CANADIAN JOURNAL OF
Disability Studies
Published by the Canadian Disability Studies Association · Association Canadienne des Études sur l'Incapacité

*Canadian Journal of Disability Studies*

**Published by the Canadian Disability Studies Association**

**Association Canadienne des Études sur l'Incapacité**

**Hosted by The University of Waterloo**

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# Disability and the Use of Support by Immigrants and Canadian born population in Canada

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**Abstract:** Immigrants account for a large proportion of Canada's population. Despite an emphasis on immigrant health issues within the literature, there is surprisingly limited attention given to disability within the immigrant population, although differential prevalence rates between immigrants and the Canadian born population have been noted. The observed differences in prevalence rates by gender and immigrant status raise questions around the use of support services. In this paper, analysis draws on Statistics Canada's 2006 Participation and Activity Limitation Survey (PALS). A mix of descriptive and multivariate techniques are used to explore who provides support, differences in the use of support between immigrants and the Canadian born and need for additional support. The descriptive results suggest that there was a broad parity in terms of the use of support, with immigrants and Canadian born nearly equally likely to use support. Use of support was also greater amongst those with a more severe disability. Multivariate analysis revealed that particular sub-groups of immigrants, and in particular immigrant females, severely disabled immigrants, and some age, income and educational groups were less likely to use support after controlling for other correlates of use. The difficulties confronted by people with disabilities appear to be magnified within the immigrant community, and particularly amongst sub-groups of the immigrant population.

**Keywords:** immigrants, Canada, disability, gender, support, need for support.

# Disability and the Use of Support by Immigrants and Canadian born population in Canada

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## Background

Immigrants accounted for over 7.5 million (21.9 percent) of Canada’s population in 2016. New immigrant arrivals are typically more likely to report better health and are less likely to report chronic conditions or disabilities than the Canadian-born population [1], attributed to the fact that those in good health are more likely to immigrate to Canada along with the screening process at the time of entry that disqualifies those with serious medical conditions [2-5]. With time, the health advantage is lost, and their health status declines toward levels observed within the broader population, illustrative of the so-called ‘healthy immigrant effect’ [1, 6-15].

Despite an emphasis on immigrant health issues within the literature, there is surprisingly limited attention to the experience of disability among immigrant populations once they have arrived in Canada. Where the literature has explored disability, existing research has largely focused on overall trends and rates of disability [16-19]. Newbold and Simone [18], for instance, observed some of the highest age-specific disability rates amongst female immigrants and the lowest age-specific disability rates amongst immigrant males, particularly for mobility, agility, and vision disabilities.

The observed differences in prevalence rates by gender and immigrant status raise questions around the use of support. That is, given the observed differences in disability prevalence rates by gender and immigrant/Canadian born status, it is possible that there are concomitant differences in the need for support, type of support received, and source of support with respect to immigrant status. For example, immigrants may be more reliant on immediate family and/or friends, as opposed to paid support, given differential ability to pay for services, insurance coverage, and their knowledge of support within the community. In addition to the barriers to health care including language, transportation, cultural differences, knowledge, insurance, costs, and access to a family doctor [10, 20-23), disabled immigrants may face additional barriers to support, particularly given the shift of services from hospitals and institutions to people’s homes [24-26]. This shift has resulted in 80 to 90% of all care and support being informal and provided by family and friends [23]. Yet, home care is often an unsustainable, undependable, and unaffordable option for individuals, resulting in the social exclusion of caregivers and their recipients alike [23, 24].

Approximately 14% of the Canadian population (aged 15+) reported a disability in 2012, with women more likely to report a disability (14.9%) than men (12.5%) [27]. Disability rates tend to increase with age, reaching 42.5% amongst those aged 75 and over [27], with pain, flexibility, and mobility the most prevalent types of disability [27]. Oftentimes, people with disabilities confront lower rates of labour force participation [28] and social marginalization [29]. Immigrants with disabilities may also face significantly greater challenges in integrating into Canadian society as compared to non-immigrants with disabilities, a process that is made more difficult by language barriers, lower incomes, and employment issues such as recognition of professional credentials and education [30]. Discrimination in workplaces, health care settings or social environments [31] based on immigrant status, skin colour, and/or disability itself may also occur, but the literature is limited.

