

Contraceptive Sterilization among Canadians, 1984-1995

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Abstract

Prior to early 1970s, traditional methods were the principal means of controlling the number and spacing of births. Today, an estimated 57 per cent of the world's married women use contraceptives and half use modern methods such as medical sterilizations. Recent statistics suggest that Canada has the highest sterilization rate in the Western world. This paper presents findings of research examining sterilization trends in Canada with respect to changing patterns in the use of modern contraceptives, using data from the 1984 Canadian Fertility Survey (CFS) and the 1995 General Social Survey (GSS). The main finding is that there is a decrease in the use of tubal ligation and an increase in the use of hysterectomy over the period 1984-1995. Less educated women are more likely to be in the forefront of modern methods of contraception.

Key Words: Contraception, sterilization, 1984 Canadian Fertility Survey, hysterectomy, tubal ligation, General Social Survey

Résumé

Avant les années 1970, les méthodes traditionnelles représentaient le principal moyen de contrôler et d'espacer le nombre de naissances. De nos jours, on estime que 57 pour cent des femmes mariées dans le monde entier utilisent un moyen contraceptif et la moitié utilise des méthodes modernes telles que la stérilisation. Les dernières statistiques indiquent que le Canada compte le taux de stérilisations le plus élevé dans le monde occidental. Cet article présente les conclusions de recherches portant sur les tendances en matière de stérilisation au Canada en ce qui concerne les modèles changeants d'utilisation de moyens de contraception modernes et ce, à partir de données de l'Enquête canadienne sur la fécondité de 1984 et de l'Enquête sociale générale (ESG) de 1995. La principale conclusion qui en est ressortie est une réduction de la ligature des trompes et une augmentation du nombre d'hystérectomies de 1984 à 1995. Les femmes moins éduquées sont plus portées à se trouver au premier plan des méthodes de contraception modernes.

Mots-clés : contraception, stérilisation, Enquête canadienne sur la fécondité de 1984, hystérectomie, ligature des trompes, Enquête sociale générale

Introduction

Throughout Western society, the multiple socio-cultural transformations of recent decades have brought a complex set of shifts in demographic circumstances. All developed regions, including North America have experienced improvements in socioeconomic conditions, low marriage and fertility rates, and contraceptive revolution. Women's higher educational levels and increased labor force participation, especially since the 1950s brought greater opportunities for women by reducing their economic dependence on men. It also led to a revolution in birth control by allowing them to choose if and when to become pregnant. The demographic transition in North America has been so dramatic, as Preston (1984) observed, "an earthquake had shuddered through the American family" (see, Skolnick & Skolnick, 1999, p. 301).

The decline in fertility has been one of the most remarkable demographic realities in modern times in Canada. In 1999, the total fertility rate in Canada hit a record low of 1.52 children per woman (Statistics Canada, 2002). Fertility rates are falling for a number of reasons. Declining marriage rates, rising divorce rates, delaying the birth of the first child, and the changing status and roles of women all continue to affect fertility levels to drop. However, the key factor appears to be the use of more effective contraceptive methods. Prior to the 1970s, traditional methods (e.g., withdrawal, rhythm, douching) were the principal means of controlling the number and also the spacing of births. However, the use of traditional methods has not resulted in significant fertility

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declines. It was only after the introduction of more effective modern contraceptive methods and induced abortion, marked declines in fertility started to take place. Although estimates of the abortion rate before legalization in 1969 were as high as 14% of live births (McLaren and McLaren, 1986), abortion as such did not contribute significantly to the decline of fertility in North America because it is more often used by women who are unmarried or divorced, who have never had a child or have only one, and who are in their twenties (Nett, 1993). In other words, it was mostly used as a last option in the case of unwanted pregnancies.

The rapid popularization of such modern contraceptive methods as the hormonal pill, intra-uterine devices, spermicidal gels and foams, condoms, and sterilizations, makes it hard to rule out that the family is hit by a medical "earthquake." In Canada, among women aged 15 to 19 who use contraceptives, 86% use a pharmaceutical method, primarily the pill, and 14% use a barrier method, mainly the condom (Statistics Canada, 2002). By 1995, some 3.3 million couples had undergone a vasectomy or tubal ligation to stop having children (Belanger, 1998). Of the 56.1 % of married women 18-49 years of age who chose sterilization as their method of contraception, 30.0% had a tubal ligation and the remaining were relying upon their husbands' vasectomies (Belanger, 1998).

