The Health of Immigrants and Refugees in Canada

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ABSTRACT

Canada admits between more than 200,000 immigrants every year. National policy emphasizes rigorous selection to ensure that Canada admits healthy immigrants. However, remarkably little policy is directed to ensuring that they stay healthy. This neglect is wrong-headed: keeping new settlers healthy is just, humane, and consistent with national self-interest.

By identifying personal vulnerabilities, salient resettlement stressors that act alone or interact with predisposition in order to create health risk, and the personal and social resources that reduce risk and promote well-being, health research can enlighten policy and practice. However, the paradigms that have dominated immigrant health research over the past 100 years – the “sick” and “healthy immigrant,” respectively – have been inadequate. Part of the problem is that socio-political controversy has influenced the questions asked about immigrant health, and the manner of their investigation.

Beginning with a review of studies that point out the shortcomings of the sick immigrant and healthy immigrant paradigms, this article argues that an interaction model that takes into account both predisposition and socio-environmental factors, provides the best explanatory framework for extant findings, and the best guide for future research. Finally, the article argues that forging stronger links between research, policy and the delivery of services will not only help make resettlement a more humane process, it will help ensure that Canada benefits from the human capital that its newest settlers bring with them.

MeSH terms: Canada; immigrants; settlement and resettlement; migration policy

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

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Identifying a category of people as vulnerable implies that they suffer a disproportionate burden of illness, lower than average life expectancy or compromised quality of life. As a group, immigrants fulfil none of these criteria. Immigrants are, on average, in better health than native-born Canadians, and have lower mortality rates. However, shortcomings in immigration and resettlement policy jeopardize immigrants' health advantage.

Canada selects immigrants on the basis of attributes such as education, job skills and youth, all of which are grouped under the rubric of human capital. Screening helps ensure that they are healthy as well.¹ After immigrants enter the country, responsibility for assuring they stay healthy devolves to the provinces. However, aside from defining a mandatory waiting period before becoming eligible for health-care coverage, and arranging surveillance for immigrants with a history of tuberculosis, provincial health policies have little to say about immigrants. Refugees, a sub-category of immigrants, have, by definition, suffered unusual stresses and assaults on their health prior to coming to Canada. In some ways, refugees are like other immigrants. For example, like immigrants in general, refugees have lower death rates than native-born Canadians. However, refugees are in less robust health than their immigrant counterparts, and they have a particular vulnerability to infectious and parasitic diseases.²

Expending a great deal of effort to select people to become part of Canada, and then more or less ignoring them is short-sighted. Resettlement experiences exert enormous influence on the eventual health of immigrants and refugees, and on the likelihood that their human capital will fulfil its promise.³ A century or more of research concerning the health of immigrants and refugees has produced potentially useful findings that are, however, diverse, scattered and sometimes contradictory. This article advances an integrative framework to help make sense of an unwieldy literature. It proposes that the two paradigms that dominated 20th century research and practice – the sick and the healthy immigrant, respectively – were, at least in part, products of the socio-political context of the times, and that they fail to do justice to a complex issue. It further

proposes that the current gap between research, policy and practice must be bridged to help ensure that the people who come to this country in apparent good health stay that way.

Background: Canada and immigration

Eighteen percent of the people living in Canada were born somewhere else.² In the expectation that immigration will help rejuvenate an aging society, provide both skilled labour where it is needed and unskilled labour for jobs Canadians do not want, and help to ensure present and future competitiveness in the global economy, Canada admits between 220,000 and 240,000 new settlers each year.² For reasons having nothing to do with economic benefit, or with compensating for the greying of a nation, about 10% of Canada's annual immigration quota consists of refugees, people deemed to be in need of refuge and protection. Canada is one of roughly 150 countries to have signed a UN Convention, signalling a commitment to protect the persecuted and stateless. Canada is also part of a much smaller group of these Convention signatories – about 20 – who offer not just temporary protection, but the option of permanent resettlement.

National discourse tends to focus on whether immigration fulfils the promise of net economic benefit and on the effects of immigration on social cohesion. The neglect of immigrant health is not only irresponsible, it is wrong-headed. Health is integral to immigrant human capital. If their health is compromised, immigrants cannot achieve their full economic and social potential. Moreover, immigration demands changes in social institutions, none more so than in health and health care; an effective response to this challenge requires information and the development of appropriate expertise.

As they have ever since Confederation, immigrants and refugees resettle in Canada, adjusting and changing their languages, habits, dress, foods and values in the process. They also reshape the language, habits, dress codes, foods and values of Canada.

Change brings challenges to new settlers and the resettlement country alike. However, nothing in the 100-year history of Canada prepared either the country or

the immigrants and refugees it received for the diversification in migration flows that began in the 1970s. Before 1970, most immigrants (70% or more) came from Europe, with the United States a distant second (about 15%); Asia was the source region for 10% or fewer of all immigrants, and Africa, the Middle East and the Caribbean accounted for the remaining 5%.¹ Post-1970 figures document a startling reversal. By 2002, Europe and the UK accounted for only 17% of immigrant flows, the US for only 2%. South and Central America (9%), Africa and the Middle East (20%), and Asia and the Pacific (52%) have replaced so-called traditional sources of immigration.⁴

Although Canadian societal institutions – the economy, education, and health – have been slow to respond, the country's changing makeup can no longer be ignored. To adapt to change, the caregiving sector requires information about the health of immigrants and refugees, and about how this evolves over time; an understanding of health determinants, some of which may be similar to those in the majority culture population, others of which may be unique; an analysis of the match between health needs on the one hand, the use of health and related services on the other, and an appreciation of how socio-political context can affect research about and care for new settlers.

Models of immigrant and refugee health

Three somewhat conflicting paradigms have influenced the conduct of immigrant health research: nation states have always been cautious about admitting strangers who might be a menace to the health of the indigenous population, or a threat to its economic well-being. Consistent with these time-worn concerns, the sick immigrant paradigm proposes that it is the least healthy and well-adjusted people who choose to emigrate from their home countries of origin. Taking Canada's rigorous selection policies as its point of departure, the healthy immigrant paradigm portrays immigrants as the cream of the world's crop. According to this framework, if immigrants become ill as they resettle, it is likely due to convergence and/or resettlement stress. Convergence is a process through which, because immigrants are

exposed to the health risks encountered by resident Canadians, their good health declines to the more mediocre Canadian average. The resettlement stress model proposes that declining health may be due to stresses inherent in the resettlement process. The interaction framework proposes that health is the outcome of interacting processes including predisposition – which may be genetic, or based on pre-migration exposures and experience – as well as post-migration stressors and individual and social resources.

The Sick Immigrant Paradigm

Until at least the middle of the 20th century, the idea that immigrants were sick and that the public needed to be protected from them dominated North American thinking. There was good reason for this, since it was immigrants from Europe who brought measles, smallpox, cholera and syphilis to the continent in the 16th and 17th centuries.¹ Protecting the public's health and economic well-being continues to guide federal policy. For example, Canada's *Immigration and Refugee Protection Act* refers to migrant health in only one place, s. 38.1, which mandates rejecting an applicant if he/she is (a) likely to be a danger to public health, or (b) to pose a danger to public safety, or (c) if he/she might reasonably be expected to cause excessive demand on health or social services. The last restriction does not apply to refugees or persons admitted to rejoin family. Regulations stemming from the Act call for continuing provincial surveillance of immigrants or refugees who have been granted permanent residence status, but who have evidence of inactive tuberculosis or who have been successfully treated for syphilis.

