

POLICY

DIALOGUE

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REGRET AFTER STERILIZATION - CAN IT BE AVERTED?

Sterilization is a convenient method of avoiding further pregnancies for couples who do not want any more children. Its finality implies that its use should as far as possible be restricted to men and women who will not decide later that they would have liked to have had more children. About one in six currently married women in Bangladesh aged under fifty years who are using a permanent method of family planning (tubectomy or vasectomy) regret that they or their husbands were sterilized, according to the Bangladesh Demographic and Health Survey conducted in 1993-94 (Mitra et al., 1994: 58-9).

The proportion who regretted that their husbands had undergone vasectomy (29 per cent of women whose husbands have had the operation) was considerably higher than the proportion who regretted having had a tubal ligation themselves (14 per cent of women who had undergone tubal ligation).

In one sense, these are not high numbers, because they imply that a large majority of women who are using a permanent method of family planning express no regrets about it. Even so, the number who do have regret is large enough to dispel complacency and to compel an examination of the reasons. When they are examined, the reasons give cause for considerable concern. Over 60 per cent of the women who reported regret that they or their husbands had been sterilized said that the reason was that they themselves wanted another child, and this proportion becomes almost 80 per cent after inclusion of women who said that the reason was that their husbands wanted another child.¹ Whether it is the woman or her husband, regret for the reason of being unable to bear more children is qualitatively different from regret because of perceived side effects of sterilization, which account for most of the remaining cases.

This Policy Dialogue will explore the possibilities for reducing the level of regret about sterilization. The main question is: 'Are there identifiable warning signs that a couple might later regret accepting a sterilization procedure?' We concentrate our attention on those cases where the reason for regret is that either the woman or her husband wants another child. Our conclusion is that some minor adjustments to policy, more or less in accord with actual practice and certainly in accord with common sense, would reduce the level of regret markedly.

IS CURRENT POLICY EFFECTIVE?

There are many aspects to the policy and practice of sterilization in Bangladesh. One aspect of policy that is clearly intended to minimize regret is that to be accepted for tubal ligation, a woman should have at least two surviving children aged two years or more. When this policy was first introduced, in 1988, the age of the younger child could be one year, and this standard will be used for the following discussion. Among the currently married women who had had a tubal ligation and were respondents to the 1993-1994 DHS, 87 per cent had at least two surviving children aged one year or more at the time they were sterilized.

The proportion was actually the same among the women whose tubal ligation took place after 1988 as among those who were sterilized earlier, according to the DHS.² This indicates two things - that the policy institutionalized existing practice but it has not been applied universally.

Application of the policy does have an effect on whether regret will be expressed later. Among

women who had no surviving children aged one year or more at the time they underwent tubal ligation, 7 out of 15 women (47 per cent) regretted the sterilization, in all of these cases because they wanted more children. If they had one surviving child aged at least one year, the level of regret was 31 per cent (26 out of 85), but if they had two children aged at least one year the proportion was much lower, at 11 per cent (69 out of 639).³

Despite these highly significant differences, the overall effect of application of this policy is rather more slight than might be expected. Even if no women were given tubal ligations unless they met the condition of having at least two children aged at least one year absolutely, the level of regret about tubal ligation would be reduced by only three percentage points, from 14 per cent to 11 per cent overall. There would be a similarly slight effect on the proportion who regretted tubal ligation because they or their husbands wanted more children, which would be reduced from 11 per cent to 8 per cent.

While these gains would be useful to achieve, it also

needs to be recognized that reasons for lack of adherence to the letter of the existing policy can be valid. If a family planning client seeks a tubal ligation, and will not be deterred from this intention, then a service provider might experience difficulty in convincing her that she could regret it later.

The gains would be much more impressive if the same policy was followed for vasectomy. If vasectomies were performed only on men who had two or more children aged at least one year, then the proportion of their partners who expressed regret for reasons of wanting more children would be reduced from 25 per cent to 11 per cent. This is because a considerably higher proportion of men who accepted vasectomy did not meet the condition of having at least two children aged one year or more. In a few cases, they subsequently married with partners who had not completed their childbearing, or even begun.