This situation suggests the growing popularity of contraceptive sterilization in Canada. Similar developments are experienced elsewhere in the West, particularly in the United States. Data from the 1991 National Survey of Men in the United States indicated that about 12% of married men aged 20-39 have had a vasectomy and about 13% had a wife who was sterilized (Forste, Tanfer, & Tedrow, 1995).

How do the countries of the West behave with regard to sterilization? It is difficult to make international comparisons of the prevalence rate of sterilization, for several reasons. First, nationwide data on sterilization are scarce. Second, the availability of data varied from country to country; in some cases, data sources are quite outdated. Finally, existing data for each country make it difficult to compare because of differences in sampling and methodology.

Globally, sterilization has become a leading method of choice in regulating fertility among women of childbearing ages (Gentile, Kaufman, & Helbig, 1998). As Belanger (1998) reported, compared with other western countries, voluntary sterilization for contraceptive purposes is remarkably widespread in Canada. Mauldin & Segal's (1988) study of the prevalence of contraceptive use indicated that the three leaders in the world in terms of sterilization were Puerto Rico, Canada, and South Korea with more than 40% of couples in the reproductive ages have been sterilized. A survey in 1984 and 1985 of 7696 women aged 15-44 living in Italy, France, Great Britain, Spain, and West

Germany (Riphagen & Lehert, 1989) revealed that sterilization was more frequent in Great Britain (23%) than in the other four countries (Italy, 1%; France, 5%; Spain, 3%; and Germany, 7%). According to Riphagen and Lehert, sterilization was not legal in Italy and rarely practiced in Spain and it was slightly more frequent among women with a lower level of education in other countries. As the authors noted, sterilization evoked some doubt about health safety in France, Germany, and Spain and a slightly greater degree in Italy, but not in Great Britain. In Great Britain, either oral contraceptives, the IUD, or sterilization was considered unsafe. In the 1970s and 1980s, there was concern about vasectomy and atherosclerosis after a report of an increased risk of atherosclerosis among those who had undergone the procedure (Peterson & Howards, 1998).

According to the United Nations (1999), female sterilization predominates in the less developed regions, while the pill is the most popular method in the more developed regions. Worldwide, about 155 million relied on male or female sterilization in the late 1980s (Mauldin & Segal, 1988) with about 19 million found in the developed countries.

While there is a compelling body of research to suggest the importance of opening our eyes to the sterilization 'syndrome' (e.g., Poma, 1980; Shy, Stergachis, Grothaus, Wagner, Hecht, & Anderson, 1992), the demographic and physiological consequences of sterilization require much more thinking and research. It is within this context that contraceptive sterilization is examined here. The paper examines sterilization trends in Canada with respect to changing patterns in the use of modern irreversible procedures such as hysterectomies. Data on sterilization from the 1984 Canadian Fertility Survey and the 1995 General Social Survey are compared to indicate trends and patterns of use of irreversible methods of contraception among Canadian women.

Methods

Data

Data for the study came from the 1984 Canadian Fertility Survey (CFS) and the 1995 General Social Survey (GSS). The CFS was Canada's first and only national fertility survey, using telephone interviews for both household selection and in-depth interviewing of the selected respondents, namely, women in the reproductive ages of 18 to 49 years. A total of 5,315 women of all marital statuses who were interviewed constituted a nationally representative sample.

The CFS questionnaire was an outgrowth of not only the World Fertility Survey questionnaire, but also other surveys done in Canada (e.g., Family

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History Survey, 1984) and the United States (e.g., National Survey of Fertility Growth, 1973, 1976, 1982) (Krotki, 1988). It contained a substantial number of questions on childbearing intentions and experiences, contraceptive behavior, and abortion. It also covered a range of topics, including pregnancy, marriage, and work histories and socioeconomic variables, such as income, education, and religion (where applicable, socioeconomic data were also obtained on the husband).

The 1995 GSS was the 10th Cycle of the General Social Survey, using telephone interviews, conducted by Statistics Canada. The Survey was based on a national probability sample of 5,914 women and 4,835 men 15 years of age and older. It contained information on marital and reproductive histories, childbearing intentions, contraceptive practices, and socioeconomic characteristics of respondents and their partners. The respondents in the GSS did not match those in the CFS, in terms of age. However, the GSS provided a unique opportunity to study Canadian men's contraceptive behavior for the first time.

