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Healthy Immigrant Effect in Canada: A Longitudinal Perspective using National Population Health Surveys Edward Ng (a), Russell Wilkins, (a, b) and Jean-Marie Berthelot (a, c)

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Introduction

In 2001, immigrants comprised 5.4 million or 18.4% of Canada's population, the highest in 70 years. About 1.8 million arrived during between 1991 and 2001, and these recent immigrants accounted for 6.2% of the total population in 2001. In recent years, Canada has been receiving about 200,000 immigrants annually. While considerable efforts are made to screen immigrants in terms of health prior to entry, relatively little is done to monitor immigrants' health thereafter.

Literature Review

Previous studies in Canada and elsewhere (1-5), based on cross-sectional data, generally point to a strong 'healthy immigrant effect' which diminishes over time. The relationship of immigration and health is a highly complex matter, but prior research suggests at least three explanations for the healthy immigrant effect, namely the 'filtering', 'buffering' and 'stress' hypotheses. These explanations should be viewed as complementary to rather than competing with one another.

First, migration generally filters in a highly selective population in terms of health, for several reasons: (a) Self-selection among the more motivated, leaving behind the sick and less vigorous. (b) Selection by explicit health criteria, as immigrants usually have to meet certain health requirement to be allowed into the country. (c) Indirect selection by health-related criteria such as education, income, occupation, wealth, etc. (d) Selection after migration as less successful migrants may return to the home country. Thus, according to this 'filtering' perspective, it is reasonable to observe that immigrants tend to be healthier.

Second, different cultural groups have different norms and values proscribing risky behaviours and promoting healthy behaviours, which may include stronger familial and social support networks and better nutrition. However, to the extent that immigrants acculturate and lose the hold onto aspect of their own culture that buffer themselves from risky behaviours and promote healthy ones, their health status will tend to deteriorate over time.

Third, some health problems may arise due to the actual migration as the process of 'stress' of acculturation may take its toll on immigrants' health. Economic stress, finding a suitable job, and establishing a new social support network may all have profound effect on health. In terms of health care utilization, formal and informal barriers can block or limit the immigrants' access to medical care. The health effect in the migration process is expected to be temporary and to lessen as immigrants integrate into the society.

An important limitation of many of earlier studies is the cross-sectional nature of their data. These cross-sectional studies did not actually assess the health impact in the immigration process, as immigrants adjust to, settle in and integrate into the host country. It may well be that the healthy immigrant effect observed in cross-sectional data was caused by an upward shift over time in the health status of immigrants at entry. Longitudinal data can be used to confirm or rule out that possibility.

Methods and materials

To better understand the duration-related gradient of health among immigrants, we use four waves of the Canadian National Population Health Surveys (NPHS), conducted bi-annually from 1994 to 2000 to ascertain change in immigrants' health over time in the host country. The NPHS was designed to collect longitudinal data on health and related socio-demographic characteristics for a representative sample of the Canadian population, every two years beginning in 1994. The cohort to be followed is the 1994 longitudinal component of the survey.

We compare changes in health status (prevalence of chronic conditions, disability and dependency), health care utilization (hospitalization, contact with physician and dentist), and health-related behaviours (such as smoking and leisure time physical activity) by immigration status (European and non-European compared with Canadian-born) and by duration of residence over the 6 years period covered by the surveys, controlling for socio-economic factors such as age, sex, income and education. We would have preferred to break down the different immigrants by region (South Asian, European, Latin American, African, West Asian, Southeast Asian, etc.), but due to sample size limitations, this will not be possible. It would also be desirable to compare health indicators for refugees versus other classes of immigrants, though this is not possible with NPHS data.

For baseline estimates of chronic conditions, disability, health-related dependency and health care utilization, data on all household members aged 18 and over (n=41,045),

which includes proxy responses, were used. This sample included 4,004 European and 2,375 non-European immigrants. However, for the estimates of behavioural risk factors and the longitudinal follow-up, only non-proxy data on randomly selected household members aged 18 and over (n=16,291) were available, which included 1,640 European and 704 non-European immigrants.

There are two main hypotheses to be tested here. First, immigrants, especially more recent immigrants, are less likely than the Canadian-born population to have chronic conditions or disabilities, they are expected to use less health care and to be less likely to smoke and engage in physical exercise. Second, these differences should be more evident among those from non-European countries as Europeans were expected to have cultural backgrounds and lifestyles more like those of the Canadian-born population.

Expected results

If the healthy immigrant effect holds true, then we expect that health status of immigrants (especially recent immigrants) to be better than that for the Canadian-born in terms of chronic conditions and disability, but the advantage should narrow over the 6-year period of follow-up. As well, the health status difference with the local born should be more pronounced for the non-European compared with the European immigrants.

For health care utilization, immigrants (especially recent immigrants) are expected to have less frequent hospitalization and contacts with physicians and especially with dentists, but the differential use should narrow during the follow-up period. The utilization differences with the local born should be more pronounced for the non-European compared with the European immigrants.

Similarly for health-related behaviours, immigrants (especially recent immigrants) are expected, for example, to have lower rates of smoking but also less physical activity, but these behavioural differences should narrow during the follow-up period. Again, the differences with the local born should be more pronounced for the non-European compared with the European immigrants.

Conclusion

This will be an important first step in disentangling the different factors contributing to the changes in health of immigrants upon arrival in Canada near the end of the 20th century. We hope that by this analysis, we will better understand the role of immigration experience as a health determinant. This increase in understanding is only made possible with longitudinal data such as the different waves of the National Health Population Surveys in Canada.

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