not consult relatives, perhaps because they felt they would disapprove.

The respondents were asked why they had decided to have a tubal ligation. In an effort to get the most accurate responses possible, the question was asked in three steps. The first part was open-ended: "For what reason did you decide to have a tubal ligation?" After obtaining the response, the interviewer asked the respondent, "Besides the reason you just mentioned, were there other things that prompted you to have the operation, for example . . ."; she then listed the 10 items shown in Table 2 and waited for the participant to respond to each one. After completing the list and registering the responses, the interviewer asked, "You gave one reason for having the operation and I just listed some others. Of all these, which was really the one that convinced you to have the operation?" The reason for this lengthy probing was to get beyond the socially acceptable response of "health reasons" and identify other factors that might have played a role in the decision.

Table 2 shows the proportions of women giving the various responses to all three questions. Columns 1 and 3 are percentage distributions of all women, whereas column 2 adds to more than 100 percent because the women could cite more than one reason in response to the second question. One-half of the respondents initially cited health reasons as their primary motivation, and almost one-third stated that they had decided they had enough children. The third most commonly given reason—economic difficulties—was cited by only 10 percent of the women. When asked to respond to the list of factors that might have influenced their decision, over 60 percent of the respondents cited each of those three factors as either their first reason or a contributing reason. Other reasons, mentioned by 25–47 percent of the women, were complications with the last pregnancy, the last pregnancy being unwanted, inability to tolerate other contraceptive methods, the recommendation of their doctor and lack of access to other methods.

Table 2. Among women who had had a tubal ligation, percentage who gave particular reasons, by priority of reason

Reason	Priority		
	Main reason	Contributing factors	Final reason
Health reasons	50.3	86.5	38.9
Had enough children	31.3	67.8	29.8
Economic difficulties	9.9	61.6	8.4
Doctor recommended it*	1.1	25.8*	4.4
Complications with last pregnancy	0.0	47.2	13.2
Couldn't tolerate other methods	0.0	28.0	0.2
Last pregnancy was unwanted	0.0	29.1	0.2
Lack of access to other methods	0.0	24.9	0.4
Lack of knowledge of other methods	0.0	13.0	0.0
No husband	0.0	4.6	2.9
Other	6.7	na	1.5
Don't know	0.4	na	0.0
Total	100.0	na	100.0

*This item was intended to identify those women who received a strong recommendation from their doctor. In contrast, "health reasons" included those cases where the woman felt it was good for her health but was not necessarily directed by her doctor.

Note: na=not applicable.

Interestingly, this extensive probing for the motive for the operation had little effect on the responses given to the final question. "Health reasons" and "had enough children" still emerged as the two main reasons.

Obtaining the Operation

For women deciding to have a tubal ligation, three principles are basic to informed consent: that the woman know the operation is permanent and that she will not be able to have more children; that she know of other contraceptive options; and that she make the decision of her own free will. We examined the extent to which our sample had the opportunity to practice informed consent, as measured by these three factors.

To determine whether they recognized the permanent nature of tubal ligation, all the respondents were asked if they believed they could have more children; if they believed it was necessary to use another contraceptive method to avoid pregnancy; and if they thought their sterilization was permanent. Almost all the women (97–99 percent) gave answers indicating that they understood the permanent nature of the operation; 1–2 percent of women gave the wrong answer on each of the questions, and on two questions, one percent said they did not know.

Ninety-six percent of the women had heard of at least one other contraceptive method; 91 percent knew of at least one modern method, and 85 percent knew of at least one traditional method (Table 3). However, only 38 percent had ever used a modern method, and only 46 percent had ever used a traditional one. Among women who had ever used a contraceptive, the methods most commonly used prior to sterilization were the pill (22 percent), withdrawal (20 percent) and injectables (15 percent).

To test the voluntary nature of the decision, women were asked who had recommended that they have the operation: Sixty-five percent of the respondents said that it was their own idea, 19 percent cited their husband, four percent considered it to have been a joint idea with their husband and seven percent said it was their doctor's idea (Table 4, page 104). Among women who said it was solely their own idea, 67 percent said the first person they consulted was their husband, 13 percent said they had first consulted a nurse and nine percent, a doctor.

