Gender, Income and Immigration Differences in Depression in Canadian Urban Centres

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ABSTRACT

Background: Immigrants tend to initially settle in urban centres. It is known that immigrants have lower rates of depression than the Canadian-born population, with the lowest rates among those who have arrived recently in Canada. It is established that women and low-income individuals are more likely to have depression. Given that recent immigration is a protective factor and female gender and low income are risk factors, the aim of this study was to explore a recent immigration-low income interaction by gender.

Methods: The study used 2000-01 Canadian Community Health Survey data. The sample consisted of 41,147 adults living in census metropolitan areas. Logistic regression was used to examine the effect of the interaction on depression.

Results: The prevalence of depression in urban centres was 9.17% overall, 6.82% for men and 11.44% for women. The depression rate for recent immigrants was 5.24%, 3.87% for men and 6.64% for women. The depression rate among low-income individuals was 14.52%, 10.79% for men and 17.07% for women. The lowest-rate of depression was among low-income recent immigrant males (2.21%), whereas the highest rate was among low-income non-recent immigrant females (11.05%).

Conclusions: This study supports previous findings about the effects of income, immigration and gender on depression. The findings are novel in that they suggest a differential income effect for male and female recent immigrants. These findings have implications for public health planning, immigration and settlement services and policy development.

MeSH terms: Canada; depressive disorder; immigrants; gender; socio-economic factors

La traduction du résumé se trouve à la fin de l'article.

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Immigrants constitute a growing proportion of the Canadian population. Since the early 1990s, between 175,000 and 250,000 immigrants have come to Canada each year.¹ These individuals enter the country as legal immigrants (e.g., skilled workers, family reunification) and refugees.¹ In 2001, approximately 1.8 million of Canada's immigrants had arrived in the previous 10 years, representing 6.2% of the population in 2001.¹ This was an increase from 4.3% in 1996. Of the 1.8 million recent immigrants, 58% arrived from Asia and the Middle East.¹ In 2001, 94% of recent immigrants were living in Canada's census metropolitan areas, with 73% settling in Toronto, Vancouver and Montreal.²

Depression is an important mental health condition. Worldwide, major depression is the leading cause of years lived with disability and the fourth cause of lost disability adjusted life years.³ A recent review on immigrant health reported that immigrants have lower rates of mental illness than the Canadian-born population, with the lowest rates among recent and non-European immigrants.⁴ With increasing length of residence in Canada, rates of immigrant physical and mental health conditions begin to mirror the rates experienced by the Canadian-born population.⁴⁻⁶

It is well established that low-income individuals and women are at a high risk of depression relative to those with middle/high income and men, respectively.⁷ To date, however, no studies have looked at the effect of low income on the mental health of immigrants. Given that being a recent immigrant is a protective factor for depression and having a low-income level is a risk factor and that there are noted gender differences in depression, the objective of this study was to explore a recent immigration-low income interaction stratified by gender. Since the proportion of immigrants is increasing, it is important to understand the health needs of these individuals in order to provide appropriate health and settlement services.

METHODS

Since immigrants are most likely to settle in urban areas, the sample was restricted to individuals living in the 25 Census Metropolitan Areas (CMAs) across Canada.² CMAs consist of one or more adjacent municipalities situated around a major urban core.⁸

TABLE I
Socio-demographic Profile of CMAs in Canada Stratified by Depression and Sex (CCHS 2000-2001)

