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Low income among persons with a disability in Canada

by Katherine Wall

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Low income among persons with a disability in Canada

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Overview of the study

This study uses data from the 2014 Longitudinal and International Study of Adults (LISA) in order to examine the relationship between low income and characteristics of people aged 25 to 64 with a disability, including disability type, severity class, age of onset of disability, family composition, and other risk factors associated with low income. It also examines the composition of the low-income population in relation to disability, and provides information on the relationship between employment and low income for this population.

- In 2014, persons with a disability accounted for approximately one-fifth of the overall population aged 25 to 64. Of these, 23% were in low income, compared with 9% of those without a disability.
- Low-income rates vary by disability type. For example, the rate was 17% for those with a physical–sensory disability, 27% for those with a mental–cognitive disability, and 35% for those with a combination of both.
- Low-income rates vary considerably by family composition. Among persons with a disability, the low-income rate was over 50% for lone parents and persons living alone, compared with 8% for persons with a disability who lived with a spouse who did not have a disability.
- In 2014, unattached people aged 45 to 64 with a disability and lone parents with a disability accounted for nearly one quarter of the total low-income population. In contrast, both groups accounted for 3% of the non-low-income population.
- Among those without a job, 22% of people without a disability were in low income, compared with 35% for those with a physical–sensory disability, 46% for those with a mental–cognitive disability and 47% for those who had a combination of both.

Introduction

Some groups face higher risk of low income than others: recent immigrants, Aboriginal people, lone parents, unattached people aged 45 to 64,¹ and persons with a disability. For this reason, policies and programs designed to reduce poverty have often been based on interventions specifically targeted at benefitting members of these groups.² Many examples of studies on low income among Aboriginal people, recent immigrants and lone parents can be found,³ but there are fewer studies on low income among persons with a disability.

In this paper, disability is defined as a physical or mental impairment that is not accommodated by one's surrounding environment, making it more difficult

to perform daily activities. This acknowledges that impairment does not have to result in disability if a person's physical and social environment fits their needs.⁴ Previous studies have consistently demonstrated that persons with a disability have lower median incomes, are less likely to be employed, and are less likely to hold a university degree than persons without a disability.⁵ Specifically, the 2012 Canadian Survey on Disability (CSD) found that among persons aged 25 to 64, 49% of those with a disability were employed, compared with 79% of those without a disability.⁶

The employment and income status of persons with a disability also depends on the type of disability. The 2012 Canadian Survey on Disability found the median income for persons with a mental–cognitive disability ranged from \$12,200 for those with a learning disability to \$14,700 for those with a mental health-related disability.⁷ In comparison, the median income of persons with a physical–sensory disability ranged from \$15,500 for those with a dexterity (fine motor control) disability to \$24,200 for those with a hearing disability.⁸ An article on disability and poverty in the United States also found higher rates of poverty among persons with a mental disability than among those with a physical or sensory disability.⁹

In Canada, most statistical information on disability and low income is from two sources: the Canadian Survey on Disability (CSD) and the Canadian Income Survey (CIS). The CSD occurs every five years, is generally conducted in the year after the Census of Population and asks a wide range of questions on the experiences, jobs and education of persons with a disability. The CIS is an annual survey that can be used to track changes in the low-income rate of persons with a disability over time (see “[Data sources, methods and definitions](#)”).

A third source of statistical information on disability and low income—the biennial Longitudinal and International Study of Adults (LISA)—has several advantages. It asks every member of the households it surveys detailed questions on

disability, whereas the CIS randomly selects one person per household as a respondent. It thus combines the greater frequency of the CIS with the greater detail of the CSD. This makes LISA, a primary source of data in this paper, a valuable supplement to the CIS.

This article makes several contributions to the literature. First, it identifies which groups of persons aged 25 to 64 with disabilities have higher low-income rates, taking advantage of the LISA’s data to examine the relationships between low income and characteristics such as family composition, disability severity class, and the age of onset of the disability. Second, it presents a new categorization of disability types that sheds light on the relationship between low income and three mutually exclusive categories of disabilities: physical–sensory

(affecting sight, hearing, mobility, dexterity, flexibility or pain); mental–cognitive (affecting mental health, learning, memory, or development); and combined (affecting both of the above).

Among persons who report a disability, 1 in 4 is in low income

In this article, persons in low income are defined as those living in a household earning less than one-half of the median Canadian income, adjusted for household size—referred to as the after-tax low-income measure (LIM–AT). Despite the differences in their methodologies, the CIS and LISA show similar trends in the proportion of the population with a disability (Table 1). Both surveys find that 1 in 5 Canadians aged 25 to 64 have at least one disability. They

Table 1
Proportion of the population aged 25 to 64 who reported having a disability¹

	CIS 2013	LISA 2014
	percent	
Both sexes		
Without a disability	80.2	79.7
With a disability	19.8	20.3
Physical–sensory disability	11.0	12.1
Mental–cognitive disability	3.0	2.6
Combined disabilities	5.8	5.7
Women		
Without a disability	77.3	77.4
With a disability	22.7	22.7
Men		
Without a disability	83.2	82.0
With a disability	16.8	18.0

1. Disability status refers to the collection period in both surveys. Both surveys were conducted in early 2014 and are linked to the 2013 income tax records.

Note: Combined disabilities refer to persons who have both a physical–sensory disability and a mental–cognitive disability.

