Ceylon J. Med. Sci. 34 (No. 2, December) 1991, pp. 63 - 74

A COMMUNITY BASED STUDY ON SOCIO - DEMOGRAPHIC CHARACTERISTICS OF WOMEN REPORTING AN INDUCED ABORTION

D. C. Perera[1] and L. C. Rajapaksa[2]

Summary: The objective was to study the sociodemographic characteristics and contraceptive practices among married women of the reproductive age group reporting an induced abortion, in comparison with a group of women who did not report such an experience. The women reporting an induced abortion during the three years preceding the survey constituted the "cases" and a group of women matched for year of birth and year of marriage with each "case" constituted the "controls" The two groups were found to be comparable in respect of the socio-economic indicators studied and the knowledge of contraceptives. However, in cotraceptive use there were marked differences between the two groups. The contraceptive prevalence at abortion when compared to the "controls" at a similar duration of marriage was low. Furthermore, among those who had used a method, the prevalence of permanent methods in "cases" was significatly lower than in controls, while the use of traditional methods was higher among the "cases". Contraceptive use among the cases increased after abortion but there was very little increase in methods like IUCD and injectables. The current contraceptive practice among those not wanting more children among both cases and controls, appears unsatisfactory. Nearly 75% of those who stated a reason for seeking an induced abortion appear to have done so as a method of family planning. The study highlights the need for convenient to use, safer, effective, long-term temporary methods of family planning and the need to reach younger cohorts of women in the early years of marriage.

Key words: Induced abortion, contraceptive use, community-based study.

INTRODUCTION

Although induced abortion is recognized as an increasing problem in many parts of the world, little is known about it's epidemiology, especially in countries where there is legal restriction (1). In Sri Lanka, the need for such data is recognized and community based studies on abortion have been identified as a national level priority area for research (2).

Abortion needs to be studied within the broad framework of contraception. Induced abortion rates may be considered as a way of gauging the need for improvement in contraceptive services. In fact experience from various countries has shown that promoting the use of contraception is a major approach to reducing mortality and morbidity from induced abortion (3). The study of the existing patterns of induced abortion and their relationship to contraceptive use would therefore be important for the design of effective family planning services.

1. Health Education Bureau, Ministry of Health, Colombo 8..
2. Department of Community Medicine, Faculty of Medicine Colombo 8.

This paper reports the findings of a community based study on the socio – demographic characteristics and contraceptive practices among married women of reproductiv age group reporting an induced abortion.

METHODOLOGY

The study was condueted in the Medical Officer of Health (MOH) area Homagama, which is situated about 20 kilometers outside the city limits of Colombo. The study population consisted of married women of the reproductive age group (MWRA), both legal and common law marriages being included. As the incidence of abortion was not known, the study was carried out in two stages. All MWRA living in every other other house in the study area were interviewed in the first stage, and data necessary for identification and the pregnancy history for a period of five years preceding the study were obtained. The cut-off date for inclusion in stage two was decidtd on the basis of the number of abortions reported per year.

In the second stage, all women reporting an abortion during the years 1988, 1989 and 1990 were asked if a known or suspected pregnancy of less than 28 weeks (7 months) had to be voluntarily terminated or whether it was spontaneously terminated. Subsequent to this identification into induced and spontaneous, a 'control' was selected for every 'case' of induced abortion from among those not reporting an abortion in stage I of the survey. Each control was selected at random from among all respondents that matched a case on year of birth and year of marriage.

An interviewer - administered questionnaire was used to gather information on socio - demographic characteristics of the woman and her husband, pregnancy history, details of the abortion if any, details of contraceptive use before and after each pregnancy, knowledge about contraceptive method and problems preceived in the use of a given method. The data collection was carried out by the midwife in her respective area.

The study was subjected to ethical review procedures of the Scientific and Technical Advisory Committee of the Health Services Research Programme.

RESULTS

A total of 16,770 MWRA were interviewed during the first stage of the survey and 1,206 women reported at least one abortion during the five year period. For women who reported more than one episode of abortion the last episode was included in the study.

