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The Antecedents, Process, and Consequences of Female Sterilization for Low-Income Women in Mumbai

Marie A. Brault

University of Connecticut - Storrs, marie.a.brault@gmail.com

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The Antecedents, Process, and Consequences of Female Sterilization for Low-Income Women in Mumbai

Marie Amanda Brault

B.A., Grinnell College, 2009

A Thesis

Submitted in Partial Fulfillment of the Requirements for the Degree of
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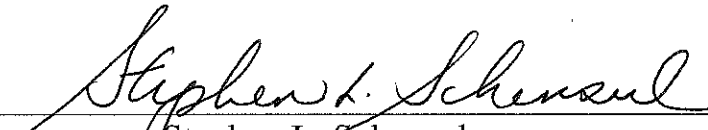
Master of Arts Thesis

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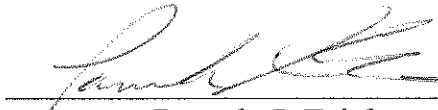
Presented by

Marie Amanda Brault, B.A.

Major Advisor


Stephen L. Schensul

Associate Advisor


Pamela I. Erickson

Associate Advisor


Merrill C. Singer

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Introduction

Multiple factors have contributed to surgical sterilization becoming the primary method of family planning in India among low-income women (Hazarika 2009). First, sterilization, both male and female, has long been the dominant approach used by the government to control population growth because it is permanent and does not require follow-up or adherence. Second, reversible means of contraception have not traditionally been accessible for urban and rural poor. Third, despite the legal requirement that women must be 18 to marry, the majority of women have been married below the legal age, resulting in early childbirth and an equally early need to permanently end childbearing. This pattern has continued to the present, with 60% of women married before the legal age of 18, with even higher rates in low-income urban and rural settings (IIPS 2008). Given the space and economic constraints of the lowest income urban communities, the ideal family size for most families has shifted to a maximum of 3 children. As a consequence, many women reach their desired family size in their twenties and nearly 35% are sterilized before the age of 25.

While there is discussion in the literature regarding post-sterilization medical complications (Pati and Cullins, 2000) and women's post-sterilization regret (Malhotra, et al. 2007), the psychosocial impact of sterilization, particularly sterilization at an early age remains understudied. In particular, there have been few studies that explore the question of how sterilization disrupts a woman's life course, or the impacts of early sterilization on marital relationship, status in the family and community, emotional health, and sexuality. This study examines these concerns and presents the results of an

ethnographic study of the policies, antecedents, and outcomes of sterilization for women in a low-income community in Northeastern Mumbai, India.

An Overview of the Literature and History of Sterilization in India

India's long history with family planning has been discussed at great length in the literature. Some authors, particularly those from India, have tended to view most population policies in a positive light (Srinivasan 1995), contending that population control will lead to greater economic and social development for India. However, authors from the West have tended to view India's population policies more negatively, arguing that population control is coercive and impinges on individuals' human rights (Connelly 2008; Vicziany 1983). Here, a brief history is presented that attempts to incorporate both perspectives on India's population policies. In the 1930's, India's population growth began to increase at a rate that concerned intellectuals, social reformers, Congress party members, and government officials (Srinivasan 1995:15). Members of these groups, who had been educated abroad and exposed to Malthusian theories, returned to India and formed Neo-Malthusian leagues to promote the use of birth control methods and the establishment of family planning clinics (Srinivasan 1995). In spite of this support for family planning, Mahatma Gandhi's opposition to artificial birth control prevented the spread of birth control programs to rural areas. After India gained independence from Britain in 1947, the Congress party government sought to promote economic development by curbing population growth. This entailed the creation of five-year plans that had a direct impact on family planning policies and practices (Srinivasan 1995).

In the first five-year plan (1951-1956), a recommendation was made to reduce birth rates through the provision of birth control advice in clinics and hospitals (Srinivasan

1995). Male and female sterilization also began to be offered in some public medical facilities. The second five-year plan (1956-1961) expanded the number of clinics that could provide free contraceptives and sterilization (Connelly 2006; Srinivasan 1995). Under this plan, incentives were introduced for male and female sterilization acceptors (Srinivasan 1995). At the same time, population planning officials began to focus attention on achieving higher levels of intrauterine device (IUD) insertion. With this emphasis on IUDs, a target, or quota, system was developed for new contraceptive users (Connelly 2006). While initially focused on encouraging IUD usage, targets were also established for sterilization. The targets for sterilization were higher than the quotas for IUD acceptors (Murthy, et al. 2002).

The incentive program was plagued by a number of problems. The payments offered were highly coercive, particularly in famine-stricken regions, where payment for IUD insertion or sterilization contributed to a family's survival (Connelly 2006). In some parts of India, the children of women who were not sterilized could be suspended from school. While proponents claimed volunteerism in sterilization and stated that members of all socioeconomic classes in Indian society adopted sterilization, a profile of most vasectomy acceptors found that they were routinely poor and illiterate (Vicziány 1983).

The target system also rapidly became corrupt, as workers in other government departments sought rewards for motivating sterilization acceptors. These government workers, known as "motivators" would offer women loans and consumer goods, and "trade" possible sterilization cases among themselves in return for a part of the incentives offered to motivators (Murthy, et al. 2002:28-29). To add to the pressure, government

workers who failed to meet their quotas could suffer reduced pay or be fired (Murthy, et al. 2002:26-28; Donaldson 2002:101).