Eighty-six percent of the women reported that they had felt no pressure to have a tubal ligation and that their decision had been made freely. Of the 14 percent who had felt pressured, 56 percent said their husband had insisted on the procedure and 37 percent reported that the pressure had come from their doctor. For 83 percent of these women, the reason for this pressure was previous difficulties with childbearing. In fact, of those who felt pressured, 75 percent agreed with the person trying to convince them. Among the few who did not, the primary reasons were the desire for more children and the fear of the operation. None of the women had received any type of monetary compensation for undergoing the operation (not shown).

In Zaire, as in many other countries, women who have a tubal ligation may not be able to obtain the operation as quickly as they would like. In the present study, the mean time between making the decision and having the operation was 4.5 months. About one-third (36 percent) of the women in our sample had had the operation within a month of the time they had made their decision; 56 percent waited 1–12 months after making the decision, and the remaining eight percent waited more than a year.

Most women who waited more than a month did so because they were pregnant (64 percent). Other reasons—none of which were mentioned by more than six percent of those who had waited—were ill health, the need for more information, child care problems, the need for rest (recuperation), economic barriers and the desire to have another child.

However, when asked specifically if they had experienced any of a list of problems in

Table 3. Among women who had had a tubal ligation, percentage who knew of or had ever used a method, and percentage distribution of ever-users, by the last method used

Method	Knew of a method (N=453)	Ever used a method (N=453)	Last method used (N=335)
Any method	**96.0**	**67.1**	**100.0**
Modern method	**90.4**	**37.5**	**48.1**
Pill	85.4	21.9	21.8
Injectables	79.3	13.2	14.9
IUD	73.1	8.6	8.1
Condom	58.7	5.1	2.4
Vaginal tablets	30.4	2.4	0.9
Foam, cream	25.8	0.2	0.0
Vasectomy	23.2	0.0	0.0
Traditional	**84.8**	**46.1**	**51.9**
Abstinence	84.1	18.1	12.5
Withdrawal	68.4	23.6	20.0
Rhythm	64.1	12.4	9.6
Traditional belt	58.5	3.1	1.2
Other	0.0	0.0	8.7

obtaining the operation, 27 percent mentioned a lack of money to pay for the operation; 24 percent, the problem of child care while gone; 18 percent, transportation to the hospital; four percent, a long wait at the hospital; and three percent, having to come back several times before being served.

Forty-two percent of the women lived within 30 minutes of the hospital where they had had the operation; however, one-quarter lived more than three hours away. On average, it had taken the women about two hours to get to the hospital. Their modes of transportation had included some combination of walking (46 percent), taking a taxi (26 percent), taking a bus or taxi-bus (14 percent), using personal transportation (seven percent) and taking a hospital vehicle (five percent).

Service and Side Effects

Respondents who had had an interval operation were asked about any complications they had experienced. (Because those who had had the procedure postpartum might have had difficulties differentiating between complications or pain attributable to the operation and attributable to childbirth, they were not asked this question.) Of the 122 women who had had an interval procedure, one-third had had complications in the first few days after the operation, including abdominal pain, fever, muscular contractions and severe headaches. Of those reporting complications, 80 percent had consulted clinical personnel regarding the problem.

Thirteen percent had complications that had persisted at least one month; these included heavy menstrual bleeding, abdominal pain and amenorrhea. Three-quarters of the women with these complications had consulted a doctor or nurse.

All the respondents were asked their impressions of the quality of service given by the doctors and nurses during their operation. A positive bias is inherent in this question, but we felt it important enough to include in this type of survey. Thirty-five percent judged their doctor's service to be "very good" and 64 percent said it was "good." Only one percent (six women) felt it was less than good or did not answer. The ratings for nurses were similar: 32 percent "very good;" 67 percent "good." Of the two percent (seven women) who considered the nurses to be fair or poor, five women complained primarily of their bad dispositions or attitudes.

As mentioned in the discussion on informed consent, 96 percent of the women in this study knew of at least one other method. However, in response to the question "Did someone at the hospital explain about other contraceptive methods to you before the operation?" only eight percent of the women responded affirmatively, suggesting minimal communication between the patient and those providing medical services. Among the few women answering yes, the nurse gave the information in almost two-thirds of the cases.

