Author's response to reviews

Title: Mental health service use by recent immigrants from different world regions and by non-immigrants in Ontario, Canada: a cross-sectional study

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Author's response to reviews: see over
Dear Dr. Christopher Morrey,

Re: Mental health service use by recent immigrants from different world regions and by non-immigrants in Ontario, Canada: a cross-sectional study

Thank you for the opportunity to strengthen our paper by incorporating the changes suggested by Drs. Valentina Cabral Iversen and Laurence Kirmayer. Our responses to the reviewers’ comments are below in italic blue text.

Reviewer: Valentina Cabral Iversen

Reviewer’s report: Mental health service use by recent immigrants from different world regions and by non-immigrants in Ontario, Canada: a cross-sectional study.

A referee’s view, by Valentina Cabral Iversen, Norway, PhD.

I find the question posed by the authors well defined. They want to study service use for non-psychotic mental health disorders by recent immigrants during their first 5 years after arrival in Canada. The immigrants were disaggregated by world regions of origin and sex. The methods are well described and appropriate for this kind of quantitative research. The collection of the extensive data material seems to have been carried out in a proper manner with n=912,114.

The manuscript adheres to the relevant standards for reporting and data deposition. However, there are topics that might have been more carefully developed in the discussion session with reference to the extensive research during the last twenty years on cross-cultural psychiatry/psychology, perspectives that might have added valuable points of view to the interpretation of the data. We revised the introduction and discussion to better represent relevant research from over the past two decades. This involved adding over 20 references. For example, in the discussion we expanded the text describing how low levels of English and French language abilities may deter use of western mental health services, and added text describing why some immigrants may terminate counselling early (e.g. due to culturally insensitive services, perceived over-willingness of physicians to provide pharmaceutical interventions, or recollections of physicians having a dismissive attitude in previous encounters).

The factors mentioned, that immigrants from industrial counties are more accustomed to navigating mental health care systems like the one in Ontario, the limited proficiency in the host country language for some immigrant groups, and the possibility of lower mental health need, due to self-selection and/or screening prior to arrival, are all important. The last point of view was discussed in the literature a long time ago by Ødegård, Ørnulf (1932): Emigration and insanity. A study of mental disease among the Norwegian-born population of Minnesota. Acta Psychiatr et neurol Scand (Suppl IV): 101-151. This reference is now noted in the discussion when we describe the effect of selection processes on immigrant mental health and how selection processes align with the Healthy Immigrant Effect.

It should be possible to look up other perspectives (and other references) for the interpretation of the data in this article.

One should also consider if there are differences in mental health service use among refugees, asylum seekers and immigrants, especially if the data collection cover people from all these categories. Possible (in fact, we know there are) differences in health service use between these groups should be
Since the study sample included people from varied admission classes, we added text to the discussion that notes that some immigration region groups (e.g. newcomers from Middle East and North Africa) may have had higher estimates of use because of higher percentages of refugees who tend to have greater mental health need, following traumatic experiences and less stringent entrance criteria. On page 18, we wrote, “...Finally, persons from Middle East and North Africa may have higher needs because as our data indicate, individuals from this region were more commonly admitted as refugees than in other admission classes. Admission as a refugee is associated with the most lenient entrance criteria, permitting entrants to have greater mental health need at arrival. [78, 81] Also, relative to other newcomers, refugees more commonly arrive as forced migrants who have had traumatic exposures, contributing to elevated rates of non-psychotic disorders, such as post-traumatic stress disorder. [10, 82-84] Admission in this class has been linked to more mental health service use. [78] Further investigation of prominent features and experiences among immigrants from varied source countries within the Middle East and North Africa region may help flag areas of potential vulnerability and contributors to high service use.”

At last, I also think that a sentence or two should be included that addresses more specifically not only those who are familiar with the Toronto health care system and those who are not, but also the variety of the conceptions of mental health among people from different cultures, not only from different world regions, and how these cultural differences might influence mental health service use. We expanded the discussion of conceptions of mental health (pgs. 17-18) when describing possible reasons for lower use by newcomers from the East Asia and Pacific region. We note that the conceptualizations of mental illness in Asian cultures and the shame and stigma associated with Western concepts of mental illness and mental health care may have deterred use of the services under study.

In the conclusion, lines 399-400, the authors seem to think that understanding variation in service use related to world regions of origin and sex may help to adapt and target services to specific sub-populations. In my opinion, there are too many differences between people from the same world region and too many cultural aspects to consider and too many personal factors to take into consideration, before the right treatment can be suggested. Thank you for the suggestion. We have changed the text in the discussion and the conclusion to more accurately represent the benefits of this research and its implications.

The paragraph describing study strengths in the discussion now states, “This study takes advantage of linked provincial health service and immigration databases in a setting with a high portion of diverse newcomers. This linkage allowed for the examination of use of different types of mental health services for newcomers from the main world regions compared to matched long term residents in the same setting. Theoretical frameworks [10, 13, 95] and research on samples of immigrants [14, 15, 84] acknowledge the far-reaching consequences of the pre-migration context on health and social factors related to mental health service use. They have noted potential drivers of differences across region groups (e.g., economy in the source region, family structure, ethnicity, etc.). However, to the authors’ knowledge, no empirical studies have systematically examined immigrants from the full range of source countries represented in a population. Our work described the differences among broad world regions by comparing them to standardized non-recent immigrant comparators. World region of origin is likely a proxy measure for the plethora of pre-migration factors that influence use, [96] and its many underlying individual level factors need to be considered to make services more responsive to need (pgs. 18-19)
The conclusion now reads: “This study used linked population-based administrative databases to examine the mental health service use by immigrants from the full spectrum of world regions living in a diverse Canadian province with universal health insurance. It found that immigrants from all world regions used less services for non-psychotic mental health disorders than LTRs with the exception of primary mental health care, which immigrants were more or less likely to use than LTRs depending on their world region of origin. These results and similar findings help to combat stereotypes that newcomers over-use publicly funded services, including mental health services. [100] Future studies that examine mental health need and barriers to care, as well as other immigration specific factors, could begin to delineate the underlying reasons for patterns displayed by newcomers from various world regions of origin. Illuminating these underlying factors and how they relate to service use may help clinicians and planners determine if and how services should be targeted to meet the unique needs, norms, attitudes and knowledge of diverse immigrants in a multi-cultural context like Ontario, Canada (pgs. 20-21).