In spite of the policies in place, the quotas for contraceptive use defined in the five-year plans were not achieved. Thus, in the fifth five-year plan (1974-1979), there was a dramatic increase in the incentives and quotas (Srinivasan 1995; Connelly 2008). Many states implemented laws making sterilization compulsory for couples with two to three children. While fertility rates were decreasing more steadily than previously observed, there was immense backlash from the general public against these compulsory sterilization laws (Srinivasan 1995). In spite of the many problems with the target and incentive systems, subsequent governments continued these programs, albeit in a less coercive manner than that observed during the fifth five-year plan (Connelly 2008).

In 1994, India participated in the UN's International Conference on Population and Development (ICPD) in Cairo, Egypt. The conference established a commitment to provide universal reproductive health care by 2015 with the goal of eliminating gender inequities and increasing female empowerment (UN 1994). The conference also emphasized a need for more personalized approaches to women's health, and particularly the unmet need for contraceptives. This commitment to reproductive health necessitated a number of changes in reproductive health policy by member countries, including India (Fathalla, et al. 2006; Donaldson 2002). India shifted to a "decentralized, client-centered approach to reproductive and child health care" (Murthy, et al. 2002:32).

Current Policy

India's current policy utilizes a "community needs assessment" approach that emphasizes localized development of women's health and family planning services,

rather than the national policies and targets in place prior to this shift (Murthy, et al. 2002). Health workers conduct needs assessments for the individual communities in which they work, thereby soliciting input from members of the communities. The services provided are based on the needs identified in the assessment. There is also an emphasis on prescribing contraceptives tailored to the needs of the individual client.

Targets still exist in the current system; however they are related to broader goals of reproductive and child health, rather than population control (Murthy, et al. 2002). Monetary incentives are also still provided to sterilization motivators. In the new system, motivators are individuals who convince a woman to undergo sterilization, and may be community health volunteers or NGO workers rather than government employees. If the sterilization occurs in a public facility, the procedure is free, and incentives are offered to the acceptor. Incentives are also offered for acceptors of IUD insertion, but the government continues to offer greater incentives for surgical sterilization. Incentives are also higher for acceptance by individuals Below Poverty Line (BPL; National Population Stabilisation Fund Website 2010). No incentives are provided to the acceptor if the procedure occurs in a private facility.

Most sterilizations in India, particularly for low-income, rural women, have occurred in government sterilization camps. Sterilization camps are temporary facilities set-up in a variety of locations ranging from hospitals to schools (Koenig, et al. 2000). While the main focus of sterilization camps is to provide female sterilization, these camps also provide family planning counseling. The sterilization procedures are typically outpatient. Women remain at the camps for a few hours or less in a postoperative recovery area (Koenig, et al. 2000). The quality of care in these camps has long been suspect, with one

report of 40 to 50 sterilizations an hour performed by one camp surgeon (Mehta 1989). Koenig, et al. (2000) describe substandard conditions in sterilization camps. These include a lack of clean water and electricity in the operating rooms and inadequately sterilized instruments. Accordingly, the conditions in these camps have been criticized and the Indian Ministry of Health and Family Welfare (MOFW; 2008) now provides a “Standard Operating Procedures” manual to ensure that quality is maintained in the camps. However, it is unclear whether evaluations are conducted to ensure that standards are followed.

In spite of the recognized need for more accessible contraception options (Hazarika 2009; Thind 2005), in urban, low-income communities access to primary healthcare for issues unrelated to pregnancy and child health is often difficult to obtain (Schensul, et al. 2006). Thus, women in these communities may have limited access to reversible contraception, making sterilization the only viable option for family planning.

The two most common procedures for female sterilization are via laparoscopic and minilaparotomy techniques (Pati and Cullins 2000; Melville and Bigrigg 2008). In both procedures, the fallopian tubes are either clamped with a band or ligated and excised (Pati and Cullins 2000; Melville and Bigrigg 2008; Ryder and Vaughan 1999; Jack and Chao 1992). Laparoscopic sterilization is performed using a very small incision (approximately 5mm) and is considered to be one of the safest elective surgical procedures, with a very low complication rate (Pati and Cullins 2000). The minilaparotomy procedure is performed using a larger incision (5cm or less) and is also considered to be quite safe, with only marginally more complications reported than the laparoscopic procedure (Melville and Bigrigg 2008). However, the medical complications for the laparoscopy

procedures are typically more serious than the minilaparotomy (Pati and Cullins 2000). Thus, from the biomedical perspective, either procedure is a safe and effective means of permanent contraception.

Building on this background, the aims of this study are to:

1. Describe the structure and organization of the current female sterilization program,
2. Identify the decision-making process of sterilization for low-income women in urban low-income communities,
3. Document women's experiences of the sterilization procedure, and
4. Delineate the personal consequences of sterilization for women.

Study Community and Methodology

The research was conducted in an urban slum community of approximately 700,000 people, consisting of Muslims (54%), Hindus (43%), and a small percentage of Buddhists and Christians. Slum dwellings vary in type, including *pucca* (permanent or organized structures constructed of concrete that include floor, walls, and roof), *semi-pucca* (partly concrete but supplemented with "found materials", such as corrugated metal sheets, plastic tarps, or wood, sometimes with a dirt floor), and *katecha* (consisting primarily of "found materials"). Almost 90% of the dwellings consist of one room, with a small section reserved for cooking and bathing. Average household income is approximately US \$75 per month. For health care needs, members of the community have access to a public, Urban Health Center, two health outposts, NGOs, and a wide variety of private practitioners, primarily non-allopathic (e.g., ayurvedic, unani and homeopathic). In addition to these primary care services, there are four governmental, or

Brihanmumbai Municipal Corporation (BMC), hospitals relatively near to the community (Schensul, et al. 2009).