Variable	Adults 18-74				Men 18-74				Women 18-74						
	Socio-demographics n	%	Depression n	%	95% CI	Socio-demographics n	%	Depression n	%	95% CI	Socio-demographics n	%	Depression n	%	95% CI
Gender															
Male (r)	20,239	49.19	1359	6.82	(6.37, 7.26)	20,239	100.00	1359	6.82	(6.37, 7.26)	20,908	100.00	2355	11.44	—
Female	20,908	50.81	2355	11.44*	(10.89, 12.00)	—	—	—	—	—	—	—	—	—	(10.89, 12.00)
Age group															
18-24	5549	13.49	652	11.90*	(10.80, 13.00)	2792	13.79	242	8.78*	(7.31, 10.24)	2757	13.19	410	15.05*	(13.46, 16.64)
25-44	17,405	42.30	1723	10.06*	(9.55, 10.58)	8682	42.90	650	7.61*	(6.93, 8.28)	8723	41.72	1073	12.52*	(11.70, 13.33)
45-64	14,358	34.89	1158	8.18*	(7.61, 8.77)	6996	34.57	411	5.96*	(5.25, 6.67)	7362	35.21	747	10.30*	(9.37, 11.23)
65-74 (r)	3835	9.32	181	4.81	(3.92, 5.69)	1769	8.74	56	3.23	(2.12, 4.34)	2065	9.88	125	6.16	(4.79, 7.54)
Immigrant status															
Yes	11,898	29.13	826	7.02*	(6.33, 10.46)	5967	29.69	316	5.36*	(4.53, 6.19)	5932	28.59	509	8.70*	(7.68, 9.71)
No (r)	28,944	70.87	2888	10.05	(6.38, 7.67)	14,126	70.31	1043	7.44	(6.92, 7.96)	14,818	71.41	1845	12.54	(11.90, 13.18)
Recent immigrant status															
Yes	3557	8.72	184	5.24*	(4.11, 6.36)	1801	8.97	69	3.87**	(2.51, 5.21)	1756	8.47	115	6.64*	(4.89, 8.38)
No (r)	37,238	91.28	3523	9.54	(9.17, 9.91)	18,266	91.03	1285	7.09	(6.63, 7.56)	18,972	91.53	2238	11.90	(11.32, 12.48)
Income adequacy															
Low income†	3785	9.88	542	14.52*	(13.20, 15.83)	1550	8.18	164	10.79*	(8.93, 12.65)	2236	11.55	378	17.07*	(15.29, 18.85)
Middle/High Income (r)	34,528	90.12	2992	8.72	(8.36, 9.09)	17,402	91.82	1129	6.53	(6.05, 7.01)	17,126	88.45	1863	10.95	(10.36, 11.53)
Educational attainment															
Less than high school	6995	17.12	726	10.60*	(9.65, 11.54)	3408	16.96	303	9.11*	(7.80, 10.42)	3588	17.28	423	12.00	(10.64, 13.37)
High school	8478	20.75	786	9.41*	(8.63, 10.20)	3904	19.43	245	6.38	(5.42, 7.35)	4574	22.03	541	11.99*	(10.85, 13.13)
Less than post-secondary	3828	9.37	437	11.61*	(10.42, 12.79)	1874	9.33	164	8.87*	(7.19, 10.55)	1953	9.41	274	14.23*	(12.44, 16.03)
Post-secondary (r)	21,557	52.76	1742	8.19	(7.80, 8.58)	10,906	54.28	636	5.90	(5.36, 6.44)	10,651	51.29	1106	10.54	(9.84, 11.25)
Marital status															
Married/Common Law (r)	26,026	63.31	1748	6.81	(6.41, 7.20)	12,969	64.11	612	4.78	(4.30, 5.27)	13,058	62.53	1136	8.81	(8.17, 9.45)
Separated/Divorced	3339	8.12	525	16.10*	(14.66, 17.54)	1297	6.41	165	12.94*	(10.84, 15.04)	2043	9.78	360	18.12*	(16.20, 20.03)
Single	10,520	25.59	1309	12.67*	(11.86, 13.48)	5756	28.46	562	9.94*	(8.94, 10.93)	4764	22.81	747	15.97*	(14.64, 17.31)
Widowed	1223	2.98	131	10.88*	(8.95, 12.82)	206	1.02	20	9.81**	(6.28, 13.34)	1017	4.87	111	11.10*	(8.92, 13.29)
Visible minority status															
Yes	7926	19.54	548	7.01*	(6.24, 7.78)	3951	19.79	222	5.69*	(4.64, 6.75)	3975	19.30	326	8.31*	(7.10, 9.53)
No (r)	32,637	80.46	3129	9.66	(9.27, 10.04)	16,015	80.21	1124	7.06	(6.57, 7.56)	16,623	80.70	2005	12.15	(11.55, 12.76)
Live alone															
Yes	5110	12.54	672	13.45*	(12.58, 14.32)	2442	12.15	283	11.87*	(10.66, 13.07)	2668	12.92	389	14.89*	(13.62, 16.16)
No (r)	35,636	87.46	3003	8.55	(8.17, 8.92)	17,653	87.85	1064	6.11	(5.66, 6.57)	17,983	87.08	1938	10.94	(10.33, 11.55)
Single parent															
Yes	2924	7.18	471	16.52*	(14.82, 18.21)	952	4.74	103	11.04*	(8.55, 13.53)	1971	9.55	368	19.16*	(17.03, 21.29)
No (r)	37,823	92.82	3203	8.59	(8.25, 8.93)	19,143	95.26	1244	6.60	(6.15, 7.04)	18,680	90.45	1959	10.64	(10.07, 11.21)
Government income															
Yes	14,829	36.87	1528	10.43*	(9.84, 11.02)	6660	33.62	514	7.81*	(7.00, 8.62)	8169	40.02	1014	12.56*	(11.74, 13.39)
No (r)	25,389	63.13	2145	8.50	(8.08, 8.93)	13,148	66.38	831	6.36	(5.83, 6.89)	12,241	59.98	1314	10.79	(10.07, 11.52)
Region															
Atlantic	1396	3.39	129	9.37*	(8.06, 10.67)	667	3.30	41	6.22	(4.46, 7.99)	729	3.49	89	12.21*	(10.33, 14.10)
Quebec (r)	10,444	25.38	770	7.45	(6.78, 8.12)	5061	25.01	271	5.40	(4.57, 6.23)	5383	25.75	499	9.39	(8.35, 10.42)
Ontario	17,903	43.51	1605	9.07*	(8.50, 9.63)	8843	43.69	577	6.60*	(5.88, 7.32)	9060	43.33	1028	11.48*	(10.56, 12.39)
Prairies	2291	5.57	235	10.39*	(9.26, 11.5)	1139	5.63	85	7.62*	(6.18, 9.05)	1152	5.51	149	13.10*	(11.38, 14.82)
Alberta	3985	9.68	480	12.39*	(11.04, 13.74)	1995	9.85	202	10.37*	(8.72, 12.02)	1990	9.52	279	14.43*	(12.42, 16.43)
British Columbia	5128	12.46	495	9.97*	(9.14, 10.81)	2535	12.53	183	7.47*	(6.27, 8.67)	2593	12.40	312	12.42*	(11.13, 13.71)

