

Social Gradients in Surgical Sterilization Rates: Opposing Patterns for Males and Females

Randall Fransoo, PhD,^{1,2} Jill Bucklaschuk, MA,³ Heather Prior, MSc,² Elaine Burland, PhD,² Daniel Chateau, PhD,^{1,2} Patricia Martens, PhD^{1,2}; *The Need To Know Team* (a collaborative research group involving researchers from the Manitoba Centre for Health Policy, representatives of all regional health authorities in Manitoba, and the provincial Department of Health).

¹Community Health Sciences, University of Manitoba, Winnipeg MB

²Manitoba Centre for Health Policy, University of Manitoba, Winnipeg MB

³Department of Sociology, University of Manitoba, Winnipeg MB

Abstract

Objective: The purpose of this study was to analyze population-based rates of surgical sterilization by sex, income, age group, and location of residence (urban, rural, or remote) among a universally insured population.

Methods: The study included all 1.2 million residents of Manitoba. Data from comprehensive hospital and medical visit records were used to calculate rates of vasectomy and tubal ligation among the population aged 20 to 55 years. Analyses were carried out with generalized linear modelling, using administrative data housed at the Manitoba Centre for Health Policy.

Results: There were significant income-related gradients in sterilization rates for both sexes ($P < 0.001$), but the trends were in opposite directions for males and females. Tubal ligation rates were highest in low-income areas, and decreased with income, whereas vasectomy rates were lowest in low-income areas and increased with income. Rates also varied considerably by age and area of residence (urban, rural, or remote).

Conclusion: These results are potentially worrying because tubal ligation is more invasive, associated with higher risks, and more costly than vasectomy. It would therefore be expected to be less common than vasectomy among all groups, not just those in higher income areas. The results contribute unique population-based procedure rates, which are not subject to biases that can affect survey-based studies. The findings may reflect underlying differences across income groups in decision-making regarding reproductive health issues.

Key Words: Social class, tubal ligation, vasectomy, population-based rates, income gradients, sex differences

Competing Interests: None declared.

Received on December 7, 2012

Accepted on February 19, 2013

Résumé

Objectif : Cette étude avait pour but d'analyser les taux en population générale de stérilisation chirurgicale en fonction du sexe, du revenu, du groupe d'âge et du lieu de résidence (urbain, rural ou éloigné) au sein d'une population bénéficiant d'une assurance maladie universelle.

Méthodes : L'étude s'est penchée sur les 1,2 million de résidents du Manitoba. Des données issues de dossiers exhaustifs de consultation hospitalière et médicale ont été utilisées pour calculer les taux de vasectomie et de ligature des trompes chez les membres de la population dont l'âge se situait entre 20 et 55 ans. Des analyses ont été menées au moyen d'une modélisation linéaire généralisée, en utilisant les données administratives du *Manitoba Centre for Health Policy*.

Résultats : Les taux de stérilisation chez les deux sexes ($P < 0,001$) présentaient des gradients significatifs liés au revenu; toutefois, les tendances étaient opposées chez les hommes et les femmes. Les taux de ligature des trompes atteignaient leur apogée dans les régions à faible revenu et étaient inversement proportionnels au revenu, tandis que les taux de vasectomie atteignaient leur plus bas niveau dans les régions à faible revenu et étaient proportionnels au revenu. Ces taux variaient également de façon considérable en fonction de l'âge et du lieu de résidence (urbain, rural ou éloigné).

Conclusion : Ces résultats sont potentiellement troublants, en raison du fait que la ligature des trompes est une intervention plus effractive, associée à plus de risques et plus coûteuse que la vasectomie. On serait donc en droit de s'attendre à ce qu'elle soit moins courante que la vasectomie dans tous les groupes, et non seulement dans les groupes des régions à revenu élevé. Ces résultats donnent des taux d'intervention en population générale uniques, lesquels ne sont pas assujettis aux biais qui peuvent affecter les études fondées sur des sondages. Nos constatations pourraient refléter des différences sous-jacentes, d'un groupe de revenu à l'autre, en ce qui concerne la prise de décision en matière de questions de santé génésique.