In the first stage of the research, the statistical software package SPSS 17 (SPSS Inc. 2008) was used to conduct bivariate statistical analyses on two available datasets from low-income communities in Mumbai. These datasets are the Female-Baseline Survey Instrument (F-BSI) and the Women's Structured Survey (WSS) from the ongoing International Center for Research on Women-RISHTA (ICRW-RISHTA) project. The F-BSI is a dataset generated from an NIH-funded project on married men's and women's HIV/STI risk (Schensul, et al. 2006). In this study a survey was administered to a random sample of married men (N=2,408) To generate the survey data for the F-BSI, a random sub-sample of men whose wives were living in the household was selected. The F-BSI survey instrument was administered from February-June 2004 to a sample of 260 married women. The WSS (N= 1126) is a dataset generated from an ongoing intervention providing women's health services and counseling to reduce STI/HIV risk in the study communities. The sample was obtained from women who attend the Urban Health Centre, and the WSS is administered at baseline prior to the intervention, and at six-month and one-year follow-ups during and after the intervention. These statistical analyses both helped to inform the questions to be explored in the ethnographic phase, as well in supporting the ethnographic findings.

In the ethnographic component, three different types of interviews were conducted: key informant, open-ended, and semi-structured. Key informant interviews (N=14) were conducted with medical providers, both public and private, field staff from an NGO, government doctors involved in family planning policy, and staff at ICRW in

Mumbai. These interviews focused on learning more about family planning and sterilization policy, as well as the logistics of the sterilization procedure.

During the next stage of the research, open-ended interviews were conducted with women who had been sterilized (N=14) and men married to women who had been sterilized (N=8). The unstructured interviews focused on learning more about the antecedents, process, and consequences of sterilization. Findings from these interviews, the key informant interviews, and review of the literature informed the construction of the semi-structured interview guide that was used to conduct interviews with sterilized women (N=23). A sampling frame with the parameters of religion (Hindu or Muslim) and years since sterilization (less than five years or more than 5 years since the operation) was used for the semi-structured interviews. Key informant interviews were primarily conducted in English. All other interviews were conducted in English with Hindi or Marathi translation. All interviews were recorded with a digital recorder, transcribed into English, and analyzed for major themes and patterns of consistency and variation.

In the following section, the sterilization policies and the ways in which these are implemented in Mumbai are described based on the findings from the qualitative data collection. Women's experiences with the operation are also examined.

Results

Sterilization facilities in Mumbai

In Mumbai, the minilaparotomy is available in all Brihanmumbai Municipal Corporation (BMC) Hospitals. Laparoscopic sterilization is available at many public hospitals, although some of the smaller institutions are unable to provide this option. Most of the women in this study underwent sterilization at public facilities. Public

facilities are favored by low-income women for two reasons: the government pays for sterilizations in these settings and generally provides women with a one-time monetary incentive on completion of the operation. Women who undergo the procedure in a private facility generally do so because they believe the quality of care in government facilities is poor or they have been referred to a specific private facility by family members or an NGO. There is one private hospital, operated by an NGO, in which some of the women in the study areas have been sterilized, with the cost of the operation waived by the NGO. Women who undergo sterilization at this facility do not receive an incentive.

The standard operating procedures for sterilization

The Indian Ministry of Health and Family Welfare (MOHFW) has produced a manual, “Standards for Female and Male Sterilization Services” (2006) that presents the standards for sterilization to be used at all government facilities, including camps. The manual’s first section outlines an extensive process that includes: counseling, preoperative medical assessment, preoperative instructions, review of the surgical procedure, and post-operative care. In the counseling component (to be done in a language understood by the patient), the practitioners are given a list of topics that they must address before the consent form is signed. The topics are: informing the patient of all available methods of family planning, voluntary decision to undergo sterilization, and a description of potential side effects and complications and what will occur before, during, and after the surgery. Physicians are told to remedy any misconceptions a patient may have about the procedure and encourage patients to ask questions. Patients are also supposed to be informed that they may refuse sterilization without losing access to other reproductive health services.

After the counseling is completed, the physician may then move to the clinical assessment and screening of the client. This step is to determine whether the patient is eligible for the procedure and to identify any possible risk factors. A woman is eligible to be sterilized if she: is married, between the ages of 22 and 49, has at least one child that is at least a year old, does not have a spouse who is also sterilized, and is of, "sound state of mind". In the case of mentally ill patients, this is certified by a psychiatrist. The physician obtains this information by patient self-reporting. Physicians also conduct a physical examination that includes a pelvic exam, and send blood for hemoglobin testing and other tests if indicated. Once the woman completes these tests and signs the consent form, the operation can proceed. The manual states that consent should not be obtained under coercion or when the patient is under sedation and that the patient must sign the consent form before the surgery occurs.

The manual also provides guidelines for preparation of the operative site and the local anesthesia to be used during the procedure. Requirements for the surgical techniques to be used in the minilaparotomy and laparoscopic procedure are outlined briefly. The patient is to be monitored for at least four hours post-operation, during which time her vital signs are monitored, and she is encouraged to pass urine, walk, drink, and talk. The patient should also be evaluated by the doctor and the manual strongly recommends that, if necessary, the woman remain at the sterilization facility overnight.