(r) = reference category

* Statistically significant at 0.05 using Bootvar 3.0 (Statistics Canada).

† Low income - <\$15,000 if 1 or 2 people, <\$20,000 if 3 or 4 people, <\$30,000 if 5+ people.

‡ Coefficient of variation between 16.6 and 33.3. Estimates are considered marginal and are associated with high sampling variability. Percent missing ranged from 0% to 7% (income adequacy).

The 2000-01 Canadian Community Health Survey (CCHS 1.1) is a general population survey designed to provide timely cross-sectional estimates of health determinants, health status, and health system utilization for Canada's 136 health regions.⁹ CCHS respondents ages 18-74 were included in the analysis. Respondents who were younger than 18 or older than 74 were excluded due to high rates of proxy interviews.

The Composite International Diagnostic Interview – Short Form for Major Depression (CIDI-SF MD) is a reliable and valid instrument developed by Kessler which provides a probability from 0.0 to 0.9 of receiving a diagnosis of depression if the respondent had been given the complete CIDI questionnaire.^{10,11} The scale has 7 questions. For this study, a cut-off of 4, corresponding to a 0.8 probability of depression, was used to estimate the prevalence of depression.¹²

Recent immigration and income adequacy were the variables of primary interest in this study. Recent immigration was defined as individuals not Canadian by birth and having immigrated to Canada within the past 10 years. Income adequacy was a dichotomous variable (low, middle/high income) defined as individuals whose household income is below a Statistics Canada threshold based on the number of occupants per household. Several control variables were included in the analyses. Educational attainment was coded in 4 categories (less than high school, high school, less than post-secondary, post-secondary). Government source of income was defined as individuals receiving Employment Insurance, Canada Pension Plan/Quebec Pension Plan, Old Age Security/Guaranteed Income Supplement, Child Tax Benefit, or social assistance. Marital status was coded in 4 categories (married/common law, separated/divorced, widowed and single). Region was a 6-level variable representing the Atlantic Provinces, Quebec, Ontario, the Prairies, Alberta and British Columbia. Age and age squared were included in all models, with the latter necessary to account for the non-linear relationship between age and depression.