Sources: Statistics Canada, Canadian Income Survey (CIS), 2013; Longitudinal and International Study of Adults (LISA), 2014.

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both also find that physical–sensory disabilities make up over one-half of disabilities, while mental–cognitive disabilities are the least common type of disability. Furthermore, both surveys find that women are more likely to have a disability than men.

The two surveys also report similar low-income rates—between 23% and 24%—among persons with a disability (Table 2). Furthermore, both surveys show the same pattern of low income by disability type: persons with a mental–cognitive or combined disability are more likely to be in low income than persons with a physical–sensory disability. The two surveys also found the low-income rates of persons without a disability to be close—approximately 9%.

The similarity between the results from the CIS and LISA, despite their differing methodologies, indicates that the two surveys are comparable. The following analyses will use LISA to provide insight into the characteristics of persons with a disability that are associated with higher low-income rates.

Severity of disability is associated with low income for people with a physical–sensory disability

Disabilities can be classified by severity, as mild, moderate, severe, or very severe, based on how often and to what extent they limit a person’s daily activities. In this study, “more severe” disabilities encompass moderate, severe, and very severe disabilities.¹⁰

Approximately one-half of LISA respondents with a disability (51%) had a mild disability, while the rest had a more severe disability.

Table 2

After-tax low-income measure (LIM–AT) by disability status and type, persons aged 25 to 64¹

	CIS 2013	LISA 2014
	percent	
Both sexes		
Without a disability	8.9	8.6
With a disability	23.5	23.2
Physical–sensory disability	16.1	16.8
Mental–cognitive disability	22.8	26.6
Combined disabilities	37.9	35.3
Women		
Without a disability	9.8	9.3
With a disability	25.0	23.1
Men		
Without a disability	8.0	7.9
With a disability	21.6	23.3

1. Disability status refers to the collection period in both surveys. Both surveys were conducted in early 2014 and are linked to the 2013 income tax records.

Note: Combined disabilities refer to persons who have both a physical–sensory disability and a mental–cognitive disability.

Sources: Statistics Canada, Canadian Income Survey (CIS), 2013; Longitudinal and International Study of Adults (LISA), 2014.

Table 3

Distribution of persons aged 25 to 64 who reported having a disability, by disability type and severity class, 2014

	Disability severity class	
	Mild	More severe
	percent	
Disability type	50.7	49.3
Physical–sensory disability	60.2	39.8
Mental–cognitive disability	81.7	18.3
Combined disabilities	16.2	83.8

Note: Combined disabilities refer to persons who have both a physical–sensory disability and a mental–cognitive disability.

“More severe” disabilities encompass moderate, severe, and very severe disabilities.

Source: Statistics Canada, Longitudinal and International Study of Adults (LISA), 2014.

The disability severity class varies by disability type. While 82% of mental–cognitive disabilities are mild, 84% of combined disabilities are more severe. Physical–sensory disabilities are more evenly split: 60% are mild and 40% are more severe (Table 3).

Persons with a more severe disability have a low-income rate of 30%, compared with 17% for those with a mild disability, but the relationship between low income and severity

class differs between disability types. At 24%, the low-income rate of persons with a more severe physical–sensory disability is nearly twice the rate of those with a mild physical–sensory disability (12%). In contrast, among people with a mental–cognitive disability or combined disabilities, low-income rates do not differ significantly between those in different severity classes (Chart 1).

An earlier age of disability onset does not affect the low-income rate

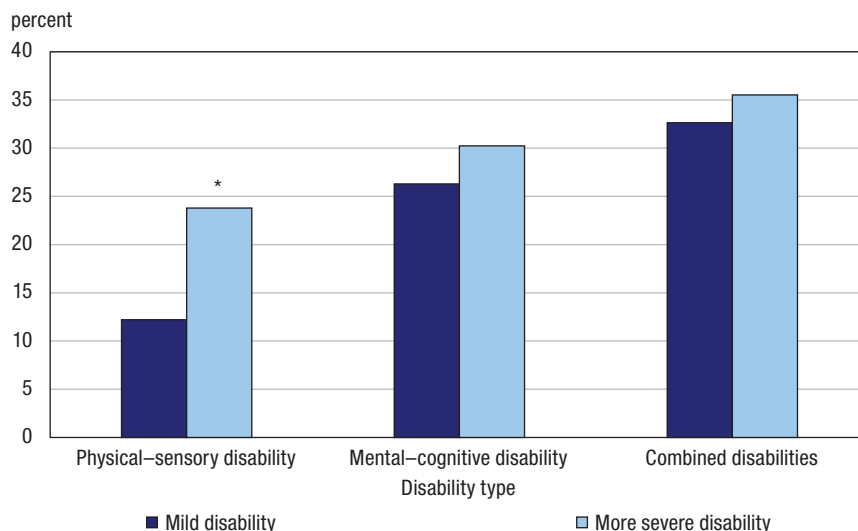
The onset of most disabilities occurs later in life. Onset of disability occurred at age 25 or older for 73% of persons aged 25 to 64 who had a disability. When disability onset occurs before age 25, people with a disability may be at greater risk of being in low income if their disability impedes their opportunity to pursue their education or enter the labour market.