Upon discharge, the patient is provided with a card that includes the name of the institution; the date, type, and method of surgery; and the date and place for follow-up care. The woman is advised to resume light work after 48 hours and full activity by two weeks after the operation. She is also told that she may resume sexual activities "one

week after the surgery, or whenever she feels comfortable". Unless there are complications, the woman has three follow-up appointments. The first follow-up is done either in the patient's home within 48 hours after the surgery with a female health worker or the patient reporting to the facility via telephone. The second follow-up (a week following surgery) is a medical check-up in which the stitches are removed. The third follow-up is done one month post-operation or after the client's first menstrual period, whichever is earlier. At this third follow-up visit, the woman receives a certificate of sterilization. Women are also instructed to report to the sterilization facility if they experience any complications. The most common post-operative complications listed in the manual are: wound sepsis, hematoma in the abdominal wall, intestinal obstruction, paralytic ileus, peritonitis, tetanus, and incisional hernia. The manual states that psychological problems such as depression, menstrual irregularities, and chronic pelvic inflammatory disease (which presents as lower abdominal pain) are *not* related to sterilization.

The variable implementation of sterilization protocol in Mumbai

These guidelines describe the methods to be followed for sterilization. However, both physicians and women who have been sterilized report that many of these guidelines are not followed, particularly in the pre- and post-operative periods. The BMC doctors interviewed reported that the best time to motivate a woman for sterilization was immediately after giving birth, with one explaining that, "*during the five days of stay in the hospital, post-delivery, they are well-motivated to go for sterilization.*" One physician, conducting a training session with other physicians, recommended motivating women for sterilization and IUDs while she was in labor:

You should try to do consent and counseling in the labor hall. Talk to her during delivery. The patients get motivated better during labor and delivery because that is the most painful part of it, and they will be more likely to accept.

This motivation for sterilization immediately following, and in some cases, during delivery is counter to the guidelines that consent should not be obtained under coercion or when a patient is under the influence of sedatives. In addition, all the physicians interviewed emphasized the need to motivate patients for sterilization rather than discussing other contraceptive options. One BMC physician felt that encouraging condom use was ineffective in the low-income population that his hospital served:

They are not using the condom at the right time. It is an instinct. If you cannot put a condom at the right moment, it will not help you for family planning. And, for those who are illiterate, they will be 100% failures in using the condoms.

Deviations from the procedure manual also occur in the information provided to women during the informed consent. Most (25/37) of the women interviewed stated that doctors and nurses provided little to no information regarding the sterilization procedure, and they learned about the procedure from other community members, family members, and NGO workers. These information sources led to discrepancies in women's knowledge of the procedure that were often not remedied by the medical staff performing the surgery. This lack of information is particularly frequent with the laparoscopic procedure, leading some women to decide against this type of sterilization. The two primary beliefs concerning the laparoscopic procedure are that it is ineffective and, if done in a setting with unreliable electricity, may lead to the death of the woman:

There is a risk with the laparoscopic, if the electricity goes out, then it's a problem for the patient. If I lose my life from this, then what? So, my mother-in-law suggested that I go for the laparotomy. My mother-in-law also said that, with laparoscopy, there was the risk that I might conceive another child.

Three women were not even aware of the type of sterilization procedure that they would undergo, and remained unaware even after the procedure had been completed. One woman stated,

I didn't know anything about it. They took me, and gave me anesthesia, and then afterwards, when I was called back to the hospital to get the stitches removed, then I was told that it was laparotomy. I didn't know anything about what type of operation it was.

Most women were accompanied to the hospital by their husband and sometimes, their mother or mother-in-law. Depending upon the procedure and types of testing, women might be admitted to the hospital in the morning, have the tests performed, undergo the procedure, and return home that evening or the next morning.

Several women, particularly those without support from their families or prior knowledge of the sterilization procedure, described the anxiety they felt prior to the operation:

Respondent: Nobody told me anything about the operation, but I had that fear.

Interviewer: What fear?

Respondent: I had that fear, what will the doctors do to me when I get to the operation theatre, because I didn't know anything about the operation.

Frequently, women were not even asked which procedure (laparotomy or laparoscopy) they would prefer. Women stated that if doctors spoke to them at all it was to tell them not to worry, prior to administering the anesthesia.

It is also unclear whether physicians are informing clients that sterilization does not protect against HIV/STI. Most women with husbands who used condoms before the operation ceased using them after the operation, because, as multiple (5/37) respondents stated, *"I have had the operation, so why use them [condoms]?"* Based on these

interviews, it appears that women are not receiving adequate information regarding family planning options and what the procedure entails before they have the operation.

After the operation was completed, the length of stay in the hospital was dependent upon the type of operation and how quickly the woman recovered. In general, women require longer hospital stays with the laparotomy procedure. With the laparoscopic procedure, women may be able to leave the hospital the same day. For the women in this study, hospital stays after the procedure ranged from a few hours to 7 days. Upon discharge from the hospital, some women received pain medicine and instructions, whereas others did not receive anything. Women generally returned home in rickshaws, taxis, or buses, and the cost of transportation was not subsidized by the hospitals.

The most common immediate post-operative complications were: pain at incision site, all-over aches and body pains, weakness, and pain from injection of the anesthetic. These symptoms appeared to be minor and were typically gone within a month post-op, although some side effects did not subside.