The 909 MWRA who had at least one abortion during the years 1988, 1989 and 1990 were included in stage II. Of these 8% were lost to follow

up and only 836 women were interviewed during the second stage of the study. Of those interviewed 548 (65.5%) reported an induced abortion, while 283 (33.9%) reported a spontaneous abortion. Five of the women who reported an abortion in stage I of the survey denied this during the second interview.

Since cases and controls were matched in respect of year of birth and year of marriage, they were very similar in respect of mean age (30.3 years), mean age at marriage (23.3 years) and mean number of years of marriage (6.9 years). However, the induced abortion group is seen to be younger when compared to the study population, the differences observed being significant, $P < 0.001$ (Table 1).

The two groups were similar in ethnicity, religion, level of education occupation of respondent and spouse and the family income. The standard of living was compared using ownership of housing, source of drinking water, type of latrine used and availability of electricity for lighting and no difference was observed between the groups in these respects.

The number and the gender composition of the living children at abortion was compared with the situation in the matched control at a similar marital duration. The distribution of the number of living children was very similar in the two groups. It was noted that 20% of the women did not have any children and only 19% had three or more children at the time of induced abortion. The gender composition of the children was significantly different ($p < 0.05$) in that 36% of controls had children of both genders in comparison to 27% in the induced abortion group. 39% of the induced abortion group had only girls in comparison to the 30% with only daughters in the control group.

At the time of the study 9% of the women in the induced abortion group were pregnant in comparison to 5% in the control group, this difference being statistically significant ($p=0.01$). Sixty nine percent of the cases did not desire more children compared to 68% in the control group. Among those who did not desire any more children, the number of children at survey were very similar in the two groups.

The respondents were first questioned on their knowledge of methods of contraception unprompted. For methods not mentioned spontaneously, the interviewer gave the name and a brief description and checked whether they had heard about the method. For all methods known to the respondent the place where it could be obtained and any problems perceived in the use of the method were inquired into.

The two groups were very similar in respect of knowledge. More than 75% could name seven contraceptive methods spontaneously. Over 80% of

Table 1. Distribution of cases of induced abortion and the study population by age

Age group in years	Induced Abortion		Study population	
	N	%	N	%
15-19	24	4.38	385	2.29
20-24	87	15.88	2054	12 25
25-29	150	27.37	3197	19.07
30-34	138	25.18	3438	20.51
35-39	93	16.97	3237	19.30
=>40	56	10.21	4459	26 58
Total	548	100.00	16770	100.00
Median age in years		30.00		32.00
Mean age in years		30.26		33.10*
s.d. years		6.53		7.24

*p =0.001

Table 2. Distribution of women who have ever used, by category of contraceptive used

Category of contraceptive	Induced abortion		Control group	
	N	%	N	%
1	309	56.39	281	51.28
2	189	34.49	174	31.75
3	45	8.21	77	14.05*
1 or 2 with 3	24	4.39	27	4.93
1 and 2	76	13.87	53	9.67**
never used	112	20.44	104	18.98

The percentages have been calculated using the number of respondents.

Category

1 = Modern temporary methods
2 = Traditional methods
3 = Permanent methods

* $p < 0.01$
** $p < 0.05$

MWRA in both groups were aware of condoms, oral pills and injectables. Around 70% knew about sterilization, both male and female, and about IUCD. Only about 60% were aware of the safe period, and 15% of persons were aware of Norplant. The two groups were similar in their knowledge in respect of places and persons from where services could be obtained. However, nearly two thirds of the women interviewed did not know that condoms and pills could be obtained from pharmacies and shops. Only 15% identified non-governmental sources where sterilization, IUCD or injectables could be obtained.

