
GOVERNMENT OF KERALA

A STUDY ON THE AFTER EFFECTS OF STERILISATION

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1. INTRODUCTION:

Kerala which lies in the South-west corner of India is a problem State as regards the rate of population growth and density of population. A good number of Family Planning Centres have been opened in different parts of the State with the object of disseminating the necessary know-how to people desirous of adopting Family Planning methods and providing other facilities in this regard. The necessity to limit families to moderate sizes so as to enable the parents to bring up their off-springs in a befitting manner, providing them with good food, education and other amenities of life has been realised by most sections of the people and the idea is gradually percolating to the less educated and poorer classes. The sterilisation operation performed on males and females for permanent stoppage of child birth is becoming popular among couples with three or four children.

Based on the data on 7592 married men in six rural localities around Poona City Kumudini Dandekar (1)** has estimated, (i) the effect of male sterilisation on the annual birth rate, (ii) the total number of such sterilisations that will have to be performed, if a programme was adopted for the country as a whole and (iii) the total number of sterilisations that will have to be conducted periodically. She has also studied the effect of putting an upper and lower limit to the age of the sterilised. Jhaver P.S. (2) has studied the sterilisation in the male for spacing of child birth. The legality of sterilisation has been discussed in the British Medical Journal in November 1960 by its legal correspondent (3). In the Journal of the American Medical Association (February 1958) (4) the medico-legal aspects of sterilisation, artificial insemination and abortion has been discussed. Sterilisation in Japan has been studied by Yoshio Koya (5). This paper is confined to a study of the after-effects, both physical and psychological, of the persons who have undergone the sterilisation operation in the hospitals in Kerala where facilities are provided for such operation.

2. DATA:

Upto the end of March 1962, a total of 18752 persons have undergone the sterilisation operation in the hospitals in Kerala. The present study is based on a random sample of persons, the frame for which was the list of 14126 persons who were sterilised upto March 1961. The sampling frame contained details such as age, sex, educational standard, monthly income, occupation, religion, number of children born and living etc. A 4% sample was selected for the study. It was possible to contact and collect the requisite information from nearly 80% of the selected persons (457 persons in all).

The persons selected for the study were requested by the Medical Officers in charge of the hospitals where the sterilisation operation was performed to appear for an interview on a specified date. Those persons who failed to turn up even after repeated requests were not interviewed. It is believed that there is no bias due to non-response from 20% of the persons selected who did not turn up for the interview.

* This paper was prepared by Messrs. R.S. Kurup, Assistant Director, John Thomas Chirayath, Research Officer and N.V. George, Analyst. The services rendered by the District Medical Officers and Dist. Statistical Officers for the collection of information are acknowledged.

** See references at the end.

(contd.....)

The selected persons were interviewed by the District Statistical Officers of this Department with the co-operation of the Medical Officers concerned. It is highly gratifying to state that most of the persons who reported for the interview were very co-operative and willingly furnished answers to the questions put to them, some of which were highly embarrassing.

The information collected falls broadly into three categories (i) general, (ii) details of sterilisation and (iii) periodic complaints. In the first section general particulars of the persons who underwent the operation, like age, religion, marriage duration, occupation, monthly income, details of children born etc. were collected. Details of the operation viz. the number of days confined to bed after operation, the reason for adopting this method, period of abstinence from sex life after operation, details of contraceptives used prior to operation were collected in the second section. In the last section information about complaints like swelling, pain on testes, pain at the time of ejaculation, difference in erection, ejaculation and retentive power, change in sex desire, food and working habits were collected.

3. COMPARISON BETWEEN THE SAMPLE AND THE UNIVERSE:

The Demographic Research Centre, Trivandrum has conducted a study (6) relating to the Demographic characteristics of the 14126 persons who have undergone the operation prior to April 1961. In the following paragraphs a comparison is made to the demographic and other characteristics of the persons who were actually interviewed for the study and the universe of sterilised persons from which these persons were selected.

Out of the 457 persons interviewed, 297 are males and 160 are females while the universe of 14126 persons is composed of 9420 males and 4706 females. The sex ratio in the sample and the universe are 539 and 500 respectively which are not significantly different.

The hypothesis that the sample of 457 persons constitute a random sample of the persons sterilised is tested in sections 3.1 to 3.5. Actually the proportions in the sample and the universe have been tested for significance at 5% level. It is seen that the sample differs from the universe only in the proportions in the various age-groups and income and occupation groups. Hence it may be noted that the comparisons are affected to a great extent by the group 'not recorded' which has a large proportion in respect of most of the characteristics. The comparisons are made after excluding this group in such cases. However, considering the demographic characteristics except age, the sample can be said to represent the universe.

3.1. RELIGION:

The distribution of the persons sterilised in the sample and the universe according to religion is given in the following table.

TABLE 3.1
Distribution of persons sterilised according
to religion.

Religion.	Persons interviewed.		Total No. of persons sterilised.	
	Number.	Percentage.	Number.	Percentage.
Hindu.	349	76.4	10513	74.4
Xian.	84	18.4	2862	20.2
Muslim.	24	5.3	705	5.0
Not Recorded.			46	0.4
Total.	457	100.0	14126	100.00

By testing it is found that there is no significant difference between the percentages in the sample and in the universe of sterilised persons. It is noted that there is no bias in favour of any religious group. The data can be assumed to relate to a random sample from the sterilised persons.