The post-operative period rarely conformed to the procedure manual guidelines. According to the head of the Family Planning Department at the BMC, the current incentive provided to women undergoing sterilization is 600 INR for women who are Below Poverty Line (BPL) and 250 INR for women above the BPL. Based on interviews with physicians and patients, this standard incentive rate is not followed at all BMC facilities. One doctor at a government facility stated that they gave sterilized women 500 INR, while another physician stated that the incentive rate was 1000 INR. Women who were interviewed reported having received amounts varying from 100-1300 INR, with some women receiving no incentive for sterilization. According to BMC policy,

motivators receive 150 INR. One BMC doctor interviewed said that family members and the patient herself may also be eligible for the motivator incentive, however two other BMC physicians stated that motivators could not be related to the patient.

The information and follow-up provided to women after the operation was also variable. Most women were instructed to refrain from heavy lifting or work for a few days after the operation. Women were also told to abstain from sexual activities, but the recommended time period varied from a week to three months. For follow-up, some women received a phone call asking them about their status a week after the surgery, while some women had to return to the hospital for a check-up and to have stitches removed either 7 days or 1 month post-operation.

Antecedents of Sterilization

The decision-making process for female sterilization is often complex and almost always involves the woman's husband and family members. Based on the findings of this study, the three primary reasons women undergo sterilization are: the financial hardship of having more children, lack of knowledge, failure or dislike of other contraceptive methods, and a history of health problems and early, difficult pregnancies. Women frequently cite their husband's income and the expense associated with raising a child as a strong impetus for undergoing sterilization, especially if they feel that they have reached their ideal family size,

My husband is not a permanent worker, and you see, so many things have become so costly. How is it possible to bear more than two children? So, I decided to get myself sterilized.

Many (7/37) sterilized women believed that, given their economic situation 2-3 children is an ideal family size, reiterating the common promotion that, "a small family is a happy

family". For some women (7/37), economic difficulties were compounded by their husband's alcohol habit. Additionally, these women reported more instances of forced sex (both before and after the operation), indicating that sterilization may also be helpful in controlling family size when women lack control over their bodies.

While women believe that 2-3 children is the ideal, several (11/37) women interviewed had exceeded their ideal family size due to lack of knowledge of temporary contraceptive methods, contraceptive failure, dislike of available contraceptives or uneven use and/or misuse of contraceptives. Women, particularly those who have migrated from rural villages in the impoverished northern states of Bihar and Uttar Pradesh, often state that they were unaware of temporary contraceptive methods. The following statement is from a woman who emigrated from Patna, Bihar and was sterilized after 4 children and 3 abortions:

I did not use any contraceptive for spacing between the first two children. We did not ever use condoms, either before or after the operation. I was in the village, and my husband was here, so there was naturally a gap between the first two children. I was not aware of the contraceptives. I had no TV in the village, and no information. My relatives also didn't talk about all this. That's why I never used anything.

Table 1 shows the frequencies for contraception methods ever used by the women in the WSS. Similar to the woman quoted above, 9 (24%) women in the sample reported at least one medically terminated pregnancy (MTP) prior to sterilization. Given that 24% of women in the WSS also reported at least one MTP, it appears that women in this community may use MTPs as a form of contraception, at a higher rate than sterilization (used by 11.5%).

Table 1: Contraceptive usage in the study area from the WSS.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Nirodh/Condom	197	19.3	37.6	37.6
	Copper-T/IUD	117	11.5	22.3	59.9
	Female Sterilization	117	11.5	22.3	82.2
	Oral Pills	68	6.7	13.0	95.2
	Withdrawal	17	1.7	3.2	98.4
	Safe period	5	0.5	1.0	99.4
	Male Sterilization	1	0.1	0.2	99.6
	Others	2	0.2	0.4	100
	Total	524	51.4	100	
Missing	System	496	48.6		
Total		1020	100.0		

Although any type of contraceptive (IUD, pill, patch, or injection) is available in the private sector, the government only offers one type of IUD and birth control pill. Modern IUDs, such as the hormone-releasing types and the copper-T 380A, are considered a very feasible option for women wanting to limit family size due to their low failure rate and the ease with which they can be inserted and removed (Grimes 2000). However, there are no hormone-releasing IUDs, and only one form of copper-T IUD available to low-income women in Mumbai. Women in the qualitative interview sample who have used the copper-T (9/37) reported many side effects, including excessive bleeding, discomfort, and *safed pani* (white discharge):

I suffered a lot when I had the copper-T inserted, and he [respondent's husband] had to pay a lot of money for it. I used to menstruate for 20-25 days. And, after removing the copper-T, I had this white discharge problem. White water (safed pani) is so important for the health, and if everything goes out, then what?

Some of the women (4/37) in the sample had tried the only birth control pill available, mala-d, but had also been dissatisfied with it. Common complaints regarding mala-d were that it causes weight gain, and that it must be taken everyday to avoid pregnancy.

Providers are also hesitant to prescribe the pill, as the type available at no cost is contraindicated for women who are breastfeeding.

Condoms are the other primary form of contraception used in this community. Several women voiced a preference for condoms, but were unable to convince their husbands to use them. As one participant stated,

Because my husband works in the auto line, he gets free condoms, but he is not interested in those things. If he would have used that, I would not have gone for sterilization.

