Induced abortion and contraception use

Among immigrant and Canadian-born women in Calgary, Alta

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Abstract

Objective To determine what proportion of women seeking induced abortion in the Calgary census metropolitan area were immigrants.

Design For 2 months, eligible women were asked to complete a questionnaire. Women who refused were asked to provide their country of birth (COB) to assess for selection bias.

Setting Two abortion clinics in Calgary, Alta.

Participants Women presenting at or less than 15 weeks' gestational age for induced abortion for maternal indications.

Main outcome measures The primary outcome was the proportion of women seeking induced abortion services who were immigrants. Secondary outcomes compared socioeconomic characteristics and contraception use between immigrant and Canadian-born women.

Results A total of 752 women either completed a questionnaire (78.6%) or provided their COB (21.4%). Overall, 28.9% of women living in the Calgary census metropolitan area who completed the questionnaire were immigrants, less than the 31.2% background proportion of immigrant women of childbearing age. However, 46.0% of women who provided only COB were immigrants. When these data were combined, 34.2% of women presenting for induced abortion identified as immigrant, a proportion not significantly different from the background proportion ($P = .127$). Immigrant women presenting for induced abortion tended to be older, more educated, married with children, and have increased parity. They were similar to Canadian-born women in number of previous abortions, income status, and employment status.

Conclusion This study suggests that immigrant women in Calgary are not presenting for induced abortion in disproportionately higher numbers, which differs from existing European literature. This is likely owing to differing socioeconomic characteristics among the immigrant women in our study from what have been previously described in the literature (typically lower socioeconomic status). Much still needs to be explored with regard to factors influencing the use of abortion services by immigrant women.

EDITOR'S KEY POINTS

- Literature suggests that immigrant women are more likely to present for induced abortion. Studies attribute this trend to socioeconomic factors that increase their vulnerability to unintended pregnancies. This study aimed to determine what proportion of women seeking induced abortions in Calgary, Alta, were immigrant women.

- Unlike previous European studies, this study did not find that immigrant women were presenting for induced abortion in higher-than-expected numbers. Immigrant women in this study had greater parity and number of children compared with the Canadian-born women; however, unlike in previous literature they had similar income and employment levels and were more educated than the Canadian-born women. Immigrant women also tended to be older and married, characteristics for which no clear trend exists in the literature thus far.

- One-quarter of participants were not using any contraception. Participants indicated a lack of knowledge and misconceptions around reproductive health resulting in the use of less effective or no contraception and poor compliance, and immigrant women were more likely to be concerned about side effects. More focused contraception counseling is needed.

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Avortements provoqués et utilisation de moyens contraceptifs

Chez les immigrantes et les femmes d'origine canadienne à Calgary, Alberta

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Résumé

Objectif Déterminer dans quelle proportion les femmes de la région métropolitaine de Calgary qui demandent un avortement provoqué sont des immigrantes.

Type d'étude Sur une période de 2 mois, on a demandé à des femmes admissibles de répondre à un questionnaire. À celles qui refusaient, on a demandé d'indiquer leur pays de naissance (PDN) afin de vérifier la possibilité d'un biais de sélection.

Contexte Deux cliniques d'avortement à Calgary, Alberta.

Participantes Les femmes enceintes de 15 semaines ou moins qui désiraient un avortement provoqué pour des indications d'ordre maternel.

Principaux paramètres à l'étude L'issue primaire était la proportion des femmes désirant se faire avorter qui étaient des immigrantes. Les issues secondaires consistaient à comparer les caractéristiques socioéconomiques des immigrantes et des femmes d'origine canadienne ainsi que leur utilisation de moyens contraceptifs.

Résultats Un total de 752 femmes ont répondu à un questionnaire (78,6 %) ou fourni leur PDN (21,4 %). Dans l'ensemble, 28,9 % des femmes vivant dans la région de recensement du grand Calgary et ayant complété le questionnaire étaient des immigrantes, soit moins de 31,2 % de la proportion générale des immigrantes en âge de procréer. Toutefois, 46,0 % de celles qui avaient indiqué leur PDN étaient des immigrantes. Lorsqu'on combinait ces données, 34,2 % des femmes désirant un avortement provoqué étaient des immigrantes, une proportion qui ne différait pas significativement de la population générale ($P = ,127$). Les immigrantes qui consultaient pour se faire avorter avaient tendance à être plus âgées, plus instruites et, mariées avec des enfants, et à avoir eu plus de grossesses. Le nombre de leurs avortements antérieurs, leur revenu et leur niveau d'emploi étaient comparables à ceux des femmes d'origine canadienne.