However, people whose disability onset occurred before age 25 are slightly less likely to be in low income—with a low-income rate of 20%—compared with 24% for those whose disability onset occurred at age 25 or older. This difference is entirely attributable to younger people (aged 25 to 44) whose age of onset is before age 25, who have a low-income rate of 16%. Their smaller low-income rate may be explained by living arrangements. Younger persons whose disability onset is before age 25 are particularly likely to live in a household consisting of non-relatives such as roommates: 13% have this household type.¹¹ The LIM is calculated using income adjusted for household size, to account for the cost-savings of living with other people, so people living with roommates are less likely to be low-income than people living alone.

Lone parents and persons living alone with a disability are more at risk of being in low income

The focus of this paper now shifts to differences by family type. In this section, “couples” refer to those who are married or common-law, including same-sex couples. “Lone parents” are defined as mothers

Chart 1
Low-income rate¹ by disability type and severity class, persons aged 25 to 64, 2014



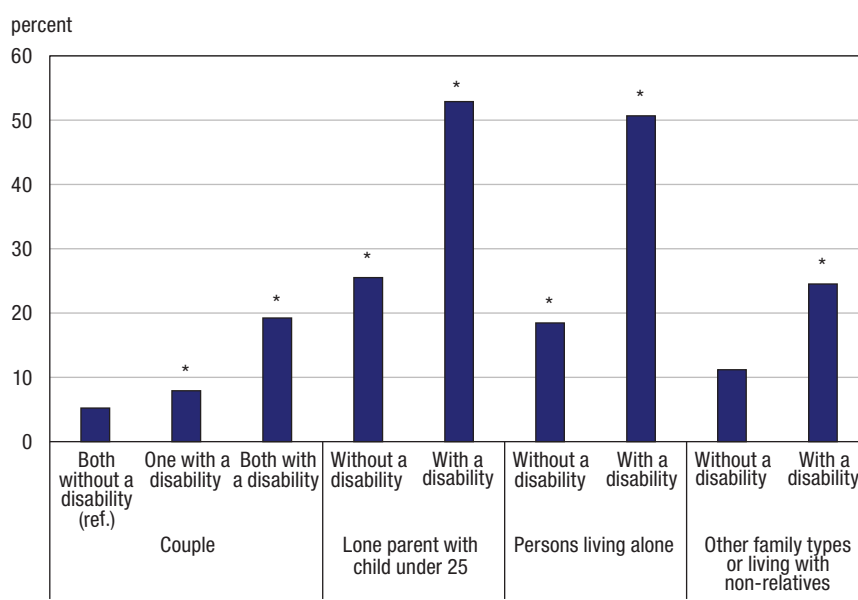
*significantly different from the reference category (mild disability) ($p < 0.05$)

1. The low-income rate is based on income during the year 2013.

Note: Combined disabilities refer to persons who have both a physical-sensory disability and a mental-cognitive disability. "More severe" disabilities encompass moderate, severe, and very severe disabilities.

Source: Statistics Canada, Longitudinal and International Study of Adults (LISA), 2014.

Chart 2
Low-income rate¹ by family composition and disability status, persons aged 25 to 64, 2014



*significantly different from the reference category (couple, both without a disability) ($p < 0.05$)

1. The low income rate is based on income during the year 2013.

Source: Statistics Canada, Longitudinal and International Study of Adults (LISA), 2014.

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and fathers who are not in a couple and who live with children under the age of 25. "Persons living alone" include those who are not a couple, are without kids and are living alone. Lastly, persons in "other family types or living with non-relatives" include lone parents living with children aged 25 and above, and also persons that are neither in a couple or lone parents, but are living with other family members or with non-relatives.

For both persons with and without a disability, those in a couple are the least likely to be in low income, while lone parents and people living alone are most likely to be low income (Chart 2). This fact can be attributed to the cost-savings associated with cohabitation and to partners being able to support each other if one of them becomes unemployed. Persons with a disability, however, are more likely than those without a disability to be lone parents or to live alone.

People with a mental-cognitive disability or combined disabilities are more likely than those with a physical-sensory disability to be in a lone-parent family or to live alone, and less likely to be in a couple with a spouse who does not have a disability (Table 4). Similarly, people with a more severe disability are more likely to live alone than people with a mild disability. Family type may therefore explain much of

Table 4

Family composition of population aged 25 to 64, by disability status, type and severity class, 2014

	Couple			Lone parent with child under 25	Persons living alone	Other family types or living with non-relatives
	Both without a disability ¹	One with a disability	Both with a disability ²			
	percent					
Disability status						
Without a disability	63.3	11.4	0.3	6.0	11.7	7.4
With a disability	1.0	44.7	17.0	8.3	16.7	12.2
Disability type						
Physical–sensory disability	1.0	52.3	19.2	6.9	13.8	6.9
Mental–cognitive disability	1.9	41.8	9.1	9.2	18.2	19.9
Combined disabilities	0.6	30.0	16.0	11.1	22.1	20.2
Disability severity class						
Mild	1.3	52.7	16.6	8.2	12.7	8.5
More severe	0.8	36.5	17.6	8.4	20.7	16.0

1. People with a disability in this category are children over the age of 25 living with parents without a disability.

2. People without a disability in this category are children over the age of 25 living with two parents who have a disability.

Note: Combined disabilities refer to persons who have both a physical-sensory disability and a mental-cognitive disability.