Forty-seven percent of the women in this community married before the age of 18, and the mean age at first pregnancy is 19. Early marriage and childbearing leads many women to reach or exceed their ideal family size at an early age. Several women state that they felt it was necessary to get sterilized because they had started conceiving “too early”, meaning that they married young, and began having children immediately. As one woman explained, “*My husband and myself, we decided to go for the operation. I began conceiving too early, and every year, like. So, it was better that I got sterilized.*” The data from the F-BSI further supports a negative correlation between age at first pregnancy and sterilization ($r = -0.211$, $p = .001$). This correlation suggests that, as age at first pregnancy decreases, sterilization is more likely to occur.

For Muslim women, the decision to undergo sterilization was particularly difficult, as they viewed their religion as forbidding contraceptives, and women reported that they were told that if they get sterilized, they will, “go to hell”. Muslim women who decided to be sterilized reported that health problems and previous high-risk pregnancies were more culturally acceptable reasons for undergoing sterilization. The husband of a

sterilized Muslim woman also used physical health to justify motivating his wife to get sterilized:

Many people still question me, but I give them the explanation that it was because of health problems that we went for the operation. People asked my wife also, if her husband forced her to have the sterilization operation, but she said no, there was no force.

While the rationale given for sterilization suggests that women are forced to undergo sterilization, most (35/37) of the women I interviewed felt that they were central to the decision-making process, and only two women felt forced to undergo the operation. Several women initiated the decision-making process with their husbands and family members, seeking information on the operation from others in the community and then asking their husbands for permission. Most women stated that the decision to be sterilized was made jointly, with input from their husbands, although a few women had to spend considerable effort to convince their husbands to consent to the procedure. One woman underwent sterilization in spite of her husband's and family's opinions:

I had heard about the operation from my mother and mother-in-law, but they didn't want me to go for the operation, because they hadn't undergone sterilization. But, I wanted to go for it. My mother and mother-in-law said, God has given you all this, so why do you want to stop it? I decided in the beginning that I would have two sons and two daughters. First time, I delivered a baby boy, then I delivered a baby girl, third time I delivered a baby girl. Then, my husband was tensed that we only had one son. You have to give so much dowry to the girls, so I was waiting for one more son. When I delivered a son, I decided, now I am going for sterilization. I did not tell anyone that I was going for sterilization until after. When I came back home, all my relatives came, and wanted to know why I didn't tell them anything about sterilization. So, I told them, if I had said anything about sterilization, I know it would not have been possible to go for it.

Family members often offered advice to couples considering sterilization, and might encourage a woman to undergo the operation to prevent the economic burden that additional children would create. One woman described the decision-making process thus:

Interviewer: Who decided to go for the operation?

Respondent: I decided to go for sterilization, and I discussed it with my husband and my mother-in-law and they said it was fine and then I took the decision that I would go for sterilization.

Interviewer: Why did you decide to have the operation?

Respondent: My mother suggested that I go for sterilization. She said that, your children will not have a bright future if you have many children, and that's why I decided to go for it.

Encouragement from family members was often welcomed by women contemplating sterilization; however there was one instance, in which a woman felt that her mother-in-law “forced” her to undergo sterilization, resulting in negative consequences.

Consequences of Sterilization

The domain of sterilization consequences has yielded a mix of positive and negative outcomes for women, both in the qualitative and quantitative data. For most women, sterilization has neutral health impacts. However, a subset of women in this study suffers from a number of long-term health complaints. Six women reported changes in menstruation, including decreased bleeding, increased bleeding, and irregular menses. Possibly related to increased bleeding, three of the six women reported increased weakness and *kamjori* after the operation. *Kamjori* refers to a series of bodily complaints, including general pain, headaches, dizziness, and decreased energy (Kostick, et al. 2010). One of the women with increased bleeding and weakness had been receiving treatment for the problem at a private practitioner in her community. One woman had incisional pain, and felt that this made it more difficult for her to do work around the house. Another woman had abdominal pain since the operation. She went to a private practitioner who told her that the operation caused swelling in her abdomen, which was

causing the pain. The woman was receiving treatment for her abdominal problems when I interviewed her and felt that her health was much worse after the operation. For the rest of the sample, there were no long-term physical side effects from the operation.

Additionally, all of the women who had physical health problems stated that they did not regret undergoing sterilization, and would do it again.

Most of the women in the qualitative sample reported improved emotional health after the operation, confirming the positive correlation between sterilization and emotional health ($r=0.165$, $p=0.002$) from the WSS dataset. Most (27/37) of the women interviewed reported less *tenshun* as a result of the operation, because they no longer had to worry about getting pregnant again and being faced with the choice of either having an MTP or another child to provide for. *Tenshun* is an illness category similar to the Western notion of “stress” (Kostick, et al. 2010). In general, women felt a great deal of anxiety over the possibility of conceiving more children, and felt that sterilization was the only option that almost completely removed this stressor. A common sentiment, voiced by one woman, was:

I am free now, no tension at all after the operation. Already, I have three children, and then I have that tension, and then I have the tension that I have to go near [sleep with] my husband and all. So, it is better that I have got myself sterilized and now have no tension. I had this fear, before the operation, that if I go close to my husband, I will conceive. But now, I have nothing to think about it, when I go near to my husband. Now, I am free.

While most of the women interviewed had improved emotional health post-sterilization, there was a subset (5/37) that reported increased *tenshun* after the operation. Three of the women attributed their increased *tenshun* to concerns over their poor health. None of these women attributed their poorer post-operative health to the procedure; yet, they reported increased “weakness”, and more health problems after the operation.