The cases and controls were very similar in their perceptions regarding problems in using methods of contraception. About 50% of women did not perceive any problem in the use of the safe period. Male and female sterilization were perceived by about a third as having no problems. Husbands' dislike of the use of the condom were stated by a third, while 17% of the induced abortion group and 22% in the control group perceived condoms as ineffective. Health reasons and side effects were perceived as problems in respect of use of IUCDs and orals by about a third of the women, while almost half of the respondents stated these as problems in respect of injectables. None stated reasons like inaccessibility, shortages, cost or inconvenience as perceived problems in the use of a contraceptive method.

Contraceptive practice was considered under ever use, use before abortion at that particular conception, use following abortion, ever use prior to abortion and current use. Of the induced abortion group 20%, and 19% of the control group had never used any method of contraception. This difference was not significant. The modern temporary methods were the commonest methods used by both groups of women, followed by traditional methods. The percentage who had ever used a permanent method with or without prior use of a temporary method were higher (16%) in the control group compared to the induced abortion group (9%), This difference was found to be statistically significant, $p=0.01$ (Table 2).

Among the induced abortions, 67% were not using a contraceptive at the time of conception of the pregnancy ending in the abortion, in comparison to 47% in the control group who were using a method at a similar marital duration. Table 3 shows that the proportions using both temporary modern methods and traditional methods were higher among the induced abortion group, while permanent methods were significantly higher in the control group.

Table 4 compares the prevalence of contraceptive use in the women who reported an induced abortion during three periods of time. The commonest methods ever used before the abortion were the safe period, orals, condoms and injectables. At the particular conception there is a marked fall in the

Table 3. A comparison of the categories of contraceptives used by cases before abortion (at particular conception) and controls at a similar marital duration

Category of contraceptive used	Induced abortion		Control group	
	N	%	N	%
Modern temporary methods	112	62.57	138	47.42*
Permanent methods	5	2.97	69	23.70*
Traditional methods	62	34.64	84	28.87
Total used	179	100.00	291	100.00

* $p < 0.01$

Table 4. Distribution of cases by ever use of contraceptives before abortion, use at the particular conception and in the interval after abortion.

Method used	Ever before abortion		Particular conception		Interval after	
	N	%	N	%	N	%
Condom	33	9.51	22	4.01	55	10.04
Orals	72	20.74	60	10.95	82	14.96
Injectables	32	9.22	28	5.11	55	10.04
IUCD	11	3.17	2	0.36	19	3.47
Norplant	0	0.00	0	0.00	0	0.00
Female sterilization	5	1.41	5	0.91	25	4.56
Male sterilization	0	0.00	0	0.00	2	0.36
Safe period	188	54.17	60	10.95	113	20.62
Withdrawal	6	1.73	2	0.36	3	0.55
Total used before	347	63.32	179	32.66	354	64.60
Pregnancy desired			0	0.00	0	0.00
Not used	201	36.68	369	67.15	194	35.20
Total	548	100.00	548	100.00	548	100.00

prevalence of the above methods. The contraceptive practice in the interval after abortion shows a decrease in the use of the safe period and oral contraceptives. The permanent methods show an increased prevalence post abortion, but the modern temporary methods like the IUCD and the injectables and the total prevalence remain very similar to the pre – abortion levels.

Table 5 shows the distribution of women by current contraceptive use. The proportion who were using a modern temporary method at the time of survey was higher among the controls (45.5%) when compared to the cases (42.3%). This difference was not significant. The proportion using permanent methods was significantly higher ($p < 0.01$) in the control group (12,7%). Twenty one percent of the cases were using traditional methods in comparison to 16.3% in the control group. This difference was statistically significant ($p < 0.05$).

There were 378 women in the induced abortion group and 371 women in the control group who desired no more children. The current contraceptive use among these two groups are shown in Table 6. It is seen that the prevalence of permanent methods is signficantly different between the two groups ($p=0.01$), being 14.8% and 23.5% among the cases and controls respectively. However, for a group of women who do not desire another pregnancy, the prevalence of temporary methods and the proportion not using any method is unacceptably high.