This complex intersection of immigrant status, disability, and gender also raise important questions about people’s need for, and access to, supports. For those with disabilities, support with activities of daily living (ADLs) may be a significant determinant of their social and economic integration into society. For instance, a 2010 Statistics Canada report based on an analysis of the PALS [32] revealed significant (self-assessed) unmet need for support, with 30% of those with a disability indicating that they would like more help than they receive, or were not receiving support at all, even though they needed help with activities of daily living. Not surprisingly, the amount and type of support received depended on the type of disability, and the amount of support received increases with age and severity of disability, but sufficient support was also increasingly hard to get as need for support increased.

It is also likely that problems accessing supports may be exacerbated within immigrant communities: immigrants may have less knowledge or comparably fewer resources (monetary, family, friends) and options to ensure adequate help with activities of daily living given their level of need. Differences in the type and source of support between immigrants and the Canadian born may also exist. Given observed differences in income along with access to health and social services (including use of preventative health services) between immigrants and Canadian born, it could be hypothesized that immigrants may be less able to pay for formal supports (such as a personal support worker) and are more reliant on family and/or friends.

While there has been some analysis of need, type, and source of support [32] for people with disabilities, the literature has typically not differentiated between immigrants and non-immigrants. Yet, immigrants with disabilities may have different support needs than Canadian born. They may also confront different institutional barriers, with the consequence that needs may go unmet. At the same time, immigrant groups may have different cultural expectations about how support needs will be met. For example, a study of caregivers in Hong Kong showed that caregiving was a ‘natural’ and expected role for family members, with no expectation that care should be the responsibility of the government [33]. Research from the United States and Canada has also noted the importance of informal caregiving within the Vietnamese immigrant community, with the expectation that immigrants will depend on family members for health needs unless the family has exhausted all of its resources [21, 34].

From a policy and programming perspective, it is vital to understand whether immigrants with disabilities are more (or less) disadvantaged than non-immigrants in terms of receiving support (or if there are cases of unmet need), the type of assistance that is used, and who is providing support (i.e., family, friends, paid help, etc.). Insight into the sources and types of support will enable greater understanding of the different constraints and opportunities that immigrants and non-immigrants with disabilities face in the course of their everyday lives.

The purpose of this paper is therefore to evaluate the type and level of support used by disabled adults in Canada, and whether immigrants and non-immigrants differ in their use of supports. Three questions guide the research. First, is there a difference in the utilization of care for disabled immigrant adults compared to the disabled Canadian born population? Second, do disabled immigrants express a higher need for care than the Canadian born population? Third, what is the importance of socio-demographic and socio-economic factors such as age, gender, immigrant status, education, severity of disability, and income on the utilization and need of care in the disabled immigrant population?

## Methods

Our analysis draws on Statistics Canada's 2006 Participation and Activity Limitation Survey (PALS). The PALS adopts the World Health Organizations [35] definition of disability as "any restriction or lack of ability (resulting from an impairment) to perform an activity in the manner or within the range considered normal for a human being". The PALS is a post-census survey, and its population consists of persons who answered "yes" to either of the 2006 Census questions on activity limitations ("Do you have any difficulty hearing, seeing, communicating, walking, climbing stairs, bending, learning or doing any similar activities?" and "Does a physical condition or mental condition or health problem reduce the amount or the kind of activity you can do a) at home?; b) at work or at school?, or; c) in other activities, for example, transportation or leisure?”). The same filter questions were repeated during the PALS interview. Further questions within PALS determined the type of disability (i.e., mobility, agility, hearing, speaking, and vision) and whether the disability was corrected (i.e., via hearing aids or glasses) or uncorrected.