Unlike the CFS, the GSS was not intended to gather data about fertility. Its focus was mainly on the family. Further, it provided less information than the CFS about contraceptive use. For example, the CFS respondents were asked for multiple method use whereas the GSS included only questions on which method the respondents were currently using.

In both the CFS and the GSS, respondents were asked to indicate what method(s) of contraception they and their partners were using; they were given a number of different methods to choose from. The GSS distinguished between those who had the operation for contraceptive purposes, medical reasons, or both. Needless to say, hysterectomies, to some extent, are due to medical problems. That is, they are done for medical or contraceptive reasons. In order to make meaningful comparisons between the two surveys, it was felt necessary to separate those who were medically sterile from those who were sterile due to contraceptive reasons. Thus, in the GSS, those who reported that they themselves or their partners had operations for contraceptive or both reasons were considered contraceptively sterile (tubal ligation or vasectomy). Those who reported operations for medical reasons were considered medically sterile.

For the present study, in order to make the samples comparable, the sample from the GSS was restricted to include only those women aged 18 to 49 years. This procedure reduced the sample size to 3,220 women in the GSS, including nonusers of contraception.

Results

The reader is reminded that we are concerned exclusively with the question on contraception that the respondents or their partners were *currently* using. The sample of respondents was broken down into users of two forms of irreversible procedures of contraception, namely, hysterectomy and vasectomy. The numbers and percentages of women's report of their use of tubal ligations and hysterectomies and their husbands' or partners' use of vasectomy in the two national surveys are presented in Table 1. To understand the extent of contraceptive use, in general, data on reversible methods are also presented. Also included in the Table are numbers and percentages of those who had undergone sterilization for medical reasons.

Table 1
Trends in Contraceptive Use by Women and their Husbands/Partners
across Two National Surveys for Canada: 1984 and 1995

Method	CFS 1984		GSS 1995			
	Women		Women		Men	
	number	percent	number	percent	number	percent
Reversible^a	1889	35.6	1033	32.1	1211	34.8
Irreversible	1977	39.9	1304	40.4	1073	31.1
Tubal Ligation	1285	24.2	559	17.3	355*	10.6*
Vasectomy	462**	8.7**	343**	10.6**	453	13.1
Medical Sterilization ^b	230	7.0	402	12.5	265	7.7
Pregnant	200	3.8	78	2.4	138	4.0
Non-Users	1107	20.8	807	25.1	1027	29.8
TOTAL	5315	100.0	3222	100.0	3449	100.0

a Includes pill, condom, IUD, diaphragm, foam, rhythm, withdrawal, douche (in CFS) and sponge (in GSS).

B Includes those who were naturally or surgically sterile.

* The figures are based on men's report of their wives'/partners' method use.

** The figures are based on women's report of their husbands'/partners' method use.

Source: Canadian Fertility Survey, 1984; General Social Survey, 1995.

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In 1984, 19% of women reported using the pill and 6% reported having had their husbands/partners using the condom (not shown). By contrast, in 1995, nearly 17% had used the pill and almost 10% had their husbands/partners used the condom. The male sample indicated as many as 22% using a condom with 9% of their wives/partners using the pill in 1995 (not shown).

Tubal ligation was the most common reported form of sterilization in 1984. Comparisons between 1984 and 1995 figures indicate an increase in vasectomy and sterilization for medical reasons and a decrease in tubal ligations (Table 1). The decision to terminate childbearing and consequently the decision to favor a particular method of contraception may be affected by a host of factors, including sociodemographic, emotional, and values of both the spouses (Miller, Shain, & Pasta, 1989; Goldberg & Toros, 1994). Goldberg and Toros (1994), for example, found fears of adverse health effects as given by 10% of women who preferred tubal ligation when asked why they were not using a method they preferred. Many researchers investigated the premenstrual symptoms and menstrual disturbances of post-tubal sterilization and recommended hysterectomy instead of tubal ligation (e.g., Gentile, Kaufman, & Helbig, 1998; Shy et al., 1992; Wilcox, Chu, Eaker, Zeger, & Peterson, 1991; Wilcox, Martinez-Schnell, Peterson, Ware, & Hughes, 1992). Thus, the lower incidence of tubal ligation in 1995 is attributable in part to the fact that there was more awareness among women of the risks associated with the procedure. However, more research on the relationship between factors affecting contraceptive use and sterilization decision is needed before a firm conclusion can be made.