Conclusion Contrairement à ce qu'on trouve dans la littérature européenne, les immigrantes de Calgary ne consultent pas pour obtenir un avortement provoqué dans une proportion anormalement élevée. Cela est vraisemblablement dû au fait que les caractéristiques socioéconomiques des immigrantes de notre étude diffèrent de celles des études antérieures (typiquement, un statut socioéconomique inférieur). Il reste encore beaucoup de recherche à faire pour cerner les facteurs qui influent sur l'utilisation des services d'avortement par les immigrantes.

POINTS DE REPÈRE DU RÉDACTEUR

- La littérature donne à croire que les femmes immigrantes sont plus susceptibles de demander un avortement provoqué. Les études attribuent cette tendance à des facteurs socioéconomiques qui rendent ces femmes plus vulnérables à des grossesses non désirées. Notre étude voulait déterminer quelle est la proportion d'immigrantes chez les femmes de Calgary qui demandent un avortement provoqué.

- Contrairement aux études européennes antérieures, cette étude n'a pas observé que les immigrantes qui venaient pour un avortement provoqué étaient en nombre supérieur à celui auquel on s'attendait. Les immigrantes de cette étude avaient eu un plus grand nombre de grossesses que les Canadiennes d'origine et elles avaient plus d'enfants; toutefois, contrairement aux études antérieures, elles avaient des revenus et des niveaux d'emploi comparables aux femmes d'origine canadienne, en plus d'avoir un niveau d'éducation supérieur. Les immigrantes avaient aussi tendance à être plus âgées et à être mariées, des caractéristiques pour lesquelles il n'existe pas de tendance claire dans la littérature jusqu'à présent.

- Un quart des participantes n'utilisaient pas de contraception. Les participantes disaient avoir une connaissance insuffisante et des idées erronées au sujet de la santé reproductive, avec comme conséquence qu'elles utilisaient des méthodes contraceptives peu efficaces ou n'en utilisaient pas du tout, sinon de façon irrégulière; en outre, les immigrantes étaient plus susceptibles de s'inquiéter d'éventuels effets indésirables. Il est nécessaire d'offrir plus de conseils au sujet de la contraception.

Cet article a fait l'objet d'une révision par des pairs.
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European research suggests that immigrant women seek induced abortion in higher numbers than would be expected given their proportion of the population.[1-6] A 2008 review of worldwide abortion trends by Sedgh et al found that in Spain and Italy abortion rates among immigrants were more than 3 times what would be expected.[1] A Norwegian study found that 25% of women seeking abortion were of non-Western origin[2] and a Swedish study found that 37% of women seeking abortion were immigrants,[3] compared with background population proportions of 15.5% and 29%, respectively.

Literature suggests that immigrant women might be vulnerable to unintended pregnancy owing to low socioeconomic status and limited knowledge about and access to services for contraception and family planning.[1,3,5,7-9] In addition, a woman's cultural background might influence her reproductive goals, her sexual behaviour, her patterns of contraception use, her partner's role in decision making,[7] and her perceived legal or moral barriers to abortion,[8,9] but the heterogeneity of cultural contexts studied makes generalizations difficult.[3]

In Alberta, 3 health facilities offer induced abortion for maternal indications up to 20 weeks' gestation: 2 in Calgary and 1 in Edmonton. In 2010, the provincial rate of induced abortions per 1000 women of reproductive age was 13%, an increase of less than 1% since 2001.[10]

Review of the literature revealed few Canadian data examining the use of induced abortion services by immigrant women. Our study aimed to understand local trends in abortion and contraception use in order to better inform women's health programs, particularly those serving immigrants in the Calgary census metropolitan area (CMA). In 2011, the Calgary CMA immigrant population represented 26.2% of the total population.[11] Our primary aim was to determine what proportion of women seeking induced abortion in the Calgary CMA were immigrants. Secondary aims were to compare the socioeconomic characteristics and contraception use of immigrant women with those of Canadian-born women. Our study was modeled after a 2003 study by Helström et al for comparative purposes.[3]