The conceptual framing of disability within the PALS is problematic when read through a lens of critical disability theory. While the WHO definition recognizes that “disability is… not just a health problem”[1], the definition remains overly reliant on a medical model in which disability is ultimately sourced in the problems and limitations of the individual’s body [36]. Despite the problematic definition of disability used in the PALS, we believe that quantitative data of this nature are still useful in providing a window into disabled people’s experiences.[2] Similarly, the PALS survey uses the word ‘caregiver’ to identify persons who provide support for disabled people. We use the term throughout the paper to describe and interpret the data produced by Statistics Canada but we acknowledge that ‘care’ is a problematic word to use when describing the supports required by people with disabilities [37-38]. Wood [37] argues that disabled people have never asked or demanded care but instead advocate for independent living. From a critical perspective, the use of the terms ‘care’ and ‘caregiver’ risks implying that persons with disabilities are necessarily dependent on others. In this paper we draw from a modified social model to approach and interpret the insights that emerge from the PALS data. From this perspective, we focus attention on the ways in which the organization of society and specifically the extent to which people have access to different forms of formal and informal support, may hold implications for their ability to participate in economic and social activities [40].

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[1] See http://www.who.int/topics/disabilities/en/ [35]

[2] Goodley [39] makes a similar argument with respect to the data contained in WHO’s World Report on Disability when he states: “Like it or loathe it, the World Report has put disability on the geopolitical map”

The population covered by PALS includes individuals living in private and some collective households (i.e., senior citizen residences) across Canada, including the three northern territories. Residents of First Nations reserves are excluded from the survey, as were residents of some institutional and non-institutional collective dwellings. The sample includes approximately 39,000 adults aged 15 years and over at the time of the survey, representing a weighted population of 2.4 million Canadians with a disability. For the current paper, the sample was restricted to individuals aged 40 and over, capturing the ages at which rates of disabilities – and therefore need for support– start to increase. All responses are self-reported, and all respondents reported that they had difficulties with activities of daily living (ADL), such as preparing meals, everyday housework, heavy chores, personal care, mobility, specialized treatments, or that a physical or mental condition or health problem reduced the kind or amount of activities they could do.

The PALS also includes variables drawn from the 2006 census, including immigrant status (immigrant or Canadian born), year of arrival in Canada, and other socioeconomic and sociodemographic information that are linked at the individual level. Immigrants in the PALS are self-identified, and include all individuals who are not Canadian citizens by birth (i.e., born outside Canada) and eligible to reside in Canada permanently. The PALS file does not allow further distinction by immigrant status (i.e., distinction between immigrants and refugees). Throughout the analysis, weights developed by Statistics Canada for use in analyzing the PALS are incorporated. Reporting standards are congruent to the standards enforced by Statistics Canada.

Descriptive analysis provides a picture of the sources of people’s care and support, identified as family, friends and others. Family includes immediate family such as spouse/partner, parents, children and siblings. Friends include family members such as grandparents, in-laws and friends. Others include paid employees, organizations and government services. Following the descriptive analysis, multivariate logistic regression explores the covariates associated with need for care, receipt of care, and type of care. The receipt of care variable identifies if a person receives care regardless of the type of care. Need for care identifies if the individual believes that they need help in addition to the help that they already receive. For type of care, four different dependent variables were used to identify the type of care that the disabled receive: Meals, housework, errands, and personal care.

Independent variables used in the models include a mix of sociodemographic and socioeconomic factors. Sociodemographic variables include age (10 year age cohorts), gender, immigrant status and severity of disability. Socioeconomic variables include education (less than high school, high school, college and trade, and bachelor or better) and income (<$19,999, $20,000-$49,999 $50,000 - $79,999 $80,000 - $ 99,999 and >$100,000). In addition to the direct effects, a number of interaction terms between immigrant status and selected effects were evaluated to gain a better understanding of the differences between immigrants and Canadian born individuals with disabilities.

Table 1 reports the sample characteristics. Immigrants represent 25.2% of the sample, slightly larger than the proportional size of the immigrant population within Canada. Recalling that all individuals included in the PALS are disabled, it is interesting to note that a greater proportion (44%) of immigrants report a severe disability as compared to the Canadian born (40.1%). Otherwise, the immigrant sample tends to be somewhat older, more female, better educated, and reports a higher earned income than the Canadian born.