Refusing entry to people who might jeopardize public safety and/or empty the public purse seems reasonable. Politics can, however, all too easily use concern for the health of the public as a convenient smoke-screen. Late 19th century Canada was ambivalent about immigrants who did not come from the "right" places, meaning Britain, northern Europe and the United States. The country needed cheap Asian and southern European labour to help build the railroads, cut down forests and work in mines, and it needed eastern European know-how to make central Canada's fields produce grain. But it was

not at all sure that Canada wanted these people to stay.⁵⁻⁹ Selection and settlement policies militating against non-white immigrants remained in effect until 1967, when they were replaced by a colour-blind system based on points assigned according to an applicant's human capital.

Rather than always supplying ballast for reasoned argument, science has been a sometimes naïve, sometimes complicit bedfellow of politics.

Until well after World War II, the sick immigrant paradigm fuelled anti-immigrant discourse. Psychiatry provides the most obvious example. G.F. Bodington, a powerful British Columbia mental hospital superintendent, inveighed against foreign governments for shipping off to Canada "weak-minded young persons...[to]... swell the ranks of the already too numerous lunatics..."⁵ Toronto-based C.K. Clarke, a leader of pre-World War II Canadian psychiatry, wrote articles with titles such as "Keeping this young country sane," in which he cautioned that the influx of the genetically weak threatened to impair the quality of Canadian stock.¹⁰ A popular explanation for migrants' putative mental fragility was that they were individuals who chose to leave home because they were the least well-integrated, and perhaps the least competent people in their respective societies.^{11,12}

Statistics showing that mental hospitalization rates among immigrants were higher than among the native-born lent credence to the mentally sick immigrant paradigm.¹³⁻¹⁵ However, hospital statistics confuse the amount of mental disorder a group suffers with the resources they can call upon to deal with problems. When mental illness strikes a member of a small, isolated or fragmented community, he or she may experience different treatment than someone suffering the same type of disorder who belongs to a community that can call on traditional healers, supportive family, or health-care professionals who understand the language and share the ethnocultural background of the patient. Hospitalization – usually the last resort in an episode of illness – may take place quickly in the first scenario, but take much longer, or even be avoided, in the second. A groundbreaking study by H.B.M. Murphy¹⁶ illustrates this point. Murphy showed that mental hospitalization rates

for immigrant groups in Canada increased as the size of the like-ethnic community decreased. Consistent with these findings, Bland and his colleagues¹⁷ demonstrated that migrants as a whole were no more likely than members of the general public to be hospitalized for schizophrenia. Immigrants who were also members of ethnic minorities were, however, over-represented on hospital rolls.

Undeterred by methodologically flawed studies, leading psychiatrists such as Bodington and Clarke argued in favour of psychiatric surveillance to make it tougher to get into Canada. Interestingly, although health officers during the early years of the 20th century could turn down a prospective immigrant if they found any evidence of insanity, neurosis or feeble-mindedness, psychiatric disorder accounted for less than 1% of all rejected applications.⁵

Psychiatry played a more significant role in a second method of crowd control – expulsion. Between 1900 and 1940, approximately 10,000 people were expelled from Canada every year, 10% of them – nearly 1,000 annually – for psychiatric reasons. Statistics from the one province, British Columbia, that recorded deportations by country of origin, suggest ethnic bias. Between 1921 and 1936, 6-7% of Canadian immigrants who had been born in the UK and admitted to a mental hospital were deported: comparative figures for Finns were 35%, for Hungarians 40%, and for Slovaks 65%.⁵

Nowadays, all immigrants, with the exception of refugee claimants, undergo comprehensive medical screening before entry. Perhaps partly as a result of these practices, newly resettling immigrants are, on average, healthier than resident Canadians.^{2,18-23} Nevertheless, the idea that immigrants bring with them diseases such as syphilis, malaria and tuberculosis (TB) continues to be evoked as an argument against immigration.²⁴

Screening and mandatory pre-entry treatment obviate the spread of syphilis by immigrants, and the mosquito vector necessary to infect humans with malaria is not found in Canada. However, TB is a more serious issue.

The major source countries for contemporary immigration are burdened with high rates of TB. For example, in the Philippines and China – currently the two

major sources of Canadian immigration – the rates are 316 per 100,000 and 88 per 100,000 respectively. In Afghanistan, a major refugee-sending country, TB cases number 321 per 100,000.²⁵

Tuberculosis rates fell in Canada throughout most of the 20th century, reaching an all-time low of 6.9 cases per 100,000 per year in 1987. However, rather than continuing to fall, the prevalence of the disease has since stabilized, and continues to hover within a range of 6.9 to 7.4 cases per 100,000 per year. Immigration helps account for TB's tenacity. Although the foreign born make up approximately 18% of Canada's population, they account for almost 60% of all cases of TB.²⁶ Most cases of active infection occur within five to seven years after initial resettlement.²⁷⁻³³ Immigrant-receiving countries in Europe, Australia and the US have reported consistent findings: immigrants and refugees have a 4- to 10-fold greater risk of developing TB than non-Aboriginal native-born people.^{27,31,34-38}

Do immigrants and refugees bring TB with them, as the sick immigrant paradigm suggests?

The rigorous health screening immigrants undergo as part of their entry requirements argues against this interpretation. Both Canada and the US require that immigrant applicants have a negative sputum culture and a normal chest X-ray. The system is not foolproof, however. People admitted under non-resident visa categories – a category that includes inland refugee claimants – do not receive pre-entry screening. Fraud is another possible explanation. Although plausible, and the subject of many anecdotes, the use of fraudulent X-rays is difficult to establish, its possible impact on the high rates of TB among new settlers probably impossible to determine.

For hundreds of years, countries have used quarantine to protect themselves against importing infectious illnesses. Although it does not quarantine prospective immigrants suspected of having TB, Canada disqualifies applicants who have X-ray abnormalities compatible with active TB until they have been successfully treated and found to be free from active disease.¹

Modern-day quarantine has sometimes jeopardized health. During the winter of

1993-94, Dutch researchers studied the health of refugees who, while waiting to be officially processed, were housed in an off-shore cruise ship. By the time health inspections took place, TB had spread not only among the refugees themselves, but also among the staff. The mini-epidemic was not the result of high initial rates of disease. Although there were a few carriers among the group placed under quarantine, disease spread resulted from inadequate living conditions and poor ventilation.³⁹

In his book, *Silent Travellers: Germs, Genes, and the Immigrant Menace*, Kraut⁴⁰ describes late 19th century and early 20th century screening of immigrants on Ellis Island in New York. Charged with identifying carriers of dangerous or loathsome diseases, insanity and idiocy, medical officers examined thousands of would-be immigrants with a long list of conditions that could exclude entry. Despite rigorous screening, most immigrants proved to be healthy, and were admitted. Within a few years, however, the new settlers were suffering high rates of illness, including TB. In Kraut's view, immigrants had not brought TB with them, but, instead, contracted it after being admitted to the US where they faced overcrowded living conditions and poor diets, and were subjected to exploitative and physically hazardous work situations, all of which increased the likelihood of exposure and decreased their resistance to disease.