Source: Statistics Canada, Longitudinal and International Study of Adults (LISA), 2014.

the difference in low-income rates between people with different types and severity classes.¹²

Unattached people aged 45 to 64 with a disability are more likely to be in low income than their counterparts without a disability

This section covers the interaction between persons with a disability and unattached people, who can be defined as people living alone or with non-relatives. Examining unattached people aged 45 to 64 is important, given that this characteristic is associated with a higher risk of being

in low income,¹³ and that persons with a disability are more likely to be in this situation.

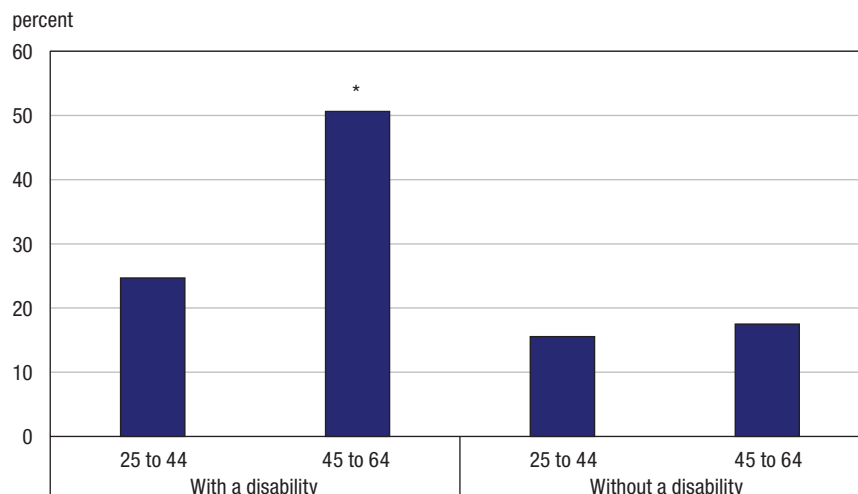
In fact, most of the increased risk of being in low income for unattached people aged 45 to 64 is associated with disability. About 38% of unattached people aged 45 to 64 have a disability, compared with 19% of their younger counterparts.

Furthermore, over one-half of unattached people aged 45 to 64 with a disability are in low income, twice the rate of their counterparts aged 25 to 44 (Chart 3). In contrast, the low-income rates of unattached people without a disability do not differ significantly by age group.¹⁴ The higher low-income rate of older

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Chart 3

Low-income rate¹ by disability status and age group, unattached persons aged 25 to 64, 2014



*significantly different from the reference category (with disabilities, 25 to 44) ($p < 0.05$)

1. The low income rate is based on income during the year 2013.

Sources: Statistics Canada, Canadian Income Survey (CIS), 2013; Longitudinal and International Study of Adults (LISA), 2014.

unattached people with a disability is related to employment status: 30% of older unattached people with a disability are employed, compared with 82% of their younger counterparts.

Persons with a disability account for 41% of the low-income population

Another perspective on the relationship between disability and low income can be obtained by examining the share of those who have a disability within the low-income population.

Persons with a disability make up 41% of the low-income population, compared with 18% of the non-low-income population. Having a disability is therefore an important factor that increases the risk of being in low income, but not all

persons with a disability are equally represented within the low-income population.

People who have other risk factors in addition to disability are overrepresented in the low-income population, particularly the older unattached and lone parents. These two groups make up nearly one-quarter (23%) of the entire population of low-income people, but account for 3% of the non-low-income population (Chart 4).

In contrast, people who have a disability but no other risk factors¹⁵ make up similar proportions of the low-income population and the non-low-income population (16% and 14%, respectively).

The results presented earlier in this article have shown that lone parents with a disability and older unattached people have higher low-income rates: approximately one-half of

each group is in low income. Persons with a disability are also more likely to have these two risk factors. While persons with a disability make up one-fifth of the total population, they constitute 27% of lone parents and 38% of older unattached people.

Persons with a disability are more likely than persons without a disability to be in low income when they are without a job

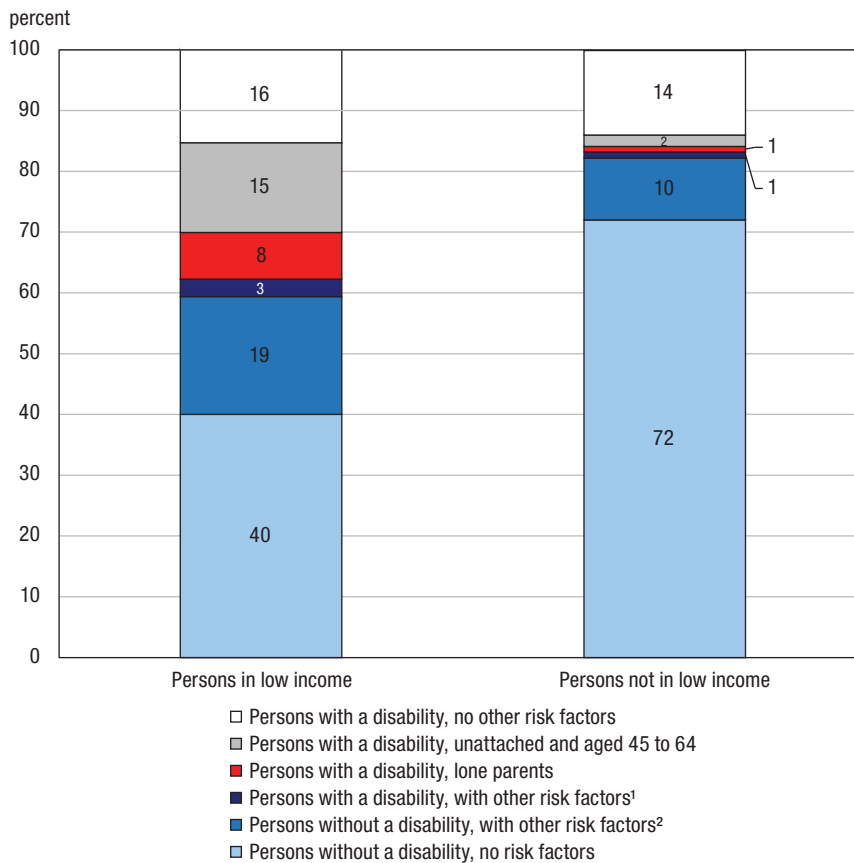
Employment and government assistance through income transfers can help reduce the incidence of low income. Examining employment and income sources sheds light on the role these instruments could play in reducing low-income rates among persons with a disability.