**HAVE POLICY
CHANGES
INFLUENCED THE
LEVEL OF REGRET?**

Apart from the testimony just discussed, there is no evidence that policy and program changes have influenced the level of regret about sterilization except in the sense that ever lower incidence of sterilization in Bangladesh means fewer new cases of regret.

If the emphasis of policies and programs over the years had influenced the level of regret about sterilization, then it would be expected that women who had tubal ligations or whose husbands had vasectomies at certain times in the past would be more likely to express regret than those who were sterilized at times when stricter eligibility criteria had applied or there were more choices of methods of family planning. The association between regret at being unable to have another child, on the part of the woman or her husband, and the length of time before the survey at which the operation was conducted, is actually very weak in the 1993-1994 DHS data and in any case seemingly unrelated to policies and programs, or the relative incidence of

sterilizations.⁴ The details are not given here.

It is possibly more useful to invert the question, and speculate about whether expressed regret, on the part of some acceptors of permanent methods, has influenced policy and programs. There must be little doubt that such an effect exists, as one component among the many influences which have combined to reduce permanent methods to an ever-decreasing position in family planning method mix in Bangladesh. Real or perceived unsatisfactory experience with the quality of services offered by the family planning program has undoubtedly contributed to the decline of permanent methods of family planning. In the case of tubal ligation, for example, there were three deaths in 1995,^{5 6} reinforcing concerns over the standard of clinical practice and providing a devastating disincentive against tubal ligation in the local areas in which the deaths occurred.

Sterilization incidence was high in the 1960s and 1970s because few other methods of family planning were available. Indeed, sterilization of older and higher-parity women by tubal ligation was one of the main methods of popularizing the family

planning program. The incidence of sterilization climbed to its peak in 1983-1985 (for numbers of sterilizations see Haider *et al.*, no date: 22-28, 154-5), and subsequently went into slow decline as other methods of family planning became more and more available. Among factors thought to have influenced the decline there was also the withdrawal in 1988 of incentives to family planning program workers and traditional midwives (*dais*) to refer clients for sterilization. This has contributed to a situation where there is little interest on the part of field workers in provision of any methods other than temporary methods. Indeed there are disincentives, for example because a large proportion of clients who do get referred for sterilization are rejected by doctors on strict interpretation of medical eligibility. While the family planning program puts emphasis on improving quality of care, structural problems remain, especially in maintaining a corps of trained service providers.

While it is difficult to identify any strong link between the nature of policies and programs and the level of regret after sterilization, there are other factors which are much more clearly linked to

outcomes. These have to do with the characteristics of women and their husbands at the time they were sterilized.

WHICH PEOPLE REGRET STERILIZATION?

It is important to distinguish between things which can possibly be known by the family planning program at the time a sterilization service is delivered from other factors which might cause regret but occur after the event of sterilization.

Attributes which can be known beforehand include personal characteristics at the time of sterilization, such as the age of the person at that time, the number of surviving sons and the number of surviving daughters, the reason for the choice of method, influence of partner on the choice of method and whether the person received the family planning service that was wanted. The 1993-1994 DHS provides information on all of these matters,⁷ and also on possibly influential things which occurred after

the sterilization, such as death of children. Starting with age at the time of sterilization, we will discuss these factors one by one as they affect regret after sterilization for the reason of wanting more children.

It is hardly surprising that if women were very young at the time they or their husbands were sterilized, they were much more likely to regret the operation than if they were older, according to analysis of the 1993-1994 DHS data:

Age group of woman (at time of sterilization of themselves or their husbands)	Women who regret sterilization because they (or husbands) want more children
Less than 20 years	33 % (of 76 women)
20 to 24 years	19 % (of 227 women)
25 to 29 years	10 % (of 253 women)
30 to 34 years	7 % (of 180 women)
35 or more years	2 % (of 86 women)
All ages	13% (of 822 women)

Analysis of weighted 1993-1994 DHS data (currently married women)

Regret at not being able to bear another child is heavily concentrated among women who were very young when they or their husbands were sterilized. Note that these women constitute quite a large proportion of sterilized couples in the survey - approximately 37 per cent of the women were not yet aged twenty-five years when they or their husbands were sterilized. The effect is actually much more pronounced if it was the

husbands who were sterilized, although this is not shown explicitly in the table but the effect remains strong for tubal ligations. This observation raises the poignant dilemma of young women, physically capable of bearing children themselves and wanting children, but with sterilized partners.