**Table 1.** Sample characteristics (%), Immigrants and Canadian born, aged 40+

| | | Canadian born | Immigrant |
|---|---|---|---|
| Immigrant status | | 74.8 | 25.2 |
| Severity | Severe | 40.1 | 44.0 |
| Age cohort | 40-49 | 20.2 | 11.1 |
| | 50-59 | 23.5 | 19.0 |
| | 60-69 | 19.5 | 24.5 |
| | 70-79 | 20.8 | 23.8 |
| | 80+ | 16.0 | 21.5 |
| Gender | Female | 54.7 | 57.7 |
| Education | Less than High School | 36.8 | 33.4 |
| | High School | 22.7 | 20.5 |
| | College and Trades | 31.3 | 32.5 |
| | University | 9.3 | 13.7 |
| Income | $0 - $19,999 | 19.4 | 14.6 |
| | $20,000 - $49,999 | 37.2 | 33.4 |
| | $50,000 - $79,999 | 21.8 | 26.0 |
| | $80,000 - $99,999 | 8.5 | 9.0 |
| | $100,000+ | 13.1 | 16.9 |
| N (Weighted) | | 2,687,179 | 907,027 |

## Results

Table 2 reports the proportion of immigrants and non-immigrants aged 40 and over who receive support for a disability, with results indicating that females are much more likely than males to report use of support, regardless of immigrant status and severity of disability. Despite potential differences in the source of support and ability to pay for support, there is comparatively little difference in the proportion of immigrants and non-immigrants reporting use of supports. For instance, 68.3% of immigrant women reported use of support, and 69.3% of Canadian born women reported use, with a similarly small difference between Canadian born and immigrant men (47.4% and 49.1%, respectively). However, women reported greater use of support than their male counterparts.

Turning to severity[3] of a disability and immigrant status, greater use of support was, not unexpectedly, associated with greater severity regardless of immigrant status. However, immigrants reporting mild/moderate disabilities were slightly more likely to report use of support (46.8% versus 45.0% for immigrants and Canadian born, respectively). Conversely, immigrants reporting a severe disability are less likely to report use of support (77.2%), compared to 80.8% of Canadian born. Finally, although 80.8% of immigrant women with severe disabilities reported receiving support, 85.7% of their Canadian born counterparts reported use of support services, a difference of 4.9 percentage points. In comparison, there was just a 2.8 percentage point difference between immigrant and non-immigrant males reporting a severe disability, suggesting that immigrant females with a severe disability were at a slightly greater risk of not receiving support.

**Table 2.** Receipt of support (%) by immigrant status, severity, and gender, aged 40+

| | Canadian born | | | Immigrant | | |
|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total |
| Mild/Moderate | 31.7 | 57.1 | 45.0 | 34.9 | 56.9 | 46.8 |
| Severe | 74.0 | 85.7 | 80.8 | 71.2 | 80.8 | 77.2 |
| Total | 47.4 | 69.3 | 59.3 | 49.1 | 68.3 | 60.2 |

Table 3 extends this analysis by considering type of caregiver (family, friends, other), age cohort, gender, and immigrant status, from which we make four broad observations. First, immediate family members such as a spouse, partner, child, or parents were the most likely to be the care provider for any disabled individual regardless of gender, immigrant status, or age cohort. Second, family members were

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[3] Statistics Canada created an index measuring the severity of the disability based on the self-rated answers to the survey questions. Points were given according to the intensity and the frequency of the activity limitations reported by the respondent. A single score was computed for each type of disability and each score was then standardized to have a value between 0 and 1. The final score is the average of the scores for each type of disability.

more likely to provide support for immigrants as compared to non-immigrants, again regardless of age cohort, or gender. Third, while family members were the primary source of support in each case, support from friends was more important amongst non-immigrants. That is, friends represented a greater share of providers amongst non-immigrants as compared to immigrants. Similarly, non-immigrants were generally more likely to have a caregiver that was either paid, from a Non-governmental organization (NGO) or the government (i.e., 'other' providers) compared to immigrants. Amongst immigrants, women were typically less likely to use these 'other' providers as compared to men. Fourth, the use of 'other' caregivers tended to increase with increasing age, reflecting increasing use of formal supports external to the immediate circle of family or friends, while the use of both family and friends tended to decline with age.