Ultimately, they were happy with the sterilization, but felt that their emotional health was poorer as a result of their health problems. For the other two women who had increased *tenshun* post-sterilization, this was a consequence of undergoing sterilization before they were ready. One woman reported that, a doctor told her that it was medically necessary that she undergo sterilization after the birth of her second daughter due to the health risks associated with bearing another child. She has since been ostracized by community members, her husband, and her husband's first wife:

He [her husband] says that he doesn't love me at all now, because if I hadn't gone for sterilization, maybe I would have conceived one more child, and I would have delivered a baby boy. And, that's why he is not good with me, and he doesn't talk much with me. The first wife also tortures me, saying, what have you done, delivering two daughters? You have not anything so great, delivering two daughters. Even my daughters say that they should have had one brother, so that after their daddy, if anything happens to him, somebody is there to look after them. He would have grown up and become something, and he would look after them. So, I am too tensed, when even my daughters talk like this.

The other woman in this group was forced by her mother-in-law to undergo sterilization at the age of 19, immediately after the birth of her second child, a daughter. This woman was uncertain as to why her mother-in-law was so adamant that she undergo sterilization. Her daughter died at a year old, and she has since regretted undergoing sterilization. This stress, in addition to comments from community members and her young son, contributed to her increased post-sterilization *tenshun*:

Before the operation, I had no tenshun, but after the operation, I am tensed because I lost my daughter, and my son is five years old, and he remembers his sister all the time. And, he tells me, you left my sister in one of the hospitals, so you better go and get her back. And, then when he remembers this, he starts crying. He says, you look only for yourself and you are not worried about my sister. And, maybe she's grown up now, so you should go and get her. So, we both remember. My daughter's name was Nandini, and my son says, why don't you get Nandu back home again from the hospital. So, this is very emotional for me, and makes me very tensed.

In addition to the *tenshun*, both of these women regretted undergoing sterilization, and would like to have the procedure reversed, although neither believed that this was likely to occur. In spite of these two instances of post-sterilization regret, the emotional impact was largely positive for the women in my sample.

While many (16/37) women believe that sterilization effectively ended their childbearing responsibilities, there were a few (3/37) women who were less certain about the efficacy of the procedure. For this subset, there continued to be some anxiety over the possibility of conceiving a child, and therefore some anxiety over the resumption of sexual activities with their husbands. The rest of the women in the sample did not comment on the efficacy of the procedure. A few (3/37) women with physical health problems that they attributed to the operation also became less interested in sex and reported decreased frequency of sex. Several (11/37) women felt less anxiety over sex, and stated that they enjoyed sex more after the operation. For many women, this increased sexual enjoyment was largely related to the fact that they could no longer conceive. As one woman explained, "*I enjoy sex more, now after the operation, because I don't have that fear of conceiving another child. So, I am happy about that.*" This lack of sexual anxiety women felt after sterilization may explain a belief described to me by two interview participants who stated that their husbands and other men in the community believed that sterilization made women more likely to engage in extramarital sex.

Most women reported that their husband's interest in sex remained unchanged after the operation, although one woman found her husband less interested in sex after her operation. Two women reported increased violence and forced sex in the brief post-operative period when doctors told them to abstain from sexual activities. One of these

women resolved the issue by explaining to her husband that she was unable to have sex due to the operation. The other woman (sterilized a month prior to the interview), planned to return to her native place, because her husband had become increasingly violent over her refusal to have sex with him. Two of the women who had undergone sterilization without bearing sons, believed that sterilization has increased the likelihood that their husbands will engage in extramarital sex. The husbands of these women were largely displeased with their wives' decisions to undergo sterilization, indicating another potential consequence of sterilization before the ideal family is achieved.

Beyond the impact on sexual relations, the general marital relationship remained largely unchanged for most women. One woman, a Muslim, reported that her husband allowed her greater mobility (to leave the house when she wanted without asking permission) than before the operation, although she said that she still asked his permission. Another woman also felt that she had somewhat greater mobility after her sterilization. One woman with multiple health problems after the operation said her husband was feeling very stressed because of her health problems and stopped sleeping at home. Otherwise, women felt that communication, mobility, and gender roles within the home had remained unchanged after the operation.

With respect to a sterilized woman's status in her family, family members were generally very supportive of the woman's decision. In the two cases where women were sterilized, in part, due to their husbands' drinking problems, the women's mothers-in-law strongly encouraged these women to have the operation. Two women were having trouble with their mothers-in-law, because they were sterilized after giving birth to only two children (in one case, the woman had two daughters, in the other, the woman had two

sons). The mothers-in-law felt that the women should have continued trying for a child of the other gender. However, neither of these women lived with their mother-in-law, thus their mothers-in-law's opinion did not seem to cause them any *tenshun*.

Changes in reputation after sterilization were particularly relevant for Muslim women, as they faced a lot of questions and disapproval from other members of their communities. One husband described the community's response to his wife sterilization,

People came and asked us, why have you done this operation, there is no problem with more children, and they gave their own examples, that they had several children, and we're still ok.

He further explained that community members continued to question him and his wife for months after the operation, and asked his wife if she had been forced to have the operation. Thus, both the husband's and wife's reputations in the community suffered as a result of her operation. The negative opinion community members hold of sterilized women created a challenge in recruitment of Muslim participants for this project. Many women were unwilling to admit that they had been sterilized. One of the respondents had never told anyone outside of her immediate family that she had been sterilized. In spite of the stigma attached to sterilization for Muslim women, a few of the respondents stated that they have been working to change the opinions of their neighbors.