Explanations like Kraut's, which shifted the onus of disease from the individual and placed it in the lap of society, were consistent with the socio-political climate of the 1950s, 60s and 70s. The new optimism about human nature characteristic of these times prompted a new social construction of immigrants: perhaps they were not all sick or misfits, but strong, adventurous and healthy people. The "healthy immigrant,"⁴¹⁻⁴³ a popular construct consistent with post-1960s values, offers both good news and bad news. It proposes that immigrants are healthy when they arrive, but that they are fated to lose this advantage.

The Healthy Immigrant Paradigm

According to analyses of Canada's National Population Health Survey (NPHS) data,^{19,22,23} short-stay immigrants (people present in Canada 10 years or less) have fewer chronic illnesses and less dis-

ability than either native-born Canadians or long-term immigrants. After 10 years, immigrant and native-born health patterns are similar. Using a different data set, the Canada Community Health Survey, Perez⁴² describes a similar pattern. Immigrants present in Canada for less than 29 years have a lower risk of suffering a chronic health condition than their Canadian-born counterparts. However, the age- and sex-adjusted odds ratios for chronic illness among immigrants living in Canada 30 years and more equal those for non-immigrants.

There are conceptual and methodological issues that provide a basis for caution in inferring that resettlement makes people sick. First, studies that appear to support the concept have not been based on longitudinal follow-up of newly settled immigrants, but, instead on comparing the health of new settlers with those who came earlier. As already noted, in the years following 1970, immigrants began to come from very different parts of the world than the majority of their predecessors. Cross-sectional analyses run the very real risk of confounding time with cohort effects. Secondly, although the trends seem to apply to chronic conditions in the aggregate, specific conditions do not display a clear-cut pattern. For example, heart disease among men and cancer in women follows the trajectory predicted by the healthy immigrant effect. However, there is no demonstrable association between length of residence and increased risk of heart disease among women or cancer among men, or of diabetes or high blood pressure among either sex.⁴²

Research reports supporting the healthy immigrant paradigm effect often fail to acknowledge that "immigrant" is far from a homogeneous category. For example, Chen et al.¹⁹ and Newbold et al.,²² both of whom affirm the healthy immigrant effect, also present data showing that immigrants from the Americas and Europe tend to be in worse health than immigrants from Asia and Africa. Asians and Africans tend to be more recent arrivals,¹ and have perhaps been subjected to more rigorous screening than people who came to this country earlier.

Aside from cohort effects, selective in- and out-migration could help explain the healthy immigrant effect. The subsample of immigrants coming to Canada whose

ambitions go unrealised and who choose to leave, tends to be the most highly skilled⁴⁴ and may be the healthiest.⁴⁵ Selective out-migration of the healthiest people could account for the apparent decline in immigrant health.

Determining the extent to which the putative healthy immigrant effect applies to all or even any immigrants, and to all or any illnesses, and the extent to which it is a research artefact, constitutes an important research priority.

Two subcategories of the healthy immigrant model – convergence and resettlement stress – are based on proposed mechanisms explaining deterioration in immigrant health over time.

Convergence

According to the convergence premise,^{20,46-48} exposure to the physical, social, cultural and environmental influences in a destination country sets in motion a process in which migrant patterns of morbidity and mortality shift so that they come to resemble the (usually worse) health norms of the resettlement country.

Part of the shift is passive, a product of immigrants' and their native-born counterparts' exposure to the same environmental toxins, stressors and pollutants. Part of the change may be due to more active processes such as adopting receiving society bad habits including smoking, drinking to excess, and eating junk foods,^{49,50} and/or abandoning protective health behaviours that characterize many immigrant cultures.

Some research on cardiovascular disorders – conditions that account for one third of deaths worldwide⁵¹ – is consistent with the convergence model. Marmot and Syme,⁵² for example, found a higher prevalence of heart disease among Japanese male migrants to California and Hawaii than among their non-migrant counterparts in Japan. The authors also observed a dose-response relationship: coronary heart disease was three to five times more common among the most acculturated, as compared to the least-acculturated immigrants. First-generation Japanese immigrants in Hawaii had less cardiovascular disease than the second generation, whose health profiles approximated those found among native-born Hawaiians.

Obesity is becoming one of the industrialized world's major health concerns.⁵³ In

Canada, the prevalence of obesity rose from 5.6% in 1985 to 14.8% in 1998⁵⁴ and in the US obesity is a contributing cause of 280,000 deaths per year.⁵⁵

China and Africa, two of Canada's leading source regions for immigration, boast the lowest rates of obesity (<5% of the population) in the world,⁵³ an observation suggesting that immigrants should be less prone to obesity than Canadians in general. Reports based on data from Canada's National Population Health Survey (NPHS) appear to bear this out.⁵⁶ The observation that the prevalence of overweight (Body Mass Index >25) seems to increase with increasing length of stay in Canada⁵⁷ implicates Canada's bad health habits as a possible risk factor. Unfortunately, immigrants are under-represented in the NPHS, a limitation that obviates potentially informative analyses that could take into account factors such as age, gender, ethnicity, exercise and diet.

Obesity is linked with type 2, or non-insulin dependent diabetes, a condition affecting 177 million people around the world, and implicated in approximately 4 million global deaths per year.^{53,58-60} Studies suggest that the prevalence of type 2 diabetes rises in concert with emigration from less affluent, to more affluent countries. After relatively diabetes-free immigrants resettle, their health apparently deteriorates. Immigrant rates of diabetes do not, however, converge with majority population norms, they overshoot them.⁵⁸ South Asian immigrants in Canada, for example, have higher rates of type 2 diabetes than native-born Canadians⁶¹ and in the UK, South Asian immigrants have five times more type 2 diabetes than members of the indigenous British population.⁶²

Some Canadian data about cancer among Italian migrants and their offspring⁶³ are more consistent with the convergence model. First-generation Italian immigrants have low rates of colon, lung and breast cancers – diseases with an etiology strongly embedded in environmental factors – while rates of illness among their offspring are midway between those of their immigrant parents and members of the receiving society. Balzi et al.⁶³ also report a dose-response effect: the risk that immigrants will develop colon cancer increases with increasing length of time in Canada.

Asians who migrate to the US have a higher risk of developing colorectal cancer than their counterparts who remain in Asia. Compared to US-born Caucasians, Chinese and Filipino immigrants have lower rates of colorectal cancer. However, Chinese and Filipinos born in the US have higher rates than US-resident members of the same ethnocultural communities who were born abroad. It is tempting to invoke the idea that, as Asians adopt western diets which are typically high in meat, sugar and alcohol – foods associated with increased risk for cancer⁶⁴ – the risk of developing the disease rises accordingly. Research demonstrating that descendants of Japanese immigrants are more likely than the first generation to eat western rather than Japanese-style meals,⁶⁵ and that, compared to their counterparts born abroad, US-born Japanese eat more sugar, drink more alcohol, and consume more calories per day⁶⁶ lends credence to this interpretation.