A socio-demographic profile describing Canadian CMAs was done using frequencies of the study variables for the entire sample, and by gender. Cross-tabular analy-

ses were done to determine if there were differences in the prevalence of depression. Logistic regression was used to examine the effects of the study variables on depression. Variables were entered into the model in the following sequence: age and age squared, gender, socio-economic status (income, educational attainment, government income), ethnic diversity (recent immigrant status, visible minority status), family composition (marital status, living alone, single parent) and region. The model testing the interaction between immigration and income was stratified by gender and adjusted for the above variables.

The interaction was explored graphically by estimating the probability of depression by income adequacy for recent and non-recent immigrants, and by creating a four-level variable according to recent immigration status and income adequacy: 1) Recent immigrant–Low income, 2) Recent immigrant–Middle/high income, 3) Non-recent immigrant–Low income, 4) Non-recent immigrant–Middle/high income.

Statistics Canada's data publication guidelines were followed throughout the analysis.¹³ All analyses were weighted using the sampling weight. In all models, the variance was estimated using the bootstrap technique with 500 replications, in order to account for the design effects of the CCHS. Statistical significance was defined at the level of $p \leq 0.05$. $P \leq 0.10$ was used for an exploratory analysis to examine interaction effects. All statistical tests were two-tailed. Statistical comparisons were made against reference categories. SAS version 9.1 (SAS Institute Inc., Cary, NC, USA) was used for the analysis. Ethics approval was obtained from the St. Michael's Hospital Research Ethics Review Board. Micro data were accessed at the Toronto Region Statistics Canada Research Data Centre.

RESULTS

The response rate for the entire CCHS sample was 80.2%. There were 41,147 adults age 18-74 living in the 25 CMAs (20,239 men and 20,908 women). There were 3,557 recent immigrants in the sample (1,801 men and 1,756 women) and 3,786 individuals with low income (1,550 men and 2,236 women).

Table I shows the socio-demographic profile and the weighted prevalence of

depression. In our sample, the prevalence of depression in the sample was 9.17% overall, 6.82% for men and 11.44% for women. The depression rate among recent immigrants was 5.24% overall, 3.87% for men and 6.64% for women. Among individuals with low income, the depression rate was 14.52% overall, 10.79% for men and 17.07% for women. Also shown in Table I, depression rates were high among individuals who were single, separated or divorced, not visible minorities, single parents, living alone, receiving government sources of income, living in Alberta urban centres and in the 18-24 age group. Women had higher rates of depression than men across all socio-demographic indicators. The highest rates of depression among women appear to be in those who were single parents (19.16%) or those who were separated or divorced (18.12%). For men, the highest rates appear to be among individuals who were separated or divorced (12.94%) or those living alone (11.87%).

Table II presents results from the multivariate logistic analyses. For men, all variables were significantly associated with depression, with the exception of visible minority and single-parent status. For women, all variables were significantly associated with depression. Tests for multicollinearity were not significant. The variables in Table II were used to adjust for the interaction term. The odds ratio for the income by immigration interaction term was 0.5 (0.15, 1.70) for men and 1.32 (0.73, 2.38) for women. The multivariate results confirm independent effects of the study variables on rates of depression.

Table III shows the unadjusted and adjusted probability of depression and relative risks stratified by the 4-level immigration income variable. In the adjusted model, male low-income recent immigrants (2.21) appear to have the lowest rates of depression whereas female low-income non-recent immigrants (11.05) appear to have the highest rates of depression. Female low-income recent immigrants were approximately four times more likely to have depression than their male counterparts. This relative risk is only 1.7 among non-recent immigrants. Male low-income recent immigrants were 30% less likely to have depression than those of a middle-/high-income status. Among recent immigrants, there was a significant difference in