Persons with a disability are more likely to be non-employed than those without a disability, and when they are employed, they are less likely to work full time (Table 5). This is particularly true for people with combined disabilities, 26% of whom are employed full time, compared with approximately one-half of people with a physical-sensory or mental-cognitive disability and 73% of those without a disability.

Persons with a disability are more likely than others to be in low income when they are not employed. While 22% of the non-employed without a disability are in low income, the rate rises to 35% for those with a physical-sensory disability, 46% for those with a mental-cognitive disability, and 47% for those with combined disabilities.

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Chart 4
Distribution of low-income and non-low-income population by risk factor category, persons aged 25 to 64, 2014



1. Includes persons with a disability who are recent immigrants or Aboriginal persons and who are not lone parents or unattached persons aged 45 to 64.

2. Includes recent immigrants, lone parents, and those who reported an Aboriginal identity.

Source: Statistics Canada, Longitudinal and International Study of Adults (LISA), 2014.

Even when they are employed, however, people with combined disabilities have higher low-income rates than those without a disability. The low-income rate of people who are employed full time is 13% for those with combined disabilities, compared with 6% for those with a physical-sensory disability and 5% for those without a disability.

In line with their lower employment rates persons with a disability have lower average employment income

than those without a disability—by approximately \$23,000 (Table 6). Some, but not all, of that difference is offset by the fact that people with a disability receive \$3,100 more in government transfers and pay \$5,500 less in taxes on average. Similarly, people with a mental-cognitive disability or combined disabilities earn less employment income, receive higher government transfers and pay less in taxes than those with a physical-sensory disability.

People with a disability who are living alone make approximately \$9,000 less in employment income than persons in a couple with both partners having a disability. They receive \$2,600 more in government transfers and pay \$1,200 less in taxes.

Lone parents face difficulties similar to those of persons with a disability living alone—with the added challenge of needing to support children—although they also receive larger amounts of government benefits. Like people living alone, lone parents earn approximately \$9,000 less in employment income than individuals in couples with both partners having a disability, but in their case this is despite having a similar full-time employment rate and a similar part-time employment rate.

Family composition remains an important determinant of low income among persons with a disability after controlling for other factors

Logistic regressions were estimated in order to understand the relationships between disability and low income. First, models were run to determine to what degree disability was associated with an increased risk of being in low income and how the association between low income and other variables differed between persons with a disability and those without a disability.¹⁶

The regression for the full population found that, after controlling for other factors (such as education level, age, sex, region of residence, and family composition), the probability of being in low income was 16% for

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Table 5
Employment status by disability status, persons aged 25 to 64,¹ 2014

	Employed full time	Employed part time	Not employed
	percent		
Employment status			
Without a disability	73	11	16
With a disability	45	13	41
Physical-sensory disability	53	13	33
Mental-cognitive disability	48	16	36
Combined disabilities	26	12	62
Low-income rate			
Without a disability (ref.)	5	13	22
With a disability	8	19	41*
Physical-sensory disability	6	16	35*
Mental-cognitive disability	14	20	46*
Combined disabilities	13*	25*	47*

* significantly different from the reference category (without a disability) ($p < 0.05$)

1. Employment status refers to whether the respondent was employed in the week before the interview, which occurred in the first half of 2014. The low-income rate is based on income during the year 2013. Full-time employment refers to employment that is typically 30 hours or more per week.

Note: Combined disabilities refer to persons who have both a physical-sensory disability and a mental-cognitive disability.

Source: Statistics Canada, Longitudinal and International Study of Adults (LISA), 2014.

Table 6
Individual income and household income¹ by disability status and family composition, persons aged 25 to 64, 2014

	Average personal income					Average household income
	Employment income	Government transfers	Other income	Income taxes	After-tax income	Adjusted after-tax income ²
	dollars					
Disability status						
Without a disability	52,200	2,500	5,300	11,600	48,300	...
With a disability	29,300	5,600	3,900	6,100	32,600	...
Physical-sensory disability	35,700	4,400	4,800	7,900	37,100	...
Mental-cognitive disability	26,800	6,000	1,500	4,500	29,800	...
Combined disabilities	16,600	7,800	2,900	3,000	24,400	...
Family composition – persons with a disability³						
Couple, one with a disability	34,400	3,800	4,500	6,900	35,800	54,700
Couple, both with a disability	31,100	4,500	4,500	6,000	34,200	45,800
Lone parent with child under 25	22,200	11,200	3,900	3,200	34,000	27,100
Other family types or living with non-relatives	14,700	7,700	1,400	2,200	21,600	40,600
Persons living alone	21,900	7,100	4,000	4,800	28,200	28,200

... not applicable

1. During the year 2013.

2. Adjusted to account for household size.

3. This category excludes persons whose family member status is "child."

Note: Combined disabilities refer to persons who have both a physical-sensory disability and a mental-cognitive disability. Numbers do not always add up due to rounding.