3.2. AGE:

The distribution of the persons in the sample and the universe according to their age is given below:

TABLE 3.2

Distribution of persons interviewed and sterilised according to age.

Age-Group.	Persons interviewed.		Total No. of persons sterilised.	
	Number.	Percent- age.	Number.	Percent- age.
1. 15-19	...	...	16	0.2
2. 20-24	3	0.7	381	4.5
3. 25-29	43	9.4	1776	21.0
4. 30-34	115	25.2	2629	31.0
5. 35-39	160	35.1	2253	26.6
6. 40 & above.	135	29.6	1420	16.7
7. Not recorded.	1	...	5651	...
8. All	457	100.0	14126	100.0

(Here and in the following tables the 'not recorded' group is excluded from the percentages).

It is found that the proportion of persons interviewed is significantly less in lower age groups and greater in age groups above 35 years.

3.3. INCOME:

Table 3.3 gives the comparative figures relating to monthly income of the persons who are included in the study and the total number of persons sterilised.

TABLE 3.3

Distribution of persons according to monthly income in the sample and universe.

Monthly Income.	Persons interviewed.		Total No. of persons sterilised.	
	Number.	Percent. age.	Number.	Percent- age.
1. Below Rs.50	135	29.8	6002	68.7
2. Rs.50-99	203	44.8	1971	22.6
3. Rs.100-199	97	21.4	566	6.5
4. Rs.200 and above.	18	4.0	203	2.3
5. Not Recorded.	4	...	5384	...
6. Total.	457	100.0	14126	100.0

(Contd.....)

The test of significance shows that the number of persons interviewed is significantly less in the income group below Rs.50/- and significantly greater in the two income groups Rs.50-99 and Rs.100-199. There exists no significant difference in the proportion in the income group Rs.200/- and above. This cannot be taken to mean that persons in the lower income group are not properly represented in the sample. There are many instances where the statements with regard to the income of the persons who come for the sterilisation operation given at the hospital and at the time of the interview are at variance. It was noticed that a very low income was reported at the hospital because of the financial incentive offered. It may be presumed that the information given at the time of the interview, will be more or less correct as no such financial incentives were provided for the persons who come for the interview. Having taken the botheration to appear for the interview, it may be legitimately inferred that the tendency is to furnish only correct information.

3.4. OCCUPATION:

As regards the occupation of the sterilised persons, the number of persons in the two categories 'unskilled workers' and 'other occupation' showed significant difference between the sample and the universe. In the case of the former category of persons the percentage is found to be low and in the latter category the percentage was high in the sample of sterilised persons. No definite conclusion can be made from this since the entries made in the hospital records, from which the figures have been compiled for all persons are of a highly ambiguous nature. At the time of the interview, it was possible to get the correct information relating to the type of occupations. The following table gives the distribution of persons according to occupation in the sample of persons interviewed and the total number of persons sterilised.

TABLE 3.4.

Distribution of persons according to occupation in the sample and the universe.

Occupation.	Persons interviewed.		Persons sterilised	
	Number.	Percentage.	Number	Percentage.
1. Agricultural Labour.	39	8.3	121	3.1
2. Unskilled work.	65	14.2	1533	39.0
3. Skilled work.	58	12.3	431	10.9
4. Cultivators.	56	12.3	692	17.6
5. Traders & Businessmen.	29	6.4	309	7.8
6. Professional workers (Drs., Engineers etc.)	23	5.0	191	4.9
7. Clerical workers.	8	1.8	131	3.3
8. Others.	150	32.9	442	11.2
9. Not Recorded.	1	..	10191	..
10. No occupation.	28	6.1	85	2.2
11. All persons.	457	100.0	14126	100.0

(Contd.....)

3.5. NUMBER OF CHILDREN:

On making a comparison of the sample of the persons interviewed with that of the total number of persons sterilised it is found that there is no significant difference in the percentage of persons having a specified number of children. The table below gives the distribution of persons according to the number of children born and living.

TABLE 3.5

Distribution of persons in the sample and the universe according to the number of children born.

Number of Children born.	Persons inter- viewed.		Persons steri- lised.	
	Number.	Percent- age.	Number.	Percent- age.
1	1	0.2	10	0.3
2	19	4.2	89	2.8
3	64	14.0	366	11.5
4	111	24.4	637	20.0
5	78	17.1	672	21.1
6	66	14.5	529	16.6
7	53	11.6	380	11.9
8	33	7.2	240	7.6
9	19	4.2	124	3.9
10 and above.	12	2.6	135	4.3
Not Recorded.	1	...	10944	...
Total.	457	100.0	14126	100.0

4. FERTILITY. SPACING AND CONTRACEPTIVE PRACTICES:

In this section the fertility performance, spacing and contraceptive practices of the persons interviewed are discussed.

4.1: The following tables give the distributions of males and females interviewed according to number of children born and marriage duration.

TABLE 4.1.1

Distribution of males according to the number of children born and marriage duration.