To further explore shifts in contraceptive use, several variables from both the CFS and GSS were examined: age, marital status, education, number of children, religion, religious attendance, and province or region of residence. The results are presented in Tables 2a through 3c. Among the CFS respondents, use of tubal ligation ranged from 56.7% in the 18-24 year age group to 68.4% in the 35-39 year age group (Table 2a).

Examination of age reveals that the practice of tubal ligation and age was an inverted U-shaped distribution in 1984. Goldberg and Toros (1994) observed a similar trend among Turkish couples using modern methods and an U-shaped relationship between traditional methods and age.

The GSS data support the recent trend that tubal ligation has become a less popular contraceptive choice in Canadian women of all ages. However, recent evidence indicates to an increasing popularity of tubal ligation in women aged 45 years and older. By 1995, the inverted U-shaped distribution relating age and tubal ligation had almost disappeared.

Among both the CFS and GSS survey respondents, formerly married women had the highest rate of tubal ligation use compared to their married or unmarried

Table 2a
**Number and Percentages of Tubal Ligations by Selected Socio-
Demographic Characteristics of Women Age 18-49 Years in
Two National Surveys for Canada: 1984 and 1995**

Method	CFS 1984			GSS 1995		
	number of women	tubal ligations number	percent	number of women	tubal ligations number	percent
Age Group						
18-24	30	17	56.7	21	3	14.3
25-29	169	110	65.1	73	24	32.9
30-34	376	246	65.4	192	68	35.4
35-39	525	359	68.4	314	147	46.8
40-44	472	300	63.6	366	153	41.8
45-49	406	254	62.6	337	164	48.7
Marital Status						
Married	1595	1002	62.8	973	394	40.5
Cohabiting	117	79	67.5	125	46	36.8
Formerly Married	223	179	80.3	149	95	63.8
Unmarried	43	25	58.1	56	24	42.9
Education						
Elementary	869	585	67.3	291	145	49.8
High School	531	333	62.7	322	145	45.0
Some College or University	577	367	63.6	692	269	38.9
Number of Children						
None	113	46	40.7	93	16	17.2
One	184	118	64.1	142	47	33.1
Two or More	1680	1121	66.7	1069	496	46.4

Sources: Canadian Fertility Survey, 1985 and General Social Survey, 1995.

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counterparts (Table 2a). The percentages of women using tubal ligation in 1984 were nearly constant with education, at around 63 to 67%. However, educational differences in tubal ligation were more pronounced in 1995. On the whole, women with more children opted for tubal ligation compared to their counterparts who were childless. In general, the procedure appears to be more popular among older and formerly married women.

As the data in Table 2b indicate, there is an inverse relationship between women's age and their spouses' use of vasectomy with about 62% of users had their wives/partners in the age group 25-34 in 1984. By 1995, the relationship between women's age and the proportion of men using vasectomy became an inverted U-shaped distribution.

The GSS revealed significant differences in spouses' vasectomy use by women's education; nearly 32% of women who had some college or university education reported having had their husbands/partners using vasectomy compared with 13% of women who had less than a secondary level of education having had their husbands/partners using vasectomy.

In 1984, there existed no significant differences in the use of vasectomy in terms of the number of children a couple had. By 1995, proportionately more men with two or more children opted for vasectomy than those with one child or no children at all.

The age-specific data revealed that by 1995, hysterectomy remained the contraceptive method of choice for younger Canadian women. For instance, 71% of those aged 18-24 and 40% of those aged 25-29 had hysterectomies in 1995 (Table 2c). It is clear, then that hysterectomies are predominantly used by young women during the early years of their reproductive life.

Apparently, unmarried were more likely to be the users of hysterectomies in both the surveys; the rate of use in 1995 was more than double the rate for 1984. Perhaps the most striking finding is that, in both 1984 and 1995, hysterectomies were mostly used by women with less than a secondary school education; the percentage using hysterectomies increased from 13.7 in 1984 to 37.1 in 1995 (Table 2c). This finding is similar to that of Riphagen and Leher (1989) in Europe. The authors reported that sterilization was slightly more frequent among women with a lower level of education in France, Germany, and Great Britain.