Source: Statistics Canada, Longitudinal and International Study of Adults (LISA), 2014.

persons with a disability, compared with 6% for persons without a disability (Table 7).

While younger people and women had a higher probability of being in low income among the population without a disability, age and sex were not significant factors for persons with a disability. In addition, among people without a disability, those with a postsecondary education below the bachelor level were less likely to be in low income than those with a high school diploma, while this association was not significant for persons with a disability.

The largest risk factors for persons with a disability involved family composition. Lone parents and people living alone had close to a 50% probability of being in low income, compared with 8% for those in families where a person with a disability lived with a spouse who did not have a disability.¹⁷ Furthermore, family composition was a stronger explanatory factor for low income among persons with a disability than without a disability.¹⁸

A set of models run solely on the population with a disability was used to determine the associations between low income and disability type, severity class and age of onset.¹⁹ The model was also run separately for both age groups and across disability type.²⁰

Overall, for persons with a disability, disability type and severity were associated with low income. All else equal, people with a physical-sensory disability or a mild disability had a 14% probability of being in low income, compared with over 20% for people with a mental-cognitive disability or combined disabilities, or those with a more severe disability (Table 8). Age of

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Table 7
Predicted probability of being in low income across several characteristics,
persons aged 25 to 64, 2014

	All	Without a disability	With a disability
	predicted probability		
Disability status			
Without a disability (ref.)	0.06	...	...
With a disability	0.16**	...	...
Family composition			
Couple, spouse without a disability (ref.)	0.05	0.04	0.08
Couple, spouse with a disability	0.08**	0.06*	0.20**
Lone parent with child under 25	0.26**	0.21**	0.51**
Other family types or living with non-relatives	0.11**	0.09*	0.21**
Persons living alone	0.26**	0.19**	0.49**
Age group			
25 to 44 (ref.)	0.09	0.08	0.18
45 to 64	0.07*	0.05**	0.18
Sex			
Male (ref.)	0.07	0.06	0.17
Female	0.08	0.07*	0.18
Region			
Atlantic	0.09	0.08	0.18
Quebec	0.09	0.07	0.19
Ontario (ref.)	0.09	0.07	0.23
Prairies	0.04**	0.04*	0.08**
British Columbia	0.08	0.06	0.17
Education level			
Less than a high school diploma	0.18**	0.18**	0.30**
High school diploma	0.11**	0.10**	0.20
Postsecondary below a bachelor degree (ref.)	0.07	0.06	0.15
Bachelor degree or more	0.05†	0.04	0.13
Immigration status			
Non-immigrant (ref.)	0.07	0.05	0.18
Immigrant (any entry date)	...	0.11**	0.16
Immigrant before 2004	0.09†	...	...
Recent immigrant (2004 or later)	0.22**	...	...
Aboriginal identity			
Non-aboriginal (ref.)	0.08	...	...
Aboriginal	0.16**	...	...

... not applicable

* significantly different from the reference category (ref.) ($p < 0.05$)

** significantly different from the reference category (ref.) ($p < 0.01$)

† significantly different from the reference category (ref.) ($p < 0.10$)

Note: These are predicted probabilities based on marginal effects at the mean derived from logistic regressions.

Source: Statistics Canada, Longitudinal and International Study of Adults (LISA), 2014.

onset did not have a significant association with low income in any of the five regressions.²¹

Lone parents and people living alone consistently had among the highest predicted probabilities of

being in low income, but their risk level differed between age groups. Among younger people, lone parents had a 61% probability of being in low income, compared with 26% for people living alone. Conversely, for older people, people

living alone were at greater risk, with a 52% probability of being in low income, compared with 35% for lone parents. Older people living in other family types or with non-relatives were also at an elevated risk of being in low income but to a lesser degree, with a predicted probability of 20%. Their younger counterparts, by contrast, were not at an elevated risk.

Another difference between age groups was that younger people whose highest level of education was a high school diploma faced a significantly higher probability of being in low income than those with postsecondary credentials below a bachelor degree. In contrast, older people whose highest level of education was a high school diploma did not face a significantly increased risk.

Two differences were apparent when the regressions were separated by disability type. First, having a more severe disability was significantly associated with a higher risk of being in low income for people with a physical-sensory disability, but the difference was not significant for those with combined disabilities. Second, among those with a physical-sensory disability, those whose highest level of education was a high school diploma had a higher risk of being in low income. However, there was no significant relationship between level of education and low income for those with combined disabilities.