No. of Chil- dren born.	Marriage duration (year)								To- tal.	Per- cent- age
	Below 5 years.	5-9	10-14	15-19	20-24	25-29	30 & above.	Not Recor- ded		
1	...	...	...	...	...	...	...	...	...	...
2	1	9	3	...	2	...	...	...	15	5.1
3	...	22	25	4	1	...	...	...	52	17.5
4	...	10	43	20	3	...	...	...	77	25.9
5	...	2	22	22	6	1	...	...	53	17.8
6	...	...	13	21	7	...	...	...	41	13.8
7	...	...	1	14	9	3	...	...	27	9.1
8	...	...	...	7	10	1	2	...	20	6.7
9	...	...	...	3	4	1	2	...	10	3.4
10 & above.	...	...	...	1	1	...	...	...	2	0.7
Total.	1	43	107	92	43	6	4	1	297	100
Percentage.	0.34	14.48	36.02	30.97	14.48	2.02	1.35	0.34	100	..
Average No. of Children.	2.00	3.12	4.19	5.65	6.53	7.17	8.50	4.00	4.94	..

(Contd.....)

TABLE 4.1.2

Distribution of females according to the number of children born and marriage duration.

No. of Children born.	Marriage duration (year)								Total.	Percentage.
	Less than 5 years	5-9	10-14	15-19	20-24	25-29	30 & above.	Not Recorded.		
1	1	...	...	...	...	...	...	...	1	0.6
2	...	3	1	...	...	...	...	...	4	2.5
3	...	3	7	1	1	...	...	...	12	7.5
4	...	5	21	8	...	...	...	...	34	21.3
5	...	1	10	13	1	...	...	...	25	15.6
6	...	...	9	11	4	...	1	...	25	15.6
7	...	...	5	15	4	1	1	...	26	16.3
8	...	...	...	10	2	1	...	...	15	8.1
9	...	...	...	2	5	2	...	...	9	5.6
10 and above.	...	...	...	1	5	3	1	...	10	6.3
Not Recorded.	...	...	...	...	...	...	...	1	1	0.6
Total.	1	12	53	61	21	7	3	1	160	100.0
Percentage.	0.63	7.50	33.13	38.12	13.75	4.37	1.87	0.63	100	...
Average No. of children born.	1.00	3.33	4.64	6.23	8.00	9.43	8.00	...	5.74	

Considering table 4.1.1 the average number of children born is 4.94 and average marriage duration is 14.82 years. Thus on an average it is seen that there is one birth in three years of married life.

In the case of the females, coming under the purview of the study, the average number of children born is 5.74 and average marriage duration is 15.9 years. It is seen that there is more than one birth in every three years.

The data in tables 4.1.1 and 4.1.2 also show that the maximum number of sterilisations of males and females are done to persons in the marriage duration groups 10-14 years and 15.19 years. The percentage in those groups are 71 for females and 67 for males. The least number of sterilisation is naturally in the less than 5 years group. The maximum number of males and females sterilised have 4 children. The percentage of persons having less than 4 children is 11 in the case of females sterilised and 23 in the case of males.

4.2. SPACING:

For the males included in the study the average interval between successive children is found as 2.63 years. The greatest interval elapses between the 1st and 2nd child. In the case of the females, the average interval is above 2 years for all orders though the average is 2.44 years. The greatest interval is between the second and third children. The following table gives the details.

(Contd.....)

TABLE 4.2

Average interval in years between successive children for males and females sterilised.

Order of birth.	Average interval (years)	
	Males.	Females.
1	1.91	2.40
2	2.66	2.51
3	2.63	2.52
4	2.17	2.47
5	2.47	2.48
6	2.54	2.42
7	2.50	2.36
8	2.41	2.24
9	2.03	2.47
10 and above.	1.50	2.23
All.	2.63	2.44

It may be recalled here that according to the survey on attitude to family planning (7) conducted by the Demographic Research Centre in 1958-59 the average interval between terminations was estimated as 27 months for the centres Trivandrum, Quilon, Alleppey, Kottayam, Palghat and Cannanore. The interval was 28 months for Attingal, 31 months for Koshikode and 32 for Ernakulam. The present study has shown that comparatively the interval between termination is slightly greater for persons who have been interviewed than those in the first two groups of towns.

4.3. CONTRACEPTIVE PRACTICES:

Only 16 males and 2 females were in the practice of using contraceptives. Among the two females one was using Diaphragm method and the other preceptin and applicator method. The former gave up the method because of the difficulty in using it while the latter abandoned the method due to husband's dislike. The distribution of males according to methods used and the reason for giving up is given below.

TABLE 4.3

The Distribution of males according to methods used and the reason for giving up.

METHOD.	Diffi- culty of use.	Cost.	For more surety	Reason for giving up			Total.
				Failure of method.	Lack of plea- sure.	Other reason.	
Condom.	2	1	3	1	2	1	10
Spermicidal Method.	1	..	1	..	..	1	2
More than one method.	1	..	2	1	..	1	4
All.	2	1	6	2	2	3	16

The condom method was used by a majority but was given up for more surety, difficulty in use, cost, lack of pleasure and failure. Most people abandoned the methods because of lack of

(Contd.....)

surety or failure of method.

5. PROMPTING INFLUENCE FOR STERILISATION:

In this section the different reasons which influenced the persons for adopting sterilisation is analysed separately for males and females.

TABLE.5.
Distribution of according to the prompting influence for sterilisation.