Immigrant men experience a greater risk of rectal cancer during resettlement than immigrant women, possibly because women change their dietary habits more slowly than men.^{62,66} Women are, however, not immune to rectal cancer, nor apparently to the effects of resettlement. Compared to Asian women born in their home countries, US-born Asian women have a 60% increase in rates of cancer. In comparison with women born in Asia and whose four grandparents were also born there, women born in the US and who had one grandparent who had also been born in the west had a risk of cancer 1.4 times greater; for women with two western-born grandparents, the risk rose to 2.2, and for three grandparents, it rose to 2.9.⁶⁷

The increase in risk for colorectal cancer coincident with immigration status is particularly dramatic among Japanese. Compared to Japanese born in Japan, US-born Japanese are twice as likely to develop cancer. Japanese born in the US not only have higher rates of cancer than their non-immigrant and foreign-born counterparts, but a 60% greater risk of developing the disease than US-born Caucasians.⁶⁸

Countries routinely use infant and perinatal mortality rates to index economic and social development. According to Carballo, Divino and Zeric,⁶⁹ immigrant-sending countries tend to have high infant

and perinatal mortality rates. In line with this observation, research has demonstrated that, compared to native-born women, immigrant women in France and Britain experienced higher risks of perinatal morbidity and mortality.⁷⁰⁻⁷³

Other research, however, qualifies interpretation of such results by demonstrating that perinatal mortality rates vary, not according to immigration levels in general, but according to the ethnicity and country of birth of immigrant mothers. For example, UK studies have demonstrated particularly high perinatal mortality among immigrants from Pakistan and the Caribbean.^{69,73-75} Moroccan and Turkish women living in Belgium have higher than average perinatal and infant mortality rates. In Germany, rates of perinatal and neonatal mortality were higher in foreign-born groups, especially babies born to Turkish mothers.⁶⁹ Findings bearing on perinatal mortality might be explained by socio-economic disadvantage, a factor often overlooked in the analysis of research data pertaining to immigrants.

Ali¹⁸ suggests that the healthy migrant effect applies to mental, as well as physical health. Using data from the Canadian Community Health Survey (CCHS), a study of 131,000 Canadians aged 12 or older, Ali demonstrated that all immigrants, with the exception of those who had been in the country 30 years or more, had lower rates of depression and alcohol dependence than the Canadian-born population. The risk of mental disorder among long-stay immigrants was, however, higher than that for the age-matched segment of the general Canadian population. Ali's claim that these data demonstrate the healthy immigrant effect is, however, far from compelling. First, the CCHS data are cross-sectional, not longitudinal. Inferring longitudinal trends from cross-sectional findings risks the confounding of time with cohort effects. Canadian immigration patterns have changed dramatically over a 30-year period. Immigrants taking part in the CCHS who had been living in Canada 30 or more years are highly likely to have come from Europe or North America. Immigrants who arrived in more recent years are more likely to have their origins in Asia and Africa, regions with low rates of depression and alcohol dependence.¹⁴ Unfortunately, Ali's investigations of the effect of length of resettlement do not

include country of origin or ethnicity. The evidence for convergence is, furthermore, compromised by the fact that rates of disorder among different length-of-stay cohorts is not linear, but, instead, highly irregular.

Ali's data provide a plausible basis for inferring that immigrants present in Canada 30 or more years are a group at high risk for mental disorder. It may be that more rigorous selection processes in recent years account for healthier immigrant cohorts. Alternatively, as Lai's⁷⁶ data suggest, aging may be a more risk-prone process for immigrants than for the Canadian-born.

By definition, the convergence model proposes that, as newly arriving immigrants become increasingly exposed to the environments their native-born counterparts have always known, the superior health of the former inevitably declines until it equals that of the latter. As research about cancer,⁶⁷ TB,^{27,33-37} cardiovascular disorder,⁷⁷ overweight,⁵⁷ neonatal and perinatal mortality,⁷⁰⁻⁷³ and mental illness^{18,78} demonstrate, however, the average health of new immigrants does not always deteriorate to equal that of the receiving society: it can get worse.^{22,66,79,80} This phenomenon, called immigrant overshoot, directs attention to risk factors unique to resettlement, as well as those which immigrants may share with members of the receiving society, but whose effect may be amplified by the resettlement experience.

Resettlement Stress

The resettlement stress paradigm provides an explanatory framework for immigrant overshoot. According to this model, stresses such as unemployment, poverty and lack of access to services have an adverse effect on everyone, but immigration and resettlement increase the probability of experiencing these stresses. For example, during their first 10 years in Canada, an immigrant is much more likely to live in poverty than a native-born Canadian.⁸¹⁻⁸³ Immigrant families with children are three times more likely to be poor than their native-born counterparts.⁸² Poverty not only increases the likelihood of exposure to risk factors for diseases but also compromises access to treatment.^{43,45}

In addition to increasing the risk of exposure to adversity, the immigrant situation can amplify the damaging health

effects of adverse circumstance. Although unemployment jeopardizes the health of both immigrants and the native-born,⁸⁴ it seems to affect immigrants more powerfully,²² perhaps because, during difficult times, immigrants have fewer resources to call upon than their native-born counterparts.

Age increases the probability of illness for everyone, but it may affect immigrants more profoundly than the native-born. The health status discrepancy between immigrants aged 50 and older and their younger counterparts is even more striking than it is between older and younger people in the general population.¹⁸

Marginal socio-economic status – an all too common experience for immigrants and refugees, particularly during the early years of resettlement – not only increases the likelihood of exposure to risk factors, but compromises survival rates in diseases such as cancer.⁸⁵ Inadequate access to screening and prevention programs may be part of the explanation.^{45,46,84} A California study demonstrated that Asian women, with the possible exception of Japanese and Filipino, were far less likely than women in the general population to have received a Pap test for cervical cancer during the three years prior to the survey. The author of the study⁸⁶ raises the concern that differential rates of immigrant versus non-immigrant participation in screening programs may be in part the product of a “false sense of security,” shared by health providers and immigrants themselves, that Asians are resistant to cancer. To counter this false sense of security, information such as the fact that Vietnamese women are five times more likely than white women to develop cervical cancer⁸⁵ should be widely disseminated. Limited English proficiency also creates barriers to preventive health care: although 63.8% of Korean women participating in a US study who were proficient in English reported having a mammogram within the previous two years, the figure dropped to 45% among women with limited linguistic proficiency.⁸⁷ Data from the province of Ontario demonstrate that most women do not follow breast screening guidelines suggested by their physicians. Economic disadvantage and health literacy are among the factors predicting non-adherence.⁸⁸ Since early detection has enormous impact on survival, Canadian

research on immigrant's access to, and use of, cancer screening programs is urgently needed.²

Socio-economic and ethnocultural status affect not only access to service, but to quality of care. Blacks with diabetes have more amputations than whites and diabetes-related mortality is increasing more quickly among minorities than among majority culture populations.⁸⁹ Black, Puerto Rican, Japanese, Hawaiian and Filipino women in the US are more likely than women in the general population to deliver low birthweight infants. Low birthweight, defined as less than 2500g, has multiple causes, most of which, including caloric intake, smoking, alcohol consumption, lack of social support and stress, affect the mother and/or the developing fetus.⁹⁰⁻⁹³ Inadequate prenatal care, a difficulty disproportionately experienced by socio-economically and culturally marginalized communities, also increases the risk of low-birthweight babies and infant deaths.⁹⁴⁻⁹⁸ Since the putative causes of low birthweight – risk-inducing health habits and deficiencies in care – tend to heap at the bottom of the socio-economic ladder, they are considered part of the explanatory chain linking socio-economic disadvantage to infant deaths.