In 1984, 33.6% of women with no children opted for hysterectomies, and in 1995, the proportion increased to 67.7% (Table 2c). Even among those with two or more children, the increase in the use of hysterectomies more than doubled.

Table 2B
Number and Percentages of Partners' Vasectomies by Selected Socio-
Demographic Characteristics of Women Age 18-49 Years in
Two National Surveys for Canada: 1984 and 1995

Method	CFS 1984			GSS 1995		
	number of women	vasectomies number	percent	number of women	vasectomies number	percent
Age Group						
18-24	30	11	36.7	21	3	14.3
25-29	169	52	30.8	73	20	27.4
30-34	376	116	30.9	192	78	40.6
35-39	525	118	22.5	314	92	29.3
40-44	472	106	22.5	366	91	24.9
45-49	406	58	14.3	337	58	17.2
Marital Status						
Married	1595	422	26.5	973	315	32.4
Cohabiting	117	22	18.8	125	27	21.6
Formerly Married	223	12	5.4	149	0	0.0
Unmarried	43	6	14.0	56	0	0.0
Education						
Elementary	869	165	19	291	38	13.1
High School	531	147	27.7	322	85	26.4
Some College or University	577	150	26	692	220	31.8
Number of Children						
None	113	29	25.7	93	14	15.1
One	184	40	21.7	142	23	16.2
Two or More	1680	211	23.4	1069	176	28.6

Sources: Canadian Fertility Survey, 1985 and General Social Survey, 1995.

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Table 2C
Number and Percentages of Hysterectomies by Selected Socio-Demographic
Characteristics of Women Age 18-49 Years in
Two National Surveys for Canada: 1984 and 1995

Method	CFS 1984			GSS 1995		
	number of women	hysterectomies number percent		number of women	hysterectomies number percent	
Age Group						
18-24	30	2	6.7	21	15	71.4
25-29	169	7	4.1	73	29	39.7
30-34	376	14	3.7	192	46	24.0
35-39	525	48	9.1	314	75	23.9
40-44	472	66	14.0	366	122	33.3
45-49	406	94	23.2	337	115	34.1
Marital Status						
Married	1595	171	10.7	973	264	27.1
Cohabiting	117	16	13.7	125	52	41.6
Formerly Married	223	32	14.3	149	54	36.2
Unmarried	43	12	27.9	56	32	57.1
Education						
Elementary	869	119	13.7	291	108	37.1
High School	531	51	9.6	322	92	28.6
Some College or University	577	60	10.4	692	203	29.3
Number of Children						
None	113	38	33.6	93	63	67.7
One	184	26	14.1	142	72	50.7
Two or More	1680	67	9.9	1069	267	25.0

Sources: Canadian Fertility Survey, 1985 and General Social Survey, 1995.

Sterilization patterns by religion and religious attendance are shown in Table 3a through Table 3c, for the two surveys. As the data in Table 3a, 3b, and 3c indicate, in 1995 as in 1984, there were no marked differences in the use of irreversible contraceptive procedures by religion or church attendance.

Almost universally, cultural patterns appear to regulate nuptiality and fertility behaviors. There are reasons to assume that these factors also link individuals into social networks that play a role in regulating fertility intentions and behaviors. In Canada, it is a consistent finding that sociodemographic phenomena change monotonically as one moves from the East to the West (Krishnan & Krotki, 1999). English-French dualism has been noted as the most distinctive feature of the Canadian population for centuries.

Somewhat surprisingly, differences in levels of contraceptive sterilization were relatively small between the regions, with Ontarians reporting slightly greater use of tubal ligation than their counterparts in other provinces (not shown). Overall, in 1995, British Columbians reported greater use of sterilization than their counterparts in other provinces, despite the fact that they had the lowest rate of use in 1984 (not shown). In general then, the monotonic principle is ruled out in the case of sterilization status of women.