TABLE II**Odds Ratios and 95% Confidence Intervals for Depression (N=37,190)**

Variable	Adults	Men	Women
Gender			
Female (vs. Male)	1.76 (1.59, 1.94)	–	–
Socio-economic status			
Low income (vs. Middle/high income)	1.37 (1.21, 1.57)	1.31 (1.04, 1.65)	1.42 (1.21, 1.67)
Government income (vs. None)	1.32 (1.2, 1.46)	1.44 (1.24, 1.68)	1.25 (1.11, 1.42)
Less than post-secondary (vs. Post-secondary)	1.24 (1.08, 1.43)	1.34 (1.05, 1.71)	1.19 (0.99, 1.42)
High school education (vs. Post-secondary)	1.11 (0.99, 1.24)	0.98 (0.81, 1.19)	1.18 (1.02, 1.35)
Less than high school (vs. Post-secondary)	1.52 (1.34, 1.73)	1.73 (1.40, 2.13)	1.40 (1.18, 1.67)
Ethnic diversity			
Recent immigrant (vs. Non-recent immigrant)	0.59 (0.45, 0.79)	0.57 (0.37, 0.86)	0.61 (0.43, 0.86)
Visible minority (vs. Non-visible minority)	0.71 (0.60, 0.83)	0.88 (0.69, 1.11)	0.63 (0.51, 0.77)
Family composition			
Living alone (vs. Not living alone)	1.35 (1.16, 1.56)	1.41 (1.13, 1.77)	1.28 (1.06, 1.56)
Single parent (vs. Not a single parent)	1.23 (1.04, 1.46)	1.13 (0.81, 1.56)	1.31 (1.06, 1.62)
Separated/divorced (vs. Married)	1.76 (1.33, 2.33)	2.55 (1.53, 4.25)	1.68 (1.19, 2.36)
Single (vs. Married)	1.88 (1.59, 2.22)	2.20 (1.66, 2.93)	1.72 (1.38, 2.14)
Widowed (vs. Married)	1.61 (1.38, 1.88)	1.75 (1.35, 2.28)	1.53 (1.26, 1.86)
Region			
Atlantic provinces (vs. Quebec)	1.23 (1.01, 1.49)	1.13 (0.79, 1.61)	1.28 (1.03, 1.58)
Ontario (vs. Quebec)	1.40 (1.23, 1.59)	1.39 (1.12, 1.73)	1.41 (1.20, 1.65)
Prairies (vs. Quebec)	1.48 (1.26, 1.73)	1.5 (1.14, 1.97)	1.46 (1.20, 1.79)
Alberta (vs. Quebec)	1.88 (1.60, 2.21)	2.09 (1.63, 2.69)	1.74 (1.40, 2.15)
British Columbia (vs. Quebec)	1.61 (1.40, 1.85)	1.49 (1.17, 1.9)	1.68 (1.41, 2.01)

All models were adjusted for age and age squared.

All models were bootstrapped using Bootvar 3.0 (Statistics Canada).

TABLE III**Probability of Depression and Relative Risk (RR, 90%CI) Stratified by Recent Immigration and Income Adequacy (N=37,190)**

Category	Unadjusted			Adjusted*		
	Male	Female	RR (F:M)	Male	Female	RR (F:M)
Recent immigrant						
Low income	3.44	10.72	3.12 (1.64-8.69)	2.21	8.33	3.77 (1.26-13.86)
Middle/high income	4.17	5.50	1.32 (0.85-2.13)	3.10	4.75	1.53 (0.58-4.28)
RR (Low income: Middle/high income)	0.82 (0.29-1.58)	1.95 (1.28-2.95)		0.71† (0.24-1.45)	1.75† (1.08-2.68)	
Non-recent immigrant						
Low income	12.79	18.55	1.45† (1.24-1.72)	6.49	11.05	1.70 (0.75-3.79)
Middle/high income	6.72	11.36	1.69† (1.57-1.83)	4.73	8.25	1.74 (0.71-4.05)
RR (Low income: Middle/high income)	1.90† (1.62-2.25)	1.63† (1.48-1.80)		1.37† (1.14-1.67)	1.34† (1.19-1.51)	

*Adjusted for age, age squared, marital status, education, government income, visible minority status, living alone, being a single parent and region.

† Statistically significant at $p \leq 0.05$.

the relative risk for income between men and women, but this difference was not significant for non-recent immigrants. Due to a limited sample, these differences were not significant at $p < 0.05$ but were significant at $p < 0.10$. Figure 1 shows the adjusted interaction of income and immigration by gender, demonstrating a differential income effect between genders.

DISCUSSION

The results of this study support previous findings that depression is more prevalent among women, non-recent immigrants and individuals with low income. The novel finding is a differential income effect whereby male low-income recent immigrants appear to have lower rates of depression than male middle-/high-income recent immigrants. This is in contrast to female low-income recent immigrants who have higher rates of depression than middle-high-income recent immigrants. The results have

also shown the importance of examining socio-demographic indicators such as living alone, single-parent status, and receiving government sources of income as factors related to depression, especially in vulnerable, high-risk subgroups like women. Findings like these have implications for public health policy and health promotion programming for vulnerable subgroups of the population. Different demographic groups may require different programming to accommodate gender, socio-economic and immigration status.