On inquiry all except 89 (16%) women reporting an induced aborion stated a reason for seeking an abortion. Most women sought an abortion for spacing births (32.9%) and a further 31.6% used this as a method of limiting family size. Financial difficulties were stated as the reason by 11.6% of the women. It is interesting to note that 10.2% of women used abortion to delay the birth of the first child. A small percentage (5.7%) of women resorted to abortion as they thought a birth of a child at that point of time may affect their career, the other reasons given being ill health (5.7%) and an unstable marriage (2.4%).

Table 7 shows the distribution of the women by reason given for seeking abortion and status of contraceptive use at time of conception resulting in the induced abortion. This shows that a significant proportion of women who had expressed reasons such as child spacing, limitation of family size, to delay first child and financial difficulty, had not used contraception at that particular conception. Among those who were reluctant to disclose a reason only about a third had used a method of contraception.

It is interesting to note that about 48% of those reluctant to disclose a reason for seeking abortion and 42.3% of those who thought that their career may be affected, did not have any children at abortion (Table 8)

Table 5. Distribution of cases and controls by method of contraception currently used

Method	Induced abortion		Control group		DHSS-Sri Lanka 1987
	N	%	N	%	%
Condoms	88	16.18	75	13.74	1.9
Orals	61	11.21	72	13.19	4.1
Injectables	66	12.13	82	15.02	2.7
IUCD	14	2.57	19	3.48	2.1
Norplant	1	0.18	1	0.18	
Fem. Ster.	67	12 30	80	14.65	24.9
Male Ster.	2	0.36	24	4.40	4.9
Safe period	112	20.59	87	15.93	14.9
Withdrawal	3	0.54	2	0.37	3.4
Total. using contraceptives	414	76.10	442	80.95	61.7
Currently not using					
- pregnant	28	5.15	15	2.75	
- not preg	101	18.57	87	15.93	
- preg. desired	1	0.18	2	0.37	
Total	544*	100.00	546 *	100.00	

* information missing form 4 cases and 2 controls

Table 6. Distribution of women who desire no more children, by current contraceptive use.

Method	Induced abortion		Control group	
	N	%	N	%
Condom	56	14.81	53	14.29
Orals	41	10.85	47	12.67
Injectables	42	11.11	44	11.86
IUCD	11	2.91	12	3.23
Norplant	1	0.26	0	0.00
Fem. ster.	55	14.55	72	19.41
Male ster.	1	0.26	15	4.04
Safe period	84	22.22	66	17.79
Withdrawal	3	0.79	0	0.00
Not using (not pregnant)	61	16.14	49	13.21
Not using (pregnant))	23	6.08	13	3.50
Total	378	100.00	371	100.00

Table 7. Distribution of women according to reason given and status of contraceptive use at abortion.

Reason given	N	% used	% not used	
Financial difficulty	53	60.38	39.62	*
Child spacing	151	65.56	34 44	**
Ill- health	26	61.54	38.46	
Limitation of family size	145	63.45	36.55	**
Unstable marriage	11	54.55	45.45	
Carreer would be affected	26	57.69	42.31	
Delay first child	47	82.98	17.02	*
Reluctant to disclose reason	89	73.56	26.44	

* $p < 0.05$
** $p < 0.01$

Table 8. Percentage distribution of women by number of living children, according to reason given for abortion

Reason for induced abortion	Number of living children at abortion					Total
	0	1	2	3	=> 4	
Financial difficulty	15.09	49.06	26.42	5.66	3.77	53
Child spacing	0.00	70.86	21.85	5.29	1.99	151
Ill health	38.46	11.54	38.46	3.85	3.85	26
Limitation of family size	0.00	5.52	45.56	32.41	16.55	145
Unstable marriage	36.37	18.18	27.27	0.00	18.18	11
Carreer would be affected	42.30	34.62	15.38	7.69	0.00	26
Delay first child	100.00	0.00	0.00	0.00	0.00	47
Reluctant to disclose reason	48.27	19.55	20.69	10.34	1.14	89

Seventy one percent of those who used induced abortion as a method of child spacing had only one living child, while 94.5% of those who reported limitation of family size as the reason had 2 or more living children.