Discussion and Conclusion

Today, four out of every ten women of reproductive age practice sterilization in Canada. It appears that Canadians are confronted with a national epidemic of sterilization. Tubal ligations were far more common than vasectomies or hysterectomies in the country. The trend in recent years has shown a rapid decline in the number of tubal ligations, with a corresponding increase in the number of vasectomies and hysterectomies. In the 1970s and 1980s, there were concerns about vasectomy and arteriosclerosis. The safety of vasectomy was seriously doubted, and some specific health risks, such as prostate cancer were reported in those who had undergone the procedure (Sandlow & Kreder, 1996; United States, 1996). By contrast, a study by Bemal-Delgado, Latour-Perez, Pradas-Amal, & Gomez-Lopez (1998), found no association between the two. While we know little about the etiology of prostate cancer and thereby the causal relationship between vasectomy and prostate cancer, such findings might have contributed to an increase in male contraception. However, vasectomy still remains controversial. One of the primary aspects of the present study is the high incidence of formerly married women who reported relying on tubal ligation. On the other hand, the unmarried outnumbered others in their use of hysterectomies. Contraception, and in particular, sterilization appears to be more

Table 3A
Number and Percentages of Tubal Ligations by Religious Characteristics
of Women Age 18-49 Years in Two National Surveys
for Canada: 1984 and 1995

Characteristics	CFS 1984			GSS 1995		
	number of women	tubal ligations number	percent	number of women	tubal ligations number	percent
Religion						
Catholic	925	599.0	64.8	634	251	39.6
Non-Catholic	921	601.0	65.3	483	219	45.3
No Religion	132	85.0	64.4	187	88	47.1
Religious Attendance						
Rarely/Never	679	443.0	65.2	608	266	43.8
Sometimes	727	476.0	65.5	418	176	42.1
Weekly	570	365.0	64	278	116	41.7

Sources: Canadian Fertility Survey, 1985 and General Social Survey, 1995

of a health issue than a social issue. What determines one's method choice? Is the choice determined primarily by personal preferences, the availability of various methods, technology or the physicians themselves? Sterilization is not the leading cause of ill health or of death in the Canadian population. However, its frequency is such that it can have ramifications beyond mere health complications. Today, sterilizations can be performed without hospitalization through safe procedures, such as laparoscopy. However, as the epidemic is felt, the health care authorities and the government will have to face the realities and assess some of the physical, emotional, and health consequences of sterilization. Sterilization is a good example of the process of medicalization by which more and more aspects of our life are being brought into the medical sphere. It raises more questions than answers. Why is medicine involved and why is there a strong aptitude toward sterilization even in those countries with low levels of fertility? Not much is known about the dynamics of sterilization and the issues associated with it. Needless to say, the outbreak of sterilization, has implications beyond the borders of Canada.

Table 3B
Number and Percentages of Partners' Vasectomies by Religious
Characteristics of Women Age 18-49 Years in Two National Surveys
for Canada: 1984 and 1995

Characteristics	CFS 1984			GSS 1995		
	number of women	tubal ligations number	percent	number of women	tubal ligations number	percent
Religion						
Catholic	925	210	22.7	634	1073	26.8
Non-Catholic	921	217	23.6	483	355*	25.5
No Religion	132	35	26.5	187	453	26.7
Religious Attendance						
Rarely/Never	679	163	24.0	608	138	24.7
Sometimes	727	176	24.2	418	1027	27.5
Weekly	570	123	21.6	278	3449	28.1

Sources: Canadian Fertility Survey, 1985 and General Social Survey, 1995

It is difficult to assess a high level of reported use of irreversible methods among young women. Sexual behavior is too complex, and it cannot be explained in terms of just social or biological factors. Another difficulty lies in the fact that descriptive studies have their own limitations. In other words, these findings need to be verified with multivariate techniques. In view of these findings, we can say that we have a situation in Canada where the practice of irreversible methods of contraception is spread laterally and vertically across various age, marital status, and educational categories.

Table 3C
Number and Percentages of Hysterectomies by Religious Characteristics of
Women Age 18-49 Years in Two National Surveys
for Canada: 1984 and 1995

Characteristics	CFS 1984			GSS 1995		
	number of women	tubal ligations number	percent	number of women	tubal ligations number	percent
Religion						
Catholic	925	116	12.5	634	213	33.6
Non-Catholic	921	103	11.2	483	141	29.2
No Religion	132	12	9.1	187	49	26.2
Religious Attendance						
Rarely/Never	679	163	24.0	608	192	31.6
Sometimes	727	176	24.2	418	127	30.4
Weekly	570	123	21.6	278	84	30.2

Sources: Canadian Fertility Survey, 1985 and General Social Survey, 1995

Acknowledgements:

An earlier version of this paper was presented at the 31st annual meeting of the British Sociological Association, Medical Sociology Group, University of York, York, UK, September 24-26, 1999.

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