**Table 3.** Caregiver type (%) by immigrant status, gender, and age cohort.

| | | | Caregiver | | |
|---|---|---|---:|---:|---:|
| Age Cohort | Gender | Immigrant Status | Family | Friends | Other |
| 40-49* | Male | Immigrant | --- | --- | --- |
| 50-59 | Male | Immigrant | 82.9 | 6.6 | 10.5 |
| 60-69 | Male | Immigrant | 78.6 | 15.9 | 5.5 |
| 70-79 | Male | Immigrant | 73.2 | 15.4 | 11.4 |
| 80+ | Male | Immigrant | 62.8 | 11.0 | 26.2 |
| 40-49 | Male | Non-immigrant | 69.7 | 17.3 | 13.0 |
| 50-59 | Male | Non-immigrant | 66.4 | 18.2 | 15.4 |
| 60-69 | Male | Non-immigrant | 61.1 | 21.0 | 17.9 |
| 70-79 | Male | Non-immigrant | 58.8 | 17.7 | 23.6 |
| 80+ | Male | Non-immigrant | 53.2 | 15.5 | 31.3 |
| 40-49 | Female | Immigrant | 76.3 | 11.0 | 12.8 |
| 50-59 | Female | Immigrant | 82.4 | 8.7 | 8.9 |
| 60-69 | Female | Immigrant | 80.3 | 14.3 | 5.4 |
| 70-79 | Female | Immigrant | 58.7 | 27.6 | 13.7 |
| 80+ | Female | Immigrant | 57.1 | 24.7 | 18.2 |
| 40-49 | Female | Non-immigrant | 72.3 | 15.2 | 11.5 |
| 50-59 | Female | Non-immigrant | 69.1 | 15.4 | 15.5 |
| 60-69 | Female | Non-immigrant | 62.8 | 18.9 | 18.3 |

| | | | | | |
|---|---|---|---|---|---|
| 70-79 | Female | Non-immigrant | 56.4 | 15.7 | 27.9 |
| 80+ | Female | Non-immigrant | 45.6 | 20.7 | 33.8 |

* Values suppressed given small sample size.

Multivariate results, which are presented in Table 4, further explore the covariates associated with receipt of support (regardless of the provider type), type of support received (support for meals, housework, errands, and personal care) and additional need for support. First, considering overall receipt of care and the type of care provided, the results suggest that immigrants are more likely to receive support, including support for meals, housework, errands, and personal care. Second, females are more likely to receive support than males, confirming the descriptive results. Additionally, individuals with a severe disability were also more likely to receive support, in line with expectations. Although increasing age is typically associated with greater use of support regardless of the type of support required, other sociodemographic and socioeconomic factors demonstrate inconsistent results with respect to the use of support. Although it might be expected that higher income groups are more likely to report the use of supports, there is no clear pattern associated with income, suggesting that the use of support is relatively equitable with respect to income. Results associated with educational attainment are, however, less intuitive, with higher levels of education (high school and higher) associated with less use of supports than individuals with less than a high school education.

The addition of a series of interaction effects between immigrant status and other correlates of use extends the analysis. From the results shown in Table 4, it is clear that some sub-groups within the immigrant population are less likely to report use of supports, suggesting greater inequalities between immigrants and non-immigrants than the direct results reveal. For instance, despite females generally having greater use of support than males, the interaction between immigrants and females reveals that female immigrants are less likely to receive support for a disability, an outcome that is only visible after controlling for other covariates. Immigrants reporting a severe disability are also typically less likely to receive support. In several cases, including overall support, housework, errands, and personal care, lower income immigrants are also less likely to use support services, as are immigrants with a high school or better educational attainment. Conversely, some of the older immigrant cohorts are more likely to use support.