When the respondents were asked if they had posed questions to either the doctor or nurse about tubal ligation prior to the operation, only 15 percent responded affirmatively, and virtually all of these respondents felt their questions were satisfactorily answered. When asked how the service might be improved, 73 percent of the respondents had no suggestions or recommendations. Among the remaining 27 percent, the most frequently mentioned suggestions had to do with "professional conscience" (four percent), meaning, for example, that health personnel should be on time, respect commitments and be attentive to patient's needs. Between two percent and three percent of the respondents had each of the following suggestions: avoid failures, have tubal ligation patients isolated from other patients, make the hospital cleaner, reduce the cost of the operation and ensure adequate equipment and supplies. One percent mentioned that the incision should be made smaller.

Table 4. Among women who had had a tubal ligation, number and percentage distribution of variables affecting voluntary decision-making

Variable	N	%
Person who recommended the operation		
Respondent	293	64.7
Husband	85	18.8
Doctor	31	6.8
Respondent and husband together	16	3.5
Friend	9	2.0
Nurse	6	1.3
Other health personnel	3	0.6
Other	10	2.2
Total	453	100.0
First person with whom the respondent discussed the idea		
Husband	195	66.6
Nurse	37	12.6
Doctor	26	8.9
Sterilized woman	16	5.5
Friend, neighbor	8	2.7
Other family member	5	1.7
Other	6	2.0
Total	293	100.0
Respondent felt pressured		
No	389	85.9
Yes	63	13.9
Don't know	1	0.2
Total	453	100.0
Person who pressured respondent		
Husband	35	55.6
Doctor	23	36.5
Mother	1	1.6
Father	1	1.6
Husband's family	1	1.6
Oldest son	1	1.6
Don't know	1	1.6
Total	63	100.0
Reason for pressure		
Difficult delivery/pregnancy	52	82.5
Had enough children	5	7.9
Economic reasons	2	3.2
Other	4	6.4
Total	63	100.0
Respondent agreed with reason for pressure		
Yes	47	74.6
No	16	25.4
Desired more children	9	14.3
Fear of the operation	6	9.5
Don't know	1	1.6
Total	63	100.0

Perceived Consequences

All respondents were asked a series of questions to determine if they had noticed any changes after the operation with regard to their health, marital situation and general well-being (Table 5). While such changes might have resulted from totally independent causes, the question was intended to identify *perceived* effects. The possible responses to most of these questions were "better," "worse" or "the same" (and "don't know," if the respondent volunteered this answer). In the large majority of cases across all these variables, the respondents reported that they had experienced no change or a change for the better. This was true for 90 percent regarding general health, 86 percent regarding capacity to do physical work and 92 percent regarding their disposition. Almost one-half of the women reported a weight gain after the operation, which in Zaire (especially in rural areas) could be considered positive; 17 percent reported weight loss.

Over one-half of the respondents had experienced no change in their menstrual cycles, and those reporting change were about evenly divided in the direction of the change. For example, 18 percent reported that their cycles were now shorter, compared with 23 percent who said they were longer; 22 percent claimed their period lasted more days than before, while 18 percent said it now lasted fewer days; and 23 percent said that their flow had increased since the operation, while 22 percent claimed it had decreased.

Approximately two-thirds of the women reported that the frequency of their sexual relations had not changed, while about one in five stated that they now had intercourse more frequently, and one in seven said they had intercourse less frequently. In addition,

one in five women found sex more satisfying than before the operation, while one in 10 said it was less satisfying.

The focus-group research on attitudes toward tubal ligation pointed to an underlying fear among women that if they underwent the procedure, they risked losing their husbands.[14] Among the 415 married women in this study, 93 percent reported that there had been no change in their husbands' behavior toward them. Nonetheless, 13 percent of the married respondents said that their husbands had tried to have or had had more children with other women following the tubal ligation, and another six percent said they did not know if their husbands had tried to do so.

Women in polygamous unions were more likely to report that their husbands had tried to have children with other women than were women in monogamous unions. Older women were no more likely than younger women to perceive a change in their husbands' behavior or to have husbands who had had children with other women.

The respondents were asked two questions regarding their general satisfaction with the procedure: "Are you glad you had a tubal ligation?" and "Do you have any regret?" Of the total sample, 88 percent claimed to be glad, but in response to the second question, 14 percent said they had some regret. (The discrepancy may result from a woman's being generally satisfied with the operation but having some small regret over it.) The 62 women who expressed some regret were asked the reason (an open-ended question). The most common answers were that they had fewer children than they would have liked (57 percent); they felt it was against God's will (eight percent); they had been sickly since the operation (seven percent); their husband did not love them anymore (five percent); they had experienced pain (five percent); and other/did not know (19 percent).