An “epidemiological paradox” challenges the explanatory power of socio-economic disadvantage as a sufficient explanation of low birthweight or of neonatal death. A team of US researchers⁹⁹ carried out a study of perinatal health among four groups: immigrant Asian, immigrant Mexican, US-born Black, and US-born Caucasian women. In comparison with their white counterparts, US-born Blacks and foreign-born Mexican mothers experienced more putative risk factors including inadequate prenatal care, teen births, a greater tendency to rely on public rather than private care, and lower levels of maternal and paternal education. Foreign-born Asian Indian mothers, on the other hand, were highly likely to enjoy good prenatal care, were rarely teenagers, and the average level of maternal and paternal education was higher than in the four comparison groups. As expected, the US-born Black women were highly likely to deliver low-birthweight babies, and to experience elevated neonatal mortality rates. Despite a comparably high-risk profile, however, Mexican rates for low birthweight and

neonatal mortality were no higher than those found among US-born Caucasian women. Although socio-economically advantaged in comparison to the other three groups, Asian Indian women had higher levels of low-birthweight babies, higher levels of fetal mortality and infants who were more likely to demonstrate growth retardation.

Retention of traditional health behaviours offers a possible explanation for epidemiological paradox. Rumbaut and Weeks¹⁰⁰ analyzed birth records for a large US sample of foreign- and native-born women giving birth between 1989 and 1991. Despite the socio-economic advantage of the US-born mothers, immigrant women were, on the whole “superior health achievers” because they were more likely to enjoy social support during pregnancy, less likely to smoke, drink alcohol, or take drugs, and their diets, even if deficient in calories, tended to emphasize carbohydrates and vegetables rather than fats, oils and sweets. Canadian research offers some confirmation of the superior health achiever effect. Doucet et al.¹⁰¹ found no difference in rates of low birthweight or prematurity among native-born and immigrant mothers in Quebec. A follow-up study^{90,91} suggested that highly acculturated immigrant women delivered more low-birthweight babies than their less acculturated counterparts. Other research¹⁰²⁻¹⁰⁴ suggests that the higher the level of cultural retention, the greater the tendency to breastfeed.

Although it supports some of the tenets of the resettlement stress paradigm, research in mental health also reveals its inadequacies. During the post-World War II era, when notions about the sick immigrant were being reconsidered, a particular variant of the resettlement stress paradigm, known as the disillusionment model, became very popular. Despite having been based on a very limited number of observations – primarily of World War II displaced persons under psychiatric care – the disillusionment model gained surprisingly widespread acceptance. According to the model, the psychological process of adapting to a new country followed predictable phases.¹⁰⁵⁻¹¹⁰ During an initial phase – sometimes called the euphoria of arrival – the mental health of immigrants was equal to, or even better than that of the host

country population. The second phase, inevitably overtaking the first, was a phase of disillusionment and nostalgia for a lost past. During this phase people were at high risk for developing psychiatric disorders. Eventually, adaptation to the new environment took place; new settlers began to think and act more and more like people in the majority population and their mental health improved.

Community-based studies¹⁰⁹⁻¹¹² tend to confirm that the period between 10 and 24 months after arrival is a time of high risk for the development of depressive disorder. However, other research¹¹² demonstrating that a time-specific period of elevated mental health risk is not universal, but appears only among immigrants lacking personal and social supports, points to the need for more complex explanations than either a convergence or resettlement stress model can supply. In addition, research among Southeast Asian “boat people” in Canada contradicts the purported healthy immigrant effect: the longer the refugees stayed in Canada, the better their mental health tended to be.^{113,114} The Canadian Southeast Asian refugee study also demonstrated that the occurrence of mental disorder and exposure to putative mental health risk could be out of step with each other. The longer refugees stayed in Canada, the more likely they were to recognize and experience racially based discrimination. Despite the fact that discrimination jeopardizes mental health, the refugees’ general level of well-being improved with length of stay.^{114,115}

Another epidemiological paradox challenges conventional thinking. Poverty is one of the most powerful factors placing the mental health of children and youth in jeopardy. However, even though immigrant children are three times more likely than their non-immigrant counterparts to live in severe poverty, their rates of emotional and behavioural problems are significantly lower.⁸²

The Interaction Paradigm

The unexpected and sometimes apparently contradictory results of research in immigrant health point up the inadequacies of both the sick and healthy immigrant paradigms. A need exists for a model that takes into account immigrant characteristics, pre- and post-migration stressors, and

strategies adopted by individuals, their families and the larger society to cope with the immigration and resettlement experience. Such a model must take into consideration that immigrants differ by country of origin, entry class (e.g., immigrant versus refugee), previous exposure to illness, prior experience with the western health care system, levels of acculturation and of cultural retention, and previous health habits, each of which can affect health. Poverty and unemployment are universal health risks and immigration increases the likelihood of exposure to them, as well as the amplitude of their impact. The health effects of social exclusion and discrimination, all too commonly faced by immigrants, are just beginning to receive serious research attention. However, the story of resettlement is not all about predisposition and pain. Individuals, their families, the like-ethnic community, and the larger society develop coping strategies to maintain immigrant health and well-being. A comprehensive model of immigration and health must incorporate the supportive and stress-buffering effects of personal and social resources.

Neither the sick, nor the healthy immigrant paradigm offers an adequate framework to explain disease phenomena such as reactivation in the case of immigrant tuberculosis; predisposition, which may underlie excessive rates of cardiovascular disorder among South Asian immigrants; the “thrifty gene” as a possible mechanism explaining the high risk for obesity among Asian and African immigrants; and the mental health resilience of many immigrant and refugee groups. These models of disease occurrence are consistent with an interaction frame of reference.

Reactivation and Tuberculosis

Because many of the major source countries for contemporary immigration are burdened with high rates of TB,²⁵ it seems highly likely that immigrants have been exposed to this illness before they emigrate. Poor living conditions increase the risk of TB for everyone. Is it possible that immigrants and refugees – who are more likely than members of the receiving society to live in impoverished circumstance⁸¹⁻⁸³ – suffer increased risk of TB as a consequence? Canadian data showing that it takes an average of 10 years for immigrants

to establish themselves economically,⁸¹ and that during that time, one third of immigrant families live below the poverty line⁸² lend credence to the hypothesis that resettlement stress and exposure to bad environments explain high rates of TB among new settlers.

However, reactivation, which posits an interaction between predisposition based on previous exposure and the post-arrival dynamics of resettlement, is the most widely accepted and most likely explanation for TB among immigrants. According to this construct, immigrants suffer high rates of TB in resettlement countries not because they were already ill before they arrived, and not solely because they are exposed to pathogen-containing and stressful environments during resettlement, but because socio-environmental circumstances trigger a reactivation of previous infections.¹¹⁶

Research demonstrating that the period of greatest risk during which immigrants develop TB is not immediately after arrival, but five to seven years later,²⁷⁻³² and that the risk of developing the disease persists for an extended period thereafter^{117,118} supports the reactivation hypothesis. Recent research using DNA fingerprinting, which allows investigators to discriminate between primary and reactivated disease also supports the reactivation hypothesis. DNA studies typically enrol patients with active TB, fingerprint their isolates and then classify them as having either shared (clustered) isolates or unique (non-clustered) isolates. People with clustered isolates are assumed to belong to a transmission chain, and those with unique isolates are assumed to have reactivated disease.¹¹⁹ According to several molecular epidemiological studies, foreign-born people are more likely to have unique, rather than clustered isolates, and there is minimal evidence to suggest foreign-born to native-born transmission.^{120,121}

Even if it were the case that most cases of TB among immigrants were due to reactivation rather than to new infection, the possibility that exposure to unhealthy environments makes an independent contribution to the burden of TB among immigrants could not be ruled out.¹¹⁹ In a study carried out in New York, Geng et al.¹²² fingerprinted 546 isolates of *M. Tuberculosis*, about half of which belonged to a cluster (likely transmitted) while the rest were

unique (indicative of reactivation). Foreign-born persons were much less likely to be in the clustered group (odds ratio 0.47, 95% CI 0.33-0.67). Nevertheless, this study showed that almost half of all TB patients who had been in the US 10 years or less and who were not HIV positive had clustered isolates, suggesting recent transmission. In a similar study of TB transmission among Somalis in Denmark,¹²³ 55% of the TB cases were clustered. Although it is possible that some of these clustered cases were acquired in Somalia, it is also possible that many were primary infections acquired in Denmark.