The final columns in Table 4 report the need for additional support, essentially allowing the respondent to consider whether there is remaining need for support. Results suggest that immigrants are neither more nor less likely to report additional need for support as compared to their Canadian born counterparts. However, individuals with a severe disability, as well as females, are more likely to report additional need, as are individuals with more than a high school education, suggesting that there may be greater awareness of either their need for support or the availability of support. Individuals with a low income (<$20,000) report less need for additional support. The inclusion of interaction effects reveal that low income immigrants (<$20,000) are less likely to report additional need for support, as are immigrants aged 50-59. However, immigrants aged 70-79 are more likely to report need for additional support.

**Table 4.** Logistic regression: Use and Need of support by disabled adults, age 40+

| | Receives Care | | Meal Support | | Housework Support | |
|---|---|---|---|---|---|---|
| | OR | *p* | OR | *p* | OR | *p* |
| Immigrant | 1.884 | <0.0001 | 2.091 | <0.0001 | 1.453 | 0.0004 |
| Severe | 5.620 | <0.0001 | 7.105 | <0.0001 | 5.149 | <0.0001 |
| Female | 2.367 | <0.0001 | 1.562 | <0.0001 | 2.004 | <0.0001 |
| Age (Reference = Aged 40-49) | | | | | | |
| Age 50-59 | 1.072 | 0.1448 | 0.812 | 0.0003 | 0.889 | 0.0133 |
| Age 60-69 | 1.028 | 0.5465 | 0.695 | <0.0001 | 0.915 | 0.1109 |
| Age 70-79 | 1.267 | <0.0001 | 0.681 | <0.0001 | 1.103 | 0.0738 |
| Age 80+ | 2.051 | <0.0001 | 1.210 | 0.0006 | 2.443 | <0.0001 |
| Education (Reference = Less than High School) | | | | | | |
| High School | 1.018 | 0.7038 | 0.863 | 0.0025 | 1.152 | 0.0040 |
| College | 1.107 | 0.0186 | 0.896 | 0.0307 | 1.225 | <0.0001 |
| University | 0.878 | 0.0431 | 0.749 | 0.0003 | 1.111 | 0.1298 |
| Income (Reference = >$100,000) | | | | | | |
| < $20,000 | 0.771 | <0.0001 | 0.436 | <0.0001 | 0.664 | <0.0001 |
| $20,000 - $49,999 | 0.868 | 0.0068 | 0.682 | <0.0001 | 0.828 | 0.0006 |
| $50,000 - $79,999 | 0.997 | 0.9552 | 0.874 | 0.0232 | 1.004 | 0.9425 |
| $80,000 - $99,999 | 0.971 | 0.6402 | 0.878 | 0.0861 | 0.939 | 0.3608 |
| Interactions | | | | | | |
| Imm*Severe | 0.758 | 0.0004 | 0.753 | 0.0008 | 0.874 | 0.0707 |
| Imm*Female | 0.869 | 0.0557 | 0.616 | <0.0001 | 0.732 | <0.0001 |
| Imm*<$20 | 0.757 | 0.0091 | | | 1.161 | 0.0587 |
| Imm*$20 - $49 | 0.869 | 0.0873 | | | | |
| Imm*High School | 0.672 | 0.0001 | | | 0.735 | 0.0024 |
| Imm*College | 0.414 | <0.0001 | 0.832 | 0.0429 | 0.652 | <0.0001 |
| Imm*University | 0.461 | <0.0001 | 0.623 | 0.0007 | 0.475 | <0.0001 |
| Imm*Age 50-59 | 0.592 | <0.0001 | 0.771 | 0.0290 | | |
| Imm*Age 60-69 | | | 1.520 | 0.0002 | 1.235 | 0.0300 |
| Imm*Age 70-79 | 1.351 | 0.0018 | 1.302 | 0.0193 | 1.388 | 0.0006 |
| Imm*Age 80+ | 1.430 | 0.0015 | | | | |
| N (sample) | | 22,513 | | 22,513 | | 22,513 |
| Likelihood Ratio | | 4452.06 | | 3378.66 | | 3820.60 |
| Rho-squared | | 0.146 | | 0.148 | | 0.138 |
| % Concordant | | 74.2 | | 76.1 | | 74.8 |