METHODS

Eligible women presenting at the 2 Calgary abortion clinics between November 1, 2011, and January 5, 2012, were invited to participate in the study. Women were excluded if they had been referred for fetal indications or pregnancy loss. Women presenting beyond 15 weeks' gestational age were excluded because of the existence of another study. Participants completed a questionnaire that included demographic information (age, country of birth [COB], education, religion, occupation, relationship status, and financial status), reproductive history (parity and previous abortions), and contraception use (method and predicted reason for failure or reason for nonuse). Women who declined to complete the questionnaire were asked to provide their COB to help assess for selection bias. City of residence was not collected from these women; however, it was assumed that the percentage from the Calgary CMA would be similar to that for women who completed the questionnaire. The questionnaire and a letter of introduction were professionally translated into 8 languages to attract as many non–English-speaking women as possible. Languages were selected according to Calgary immigrant demographic characteristics and suggestions from the clinics, and included Spanish, Vietnamese, Cantonese, Mandarin, Punjabi, Urdu, Arabic, Tagalog, and Amharic. For this study, *immigrant* refers to anyone not born in Canada.

Ethics approval was obtained from the Conjoint Health Research Ethics Board at the University of Calgary.

Statistical analysis

Analyses were performed using Stata software. A 2-sided, 1-sample z test compared the proportion of immigrant women seeking abortion with Calgary CMA data.[12] Fisher exact tests (where cell sizes were low) and χ^2 tests compared demographic and clinical characteristics between Canadian-born and immigrant women. Generalized linear models with binomial distribution and log link estimated associations between demographic characteristics and participants who had had at least 1 previous abortion. A combination of forward and backward selection with the likelihood ratio test was used to find the best-fitting parsimonious model. The same approach was used to determine associations between those with at least 1 previous abortion and contraception method used.