Genetic Predisposition plus Environment

The explanation for TB among immigrants posits an interaction between environment and predisposition, the latter based on previous exposure. Interaction models for other conditions posit genetically based predisposition.

Canadian research⁴⁸ suggests that immigrants have better cardiovascular health than the native-born, and that this advantage tends to be lost over time. Immigrants are not, however, all alike. Ethnicity, for example, affects cardiovascular health. A UK study⁷⁷ showed that men and women from India had the highest standardized mortality rates due to cardiovascular disease, and that young Indian men were at particularly high risk. Irish, Scottish and Polish immigrants also had high rates, while people from the Caribbean, western Europe, the US and old Commonwealth countries (Canada, Australia, New Zealand) had lower death rates. This study examined mortality rates over two separate periods, 1970-72 and 1979-83. Between the two time periods, mortality due to cardiovascular disease declined by 5% for men and 1% for women. The greatest percentage declines occurred among groups with the lowest rates – immigrants from the US, and the old Commonwealth. Comparatively little improvement was seen among groups with high mortality rates, namely the Irish and Polish. South Asians, the group with the highest rates in 1970-72, actually experienced an increase in risk during the subsequent decade.

Regardless of where they live in the diaspora, South Asians suffer high rates of cardiovascular disease. Based on this observation as well as other studies, researchers

have posited that a genetically based insulin resistance, combined with changing dietary habits sets the stage for the development of a high-risk atherogenic profile.^{61,80,124,125}

Cancer research also highlights the interplay between predisposition, changes in health behaviours, and the duration and intensity of exposure to etiological agents.^{63,126,127} For example, Japanese born in the US are twice as likely as Japanese born in Japan to develop cancer. US-born Japanese not only have higher rates of cancer than their non-immigrant and foreign-born counterparts, but a 60% greater risk of developing the disease than US-born Caucasians.⁶⁷ Since rates of colorectal cancer in Japan have historically been very low, the dramatic increase in the disease among Japanese in North America has stirred considerable interest. Kampman et al.⁷⁹ have proposed that Japanese harbour a genetic predisposition for colorectal cancer, but that the traditional dietary habits militate against the development of the disease. According to these authors, the adoption of a North American diet, when combined with predisposition, explains elevated risk.

Compared to majority culture Caucasians, most, if not all, minority groups experience a two- to six-fold greater risk of developing non-insulin-dependent diabetes.^{89,128} In addition, all minorities living in the US (for whom the data exist) suffer a higher prevalence of diabetes than residents of their respective countries of origin.⁸⁹ Although newly arriving immigrants are less likely to be obese than native-born Canadians, the longer they stay, the more likely they are to become fat.⁵⁷

To explain such phenomena, researchers have hypothesized that minority and immigrant groups may share a predisposition for non-insulin dependent diabetes, or that “western” environments place them at elevated risk of exposure to risk-inducing conditions, or a combination of the two. Westernization induces people to adopt a diet higher in total calories and fat but lower in fiber than they are used to, while simultaneously encouraging reduced expenditure of energy.^{95,129} Like international migration, rural to urban movement within developing countries is also associated with increased risk for diabetes, an observation that stimulated the develop-

ment of the thrifty genotype model. According to this model, a thrifty genotype evolved among humans living in situations of scarcity; however, under conditions of plenty, this evolutionary adaptation becomes a predisposing factor for obesity and diabetes.⁸⁹

Predisposition, Stress and Coping: The Case of Immigrant Mental Health

An abundance of inconsistent findings in studies of mental health provides further illustration of the need for more complex explanations than either the sick or healthy immigrant models can provide. For example, although Mexican immigrants in the US suffer a high burden of distress,⁷⁸ other research reports no difference in rates of psychological disturbance between immigrants and natives of the receiving society.¹³⁰⁻¹³² Some community-based inquiries have even suggested that immigrants, and indeed refugees, have fewer emotional problems than the native-born.^{114,133,134}

Although they face a fairly common set of stressors, only a small proportion of immigrants and refugees become psychiatric casualties. This observation strongly suggests that it is not immigration *per se*, nor even its challenges that creates mental health risk, but rather the interaction among vulnerabilities, stressors, social resources and personal strengths.^{3,114}

Lists of potential mental health stressors usually include pre-migration experience,^{113,135-144} acculturation,¹⁴⁵⁻¹⁴⁸ unemployment⁸⁴ and structural characteristics of the new society that block opportunity or oppress newcomers.^{3,114,115,149}

Pre-migration traumata, such as internment in refugee camps, jeopardize mental health after arrival in a country of permanent resettlement. In the short run, the effect tends to be evanescent; six months or so after arriving in a country of permanent resettlement, it is no longer demonstrable.^{11,113,135,150} Furthermore, many traumatized individuals are able to use repression as a coping strategy to buffer the impact of potentially damaging memory.¹¹³

Although many people can apparently keep the past under wraps for a time, others experience sporadic eruptions of traumatic memory, which take the form of episodes of post-traumatic stress disorder (PTSD), depression and somatisation.^{141,151-156} Studies showing a dose-

response relationship – that is, the greater the exposure to the stressor, the greater the likelihood of subsequent post-traumatic stress disorder^{151,157,158} – support the posited etiological link between adversity and psychopathology. Using a broad definition of mental ill health, Steel¹⁵⁸ and his colleagues showed that, despite having experienced severe trauma about 14 years before they were interviewed in Australia, most refugees from Vietnam were in good mental health. However, people who had been exposed to more than three traumatic events had an almost five-fold greater risk of disorder than the rest of the refugee population. Goldberg and colleagues¹⁵⁹ provide some of the most telling evidence of the effects of trauma: 15 years after the end of the Vietnam War, veterans who had been in combat had a far higher risk of developing PTSD than their non combat-exposed monozygotic twins.

Repression may be an effective short- and medium-term strategy for dealing with past traumas. However, research^{114,142-144} suggests that over time, recovery of the past becomes increasingly pressing, and that it is accompanied by increased risk of mental disorder. Carefully planned interventions may help refugees deal with the psychological residue of trauma and with the pain of recapturing the past. However, to ensure that intervention is effective and not harmful, mental-health specialists require more information than is currently available about the psychological means refugees use to deal with trauma, the process and timing of the recovery of repressed memory, and the factors that can mitigate the psychological impact of the past. According to recent research, occupational success and enduring relationships provide effective buffers against the trauma of memory and its recovery.^{144,158}

Aside from residual pain, disability, and possible brain damage suffered by its victims, torture betrays core beliefs about, and trust in, human nature. The immensity of the trauma probably helps explain the high rates of depression and PTSD which occur in the aftermath of torture.^{153,160}

Although resettlement countries like Canada can do nothing to alter the past that immigrants and refugees bring with them, they can do a great deal to make resettlement as effective and painless as possible. Unfortunately, post-migration

experiences – notably acculturation, unemployment, and discrimination – are only too common threats to the well-being of both immigrants and refugees.