Reviewer’s report

Reviewer: Laurence Kirmayer

Reviewer’s report:
Review of Mental health service use by recent immigrants from different world regions and by non-immigrants in Ontario, Canada: a cross-sectional study

1) This is a potentially useful paper that needs some further work. By comparing administrative data, the authors establish that there are significant variations in rates of use of mental health services (in primary and specialty care) among immigrants from different regions. They do not sufficiently address the limitations of the data and methods of analysis and the results risk having negative effects on policy by (i) conflating use with level of need; and (ii) encouraging overly broad generalizations about regions of the world without identifying the features of migration form that part of the world to Canada that influence service utilization rates.

Major Compulsory Revisions

2) The research questions are not clearly stated – presumably they are limited to exploring potential variations in rates of mental health service utilization by region of origin. We revised the text in the abstract and the introduction to clarify the research questions. For example, in the introduction the text now reads: “This study compared rates of primary care visits, psychiatry visits and hospital use for non-psychotic mental health disorders for recent immigrants to Ontario from nine world regions of origin to long term residents (LTRs), a group of long term immigrants or Canadian born individuals to whom immigrants were matched on age.” (pgs. 5-6)

3) The authors miss an opportunity to address the more interesting and important policy-relevant question of what the actual mediators or determinants are of the differences they observe. They examine only some of the key indicators available for both immigrants and long-term residents, (i.e. sex and neighborhood income); they do not do any analyses within the immigrant group itself to examine the impact of variables likely to account for the difference: e.g., reason for migration (refugee, family reunification), language proficiency, level of education. Refugee status. Consequently there results are
of limited interest and generalizability. We agree that this is an important issue that should be the focus of future research. In the methods and limitations sections we clarified the reason for our study scope that compares recent immigrants to non-recent immigrants. In the methods section we wrote, “Characteristics that applied to immigrants and not LTRs (e.g., admission class) could not be included in the adjusted models since the information collected from immigrants at landing was not available or relevant for LTRs.” (pg. 19)

By examining immigrant groups relative to standard comparators in the general population we hope to provide a meaningful comparison since it is difficult to understand how results from immigrant-only models (with no familiar reference group) compare to use by native-born individuals. This approach precluded our study from examining the impact of immigration related variables on immigrant mental health service use that likely accounted for the differences in service use related to world region of origin. Given the study design, we try to more accurately represent what can be gleaned for our study, and accentuate the need for future work to examine the underlying factors that drive the variation observed among immigrants related to world region of origin.

4) Moreover, a major concern is that by using the crude category of region of origin and not identifying the underlying factors, the authors contribute to stereotypes based on these categories. Indeed, the variations reflect Canada’s own immigration policy and pathways to entry more than any characteristics of people in this regions (some of which like South or East Asian represent major portions of the global population!). Moreover, these results are likely to change with changes in patterns of migration from within any given regions – all of which make the results of dubious value for policy.

Stereotypes that suggest that newcomers over-use services, including mental health services, contributed to the authors’ desire to conduct this research. While the potential of this study to contribute to stereotypes was still a concern, this concern was mitigated by our findings of generally lower use by immigrants. In response to your comment, we also endeavoured to further reduce the likelihood of this study driving stereotypes by:

i) Noting in the discussion (pg. 15) that the few instances where immigrants used more care than their counterparts were use of primary care services. In Ontario and many other jurisdictions, primary care is the recommended contact point for mental health services, and these services are much less costly than specialty mental health services.

ii) Adding text to the conclusion stating that these results and similar findings help to combat stereotypes that newcomers over-use publicly funded services, including mental health services.

5) Finally, it is important to note that service use does not correspond to need so that without further data there is no way to know whether groups under-utilize services and have unmet need, or have no need for further services.

To clarify this point we added the following sentence to the limitations section: “Since service use does not correspond to need, without further data we do not know if more limited use of services by immigrant region groups was linked to more unmet need, or to no need for further services.”

Minor Essential Revisions

6) There are some grammatical problems in the text, e.g. in the first sentence: “so does the attention on immigrant” would read better as “so does the attention to immigrant” The whole text should be carefully proofread. The suggested change has been made and the text has been proof-read.
7) Several of the references seem not to directly address the point for which the authors' cite them [e.g. #6, 39] or are obscure and not accessible to anyone [e.g. #4].

*These references have been replaced*


*This and other references have been added to the manuscript.*


*We reference these studies and expanded the discussion to include more potential reasons for underutilization.*

Discretionary Revisions

10) And it is surprising to see limited reference to the extensive discussion in the literature of the healthy immigrant effect in Canada, e.g.: Blair, A. H., & Schneeberg, A. (2014). Changes in the 'Healthy Migrant Effect' in Canada: Are Recent Immigrants Healthier than They were a Decade Ago? Journal of Immigrant and Minority Health, 16(1), 136-142.


*Thank you for these suggestions. We added the last two references.*

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**
I declare that I have no competing interests