The factors associated with regret are shown in Table 6 (page 106). Women were significantly more likely to experience regret if any of the following conditions existed: they had five or fewer children; they had wanted their last pregnancy; the idea to have the operation was someone else's; the operation was recommended by their doctor; they had felt pressured into having the operation; they felt their health was worse; their ability to do hard work had decreased; they felt that their husbands' behavior towards them had changed; or their husbands had tried having children with another woman.

Two other variables approached significance: Women who had no education and who had not talked with a woman who had had the operation were probably more likely to experience regret. Age, religion and marital status of the woman at the time of the operation were not associated with regret.

Table 5. Among women who had had a tubal ligation, number and percentage distribution of perceived effects

Effect	N	%
General state of health		
Better	219	48.3
Worse	47	10.4
Same	187	41.3
Don't know	0	0.0
Capacity for physical work		
Stronger	174	38.4
Less strong	63	13.9
Same	216	47.7
Don't know	0	0.0
Disposition		
Better	109	24.1
Worse	32	7.1
Same	307	67.8
Don't know	5	1.1
Weight change		
Gained	222	49.0
Lost	78	17.2
Stayed the same	152	33.6
Don't know	1	0.2
Duration between menstrual cycles		
Shorter	82	18.1
Longer	102	22.5
Same	261	57.6
Don't know	8	1.8
Number of days of bleeding		
Greater	101	22.3
Less	80	17.7
No change	264	58.3
Don't know	8	1.7
Menstrual flow		
Increased	103	22.7
Decreased	99	21.9
No change	239	52.8
Don't know	12	2.6
Frequency of intercourse		
More frequent	93	20.5
Less frequent	64	14.1
Same	279	61.6
Don't know	17	3.8
Satisfaction with sex		
Greater	95	21.0
Less	43	9.5
No change	297	65.6
Don't know	18	4.0
Husband's behavior toward wife*		
Changed	27	6.5
Didn't change	384	92.5
Don't know	4	1.0
Husband tried to have children elsewhere*		
Yes	52	12.5
No	339	81.7
Don't know	24	5.7
Total	453	100.0

*Percentages are based on the 415 married respondents.

The variables that were significant (and that approached significance) were entered into a multiple logistic regression analysis (Table 6, column 2). Women who were still found to be at significant risk for regret after other variables in the model were controlled for were those who had five or fewer children; those who did not consider the operation to have been their own idea; those who had felt pressured into having the operation; and those whose husbands had tried to have children with other women after the operation. Interestingly, women whose husbands had recommended the operation were at least as likely to experience regret as those whose doctors had recommended it.

Almost two-thirds of the women interviewed had told other people (besides their husbands) that they had had the operation (not shown). One-half had recommended it to others. Among those who had not, the main reason was that they considered the matter to be private (48 percent). Other reasons given were that they did not want to be responsible for causing problems in other households (nine percent), did not approve of tubal ligation themselves (five percent) or were afraid of being mocked (three percent). Nine percent of those who had not discussed their tubal ligation said they would provide information if they were asked about it.

Discussion

The findings from this survey constitute one of the first studies on the social and psychological aspects of tubal ligation in Africa. Given the dearth of information on this topic from Africa, there may be a tendency to generalize these results to other countries in the region. We want to emphasize that this is not appropriate, given that the climate for contraceptive sterilization differs greatly among countries. For example, previous focus-group research showed that there is much less acceptance of tubal ligation as a contraceptive method in Zaire than in selected districts of Kenya.[15] However, the present study may reflect social and psychological processes related to sterilization in other cultural contexts.

The results provide a number of insights into the factors leading to and the consequences of tubal ligation for women in Zaire. Acceptors tend to be relatively advanced in the reproductive cycle (with a mean age of 36.9) and have an average of 7.3 living children at the time of the operation. The primary reason women gave for their tubal ligation was their health. Even when probed, less than 10 percent of the women stated that their primary motivation was economic difficulty.