**Table 4** (Continued)

| | Errand Support | | Personal Support | | Needs Support | |
|---|---|---|---|---|---|---|
| | OR | *p* | OR | *p* | OR | *p* |
| Immigrant | 1.664 | <0.0001 | 1.836 | <0.0001 | 0.999 | 0.9812 |
| Severe | 5.912 | <0.0001 | 9.731 | <0.0001 | 4.213 | <0.0001 |
| Female | 2.025 | <0.0001 | 1.017 | 0.7561 | 1.637 | <0.0001 |
| Age (Reference = Age 40-49) | | | | | | |
| Age 50-59 | 0.742 | <0.0001 | 0.783 | 0.0034 | 0.872 | 0.0062 |
| Age 60-69 | 0.807 | 0.0002 | 0.968 | 0.6713 | 0.814 | <0.0001 |
| Age 70-79 | 1.057 | 0.3122 | 1.451 | <0.0001 | 0.793 | <0.0001 |
| Age 80+ | 2.521 | <0.0001 | 2.397 | <0.0001 | 0.838 | 0.0005 |
| Education (Reference = Less than High School) | | | | | | |
| High School | 0.784 | <0.0001 | 0.735 | <0.0001 | 1.073 | 0.1029 |
| College | 0.690 | <0.0001 | 0.783 | <0.0001 | 1.244 | <0.0001 |
| University | 0.608 | <0.0001 | 0.503 | <0.0001 | 1.283 | <0.0001 |
| Income (Reference = >$ 100,000) | | | | | | |
| < $20,000 | 1.043 | 0.4965 | 0.793 | 0.0119 | 1.479 | <0.0001 |
| $20,000 - $49,999 | 0.843 | 0.0012 | 0.807 | 0.0053 | 1.113 | 0.0389 |
| $50,000 - $79,999 | 0.883 | 0.0254 | 0.973 | 0.7382 | 0.885 | 0.0266 |
| $80,000 - $99,999 | 1.003 | 0.9629 | 1.226 | 0.0410 | 1.084 | 0.2346 |
| Interactions | | | | | | |
| Imm*Severe | 0.830 | 0.0129 | | | | |
| Imm*Female | | | 0.682 | 0.0003 | | |
| Imm*<$20 | 0.636 | <0.0001 | 0.711 | 0.0206 | 0.746 | 0.0029 |
| Imm*$20 - $49 | | | | | | |
| Imm*High School | 0.814 | 0.0417 | | | | |
| Imm*College | 0.760 | 0.0027 | | | | |
| Imm*University | 0.493 | <0.0001 | | | | |
| Imm*Age 50-59 | | | 0.648 | 0.0083 | 0.729 | 0.0020 |
| Imm*Age 60-69 | 1.266 | 0.0158 | | | | |
| Imm*Age 70-79 | 1.347 | 0.0018 | | | 1.757 | <0.0001 |
| Imm*Age 80+ | | | 0.737 | 0.0106 | | |
| N (sample) | | 22,513 | | 22,513 | | 22,513 |
| Likelihood Ratio | | 4954.46 | | 2691.30 | | 2680.43 |
| Rho-squared | | 0.175 | | 0.175 | | 0.100 |
| % Concordant | | 76.8 | | 80.8 | | 69.7 |

## Conclusions

Immigrants and persons with disabilities both constitute important groups within the Canadian population but we know relatively little about how immigrant status, disability, and gender intersect.