Influence for Sterilisation.	Males.			Females.		
	Part- ner agree- able.	Part- ner agree- able.	Total.	Part- ner agree- able.	Part- ner agree- able.	Total.
1. Volunteered.	175	3	178	35	1	36
2. Influenced by partner.	...	..	13	..	..	18
3. Volunteered & Influence of partner.	...	..	81	..	..	65
4. External influence.	8	2	10	6	..	6
5. Medical grounds.	5	1	6	29	4	33
6. Others.	8	..	8	2	..	2
7. Not Recorded.	..	..	1	..	..	..
8. Total.	196	6	297	72	5	160

The percentage of voluntary sterilisation among males is as high as 59. Volunteering or influence of wife or a combination of these is the reason for the adoption of sterilisation in 90% of cases. In the case of females the percentages of voluntary sterilisations is 22.5. Voluntary, influence of husband and a combination of these two prompted over 74% of females. About 21% of females adopted sterilisation on medical grounds as against 2% of males. It is noteworthy that the reason adduced as voluntary, influence of the partner, or a combination of these two account for most of the sterilisations performed. But the reliability of these statements cannot be verified. It may as well be that they had resorted to sterilisation partly because of financial incentives, a large proportion of persons being of low income.

6. AFTER-EFFECTS:

The persons who reported for the interview were interviewed by the District Statistical Officers and the Medical Officers concerned. The interviewing of these persons, called for great tact and patience on the part of the officers, to extract details of rather a very delicate nature. In almost all cases, it was possible to elicit all the information required as per the questionnaire used. An atmosphere of cordiality prevailed during the time of interview since the persons who reported for the interview, thereby also got an opportunity to discuss the after-effects which they attributed to the operation, in a very intimate manner with the Medical Officer who usually is a very busy man unable to spare so much time as taken for the interview for a single patient. For collecting the information about the after-effects, separate schedules (appended) were used for males and females. Male respondents answered questions on the following 10 items.

(Contd.....)

1. Swelling
2. Dragging Pain
3. Pain at the time of ejaculation
4. Poor erection or better erection
5. Less retentive power or more retentive power
6. Sex desire lessened or sex desire increased
7. Body thinned or fattened
8. Formation of thick scar
9. Consumption of less food
- and 10. Change in working habits

The females had only 6 questions to answer, one on each of the following.

1. Complication in menstrual cycle
2. Pain at the abdomen or back
3. Sex desire lessened or increased
4. Body thinned or fattened
5. Consumption of less food or more food
- and 6. Change in working habits

The notion that all the complaints reported after the sterilisation operation are due to the operation is obviously unsupported. There is no conclusive proof in support of the statements of these persons, that the complaints are after-effects of sterilisation as these persons did not undergo a thorough medical check-up prior to the operation. The reasons for many of the complaints noted after the operation, have to be traced back to other causes which were either dormant or escaped diagnosis at the time of the operation. The Medical Officer present along with the District Statistical Officer at the time of the interview, could not, at that stage, find out the real cause of the complaint.

The analysis in the succeeding sections is based on the statements made by the persons who reported for the interview without making any effort to verify the statements as it was not possible in most of the cases.

6.1. STERILISED PERSONS ACCORDING TO THE NUMBER OF COMPLAINTS:

In Table 6.1 is set out the details of the sterilised persons, according to the number of complaints reported by them.

TABLE 6.1

Percentage of sterilised males and females according to the number of complaints.

No. of reported complaints.	Males.		Females.	
	Number.	Percentage.	Number.	Percentage.
0	42	14.1	21	13.1
1	54	18.2	38	23.8
2	53	17.9	35	21.9
3	55	18.5	36	22.5
4	44	14.8	22	13.7
5	25	8.4	5	3.1
6	17	5.7	3	1.9
7	4	1.3	..	..
8	2	0.7	..	..
9	..	..	..	..
10	1	0.4	..	..
Total.	297	100.0	160	100.0

(Contd.....)

The data revealed that 13.1% of the females and 14.1% of the males had no sort of complaints due to sterilisation. It may be noted that 23.8% of the females and 18.2% of the males reported only one complaint. Also, no sterilised female reported more than six complaints. A good majority of the females, about 68% had only less than three complaints. As regards sterilised males one person had as many as ten complaints.

6.2. AFTER-EFFECTS AND DEMOGRAPHIC CHARACTERISTICS:

In the following paragraphs an analysis of the complaints reported by the sterilised persons is done. The relationship that exist between the complaints reported, the period after which sex life was resumed after the operation, occupation, age and number of children are investigated. These factors might have a direct bearing on the after-effects reported.

6.2.1. RELATIONSHIP OF THE COMPLAINTS WITH THE PERIOD AFTER WHICH SEX LIFE WAS RESUMED.

Swelling is reported by 20.2% of the persons sterilised. The percentage of persons with swelling is least among those who resumed sex life after a period of more than six months. Pain at the time of ejaculation is reported by only a small percentage. More than one in five reported poor erection while for more than 1 in 10 there was better erection. The most common complaint reported is that of thinning of body. This is reported by 28.6% of the sterilised males. Poor erection is a complaint with 26.9% of the persons. Most of these persons have resumed sex life before four months. Four out of 10 who resumed sex life after a lapse of more than 6 months reported a change in working habits. It may be remarked here that even after six months of abstention, on continuing sex life a large percentage have complaints like swelling, thinning of body etc. The percentages are given in Table 6.2.1.

TABLE 6.2.1

Percentage of persons according to complaints and period after which sex life is resumed - Males.