In their well-known model of acculturation, Berry and colleagues^{161,162} propose four types of reaction to acculturative forces: a) assimilation, defined as abandoning the culture of origin in favour of the new; b) integration, a creative blending of the two; c) rejection, in which the new culture is rejected in favour of the heritage culture, and d) marginalization in which neither the old nor the new are accepted. According to Berry and his colleagues, marginalization is accompanied by the highest degree of mental health risk, integration by the least.

Other research^{149,163} suggests that when acculturation changes aspirations, and the means for achieving ambitions are slight, mental disorder is a highly likely result. New settlers are interested in employment and in economic success for themselves and their families. However, it can take as long as 10 years to achieve their economic potential.^{81,114} Unemployment not only frustrates ambition but jeopardizes mental health.⁸⁴ The relationship between mental health and unemployment is reciprocal: people who are unemployed or who lose their jobs experience a high risk of depression, and people who are depressed are more likely than the non-depressed to be laid off work.⁸⁴ One implication of the latter finding is that mental health is part of human capital, affecting the chances of economic productivity as well as being affected by it.

Despite the expectation that immigrants will contribute to the GNP of countries of resettlement, many immigrants find themselves living in poverty. In Canada, for example, more than 30% of immigrant families live below the officially defined poverty line during their first 10 years in Canada.⁸² Studies of immigrant poverty reveal an interesting epidemiological paradox. Although poverty is one of the major risk factors for the mental health of children, and although immigrant children are almost three times more likely than their non-immigrant counterparts to live in poverty, immigrant children enjoy better mental health and evidence fewer behavioural disturbances. The strength of immigrant family life provides one of the expla-

nations for the paradox. Poverty among immigrant families appears to be a phenomenon quite different from poverty among non-immigrants. Being poor is, for example, far less likely to be associated with broken homes and family violence in immigrant, as compared with non-immigrant households.⁸² Results such as these highlight the need for research to address not only the challenges of resettlement, but the strengths that individuals and families bring to the task.

High levels of immigrant unemployment and of immigrant family poverty suggest shortcomings in immigration policy. Selective admission policies help ensure that immigrants are, on the whole, highly educated, and well-trained: the fact that it takes so long for them to establish themselves suggests that the shortcomings are in the policies regarding resettlement rather than in selection. Lack of recognition of foreign credentials by potential employers³ is a long-recognized problem that continues to elude solution. Discrimination in the labour market as well as in other social settings is probably another part of the explanation for unemployment and poverty. Research reveals that as many as one in four visible minority immigrants report experiencing some form of discrimination during the early years of resettlement. The research also suggests that perceived discrimination induces symptoms of depression.^{114,115} A study of Southeast Asian refugees¹¹⁵ revealed that passive avoidance was the most effective strategy for dealing with discrimination, perhaps because this was a culturally compatible form of behaviour, perhaps because the comparative powerlessness of refugees in many situations makes confrontation a non-effective or even dangerous response to aggression.

Immigrants are not passive tools of fate, but people who respond to the challenge of resettlement with varying degrees of skill and success. The psychological resources immigrants muster in order to deal with the demands of resettlement is a relatively neglected topic to date and should be an important research priority.

The study of social resources has received comparatively more attention. For example, research has demonstrated the protective effects of a long-term relationship.^{112,144,164} Community influence has received even more attention. Early studies

in this area derived from critical mass theory, whose premise is that immigrants who settle in areas in which there is an established like-ethnic community have a mental health advantage over immigrants deprived of such community.^{16,165,166} Both hospital-^{16,17} and community-based studies^{112,114} of the risk of mental disorder in immigrant and minority communities support the concept that a like-ethnic community of significant size confers mental health advantage.

Theoreticians have suggested that receiving countries offer different "levels of hospitality" to newcomers.¹⁶⁷ Although the proposition that the more hospitable the reception, the better the chances of maintaining good mental health¹⁶⁸ makes intuitive sense, testing the proposition is difficult because it is hard to know how to measure hospitality. One study compared the mental health and adaptation of government and privately sponsored refugees. Reasoning that refugees sponsored by private groups would receive more individualized attention than others left to the care of government bureaucracies, the study predicted a mental health advantage for the privately sponsored group. Results failed to confirm the prediction. Further investigation revealed that undue pressure by sponsoring groups could have the reverse effect, that is, the dependence of refugees on their sponsors made them vulnerable to exploitation and insensitivity.^{113,114,169} However, according to the results of a follow-up study, at the end of 10 years privately sponsored refugees were better integrated than their government-sponsored counterparts.¹⁷⁰

FUTURE DIRECTIONS

If it could be shown that whatever applies to majority culture Canadians also applies to new settlers, there might be no need to develop an immigrant and refugee database about health. This is not the case, as exemplified by research that demonstrates that, although immigrant families are far more likely than families of native-born Canadians to be poor, immigrant children tend to have better health.⁸² Unexpected and paradoxical findings underline the need to take account of heterogeneity in future studies of immigration and resettlement. Immigrants differ by country of ori-

gin, entry class (e.g., immigrant versus refugee), prior experience with the western health-care system, levels of acculturation and of cultural retention, and previous health habits, each of which can affect health. Data that are difficult to explain or to reconcile using simple paradigms underline the need for more sophisticated research models that incorporate not only immigrant characteristics and the undeniable stresses of resettlement, but also the effect of protective factors.

The field requires research about immigrants and refugees in comparison to members of the receiving society, investigations comparing migrants with non-migrating members of the society of origin, and studies that address the heterogeneity that is obscured by the term "immigrant." Studies focused on immigration and resettlement shed light on the process of human adaptation, and also reveal health inequities and service gaps. Research that addresses within-group characteristics such as immigration status (immigrant versus refugee), age, gender, educational level, language fluency, length of residence in Canada, and availability of like-ethnic or of other community support are needed in order to reveal specific combinations of factors that give rise to health risk. Variables such as age and gender should not be regarded as just control variables, but as factors affecting resettlement by, for example, helping to determine the likelihood of exposure to certain stresses as well as the availability of psychological and social resources.