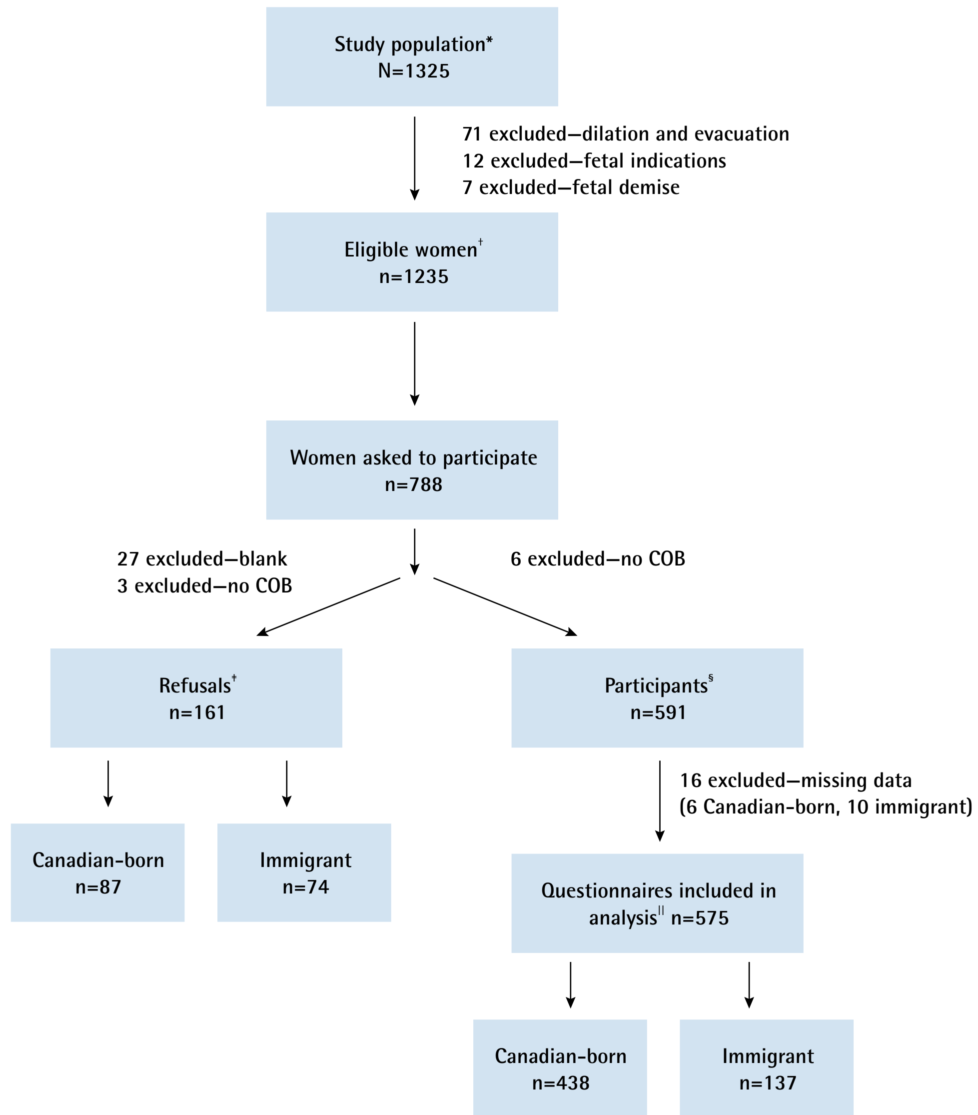
RESULTS

During the study, 1235 eligible women were seen at the 2 Calgary clinics, 788 of whom were asked to participate. The remainder were missed because clinic staff either forgot about or were unaware of the study. As outlined in **Figure 1**, 24.2% (191 of 788) declined to complete the questionnaire, although most of them (161 of 191) did provide their COB. A total of 575 questionnaires were analyzed for secondary outcomes after those with incomplete demographic data were excluded.

Induced abortion among immigrant women

Of eligible women living in the Calgary CMA who filled out the questionnaire, the proportion of immigrant

Figure 1. Study population



COB—country of birth.
*All women presenting to the Kensington Clinic (n=965) and Peter Lougheed Centre (n=360) during the study period.
†Population remaining after the exclusion criteria were applied.
‡Women who supplied their COB and age but did not fill out the questionnaire.
§Women who completed or partially completed the questionnaire, including their COB.
||Participant questionnaires that had sufficient demographic data to perform our analysis.

women (28.9%; 126 of 436) was lower than expected given the 31.2% background proportion of immigrant women of reproductive age (15 to 44 years).[12] However, our sample was subject to selection bias, as 46.0% of those who provided their COB but declined to fill out the questionnaire were immigrants. When the COB-only data were combined with data from those who filled out the questionnaire, the proportion of immigrant women presenting for induced abortion was 34.2% (190 of 556), which is not significantly different ($P = .127$) from the background proportion of immigrant women.[12]

Demographic factors

The 575 participants had a mean age of 26.8 years; 32.3% had never been pregnant before and 53.4% were presenting for their first induced abortions. A total of 71.7% indicated they were employed, but 59.4% (323 of 544) had annual incomes of less than $42 000. Almost half

had grade 12 education or less (45.2%) and were single, divorced, or separated (43.3%). **Table 1** shows that immigrant women had more previous pregnancies and children and were more likely to be older, married, and more educated than Canadian-born women. Both groups were similar in number of previous abortions, employment status, and income status. Participants originated from 62 countries (**Table 2**). The 3 most common countries of origin for immigrant women reflected the largest immigrant populations in the Calgary CMA.[12] Religious affiliation, outlined in **Table 3**, showed more Canadian-born women identified as atheist or not religious, whereas immigrants represented a wider variety of religions and higher proportions of Christians, Hindus, Sikhs, and Muslims. More than half the immigrants (51.2%) indicated that religion played an important role in their decision-making, compared with 16.9% of Canadian-born women.

Contraception use

As shown in **Table 4**, 25.1% of Canadian-born and 20.2% of immigrant participants were not using any contraception at the time of conception. The most common reasons for not using contraception were the belief that one could not or would not become pregnant (36.0%), not planning to have intercourse (21.2%), and concerns about side effects (34.4%), with the latter more common among immigrant than Canadian-born women. The most frequent reason given for contraceptive failure among participants was noncompliance. Before abortion, Canadian-born women were significantly more likely to use hormonal methods ($P<.001$) than immigrant women were. Immigrant women chose the rhythm method ($P<.001$), barrier methods ($P=.004$), or intrauterine devices (IUDs) ($P=.028$) significantly more frequently than Canadian-born women did (**Table 4**). After the procedure, most women planned to use more reliable methods of contraception, with both study groups indicating a preference for hormonal methods. Compared with contraceptive choice before the procedure, there was a significant increase in planned use of IUDs and a decrease in planned use of the withdrawal and rhythm methods in both groups ($P<.001$).