While literature on mental health among immigrant populations is limited, available evidence suggests two hypotheses that may explain lower rates of depression among recent immigrants. The healthy migrant hypothesis posits that healthier individuals are more likely to immigrate.¹⁴ Acculturation is the process by which immigrants change their attitudes, values and behaviours as they are exposed to Canadian culture. The acculturation

hypothesis theorizes that some foreign cultures are protective of health, but that health deteriorates with length of residence in Canada. Currently there are no extensions to these hypotheses that account for differential income effects.

This study has some limitations. The data were cross-sectional in nature, which precludes causal inference. Longitudinal data would allow changes in health status to be tracked over time. The CIDI-SF is a self-reported questionnaire that is a short version of the complete predictive instrument.¹⁰ Patten showed that the CIDI-SF slightly overestimates the prevalence of depression.¹¹ Recent immigrants may be more likely to be non-respondents than the Canadian-born population due to linguistic and cultural factors.¹⁵ Reporting patterns of depression may be different among recent immigrants compared to the Canadian-born population due to cultural interpretation of questions. Canada's immigrants are extremely heterogeneous

Figure 1. Adjusted probability of depression by income adequacy for recent and non-recent immigrants (CCHS 2000-2001)

with respect to source country, length of stay, category of migration and socioeconomic status.¹⁵ A limited sample size prevents detailed analysis of depression in immigrant subgroups and justified our exploratory analysis using $p \leq 0.10$. This analysis demonstrated trends in the data that need further exploration.

Despite the limited power, the income difference between male and female recent immigrant relative risks suggests that there may be a low-income advantage for recent-immigrant males, or at the very least an absence of risk. Other factors may contribute to this apparent gain in mental health. Possibly, low-income status for recent immigrants is a transitional state, or earning a low-income wage does not reflect the overall wealth of recent immigrants. Previous research in immigrant and minority communities suggests that there are mental health benefits of social capital. Social ties and supportive communities could possibly explain some of these differences. Further research is recommended to explore the relationship within larger samples and explain why low-income recent-immigrant males might be better advantaged than their middle-/high-income and female counterparts.

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RÉSUMÉ

Contexte : Les immigrants ont tendance à s'établir initialement dans les centres urbains. On sait que les immigrants présentent des taux de dépression inférieurs à ceux de la population née au Canada, et que les taux les plus faibles sont enregistrés chez les personnes récemment arrivées au Canada. Il est prouvé que les femmes et les personnes à faible revenu sont plus susceptibles d'être déprimées. Étant donné que l'immigration récente est un facteur de protection et que le sexe féminin et le faible revenu sont des facteurs de risque, nous avons voulu étudier l'interaction entre l'immigration récente et le faible revenu selon le sexe.

Méthode : L'étude faisait appel aux données de l'Enquête sur la santé dans les collectivités canadiennes de 2000-2001. L'échantillon comprenait 41 147 adultes vivant dans les régions métropolitaines de recensement. Au moyen d'une analyse de régression logistique, nous avons examiné l'effet de l'interaction susmentionnée sur la dépression.

Résultats : La prévalence de la dépression dans les centres urbains était de 9,17 % globalement (6,82 % chez les hommes et 11,44 % chez les femmes). Le taux de dépression des immigrants récents était de 5,24 % (3,87 % chez les hommes et 6,64 % chez les femmes). Le taux de dépression chez les personnes à faible revenu était de 14,52 % (10,79 % chez les hommes et 17,07 % chez les femmes). Le plus faible taux de dépression était enregistré chez les immigrants récents à faible revenu de sexe masculin (2,21 %), tandis que le taux le plus élevé était enregistré chez les femmes à faible revenu qui n'étaient pas des immigrantes récentes (11,05 %).

Conclusion : Cette étude confirme les résultats antérieurs sur les effets du revenu, de l'immigration et du sexe sur la dépression. Par contre, elle donne à penser que l'effet du revenu est différent chez les hommes et chez les femmes immigrants de fraîche date. Ces constatations ont des conséquences pour la planification de la santé publique, les services d'immigration et d'établissement et l'élaboration des politiques.