Complaints.	Period after which sex life was resumed.						
	1 month	2 months	3 months	4 months	5 months	6 months	Above 6 months
1. Swelling.	19.8	16.9	19.8	25.0	16.7	35.7	10.0
2. Dragging Pain.	22.1	20.3	26.7	41.7	33.3	7.1	30.0
3. Pain at the time of ejaculation.	4.7	3.4	8.1	8.3	...	7.1	10.0
4. Poor erection.	24.4	28.8	31.4	22.2	...	35.7	20.0
5. Better erection.	11.6	16.9	11.6	11.1	16.7	14.3	10.0
6. Less retentive power.	20.9	20.3	17.4	19.4	33.3	42.8	10.0
7. More retentive power.	25.6	23.7	19.8	19.4	...	14.3	20.0
8. Sex desire lessened.	9.3	16.9	23.3	22.2	16.7	14.3	10.0
9. Sex desire increased.	31.4	32.2	13.9	16.7	16.7	14.3	20.0
10. Body thinned.	27.9	30.5	30.2	19.4	33.3	35.7	30.0
11. Body fattened.	8.1	6.8	10.5	16.7	33.3	7.1	...
12. Formation of thick scar.	4.7	1.7	10.5	8.3	...	14.3	...
13. Consumption of less food.	6.9	8.5	9.3	2.8	...	14.3	10.0

(Contd.....)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
14. Consumption of more food.	4.7	1.7	2.3	2.8	..	7.1	10.0
15. Change in working habits.	19.8	30.5	25.6	13.9	33.3	42.9	40.0
16. No. of persons interviewed.	86	59	86	36	6	14	10

Females.

Complaints.	Period after which sex life was resumed.							
	Not resumed.	1 month	2 months	3 months	4 months	5 months	6 months	Above 6 months
1. Complication in menstrual cycle.	75.0	...	20.0	25.0	16.7	...	19.1	25.6
2. Pain at the abdomen & back.	100.0	...	60.0	50.0	42.9	50.0	33.3	46.7
3. Sex desire lessened.	50.0	...	...	2.4	...	33.3	33.3	15.6
4. Sex desire increased.	...	...	...	2.4	...	...	4.8	1.3
5. Body thinned.	75.0	...	60.0	51.2	33.3	33.3	57.1	62.3
6. Body fattened.	...	...	...	7.3	...	17.7	9.5	7.8
7. Consumption of less food.	25.0	...	25.0	10.3	16.7	16.7	14.3	24.4
8. Consumption of more food.	...	...	...	2.6	...	16.7	...	2.6
9. Change in working habits.	75.0	...	40.0	31.7	16.7	...	28.6	45.4
10. No. of persons interviewed.	4	...	4	40	6	6	21	78

Considering the complaints reported by the females interviewed, it is seen that 75% of persons who did not resume sexual life had menstrual complaints. Even among those who resumed sex life after more than six months elapsed, a quarter had complications in menstrual cycle. More than a third in all groups according to period after which sex life was resumed (in some groups even cent percent) had pain at the abdomen and back. Sex desire was lessened for two persons out of 4 who did not resume sex life after sterilisation. 3 out of these 4 had reported that their bodies were thinned and that they had changed their working habits. One reported that she consumed less food after the operation. Thinning of body was reported by 3 out of 5 who resumed sex life after 2 months and by more than fifty percent among the others except those who resumed sex life after 4 months or 5 months in which case a third reported the same complaints. Working habits were changed

(Contd.,.....)

by 45% of females who resumed sex life after more than six months elapsed.

6.2.2. RELATIONSHIP OF THE COMPLAINTS WITH THE AGE OF THE STERILISED

It is found from table 6.2.2 that there is better erection for young males though sterilised and poor erection for old. The sex desire in the young is reported as increased. Considering females complication in menstrual cycle was reported by one-third in ages 25-29 and above 40 while a fourth in 30-34 years also reported such complications. The age of one person was not reported. She had no complaints. All the females sterilised in the age group 20-24 had one of the three complaints - pain in abdomen or back, thinning of body, and change in working habits. None of the sterilised females in this age group reported the five complaints - complication in the menstrual cycle, lessening and increase of sex desire, fattening of body and consumption of more food. Thinning of body was reported by 65% of persons in 25-34 years while in 35-39 age group only 43% and in the last age group 53% reported the same complaint. More than a third in all the later age groups and nearly 42% in 25-29 age group reported change in working habits after sterilisation. This is more acute when compared to males where the percentage in each age group who changed their working habits was even less. Regarding pain in the abdomen, body thinning and consuming less food the percentages of females are comparatively more than those of males.

TABLE 6.2.2

Percentage of persons according to the reported complaints and age.

Complaints.	Age-group			
	25-29	30-34	35-39	40 and above.
1. Swelling.	27.3	27.1	17.6	18.5
2. Dragging pain.	18.2	32.2	25.0	22.7
3. Pain at the time of ejaculation.	9.1	6.8	6.5	5.0
4. Poor erection.	...	35.6	29.6	22.7
5. Better erection.	36.4	11.9	11.1	12.6
6. Less retentive power.	9.1	23.7	19.4	21.0
7. More retentive power.	18.2	15.3	27.8	19.3
8. Sex desire lessened.	9.1	20.3	19.4	13.5
9. Sex desire increased.	36.4	16.9	27.8	21.0
10. Body thinned.	27.3	39.0	25.0	26.9
11. Body fattened.	9.1	5.1	12.0	10.1
12. Formation of thick scar.	9.1	5.1	8.3	5.0
13. Consumption of less food. ...	...	6.8	13.9	3.4
14. Consumption of more food. ...	...	3.4	2.8	4.2
15. Change in working habits.	18.2	28.8	26.9	21.8
16. No. of persons interviewed.	11	59	108	119

(Contd.....)