Table 6. Among women who had had a tubal ligation, percentage who experienced regret and odds ratio after multiple logistic regression, by selected variables

Variable	%	Odds ratio
Total	**14.0**	**na**
Age at sterilization		
20–24	50.0	na
25–29	18.8	na
30–34	17.2	na
35–39	11.5	na
40–44	12.2	na
≥45	7.1	na
Education		
None	19.6*	1.0
1–3 years primary	12.0	0.7
4–6 years primary	8.9	0.5
Beyond primary	11.2	0.5
Religion		
Catholic	11.5	na
Protestant	13.7	na
Other	22.0	na
Marital status		
Married/in union	14.2	na
Single	7.9	na
No. of living children		
1–2	22.2***	5.4§,**
3–5	26.6***	§
6–8	12.2	1.6
≥9	7.5	1.0
Attitude toward last pregnancy		
Wanted	18.4***	1.0
Mistimed	11.1	0.7
Unwanted	5.1	0.6
Person who recommended the operation		
Respondent (with or without husband)	5.8	1.0
Medical personnel	25.0***	5.3**
Husband	35.1***	6.1**
Don't know	10.0	na
(continued)		
Had spoken to other woman with tubal ligation		
Yes	9.4	1.0
No	16.5*	1.5
Don't know	0.0	na
Reason for the operation		
Doctor recommended	30.0***	1.0
Health reasons	17.4	2.6
Had enough children	6.6	2.9
Other	5.6	1.4
Don't know	42.9	2.0
Respondent felt pressure		
No	8.0	1.0
Yes	49.2***	2.8
Health status after the operation		
Better	12.8	1.0
Worse**	25.5***	1.7
Same	11.8	1.9
Capacity for physical work		
Increased	11.5	1.0
Decreased	27.0***	1.3
Same	11.6	2.0
Husband's behavior toward wife†		
Changed	40.7***	1.0
Didn't change	12.5	0.4
Husband tried to have children elsewhere†		
Yes	40.4	1.0
No	9.1***	0.3**
Don't know	30.4	na

*Statistically different from other options at p<.10 by Pearson's chi-square test.

**Statistically different from other options at p<.05 by likelihood ratio estimate.

***Statistically different from other options at p<.001 by Pearson's chi-square test.

†Percentages are based on married women only.

§The categories for 1–2 children and 3–5 children were combined for odds ratio analysis.

Note: na=not applicable.

Because female sterilization is relatively new as a contraceptive option in Zaire, less emphasis has been given to the issue of informed consent in that country than in those where the method is widely accepted. Even so, the acceptors in this study did relatively well on two of the three indicators of informed consent: Over 96 percent knew tubal ligation was a permanent method and knew of at least one other contraceptive method.

However, 14 percent of the acceptors reported that they had felt pressured into having the operation, either by their doctors (which may indicate that there were compelling medical reasons) or by their husbands, who are traditionally the chief decision-makers in Zairian households. Future training of health personnel needs to emphasize the informed consent issue. The importance of reviewing alternative contraceptive methods prior to the operation (even if the client says she has already decided on the operation or knows of other methods already) should also be stressed.

The current study confirms the finding in the focus-group research that there is relatively little information on sterilization circulating through either the mass media or informal communication channels of Zaire.[16] Only 40 percent of the acceptors consulted with a woman who had undergone tubal ligation prior to the operation, compared with 80 percent in a similar study conducted among sterilization acceptors in El Salvador in 1984.[17] Moreover, only 50 percent of the Zairian acceptors had recommended the operation to others. In short, until sterilization becomes integrated into ongoing family planning programs and is more widely accepted by the population, the information, education and communication burden falls squarely on the shoulders of the service providers. Future programs in Zaire (and other African countries where contraceptive tubal ligation is just being introduced) must be designed with a strong information-education-communication component to compensate for the scarcity of information available through the mass media or informal communication channels.

In the majority of follow-up studies of sterilized women conducted in Latin America or Asia, the mean number of living children at the time of the operation averaged 3–4, compared with 7.3 in the current study. This confirms Odile Frank's contention that tubal ligation as currently practiced in Sub-Saharan Africa has little demographic impact on that region.[18] It also casts a slightly different light on the issue of choosing to undergo a sterilization procedure. This study does not describe a group of women who deliberately sought out a means of limiting family size to conform to an emerging small family norm. Rather, it describes the experience of a group of women who for the most part had had seven or more live births and who for health reasons believed it was best to stop bearing children. From the vantage point of some societies, this would be an easy decision, but these women live in a society that strongly disapproves of the unnecessary or premature cessation of childbearing.