Factors associated with having had previous abortions

Analyses of associations between demographic characteristics and participants who had at least 1 previous

Table 1. Comparison of demographic data for Canadian-born and immigrant participants

CHARACTERISTIC	CANADIAN-BORN WOMEN (N = 438)	IMMIGRANT WOMEN (N = 137)	P VALUE (χ^2 TEST)
Mean (SD) age, y	25.5 (6.1)	30.7 (6.7)	<.001*
Pregnancies, n (%)			.001†
• No previous	159 (36.3)	27 (19.7)	
• 1 or 2 previous	168 (38.4)	58 (42.3)	
• ≥3 previous	111 (25.3)	52 (38.0)	
Children, n (%)			<.001
• None	261 (59.6)	48 (35.0)	
• ≥1	177 (40.4)	89 (65.0)	
Induced abortions, n (%)			.416
• No previous	238 (54.3)	69 (50.4)	
• ≥1 previous	200 (45.7)	68 (49.6)	
Occupation, n (%)			.924†
• Employed	314 (71.7)	98 (71.5)	
• Unemployed	28 (6.4)	10 (7.3)	
• Student or homemaker	96 (21.9)	29 (21.2)	
Relationship, n (%)			.006†
• Single, divorced, or separated	203 (46.3)	46 (33.6)	
• Married, common law, live together, or engaged	191 (43.6)	81 (59.1)	
• In a relationship	44 (10.0)	10 (7.3)	
Income $42 000 or less, n (%)‡	246 (59.1)	77 (60.2)	.837
Grade 12 education or less, n (%)	219 (50.0)	41 (29.9)	<.001

*Calculated using *t* test.
†Calculated using χ^2 test for 3×2 contingency table.
‡Canadian born, n = 416; immigrant, n = 128.

Table 2. Participants' country of birth according to the 2012 World Health Organization regional country groupings

REGION OF BIRTH	PARTICIPANTS, N (%) (N = 575)	NO. OF DIFFERENT COUNTRIES
The Americas		
• Canada	438 (76.2)	1
• Other	13 (2.3)	11
Europe	23 (4.0)	13
Southeast Asia		
• India	26 (4.5)	1
• Other	4 (0.7)	6
Western Pacific		
• China	8 (1.4)	1
• Philippines	19 (3.3)	1
• Other	12 (2.1)	8
Africa	20 (3.5)	12
Eastern Mediterranean	12 (2.1)	8

Table 3. Participants' religious affiliations

RELIGIOUS AFFILIATION	CANADIAN-BORN, N (%) (N = 438)	IMMIGRANT, N (%) (N = 137)
Protestant	34 (7.8)	19 (13.9)
Catholic	110 (25.1)	42 (30.7)
Other Christian	19 (4.3)	14 (10.2)
Muslim	5 (1.1)	8 (5.8)
Hindu or Sikh	3 (0.7)	25 (18.2)
Atheist or not religious	242 (55.3)	20 (14.6)
Other	19 (4.3)	5 (3.6)
No response	6 (1.4)	4 (2.9)

abortion are outlined in **Table 5**. In multivariate analysis the best-fitting model included immigrant status, age, having children, and having less education. Immigrant women who had lived in Canada for at least 10 years were 1.27 times more likely than Canadian-born women to have had previous abortions ($P = .035$). Immigrants who had been in Canada less than 10 years were less likely than Canadian-born women to have had previous abortions ($P = .011$). These analyses accounted for age as a confounder. Not surprisingly, younger women were significantly less likely to have had previous abortions ($P \leq .01$). Additionally, women with no children were less likely to have had previous abortions ($P < .001$), and there was a nonsignificant trend toward those with less education being more likely to have had previous abortions ($P = .083$). No significant association was found between women who had had previous abortions and the contraceptive method used (data not shown), but women with previous abortions were more likely to plan on using IUDs (risk ratio = 1.19, $P = .062$) or surgical methods (risk ratio = 1.30, $P = .030$) after the procedure.