Females:

Complaints.	Age-group				
	20-24	25-29	30-34	35-39	40 & above.
1. Complication in menstrual cycle.	...	35.5	25.0	...	33.3
2. Pain in abdomen or back.	100.0	46.9	53.6	41.5	40.0
3. Sex desire lessened.	...	6.7	12.3	22.2	20.0
4. Sex desire increased.	...	3.3	1.8	...	6.7
5. Body thinned.	100.0	64.5	64.9	43.4	53.3
6. Body fattened.	...	3.2	8.8	5.7	20.0
7. Consumption of less food.	33.3	22.6	26.8	23.5	...
8. Consumption of more food.	...	3.2	3.6	1.9	...
9. Change in working habits.	100.0	41.9	37.5	33.3	33.3
• No. of persons interviewed.	3	31	56	54	15

6.2.3. RELATIONSHIP BETWEEN THE COMPLAINTS AND NUMBER OF CHILDREN BORN:

Table 6.2.3 gives the percentages of persons sterilised according to complaints and number of children born.

Males with more children have less retentive power. Their sex desire is lessened in more than a tenth of cases except those with 10 children or more. Change in working habits was reported by a decreasing percent of persons mostly as number of children increases.

Among females, pain at the abdomen or back is reported by a large percentage of persons in all parity groups but it may be said that the percentages have a tendency to decline with an increasing parity. Thinning of body is also reported by a large percentage.

TABLE 6.2.3

Percentage of sterilised according to the number of children born and the nature of complaints.

Complaints.	No. of children born									
	2	3	4	5	6	7	8	9	10 & above	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
.. Swelling.	20.2	21.2	19.5	18.9	9.8	33.3	25.0	20.0	50.0	
.. Dragging pain.	13.3	30.8	22.1	30.2	24.4	25.9	25.0	10.0	50.0	
.. Pain at the time of ejaculation.	...	5.8	5.2	7.5	7.3	7.4	10.0	...	...
.. Poor erection.	20.0	28.8	26.0	28.3	22.0	14.8	45.0	50.0	...	
.. Better erection.	20.0	13.5	13.0	15.1	14.6	11.1	...	10.0	...	
.. Less retentive power.	20.0	23.1	18.2	13.2	25.8	11.1	35.0	40.0	...	
.. More retentive power.	26.7	13.5	24.7	22.6	22.0	18.5	25.0	20.0	50.0	
.. Sex desire lessened.	20.0	25.5	11.7	17.0	9.8	14.8	20.0	40.0	...	

(Contd.....)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
9. Sex desire increased.	13.3	23.1	32.5	24.5	21.9	14.8	15.0	10.0	...	...
10. Body thinned.	40.0	32.7	27.3	24.5	22.0	25.9	45.0	20.0	50.0	...
11. Body fattened.	13.3	1.9	13.0	13.2	7.3	14.8	5.0	10.0	...	...
12. Formation of thick scar.	6.7	7.7	5.2	9.4	4.9	7.4	5.0	...	...	...
13. Consumption of less food.	6.7	9.6	10.4	5.7	2.4	7.4	10.0	10.0	...	...
14. Consumption of more food.	...	1.9	5.2	1.9	7.3	...	5.0	...	...	...
15. Change in working habits.	33.3	23.1	26.9	18.9	22.0	22.2	50.0	10.0	50.0	...
No. of persons interviewed.	15	52	77	53	41	27	20	10	2	...

Females:

Complaints.	1	2	3	4	5	6	7	8	9	10 & above.
1. Complication in menstrual cycle.	...	...	16.7	29.4	20.0	28.0	30.8	15.4	22.2	30.0
2. Pain at the abdomen or back.	100.0	50.0	66.7	44.1	52.0	36.0	50.0	30.8	66.7	50.0
3. Sex desire lessened.	...	...	16.7	11.8	20.0	20.0	11.5	23.1	11.1	10.0
4. Sex desire increased.	...	...	...	2.9	...	...	3.8	...	...	10.0
5. Body thinned.	...	50.0	66.7	58.8	64.0	60.0	57.7	38.5	22.2	80.0
6. Body fattened.	...	...	8.3	8.8	4.0	4.0	15.4	15.4	...	...
7. Consumption of less food.	...	25.0	16.7	23.5	8.0	28.0	23.1	30.8	14.3	10.0
8. Consumption of more food.	...	...	...	2.9	4.0	4.0	3.8	...	...	...
9. Change in working habits.	100.0	25.0	33.3	47.1	24.0	36.0	34.6	46.1	44.4	40.0
No. of persons interviewed.	1	4	12	34	25	25	26	13	9	10

6.2.4. RELATIONSHIP BETWEEN THE COMPLAINTS AND THE OCCUPATION OF THE STERILISED:

The following table gives the percentage of persons having complaints in the various occupational groups.

(Contd.....)

TABLE 6.2.4.

Percentage of sterilised according to complaints and the occupation.