In general, the women in this study were very positive about their operation. Most reported no change or a change for the better in their health, disposition and marital relations. The large majority were glad they had had the operation. However, the results regarding the 14 percent who had at least some regret over the operation deserve serious attention in future sterilization programs in Zaire. Future training courses should heighten awareness among health professionals that women who do not feel the operation was their own idea are more likely to experience regret. The two main sources of pressure in this study were the husband and the doctor.* Health personnel should be trained to look out for such cases and to provide additional counseling, aimed either at postponing the final decision until the woman is psychologically ready or at assisting her in accepting the reasons offered

*It is ironic that in the previous focus-group research, the husband (and his family) was cited as a barrier to sterilization, whereas in this study pressure from the husband to have the operation emerges as an issue. While this factor is associated with regret, it should be stressed that it was reported by a very small fraction of the total number of women.

by her doctor or husband (which in this study primarily had to do with her own health, not with economic difficulties).

The earlier focus-group research in Zaire indicated the generally negative attitudes that prevail with regard to contraceptive tubal ligation in this country. However, participants in those focus groups who had undergone the operation were generally positive about their experience. The current study provides quantitative results that confirm the favorable experiences of sterilization acceptors expressed in the focus groups.

This study was conducted prior to any systematic effort on the part of the national family planning program to integrate tubal ligation into the ongoing contraceptive services available at the different sites studied. It will be interesting to follow changes in the attitudes of women who undergo tubal ligation as services are expanded and the method becomes more readily accessible.

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Resumen

Según una encuesta realizada entre 1987 y 1988 entre 453 mujeres del Zaire que se habían hecho ligar las trompas, en el momento de la intervención las entrevistadas tenían una edad promedio de 37 años y siete hijos vivos. El 92 por ciento eran casadas. De ellas, el 95 por ciento había consultado al marido antes de hacerse la operación. Sólo el 40 por ciento había hablado con otra mujer que había tenido el procedimiento y menos del 25 por ciento había conversado con otros familiares o amigas sobre la operación. Las dos razones principales aducidas para la operación fueron "salud" y "tengo suficientes hijos". La mayoría de las mujeres dijo que su salud, capacidad física y relaciones matrimoniales no habían cambiado en absoluto, o incluso habían mejorado. Sin embargo, el 14 por ciento admitió cierto arrepentimiento. El sentimiento se relacionaba a haber tenido cinco hijos o menos, haber decidido esterilizarse bajo presión, y creer que el marido había tratado de tener hijos con otra mujer. Si bien las mujeres se manifestaban en general a favor de la esterilización, se mostraban renuentes a hablar abiertamente del tema con amigas y vecinas.

Résumé

Une enquête menée en 1987–1988 auprès de 453 Zaïroises ayant subi une opération de ligature de trompes a établi que ces femmes, en moyenne, étaient âgées de 37 ans et avaient sept enfants vivants au moment de l'opération. Quatre-vingt-douze pour cent d'entre elles étaient mariées et, de ces femmes mariées, 95 pour cent avaient consulté leur époux avant de se soumettre à la procédure. Quarante pour cent seulement des femmes interrogées avaient consulté d'autres femmes qui avaient subi l'opération avant de s'y soumettre elles-mêmes, et moins de 25 pour cent avaient discuté l'opération avec d'autres membres de leur famille ou avec des amies. Les deux raisons principales avancées pour justifier l'opération étaient des raisons de "santé" et de "nombre d'enfants suffisants". La plupart des femmes interrogées ont affirmé n'avoir perçu aucun changement, sinon une amélioration pour certaines, au niveau de leur état de santé général, de leur résistance à l'effort physique et de leurs relations matrimoniales. Cependant, 14 pour cent ont toutefois admis avoir éprouvé un certain regret après l'opération; ce regret était associé au fait d'avoir au plus cinq enfants, le fait de se sentir forcées de prendre leur décision ou à l'impression que leur époux avait essayé d'avoir des enfants avec d'autres femmes. Bien qu'envisageant la stérilisation de manière généralement positive, ces femmes étaient toutefois peu disposées à en parler ouvertement.

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