DISCUSSION

The results of this study differ from those of much of the existing literature on this topic by suggesting that immigrant women in the Calgary CMA are not presenting in higher-than-expected numbers for induced abortion. Scandinavian studies attribute increased abortion among immigrants to factors such as lower income, less education, unemployment, and at least 1 previous abortion, pregnancy, or child.[3,5-7] In our study, immigrant women had greater parity and number of children compared with Canadian-born women; however, unlike the literature they had similar income and employment levels, and were more educated than Canadian-born women. Immigrant women in our study also tended to be older and married, characteristics for which no clear trend exists in the literature thus far.[3,5,8] A US study also reported that foreign-born women were not presenting for disproportionately more induced abortions,[9] suggesting that patterns of immigration (to North America vs Europe) or immigration eligibility requirements might be influential in selecting for different socioeconomic demographic characteristics than those found in European studies.

Alternatively, the socioeconomic findings of our study could be the result of different patterns of family formation among immigrant and Canadian-born women. For example, the median age at first delivery in India is 19.6 years,[13] in the Philippines it is 23.3 years,[14] but in Canada it is 28 years.[15] This suggests that immigrant women might access abortion services later in their reproductive lives, as there is a tendency to have children earlier than Canadian-born women do. This provides a possible explanation for why immigrant women tended to be older, married, and more educated. Other possible contributing factors, such as the influences of culture, religion, gender-determined roles, and sexual behaviour, require further investigation.[8]

Both our study and that by Helström et al[3] found that immigrants who had lived in the country at least 10 years had a higher number of previous abortions than immigrants who had lived in the country less than 10 years. A Canadian study by Fisher et al[16] found that women undergoing repeat abortion were more likely to have been born outside of Canada, but length of time in Canada was not examined. It remains unclear how length of time in the country is affecting immigrant women and their risk of repeat abortions. It has been suggested this could be owing to differing reproductive

Table 4. Contraception use before and after induced abortion among Canadian-born and immigrant women

CONTRACEPTIVE METHOD*	METHOD AT CONCEPTION: CANADIAN-BORN, N (%) (N = 430)	METHOD AT CONCEPTION: IMMIGRANT, N (%) (N = 129)	METHOD AT CONCEPTION: *P* VALUE	PLANNED FUTURE METHOD: CANADIAN-BORN, N (%) (N = 429)	PLANNED FUTURE METHOD: IMMIGRANT, N (%) (N = 127)	PLANNED FUTURE METHOD: *P* VALUE
No method used	108 (25.1)	26 (20.2)	.247	NA	NA	NA
No method planned†	NA	NA	NA	3 (0.7)	5 (3.8)	.019
Barrier (condom, cervical cap)	175 (40.7)	71 (55.0)	.004	151 (35.2)	44 (34.6)	.909
Hormonal (OCP, patch, injection, ring)	129 (30.0)	16 (12.4)	<.001	247 (57.6)	57 (44.9)	.012
IUD (copper, levonorgestrel-releasing)	8 (1.9)	7 (5.4)	.028	123 (28.7)	29 (22.8)	.195
Withdrawal	45 (10.5)	16 (12.4)	.536	6 (1.4)	1 (0.8)	.587
Rhythm	13 (3.0)	14 (10.9)	<.001	3 (0.7)	2 (1.6)	.322
Emergency contraceptive pill‡	25 (5.8)	6 (4.8)	.400	0 (0.0)	0 (0.0)	NA
Surgical	7 (1.6)	2 (1.6)	.655	47 (11.0)	13 (10.2)	.818
Spermicide	4 (0.9)	1 (0.8)	.673	1 (0.2)	0 (0.0)	.762
Abstinence§	NA	NA	NA	7 (1.6)	3 (2.2)	.644
Undecided	NA	NA	NA	15 (3.5)	1 (0.8)	.087

IUD—intrauterine device, NA—not applicable, OCP—oral contraceptive pill.
*More than 1 choice was possible; therefore, the most common value for *n* is indicated in each column head, with any deviations indicated.
†Canadian born, n = 434; immigrant, n = 131.
‡Canadian born, n = 428; immigrant, n = 126.
§Canadian born, n = 438; immigrant, n = 137.

patterns based on cultural and socioeconomic differences; however, this area needs further research.[3]

One-quarter of women in our study were not using any method to prevent pregnancy. While this is substantially lower than the 34% to 60% reported in other studies,[3,7,16,17] it highlights that there is still improvement to be made in reproductive health services in Canada. Similar to other studies,[3,7,17] participant responses indicated a lack of knowledge and misconceptions around reproductive health resulting in the use of less effective or no contraception and poor compliance. Literature supports our finding that immigrant women are more likely to be concerned about using contraception, perhaps owing to a lack of understanding, myths, or cultural nonacceptance of side effects.[1,3,7] Our study suggests a general need for more focused contraception counseling to specifically address strategies for enhancing fertility awareness, increasing compliance, and addressing concerns about side effects.