Males:

Complaints.	Occupation.							
	Agri- cul- tural labour.	Unski- lled work.	Skil- led work.	Culti- vators & far- mers.	Profe- ssional wor- kers.	Tra- busi- ness men.	Cleri- & cal wor- kers.	Others
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Swelling.	18.7	25.9	17.5	25.9	35.3	10.3	...	25.0
2. Dragging pain.	43.7	24.1	26.3	22.2	29.4	24.1	12.5	34.1
3. Pain at the time of ejaculation.	9.4	8.6	10.5	3.7	...	3.4	12.5	2.3
4. Poor erection.	43.7	18.4	24.6	37.0	23.5	27.6	12.5	15.9
5. Better erection.	15.6	8.6	15.8	7.4	5.9	13.8	50.0	13.6
6. Less retentive power.	43.7	25.8	15.8	24.1	5.9	3.4	12.5	15.9
7. More retentive power.	31.2	17.2	24.6	20.4	35.3	10.3	50.0	11.4
8. Less sex desire.	28.1	24.1	15.8	24.1	...	13.8	25.0	20.4
9. More sex desire.	21.9	18.4	19.3	18.5	41.2	27.6	37.5	20.4
10. Body thinned.	43.7	41.4	...	20.4	11.8	27.6	25.0	13.6
11. Body fattened.	...	6.9	8.8	7.4	17.7	17.2	12.5	11.4
12. Formation of thick scar.	12.5	8.6	40.3	7.4	...	...	12.5	...
13. Consumption of less food.	29.4	6.9	10.7	7.4	5.9	6.8	25.0	6.9
14. Consumption of more food.	6.2	5.2	1.6	1.8	5.9	...	...	2.3
15. Change in working habits.	31.2	31.0	26.3	24.1	17.6	24.1	12.5	15.9
Number of persons interviewed.	32	58	57	54	17	29	8	42

Females:

Complaints.	Agri- cultural labour.	Unski- lled work.	Skil- led work.	Culti- vators and far- mers.	Profe- ssional work- ers.	No occu- pation.	Do- mestic wor- kers.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Complication in menstrual cycle.	28.6	33.3	100.0	50.0	16.7	25.0	22.4
2. Pain in the abdomen or back.	71.4	50.0	50.0	100.0	16.7	67.8	40.2
3. Less sex desire.	42.9	50.0	...	...	16.7	7.1	16.8
4. More sex desire.	...	...	...	...	...	7.1	0.9

(Contd.....)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
5. Body fattened.	...	16.7	...	...	33.3	3.6	7.5
6. Body thinned.	28.6	66.8	50.0	100.0	33.3	67.8	58.9
7. Consumption of less food.	...	...	...	...	16.7	25.0	20.5
8. Consumption of more food.	...	...	...	...	...	7.1	3.7
9. Change in working habits.	...	16.7	50.0	100.0	16.7	50.0	41.1
Number of persons interviewed.	7	7	1	2	6	28	107

From the table it is seen that more Agricultural labourers interviewed, reported less retentive power. Among professional workers 35% reported more retentive power and 41% more sex desire. 44% of agricultural labourers reported poor erection after sterilisation. 44% of agricultural labourers and 41% of unskilled workers reported that their body thinned while among other classes the percentages are less. Changes in working habits are reported by more in the labour class than the other classes.

Among females there are many who did not report any specific occupation. More persons in the labour class reported less sex desire, pain in abdomen and back and complications in menstrual cycle. Two third of the unskilled workers reported that their bodies thinned, half the number reported pain in the abdomen and less sex desire. Among skilled workers all had menstrual complications and 50% reported had pain, body thinning and change in working habits. Cultivators and farmers had the same troubles reported. Among professional workers only a small percentage had reported the complaints. A little more than 40% of domestic workers reported change in working habits and pain in the abdomen. Nearly 59% of domestic workers had their bodies thinned. More than a fifth consumed only less food after sterilisation.

In short the labour class have reported more complaints than other classes. Also, they had to change their working habits. This, in a way, reveals that sterilisation had done dis-service to them. But it may be remembered that these are just their opinions. An objective operational procedure was not adopted here, to elicit the answers or to verify the veracity of the answers.

7. SUMMARY AND RECOMMENDATIONS:

The data collected are analysed to find out the nature and intensity of the complaints attributed to the sterilisation operation. The relationship of the complaints with (i) the period after which sex life was resumed, (ii) age, (iii) number of children born and (iv) occupation is studied separately for males and females.

A substantial percentage of persons interviewed has reported complications after sterilisation like pain, lessening of sexual desire, thinning or fattening of body, change in working habits etc. Though less marked there is more trouble with those who had done the sterilisation after getting many children, for agricultural workers and unskilled workers, for persons in later age groups, even for those who resumed sex life after more than six months elapsed. Males and females have reported that they have had such complaints after performing the operation. It may be noted here that most of these persons volunteered for the operation or had done through the influence of their partners.

(Contd.....)

Though it is found that a large percentage of the interviewed persons have definite complaints it cannot be stated that sterilisation is responsible in bringing about the complaints. Since there is no thorough medical check-up it is not known whether the persons had such complaints even before sterilisation. There is a general tendency to attribute sterilisation as the cause of all later complaints. This is because of the fact that sterilisation has not been proved as devoid of such after-effects. The attributing of all complaints to sterilisation is mainly psychological. Also it may be noted that some of the complaints like less erection etc. can also be due to psychological reasons. It is therefore necessary, first, to have a thorough medical examination before sterilisation. The medical history of the patient should also be enquired into and recorded. Psychological tests should be done simultaneously. These tests should be repeated after sterilisation at an interval of 3 months. This period has to be fixed scientifically.