Conclusion

This study uses the Longitudinal and International Study of Adults (LISA) to shed additional light on the relationship between low income and various aspects of disability. It finds that family composition is an important factor in explaining the

Low income among persons with a disability in Canada

Table 8
Predicted probability of being in low income across several characteristics,
persons aged 25 to 64 who reported having a disability, 2014

	Age group			Disability type	
	All	25 to 44	45 to 64	Physical-sensory	Combined
predicted probability					
Family composition					
Couple, one with a disability (ref.)	0.08	0.08	0.07	0.07	0.12
Couple, both with a disability	0.19**	0.17	0.21**	0.16*	0.30*
Lone parent with child under 25	0.48**	0.61**	0.35**	0.32**	0.64**
Other family types or living with non-relatives	0.17*	0.09	0.20**	0.16†	0.21
Persons living alone	0.46**	0.26**	0.52**	0.36**	0.60**
Age group					
25 to 44 (ref.)	0.17	...	...	0.14	0.26
45 to 64	0.17	...	...	0.12	0.31
Sex					
Male (ref.)	0.16	0.16	0.16	0.12	0.29
Female	0.18	0.14	0.19	0.14	0.30
Region					
Atlantic	0.17	0.17	0.17	0.15	0.23
Quebec	0.19	0.20	0.19	0.15	0.44
Ontario (ref.)	0.22	0.20	0.21	0.16	0.35
Prairies	0.08**	0.05**	0.09**	0.07**	0.10**
British Columbia	0.17	0.19	0.15	0.10	0.36
Education level					
Less than a high school diploma	0.28**	0.28*	0.27*	0.24**	0.33
High school diploma	0.20†	0.28**	0.15	0.16†	0.32
Postsecondary below a bachelor degree (ref.)	0.14	0.11	0.15	0.10	0.29
Bachelor degree or more	0.13	0.08	0.16	0.10	0.24
Immigration status					
Non-immigrant (ref.)	0.18	0.14	0.18	0.13	0.31
Immigrant	0.15	0.26	0.12	0.13	0.20
Disability type					
Physical-sensory disability (ref.)	0.14	0.12	0.15	...	...
Mental-cognitive disability	0.25**	0.22†	0.27†	...	...
Combined disabilities	0.22*	0.16	0.22†	...	...
Disability severity class					
Mild disability (ref.)	0.14	0.13	0.14	0.10	0.23
More severe disability	0.21*	0.19	0.21†	0.17*	0.31
Age at onset					
Before age 25 (ref.)	0.14	0.12	0.16	0.12	0.23
Age 25 or later	0.18	0.17	0.17	0.13	0.33

... not applicable

* significantly different from the reference category (ref.) ($p < 0.05$)

** significantly different from the reference category (ref.) ($p < 0.01$)

† significantly different from the reference category (ref.) ($p < 0.10$)

Note: These are predicted probabilities based on marginal effects at the mean derived from logistic regressions.

Source: Statistics Canada, Longitudinal and International Study of Adults, 2014.

higher low-income rates of persons with a disability. This supports the value of LISA for analysis on disability as it collects information on all family members.

Persons with a disability face especially elevated risks of being in low income if they have additional low-income risk factors, particularly being lone parents or older and unattached. Persons with a disability who are lone parents or older unattached persons make up nearly one-quarter of the total low-income population in Canada.

This study also finds that the elevated low-income rates of older unattached people are mainly due to the high rates of disability among older unattached people, and to the particularly high risk of being in low income among older unattached people who have a disability. For those without a disability, the difference in low-income rates between older and younger unattached people is much smaller.

This study also found that disability type and severity class are associated with a higher risk of being in low income, but part of their association is explained by their relationship with family composition.

LISA's wealth of information on disability makes it a valuable resource for understanding the lives of persons with a disability. Over time, that information could be very effective in analyzing persistent low income among persons with a disability, and in understanding the direction of causal relationships between disability, family composition and low income.

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Data sources, methods and definitions

Data sources

The primary data sources for this study are the 2014 Longitudinal and International Study of Adults (LISA) and the 2013 Canadian Income Survey (CIS), both of which were conducted in early 2014 and are linked to the 2013 income tax records. There are differences between the two surveys.

A key difference is that LISA is longitudinal: it surveys the same people every time it is conducted in order to track changes in their situation over time. As a result, the 2014 LISA is representative of the Canadian population in 2012, the year the first cycle of LISA was conducted. Since the Canadian population changes over time, this means that some groups, such as recent immigrants, may be underrepresented in LISA relative to the CIS.

Another difference is that LISA asks every member of the surveyed households detailed questions on disability, while the CIS asks one randomly selected person per household a shorter version of the questions. In addition, LISA's detailed questions on a variety of topics (including education, labour and health) could be used to understand associations between certain life changes (e.g., changes in employment and health status) and entry into or exit from low income among persons with a disability.

LISA has a sample size of 25,504 persons in the selected households, of whom 18,433 were interviewed and weighted to make the sample representative of the target population.²² The CIS has a sample size of 57,717, of whom 23,579 were asked the disability questions. This article uses CIS weights specific to those who were asked the disability questions.

Target population

The target population for this study is Canadians aged 25 to 64 (excluding those living on reserves and in the territories since the CIS and LISA do not cover these areas).²³ The relationship between disability and low income is different for seniors, so they are excluded from this study. The target population includes 12,220 LISA respondents in 7,587 households. It includes 15,242 CIS respondents in the same number of households since one person per household is asked the disability questions.

Disability concepts

The disability measure used in this paper is based on the Disability Screening Questions (DSQ).²⁴ The DSQ are Statistics Canada's measure of disability. They provide a measure based on the social model of disability that takes activity

limitations into account in order to identify a disability. The DSQ are meant to be included in several general population surveys to allow comparisons of people with and without a disability.