Limitations

An important limitation of this study was the number of immigrant women declining to participate. They might have exhibited different characteristics and behaviour than those who did participate. Determining the background proportion of immigrants to compare with the study results was challenging, and if this study were repeated it would be beneficial to include the Edmonton clinic to enable use of provincial statistics. To conduct this study on a national scale would be difficult given differences in reporting of abortion statistics and in abortion provision among provinces. Unlike Helström et al,[3] who used nurse-midwives to interview participants and interpreters for those with language barriers, this study relied on clinic staff to distribute the self-completion questionnaire, perhaps contributing to the refusal rate. Last, our questionnaire has not been formally validated.

Conclusion

Our study diverges from existing literature by not demonstrating a disproportionately higher number of immigrant women accessing induced abortion. This is likely owing to differing socioeconomic characteristics among the immigrant women in our study from what have been previously described in the literature (typically lower socioeconomic status). Much still needs to be explored with regard to factors influencing the use of abortion services by immigrant women. Despite a limited body of

Table 5. Binomial regression models to assess risk factors for repeat abortion

	ONE-AT-A-TIME ANALYSIS			BEST-FITTING MULTIVARIABLE ANALYSIS		
VARIABLE	RATE RATIO	95% CI	*P* VALUE	RATE RATIO	95% CI	*P* VALUE
Immigrant status						
• Born in Canada	1.00	Reference	NA	1.00	Reference	NA
• Immigrant < 10 y in Canada	0.79	0.57-1.08	.133	0.66	0.48-0.91	.011
• Immigrant ≥ 10 y in Canada	1.48	1.21-1.82	< .001	1.27	1.02-1.59	.035
Age, y						
• ≤19	0.37	0.23-0.58	< .001	0.38	0.23-0.60	< .001
• 20-24	0.73	0.58-0.92	.008	0.74	0.59-0.93	.010
• 25-29	1.00	Reference	NA	1.00	Reference	NA
• 30-34	1.12	0.90-1.39	.323	1.08	0.88-1.34	.453
• 35-39	0.95	0.73-1.24	.703	0.83	0.63-1.09	.180
• ≥ 40	0.74	0.44-1.24	.249	0.67	0.40-1.12	.126
High school education or less	1.00	0.84-1.19	.976	1.17	0.98-1.40	.083
No children	0.60	0.50-0.72	< .001	0.68	0.56-0.82	< .001
Income of $42 000 or less	0.91	0.77-1.09	.325	NA	NA	NA
Religious beliefs affected decision making	0.99	0.81-1.21	.911	NA	NA	NA
Relationship status						
• Married, common law, living together, or engaged	1.00	Reference	NA	NA	NA	NA
• Single, divorced, or separated	0.91	0.76-1.09	.293	NA	NA	NA
• In a relationship	0.70	0.48-1.03	.071	NA	NA	NA
Employment status						
• Employed	1.00	Reference	NA	NA	NA	NA
• Student or homemaker	0.94	0.76-1.17	.592	NA	NA	NA
• Unemployed	0.89	0.60-1.30	.539	NA	NA	NA

NA—not applicable.

literature, trends are emerging, such as a lack of contraceptive knowledge and fear of side effects. To improve compliance, reproductive health agencies can help women—especially immigrants—select the most effective contraceptive method that fits with their values and reproductive goals, and provide them with anticipatory guidance around side effects.

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Contributors
Drs du Prey and **Talavlikar** contributed to the concept and design of the study; acquisition, analysis, and interpretation of data; and drafting and finalizing the manuscript. **Dr Mangat** acted as clinical advisor and contributed to the concept and design of the study, interpretation of data, and critical review of the manuscript. **Ms Freiheit** contributed to study design, statistical analysis and interpretation of data, and drafting and critical review of the manuscript. **Dr Drummond** acted as research advisor and contributed to the concept and design of the study, interpretation of data, and critical review of the manuscript.

Competing interests
None declared

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