It is not necessarily the age of the woman, at the time that she or her husband was

sterilized, that determines regret at inability to have more children. Young women in general have fewer children than older women, and the apparent effect of age could be a result of small family size at the time of sterilization. In fact, very high proportions of women who had few children at the time they were sterilized are inclined to express regret.

Number of surviving children (at time of sterilization of themselves or their husbands)	Women who regret sterilization because they (or husbands) want more children
No children	75 % (of 12 women)
One child	49 % (of 35 women)
Two children	25 % (of 151 women)
Three children	12 % (of 223 women)
Four or more children	4 % (of 401 women)

Analysis of weighted 1993-1994 DHS data (currently married women)

While there are few cases of sterilized couples with no surviving children at the time of sterilization, or only one surviving child, it is massively clear that women in this situation are very likely to express regret about

the fact that they cannot have more children. The proportion remains quite high even for women with two children. On the other hand, regret for this reason is very low among women who had four or more children. It

is highly relevant to the direction of this policy dialogue to consider number of surviving children in a slightly more detailed way, looking also at sons and daughters.

Number and sex of surviving children (at time of sterilization of themselves or their husbands)	Women who regret sterilization because they (or husbands) want more children
No children	75 % (of 12 women)
One daughter	31 % (of 13 women)
One son	59 % (of 22 women)
Two daughters	39 % (of 13 women)
Two sons	34 % (of 47 women)
Son and daughter	17 % (of 90 women)
Three daughters	13 % (of 8 women)
Three sons	19 % (of 37 women)
Son(s) and daughter(s) (3 children)	11 % (of 178 women)
Four or more daughters	25 % (of 8 women)
Four or more sons	13 % (of 13 women)
Son(s) and daughter(s) (4+ children)	3 % (of 379 women)

Analysis of weighted 1993-1994 DHS data (currently married women)

Here it can be seen that having both sons and daughters at the time of sterilization has a very considerable effect on whether women will later express regret at being unable to have more children. This is the case

whether they had two children, three, four or more. Gender preference issues are not prominent here. The proportion expressing regret at their inability to have more children is not different at a level of statistical significance if all the

surviving children are daughters or if they are sons. What is much more evident is an extremely strong desire for gender balance, for having at least one daughter and at least one son. If they had only one son and one daughter at the time of

sterilization, the level of regret is actually still rather higher than desirable, with 17 per cent who would have preferred to have more children.

Among other factors which can potentially be ascertained at the time of sterilization is the reason for choice of one method over any other method. It is rather evident from the following table that if the main reason

that a woman wanted herself or her husband to be sterilized is that they wanted a permanent method of family planning, then relatively few will later have regrets.

Reason for choice of method at time of sterilization	Women who regret sterilization because they (or husbands) want more children
Recommendation of family planning worker	29 % (of 52 women)
Problems with other methods	12 % (of 43 women)
Wanted a permanent method	8 % (of 584 women)
Husband's preference	30 % (of 100 women)
Other reason	26 % (of 43 women)

Analysis of weighted 1993-1994 DHS data (currently married women)

The level of regret also depends on who chose the method. Women who were

involved in the decision, which is most of them, are much less likely to express

regret later that they would have preferred to have more children.

Person who chose the method at time of sterilization	Women who regret sterilization because they (or husbands) want more children
Herself	9 % (of 233 women)
Herself and her husband	7 % (of 339 women)
Her husband	24 % (of 212 women)
Someone else	28 % (of 36 women)

Analysis of weighted 1993-1994 DHS data (currently married women)

Finally we ask a very simple question: did the woman get the method of family

planning that she wanted when she or her husband was sterilized? If the woman did

not, then it is relatively likely that she will have regrets later.