The CIS 2013 used a shorter version of the DSQ, which combines disability types into five broad categories (vision, hearing, physical, cognitive and mental health). This shorter version did not allow for the computation of a severity score. Due to time constraints associated with the CIS, only one person per household was asked the DSQ, and a special survey weight was computed to make this subsample representative of the entire population. The 2014 LISA, however, used the long version of the DSQ (which identifies 10 disability types and allows for the computation of a severity score), and all household members were asked the DSQ. To be able to compare the CIS and LISA results, the LISA indicators that are comparable to those of the short version were used, based on the five broad disability types. These were generated to allow for comparisons of LISA data with any survey that uses the short version of the DSQ.

Note that although the 2012 Canadian Survey on Disability (CSD) used the DSQ to identify persons with a disability, the benefits of using the DSQ were dampened by two factors that had an impact on the disability rates. First, the filter questions used to identify the persons most likely to have a disability using the 2011 National Household Survey (NHS) were not the DSQ filters—they were the old Activities of Daily Living questions, which could miss persons with less visible disabilities (e.g., mental health, cognitive and pain). Second, the 2012 CSD took place almost two years after the National Household Survey, meaning that some respondents to the NHS who were identified as most likely to have a disability could not be located to be surveyed for the CSD, and people with more recent disabilities could not be included on the survey frame. For these reasons, the 2012 disability rates are not comparable to those from the DSQ on general population surveys. However, the 2017 CSD rates will be more in line with the other surveys as the 2016 Census filter questions are the DSQ filters.

Low-income concepts

The after-tax low-income measure (LIM-AT), Statistics Canada's standard, is used as the primary method for measuring low income. LIM defines low income as earning less than one-half of the median Canadian income, adjusted for household size.

Notes

1. “Unattached” refers to persons who are not living with any relatives.
2. See Fang and Gunderson (2016).
3. See, for example, Wilson and Macdonald (2010); Morissette and Ostrovsky (2007); Fleury (2007); Picot et al. (2007).
4. See Grondin (2016).
5. See Fang and Gunderson (2016); Heisz et al. (2016); Arim (2015).
6. See Turcotte (2014).
7. See The [Daily release](#) on February 29th, 2016 about the Canadian Survey on Disability.
8. The Canadian Survey on Disability draws its sample from respondents to the long-form census (in 2011, the National Household Survey). As a result, prior to 2017 its income data are partially self-reported and partially drawn from the tax files. In contrast, CIS and LISA income data are entirely drawn from the tax files (as are census/CSD data from 2016 onward).
9. See Stapleton et al. (2006).
10. In most studies, mild and moderate disabilities are grouped together, as are severe and very severe disabilities. In this study, persons with a moderate, severe, and very severe disabilities are combined together because of the small sample size for each of these categories.
11. When a version of LIM-AT based on economic families (relatives living together) rather than households (any persons living together) is used, the rate for younger people with an earlier age of disability onset is 22%, similar to the rate of 24% for older people with a later age of onset. For both household and economic family-based LIMs, the highest low-income rates are among older people with an earlier age of disability onset and younger people with a later age of onset.
12. The possible causal relationships between disability, family composition and low income are complex. One U.S. study found that the onset of disabilities that prevented a person from working was associated with a sharp decline in income and an increased probability of divorce (Singleton 2012). Another study, which did not separate disabilities based on the degree to which they affected the ability to work, found no relationship between disability onset and divorce (Charles and Stephens 2004). Other relationships can be theorized—for instance, the economic challenges that lone parents and people living alone are more likely to face affect their physical and mental well-being, resulting in disability, which leads to further declines in income.
13. The other risk factors of being in low income are lone parenthood, Aboriginal status and immigrant status. The sample size of the LISA is not sufficient to examine Aboriginal people with disabilities or recent immigrants with disabilities.
14. To test whether the “unattached, aged 45 to 64” risk group is pertinent for persons without a disability, regression models were estimated with LISA and CIS data, using low income as the dependent variable and a composite variable of age and family type as the main independent variable. Three low-income metrics were tested, for three slightly differing populations of persons without a disability (persons who were not in a couple or a lone parent with children under age 25; unattached persons; and persons living alone). Out of 15 regressions, only one found a significant relationship between age and low income: this was a model using LISA data, unattached persons, and LIM-AT. Regression results are available on request.
15. They have a disability but are not unattached persons aged 45 to 64, lone parents, Aboriginal persons, or immigrants.
16. Some variables had to be omitted from the models for the subpopulations with a disability and without a disability due to insufficient sample size.
17. The odds ratios of lone parents and people living alone remained high when employment status was included in the regression, which indicates that their high odds of being in low income are not explained by a higher likelihood of unemployment than that of people in other types of families.

18. When regressions were run using family composition as the only explanatory variable, the regression for persons with a disability had a better goodness of fit measure (C-statistic) than the regression for persons without a disability.
19. The regression excluded children with a disability living with parents who do not have a disability.
20. The sample size for mental–cognitive disabilities was too small to allow for a separate regression.
21. Recall that these results are based on cross-sectional data, and not on longitudinal data.
22. Children under the age of 15 in the LISA sample are not interviewed, and adults who became part of the household after the first LISA cycle are interviewed but not weighted.
23. The target population excludes persons who did not respond to the disability questions, those whose type of disability cannot be determined due to non-response, and those with an unknown type of disability.
24. For more information on the DSQ, see Grondin (2016).

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