In nearly a fourth of the cases who had living children at the time of abortion, the youngest child was less than one year and in 45% the youngest child was less than 24 months of age. More than 80% who underwent termination did so when the youngest child was less than five years of age.

DISCUSSION

The study compared a group of women reporting an induced abortion with a group who did not report such an event. The two groups were similar in fecundity and had equal opportunities for exposure to child bearing. The induced abortion group was found to be younger in comparison to the age distribution of the MWRA in the study area, suggesting that younger women are more at risk of an induced abortion than the older cohorts in the population.

The two groups were very similar in their socio - demographic characteristics. Although the gender composition of the children was found to be different in the two groups there was no evidence to suggest that gender preference had an influence on abortion. The number of living children and desire for more children were similar in the two groups. The women who did not want any more children had an average of two children, demonstrating the general desire for small families prevalent in the study population.

The knowledge regarding contraceptive methods was uniformly high in both groups. This is to be expected in a suburban population and has been shown earlier (4). However it is inconclusive whether the knowledge of contraception improved following the induced abortion or not. The induced abortion group and the control group were similar in respect to their knowledge of places from where they could obtain specific methods. The study population as a whole had poor knowledge of non – governmental sources of contraceptives and services.

Contraceptive prevaleuce in the study area is higher than that reported in the Demographic and Health Survey of 1987 (4). This may partly be due to an increase in prevalence with time or due to the semi-urban nature of the area. The use of permanent methods was higher in the control group when compared to the induced abortion group, both at the time of abortion and at interview.

Although the current prevalence of contraceptives was similar in the two groups, the prevalence among the cases at time of abortion was as low as 32%. Furthermore among those who had used a method, the safe period and the pill were the commonest. The pattern of change of contraceptives in the induced abortion group point to probable difficulties in the regular and effective use of the safe period, pills and condoms, leading to discontinuation resulting in an unwanted pregnancy. However, the prevalence of these methods remain somewhat high even in the post-abortion period.

A comparion the use of contraceptives immediately following abortion with current use in the induced abortion group shows that the permanent methods have shown a three-fold increase, but there has been only a very marginal increase in the injectables, the IUCD remaining more or less the same. This may probably be due to a lack of motivation on the part of the cases or selective differences in accessibility to services. The pattern of use of contraceptives among women who desire no more children appears to be unsatisfactory.

Although the two groups were similar in family size, a higher proportion of the cases were using less effective methods at time of abortion. This may point to the probability that abortion is used as a method of contraceptioni This assumption is supported by the fact that nearly 60% reported child spacing, limitation of family size and delay in having the first child, as reasons for abortion. This clearly indicates that the increased use of contraceptives would substantially reduce the incidence of abortion.

Most women, other than those who gave limitation of family size as the reason for abortion, had resorted to abortion when they had one or no children. In 45% of the cases, the age of the youngest child at time of abortion was less than two years. This highlights the need for acceptable and easy to use, reliable, long - term, temporary methods and the promotion of such methods among the younger cohorts of women during the early period of their marriage. This may require the planning of special strategies.

The pressent study was confined to a single MOH area in a suburban setting and as such the generalization of findings may be limited. However it may be assumed that the experience in most urban and semi - urban populations would be similar. In the more rural areas, where access to services may be even poorer, the problems are bound to be greater.

REFERENCES

1. Teitze C, Henshaw SK. Induced Abortion, A World Review. 6th ed. The Alan Guttmatcher Institute: 1986: 143.

2. Co-ordinating Committee for Research in Reproductive Health, Sri Lanka. Assessment of Needs for Research in Reproductive Health in Sri Lanka, 1989.

3. Starrs A, Measham D. Safe Motherhood in South Asia–Challenge for the Ninetes. The World Bank and Family Care International, 1990; 12.

4. Sri Lanka Demographic and Health Survey 1987. Department of Census and Statistics, Ministry of Plan Implementation Sri Lanka, Columbia, Maryland: Institute of Resource Development, Westinghouse, 1988; 58