Thus a study on the after-effects of sterilisation can be done systematically. The present study was aimed at a preliminary clearance of ground. It is therefore recommended that persons who come for the sterilisation operation should be thoroughly examined prior to the operation and the data preserved for study. In the absence of such a prior medical check-up, as is the practice at present, there is a tendency prevailing among the persons sterilised, to quote the operation as the root cause of all their ailments. The spread of this incorrect piece of information will intimidate and discourage many a well-meaning couple, desirous of adopting this method of family limitation. The sterilised persons should be followed up, at least a sample of them, for gathering information of a like nature as collected in the present study. The data thus obtained should be analysed to find out, the after-effects of sterilisation, if any. This will, eventually contribute to the popularisation of this method by dispelling the doubts relating to the efficacy of this method harboured by some ill-informed people.

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Appendix

FOLLOW UP OF PERSONS STERILISED (MEN)

A. General particulars

- | | | | | |
|---|-----------------|-----------------------|--------------|--|
| 1. S.No. | | | | |
| 2. Name and address. | | | | |
| 3. Age | | 4. Age of wife | | |
| | | 5. Marriage duration | | |
| 6. Religion | | | | |
| 7. Occupation | | 8. Occupation of wife | | |
| 9. Monthly income (Rs.) | | | | |
| 10. No. of children born | <u>Male</u> | <u>Female</u> | | |
| 11. No. of children dead | | | | |
| 12. Order of birth of children & present age. | Order of birth. | Sex | Present age. | Space in months. Whether living or dead. |

B. Details of sterilisation.

- | | |
|--|-----------------------|
| 1. Have you ever used contraception prior to the operation. | Yes/No |
| 2. If yes, what are the methods | |
| 3. Why did you give up the methods and get sterilised | |
| 4. Date of sterilisation | |
| 5. Completed age at the time of sterilisation | |
| 6. Whether (a) volunteered
(b) influenced by wife
(c) Both
(d) external influence
(e) medical grounds
(f) other reasons (specify) | |
| 7. If not influenced by wife whether she was agreeable to this? | |
| 8. Whether there was any opposition from relatives or well wishers: | Yes/No/Does not arise |
| 9. If yes, who opposed and reasons for opposing | |
| 10. When did you resume sex life after operation | |
| 11. Have you tested your semen before resuming your sex life. | Yes/No |

(Contd.....)

12. Was the operation successful Yes/No

13. Periodic complaints, if any

		Upto 3 months	3 months 1 year	1-2 years	2-5 years
(a)	Was there any swelling	Yes/No			
(b)	Did you experience any dragging pain on the testes.	Yes/No			
(c)	Pain at the time of ejaculation.	Yes/No			
(d)	Whether there is any difference in erection after sterilisation.	Poor/ Better No			
(e)	Whether there is any difference in retentive power after sterilisation.	No/ Less/ More			
(f)	Any change in sex desire	No/ aversion/ increase			
(g)	What is the condition of your body	No change/ fattened/ thinned			
(h)	Is there a thick scar (keloid) on the operation site	Yes/No			
(i)	Is there any change in your food habits	Yes/No			
(j)	If yes, explain the change				
(k)	Is there any change in your working habits	Yes/No			
(l)	If yes, explain the change				
(m)	Any other complaints (specify)				

FOLLOW UP OF PERSONS STERILISED (WOMEN)

...

A. General particulars:

1. Sl.No.
 2. Name and address
 3. Age
 4. Age of husband
 5. Marriage duration
 6. Religion
 7. Occupation
 8. Occupation of husband
 9. Monthly income of couple
 10. Age at first birth
 11. No. of children born
 12. No. of children dead
 13. Order of birth of children and present age.
- | | <u>Male</u> | <u>Female</u> | |
|-----------------|-------------|---------------|---|
| Order of birth. | Sex. | Pre-sent age. | Space in months. Whether living or dead |

B. Details of Sterilisation

1. Have you ever used contra-ception prior to Steri-
lisation. Yes/No
2. If Yes, what are the methods
3. Why did you give up the me-
thods and got sterilised
4. Date of sterilisation
5. Age at the time of Steri-
lisation.
6. Whether (a) volunteered
(b) influenced by husband
(c) both
(d) external influence
(e) medical grounds
(f) other reasons (specify)
7. If not influenced by husband,
did he approve this Yes/No
8. Whether there was any opposition
from relatives or well wishers
for your getting sterilised Yes/No

(iv)

9. If yes, who opposed and what were the reasons for opposing
10. When did you resume your sex life after the operation
11. Was the operation successful Yes/No
12. Type of anaesthesia applied
13. Periodic complaints if any

Upto 3 3 months 1-2 2-5
months -1 year years years

- (a) Where there any complication or complaints in menstrual cycle. Yes/No
- (b) Have you any pain in the abdomen or back Yes/No
- (c) Is there any change in sex desire No/aversion/increase
- (d) What is the condition of your body No change/fattened/thinned
- (e) Is there any change in your food habits Yes/No
- (f) If yes, explain the change
- (g) Is there any change in your working habits Yes-No
- (h) If yes, explain the change
-