The current paper provides one attempt to explore the nature of this intersection, comparing access to, and needs for, formal and informal supports amongst immigrant and non-immigrants with disabilities. Initial results suggest that there was a broad parity in terms of the use of support, with immigrants and Canadian-born nearly equally likely to use supports. Unsurprisingly, the use of supports was greater amongst people who reported having a more severe disability. When examining income, individuals at the lower end of the income spectrum were not found to be disadvantaged relative to their higher income counterparts, suggesting a broad equity in the use of support services. When examining who provided the support/care, descriptive results suggested that immigrants with disabilities were more reliant on family members as support providers as compared to either friends or other sources, including paid service providers. While immigrants overall were neither more nor less likely to report additional need for support as compared to the Canadian born population, closer analysis revealed that particular sub-groups of immigrants – in particular women, immigrants with severe disabilities, and some age, income and educational groups – were less likely to access supports after controlling for other correlates. Consequently, the data suggest that the immigrant community may be more vulnerable when it comes to receiving support compared to the Canadian born population.

While these results are valuable, it is important to note that they do not allow us to get at the reasons for these differences in access to, and use of, supports. For example, we are not able to determine based on these numbers why immigrant women are less likely to report access to support compared to any other group. The data provide a useful starting point for future qualitative studies that can provide an in-depth examination of the underlying causes behind these numbers. Moreover, we argue that future research can usefully adopt an intersectional approach to understand the complex interrelationships between immigrant status, gender, culture, and people’s use of formal and informal supports. Importantly, literature on the provision of care rarely focuses on those people receiving the support, [41] but instead foregrounds those individuals who provide formal and informal care. This literature clearly indicates that caregiving is gendered, with women more likely to be formal and informal caregivers [26, 42]. With neoliberalism, care has seen a shift from formal care provided through the welfare state to a growing reliance on informal care provided by local voluntary organizations and/or family and friends. This shift has disproportionally affected women as providers of support [26, 43]. But how might these changes to the provision of supports impact women (and men) as recipients? One study [43] that examined the intersection of gender, care, and disability among elderly people with disabilities in the US found that women were much less likely to receive informal care compared to men and this was especially true for married disabled women [44]. Our analysis of the PALS data provide further evidence of gendered differences with respect to receipt of support, but it also suggests that there are important differences *among* women that reflect the intersection of disability with immigrant status and other socio-cultural factors. Further qualitative work, particularly in relation to the experiences of immigrant women, will help to shed light on the impact of these factors.

It is important for future studies to adopt an intersectional approach to examining immigrants and support services to be able to not only explore how gender impacts the use but also the importance that culture has in making decision around care and support. We know from previous studies that disabled immigrants and immigrant mothers with disabled children report facing significant stigma from their cultural communities, which has the potential to impact care and utilization of support services [45-46]. Cultural values such as filial piety also have the potential to impact care and needs to be explored further in data sets such as the PALS survey. The expectation of certain Asian cultures, for example Korean, Chinese, and Vietnamese, for the family to provide informal care to elders has the potential to be challenged by the assimilation of younger immigrants to Canadian cultural norms such as education and greater autonomy, impacting the care of older immigrants [21]. Without culturally appropriate care provided by the government or other support groups, older people from more traditional societies may choose to not receive the care that they need. For example, Chang and Hirdes [47] found that Korean Canadians had higher incidence of major chronic diseases and impairments, yet they were less likely to receive personal supports and home nursing suggesting that they receive help from formal services too late.

Since data sets like the PALS inform policy it is important that they include a larger sample size of immigrants from all regions to allow for a more in-depth analysis of cultural differences in utilization of care within Canada. Currently, the PALS dataset sample size is too small to draw conclusions on different regions causing results to be over generalized. Greater samples sizes combined with qualitative data analysis will provide a better understanding of the complex intersections of care, culture and gender.

## Declarations

Ethics approval and consent to participate: Not applicable
Consent for publication: Not applicable
Availability of data and material: The datasets analyzed during the current study are available through the Statistics Canada Research Data Centre network.
Competing interests: The authors declare that they have no competing interests.
Funding: This study was not funded, but was carried out as part of the 1st author's thesis research.
Authors' contributions: Hansen conducted data retrieval, analysis, and drafted the paper. Newbold and Wilton provided editorial support.
Acknowledgements: The author's acknowledge the RDC network.

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