Future studies should address methodological difficulties uncovered by past experience. For example, sample sizes must be large enough to permit multivariate analyses that can address confounders. Research in immigrant and refugee communities must be based on methodologically sound and appropriate measurement, an often thorny and difficult topic. For example, cultural relativists caution that concepts like depression, schizophrenia and substance dependence are western and ethnocentric, and that applying such categories to non-westerners violates indigenous assumptions about the nature, antecedents and consequences of behaviour. They also argue that, because of cultural differences, people describe illness differently and possibly even experience

different symptoms. For example, since the Cantonese, Mandarin, Vietnamese, Cambodian and Laotian languages have no word for depression connoting an illness, some authorities have concluded that Asians do not experience depression in the same way North Americans or Europeans do.¹⁷¹⁻¹⁷³ It has been proposed that Asian experiences of distress are dominated by bodily symptoms. In its most simplistic terms the proposition states: North Americans psychologize distress; Asians somatize it.¹⁷⁴⁻¹⁷⁷

Findings that purportedly demonstrate that mental illness wears a unique face in different cultures are usually based on research in clinical settings. Emphasizing somatic symptoms rather than psychic distress may result from the assumption by many cultural groups that psychological problems do not constitute legitimate tender for exchange with a health-care provider. When they feel it is appropriate or likely to be helpful, Asians confide psychic symptoms of depression to a psychiatrist with equal or even greater intensity than their North American counterparts.¹⁷⁸⁻¹⁸⁰ Cultural relativists may have misinterpreted reluctance to divulge as lack of vocabulary. Community-based research reveals similarities across cultures that are more striking than differences.¹⁸¹⁻¹⁸³

Research also challenges the idea that Asian languages are dominated by expressions for bodily distress to the relative exclusion of terms connoting psychological states. Southeast Asian languages are rich in idioms like “Do you find your life is sad and boring?” or “Do you feel remorseful?” that clearly fall within the spectrum of depressive experience even if they do not connote illness.¹⁸⁴ Furthermore, the way in which symptoms of depression co-aggregate in community samples of Southeast Asians is identical to their patterning among North Americans.^{182,183} Somatization symptoms also co-aggregate identically in both groups and, furthermore, they form a dimension completely independent of depression.^{182,183} These data suggest that somatization is not a substitute for depression but that depression and somatization are separate and independent ways of expressing and experiencing distress.

To help ensure the appropriateness of measures, attention to community sensitiv-

ities and constructive dissemination of information, researchers must engage the immigrant and refugee communities under study as partners in the research enterprise.

Research that challenges what comes to be accepted as common knowledge should be encouraged. For example, the debate about whether people from different cultural groups experience or express distress differently is more than an intellectual curio. It demands serious research attention because it can affect the chances of receiving appropriate care. Aside from needlessly shackling a clinician’s ability to diagnose a patient’s distress, emphasizing differences rather than universals in human suffering can perpetuate stereotypes. No matter how authoritative its sources, the claim that Asians experience or express distress in one set of terms, North Americans in another, runs the risk of reducing human suffering to an affectation.

Longitudinal studies, such as Australia’s longitudinal study of immigrants^{45,85,185} and the more recent Longitudinal Study of Immigrants in Canada, although expensive and time-consuming, should be encouraged because they provide an important window on the process of resettlement, and on the shifting salience of risk and protective factors over time.

Preventive and treatment services are currently failing many immigrant communities. Research documents that immigrants are less likely than their native-born counterparts to benefit from either prevention or treatment, partly as a result of linguistic and cultural differences, partly because of lack of information or misinformation – for example, the concept that certain Asian groups are resistant to cancer may lessen any sense of urgency about the importance of screening programs – and partly because the provision and organization of services does not meet immigrants’ needs. A growing body of knowledge could and should inform more effective planning for the future.³

Socio-political context invariably affects health paradigms and the choice of research topics. It behooves scientists, practitioners and policy-makers to be aware of the way in which the temper of the times influences their thinking. Although the way in which questions and hypotheses are framed, for example, is probably never value-free, the conduct of research must

adhere to principles of non-biased observation and honest reporting. Health professionals should also be aware of the potential (mis)use of health metaphors in debates about immigration, whether pro or con.

The socio-politically influenced models of the sick and healthy immigrant are insufficient to account for the complexity of the process of immigrating and resettling, and for the diversity of research findings. To do justice to the phenomenon, researchers and providers must elaborate more complex models, taking into account predisposition, whether genetic and/or developmental, pre-migration and post-migration stressors, psychological and social sources of strength, selection – whether self-selection or selection resulting from administrative process – and local conditions that can affect resettlement.

Most discussion about immigration focusses on human capital, usually translated as education and job skills. Health, like education, is an important component of human capital. Although health receives little attention in Canada’s current view of immigrants and refugees, policy decisions have important and potentially far-reaching repercussions on the health of new settlers. For example, most provinces impose a mandatory waiting period before persons can qualify for health care. Researchers² have demonstrated that this is not a period of quiescence, but of pent-up demand. When the waiting period is over, there is a surge in immigrant and refugee health-care visits. The consequences of mandatory waiting periods and their effects on decisions regarding preventive health care require careful study.

Just as policy has implications for health, health should be taken into account when formulating policy. For example, in the years 2002 and 2003, Canada seriously considered adopting a program of regionalization, under the terms of which entry could be facilitated for people who promised to settle in areas of low-population density and where there were few other immigrants. None of the debate that swirled around the issue – most of it rightfully centred on human rights issues regarding freedom of movement – took into account studies demonstrating the health advantage of like-ethnic communities, particularly during the early

years of resettlement,^{16,17,113,114,166} nor research demonstrating an association between dispersion and compromised mental health.⁶⁹

Countries in Europe and Asia have been reassessing their traditional, closed-border policies against immigrants, and have begun looking to the US, Canada and Australia for useful models. Current differences in immigration and settlement patterns in traditional immigration-receiving countries as well as in countries undergoing a change in immigration practice create "experiments in nature," allowing for comparisons that could elucidate the health effects of differing selection and resettlement policies, and of different methods for providing health and preventive services.

For the foreseeable future, migration will continue to challenge nation states as well as immigrants and refugees themselves. Research about health and well-being can help make the process of adaptation as painless as possible for immigrants and as beneficial as possible for the countries in which immigrants resettle.

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RÉSUMÉ

Le Canada accueille un peu plus de 200 000 immigrants chaque année. La politique nationale impose une sélection rigoureuse de ces gens afin de s'assurer qu'ils sont en bonne santé, mais il existe remarquablement peu de politiques pour s'assurer qu'ils le restent. Cette négligence est aberrante quand on considère que maintenir les immigrants en bonne santé c'est faire preuve de justice et d'humanité dans l'intérêt national.

En isolant les vulnérabilités de nature personnelle et les principaux facteurs de stress liés à la réinstallation qui agissent isolément ou en conjonction avec les prédispositions naturelles et se traduisent par un risque pour la santé et, d'autre part, les ressources personnelles et sociales qui réduisent ce risque et favorisent le bien être, la recherche sur la santé serait en mesure d'apporter une contribution à la politique et aux pratiques. Cependant, les paradigmes sur lesquels la recherche sur la santé des immigrants s'est appuyée au cours des cent dernières années – l'immigrant « malade » ou « en bonne santé » respectivement – se sont révélés inadéquats. Une partie du problème vient du fait que la controverse sociopolitique a eu de l'influence sur la nature des questions posées aux immigrants au sujet de leur santé et la façon de les examiner.

Après avoir fait une revue des études qui soulignent les carences des paradigmes de l'immigrant malade ou de l'immigrant en bonne santé, l'auteur de l'article affirme qu'un modèle d'interaction tenant compte tout à la fois des facteurs de prédisposition et des facteurs socio environnementaux offrirait le meilleur cadre explicatif des constatations qui se perpétuent et serait la façon la plus sûre d'orienter la recherche à l'avenir. Enfin, l'auteur de l'article affirme qu'en renforçant les liens entre la recherche, la politique et la prestation des services, on pourrait rendre le processus de réinstallation plus humain, et donner ainsi au Canada la possibilité de profiter du capital humain que les nouveaux arrivants amènent avec eux.