Did she get the method she wanted?	Women who regret sterilization because they (or husbands) want more children
Yes	11 % (of 780 women)
No	61 % (of 41 women)

Analysis of weighted 1993-1994 DHS data (currently married women, one missing response)

All these tables reveal a complex set of influences on the level of regret at not being able to have more children, but it is not difficult

to see which of them are important. A set of criteria based on these influences would suggest the following minimal set of conditions for

sterilization of a woman or her husband, if regret at being unable to have more children is to be avoided.

AT TIME OF STERILIZATION A WOMAN (OR A MAN'S PARTNER)

- 1. should be at least 25 years old;**
- 2. should have at least one surviving son and one surviving daughter;**
- 3. should want a permanent method of family planning;**
- 4. should have participated in the choice of method by deciding herself, or with her husband; and**
- 5. should get the method she wants from the family planning service.**

Women, who have themselves been sterilized or whose husbands have had vasectomies, and meet all five of these criteria (35 per cent of sterilized couples), had a level of regret at not being able to have more children of only 3 per cent, according to the DHS. Women who met only four of the criteria had a much higher level of regret, of 10 per cent, and it is progressively worse for decreasing number of criteria met. Fully three quarters of the women who met none of the criteria regretted sterilization because they wanted more children. Every single criterion is significant in a multivariate analysis, and although some criteria are marginally more important than others it is convenient to regard them as equally important.

What level of regret at being unable to have more children is acceptable? Three per cent is achievable, on the

evidence presented here. If 6 per cent can be accepted, then women who meet at least four of the criteria, or their husbands, could be accepted for sterilization. This is just on two-thirds of sterilization cases in the 1993-1994 DHS. If the acceptable level can be as high as 7 per cent, then three or more of the criteria might be enough.

WHAT ARE THE POLICY IMPLICATIONS?

It is stating the obvious that Bangladesh's family planning program should never give a permanent method to a client who has come seeking some other method and does not want to be sterilized. But the foregoing discussion offers other common-sense guidelines. For instance, the program should be very wary of offering sterilization to a person who has no daughters, or no sons. Clients who are aged less

than 25 years, or who have spouses aged less than 25 years, should be counselled to accept other methods, or given advice about suitable temporary methods if method side-effects are reported. If the client does not want a permanent method, or the client's partner has not participated in the decision to seek a permanent method, then neither tubal ligation nor vasectomy should be offered.

These are all straightforward implications of the characteristics of women who regret not being able to have children, or whose husbands regret not being able to have children, because one of them has been sterilized.

The most evident, individually tragic, event which can occur to a couple after they have been sterilized, and the reason for insisting in current guidelines that the couple

should have two children aged at least two years, is the death of children. Indeed, it can be shown that child death subsequent to sterilization is an extremely important component of the

occurrence of regret after the event. Few children who are aged at least one year, or even better two years, will subsequently die in childhood. Even so, insistence that the minimum age of the surviving children should be at least twelve

months does not provide any significant improvement over the five criteria which have been set down above, in determining level of regret about sterilization on the grounds of wanting more children.

REFERENCES

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¹ Among the 80 per cent expressing regret for the reason of wanting more children, the proportion was significantly higher if it was the husband who had been sterilized (93 per cent of cases where regret was expressed about vasectomy) than if it was the woman (78 per cent of cases where regret was expressed about tubal ligation).

² This was also the case if the criterion of having two children aged at least two years (80 per cent of all cases) is used, instead of two children aged at least one year.

³ It makes a little difference to the result, so for precision unweighted data have been used for the calculations in this paragraph and the following paragraph to reflect true relativities among the cases.

⁴ The weak fluctuations in level of regret according to the timing of sterilization nevertheless contain statistically significant differences.

⁵ I am grateful to Dr Jahir Uddin Ahmed, Directorate of Family Planning, Ministry of Health and Family Welfare, for items of information given in this and other parts of the paper (personal communication, 5 March 1996).

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⁶ There was another death, at a mobile camp, in November 1996. This was the second in 1996.

⁷ Some of the matters can only be investigated after considerable data manipulation.