For Hindu women, there was rarely community disapproval of sterilization. Respondents found that neighbors were supportive of their decision, and sometimes encouraged other women to get sterilized. Two Hindu respondents had neighbors criticize them for getting sterilized without trying to have more male children.

Discussion

The antecedents and process of sterilization reveal that while sterilization policy in Mumbai is not as coercive as it once was, structural factors continue to contribute to a women's decision to undergo surgical sterilization. Critical Medical Anthropology (CMA) provides a structural perspective on women's contraceptive choices (Baer, et al. 2003; Scheper-Hughes 1990; Singer 1990). The CMA framework examines health through the context of the political and economic factors that shape social relations. The Indian government, since Independence from Britain, has believed that population control is necessary for India's economy to develop. This political and economic legacy of population planning policies in India has resulted in a healthcare system in which sterilization continues to be encouraged as the only effective form of contraception for low-income women. The health care system has little confidence that women will successfully use reversible means of contraception, and therefore does not emphasize these forms of contraception. This makes obtaining and using alternative contraceptives difficult and contributes to the decision to undergo sterilization. Without knowledge or access to alternative contraceptives, many women in the study area reach or exceed their ideal family size at an early age. With limited economic resources to support additional children, women frequently undergo multiple MTPs and ultimately sterilization to control family size.

The process of sterilization and the discrepancy between policy and practice reveal some of the structural obstacles women must overcome to have the operation. Although attempts to standardize the sterilization procedure have been made, it is clear

that they are not always followed, resulting in anxiety and expense for the women undergoing the operation.

The concept of empowerment as described by Kabeer (1999) provides a way to understand how women perceive the more positive aspects of sterilization. Here, empowerment is defined as the process through which individuals traditionally denied decision-making power, gain the ability to make choices regarding their lives (Kabeer 1999). Sterilization, from the perspective of women who have this procedure, represents an empowering experience. In spite of the structural constraints that encourage sterilization, many women state that they felt free, rather than forced, to make the decision to undergo sterilization. After the decision is made, the sense of empowerment remains, as women report greater emotional health related to their new ability to control their reproductive health. This empowerment has several long-term consequences. Many of the women in this study have improved sexual relationships, as they no longer fear conceiving unwanted children. Some women also report improved mobility. For some Muslim women this empowerment manifests itself when they use their experience to educate other women on family planning and change community opinion. The positive outcomes experienced by many of the women in this study suggest that sterilization is positive, but does not represent a major life course transition (George 1982), similar to marriage or menopause, for a majority of women. This study also does not find that sterilization always advances a woman's status, as has been reported by Saavala (1999).

With respect to the negative impacts of sterilization, the literature has primarily focused on psychological and medical problems associated with sterilization. A previous study from India found that the most predictive factor for post-sterilization regret was

age, with women sterilized under age 30 experiencing greater regret than women sterilized at age 30 and older (Malhotra, et al. 2007:189). Other factors that were predictive of post-sterilization regret were fewer living male children at sterilization and greater involvement of husband in the sterilization decision. The factors contributing to regret and *tenshun* for women in the study areas are largely consistent with the factors contributing to post-sterilization regret in Malhotra, et al. (2007). One contributing factor that is not consistent between the two studies is age at sterilization. Malhotra, et al. (2007) find that women sterilized under the age of 30 are more likely to regret sterilization than those sterilized after the age of 30. The majority (28/37) of the women in this study were sterilized before the age of 30, yet only two women reported regretting their sterilization. For the women in the interview sample, the emotional impact is largely positive, an outcome that has been rarely reported in the literature from India.

This project has a few limitations. First, the data presented from the perspective of sterilized women is based on a relatively small sample (37) of sterilized women. Second, given the sensitive nature of sterilization, there is likely self-selection bias in the sample—only those women willing to speak with me about sterilization consented to be interviewed. Due to this hesitation, the study may be missing other key antecedents and impacts of sterilization. In addition, while I attempted to interview women along a continuum from one month post-procedure to 21 years post-procedure, 54% of the women I interviewed had been sterilized within the last five years. Thus, this study may be lacking some of the long-term impacts of the operation. In particular, the area of post-sterilization sexual behavior may warrant additional study. As noted, family planning policy has dominated reproductive health concerns, and led many to consider condoms

only as a contraceptive rather than to prevent STIs/HIV. In addition, the discouragement of condom use by OB/GYNs, and the potential changes in sexual behavior after sterilization may contribute to sexual risk.

This study suggests that the implementation of the sterilization program needs more monitoring to produce adherence to the procedure manual in the sterilization process as well as wider outreach for information, education, and access to reversible contraceptive methods. Public health efforts have attempted to spread information regarding temporary contraceptives to all areas of India, but respondents in this project reveal that there are clearly gaps in many women's information. Women also need to be provided with complete information regarding the various sterilization procedures offered to enable women to make an informed decision regarding the operation. Follow-up and incentives should also be standardized.

This study reveals the antecedents, process, and consequences of sterilization for low-income urban women that result in largely positive experiences. While women face many structural constraints that promote sterilization, they are often the ones making the decision. Much has been done to improve the quality of the family planning and sterilization programs in India, but it is clear there is still much more work to be done. With more effective contraceptive options, and expanded reproductive healthcare access, family planning, including sterilization, can be an empowering experience for many more low income women in India.

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