INTRODUCTION

Surgical sterilization remains one of the most common forms of contraception throughout the world, and the global number of tubal ligations performed is considerably higher than the number of vasectomies.¹⁻³ Vasectomies are more common than tubal ligations in only a few countries, including Canada; this is so despite vasectomy being as effective as tubal ligation, but less costly and involving fewer complications.^{1,2,4-7} Among Canadian married couples between the ages of 35 and 44, surgical sterilization is the most common method of contraception.⁶ Approximately 11 of every 1000 men between the ages of 25 and 49 in Canada have had a vasectomy, according to data from 2005 and 2006.¹ In the same time period approximately 60 900 vasectomies and 27 300 tubal ligation procedures were performed.¹ Using data from the 1995 General Social Survey, Bélanger found that at least one partner had undergone a sterilization procedure in nearly one half of all couples of childbearing age.⁸ Married couples in which the woman was aged 25 years or older tended to choose sterilization more than other methods of contraception, although these trends may have changed since that time. Canada has seen a steady increase in male sterilization and a decline in female sterilization since the mid-1980s.^{8,9} Using data collected in the 2002 Canadian Contraception Study that surveyed women between the ages of 15 and 44 years, Fisher and Black reported that oral contraception, sterilization, and condoms were the most commonly used contraceptive methods.⁶ By comparison with earlier data, they concluded that male sterilization rates have remained relatively stable since 1993, but female sterilization rates have decreased.⁶

A multitude of factors influence rates of surgical sterilization. Bélanger found that rates of sterilization can be attributed to family size and generational differences in attitudes toward contraception.⁸ Younger generations appear to be choosing vasectomies more often; it is speculated that the explanation is related to men now sharing more responsibility in contraceptive decision-making and practice.⁸ Consistent with this finding, Martin and Wu found that younger couples are more likely than older couples to choose vasectomy over tubal ligation.¹⁰ In Canada having two children has become a societal norm and couples are more likely to choose sterilization after the birth of a second child.¹⁰

According to Bélanger, approximately 14% of couples with one child and 47% of couples with two children have chosen to have a vasectomy or tubal ligation. Also supporting these findings, Charton and Lapierre-Adamcyk found that the strongest factor in choosing sterilization is

that desired family size was already achieved. Whether or not this was a first union was also a factor.¹¹

Age and education level have also been found to influence sterilization rates. Martin and Wu found that sterilization rates increase as women's age increases, a finding that is consistent with other reports and is related to achieving desired family size.¹⁰ Both Bélanger⁸ and Martin and Wu¹⁰ found that educational attainment influences the method of contraception chosen by couples, and the effect of education is more evident with regard to tubal ligation than to vasectomy. Tubal ligation is most common among women with lower levels of education.

Regional variations have not been given as much attention, but can be helpful in identifying anomalous results and generating hypotheses for further research. For example, if residents of different small areas within the same larger region have different procedure rates, this might prompt further investigation into possible causes including demographic or cultural differences or differences in medical practice. Charton and Lapierre-Adamcyk explored provincial variations in sterilization rates in Canada among women aged 40 to 49 years, and found that Quebec had among the highest rates of sterilization and the lowest fertility rate.¹¹ However, regional differences in sterilization were not significant, and the choices were similarly motivated across the country.¹¹ Alderman and Gee also examined regional and provincial variations, finding extreme variation in eastern Canada among neighbouring provinces.⁵

However, many of these studies are more than 10 years old, leaving a large gap regarding current quantitative data on this subject. Most studies are survey based, either using a survey specifically on contraceptive choices or deriving information from specific questions used in broader social surveys. The data and findings are therefore subject to the limitations of all survey data; most prominently in this case, the limitation is participation bias (i.e., participants may be systematically different from non-participants in ways that may affect the results). Additionally, if surveys are based only on women's contraceptive choices and do not include the perspectives of men, this can de-emphasize men's experiences and indirectly reinforce the notion that reproductive responsibility rests solely with women.

The purpose of this study was to use population-based records of health service use to calculate rates of vasectomy and tubal ligation in the province of Manitoba. Analyses were stratified by age, income quintile, and geographic sub-regions of the province (urban, rural, or northern).

Download English Version:

<https://daneshyari.com/en/article/3955661>

Download Persian Version:

<https://daneshyari.com/article/3955661>

[Daneshyari.com](https://daneshyari.com)