Brown's Economic Damages Newsletter

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2017 *Canadian Survey on Disability:* Unemployment rates & Participation rates (Part 1)

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* Assistance from Herb Emery, Ph.D. and Ha Nguyen, M.A. is much appreciated.

As we have done in the past using the 1991 *Health and Activity Limitation Survey* ("HALS") and 2001 and 2006 *Participation and Activity Limitations Surveys* ("PALS") data,[1] Brown Economic has conducted regression analysis using both the 2012 and 2017 *Canadian Survey on Disability* ("CSD")[2] data to estimate the gap in earnings (if any) between persons with a disability and non-disabled persons. The analysis of the 2012 *Canadian Survey on Disability* was published in the May/June 2017, July 2017, and August 2017 issues of **Brown's Economic Damages Newsletter** as well as in C.L. Brown, **Damages: Estimating Pecuniary Loss** (Thomson Reuters), Dec. 2020 (28th edition). The next series of newsletter issues presents results from the 2017 *Canadian Survey on Disability.*

Using regression analysis allows us to *isolate the impact of disability* on earnings by controlling for other factors which also affect earnings (such as age, gender, geography, education level, occupation, etc.), giving us greater confidence that our wage gap estimates reflect earnings reductions *due to disability* and not from other factors. Before we publish the findings of regression analysis, in this newsletter issue we examine two labour market indicators – **unemployment** and **participation (the choice or capacity to work)** – and how they vary between the disabled and non-disabled population. Just like with non-pecuniary awards for pain and suffering[3] – which vary by severity and type of injury – wage gaps arising from disability expand as the severity of disability increases and varies according to type of injury.

[1] For more information regarding our 2001 PALS analysis, see Brown, C.L., and J.C.H. Emery, "The Impact of Disability on Earnings and Labour Force Participation in Canada: Evidence from the 2001 PALS and from Canadian Case Law" (April 2010) Journal of Legal Economics 16(2): pp. 19-59. For more information regarding our 2006 PALS analysis, see **Brown's Economic Damages Newsletters** "2006 PALS: Wage deficits by education level & dealing with self-employed plaintiffs using the PALS data", May 2011, vol. 8, issue 4 and "2006 PALS: Wage deficits by degree of severity (replicating the 2001 PALS regression results)", February 2011, vol. 8, issue 1.

[2] The 2012 CSD took place from September 24, 2012 to January 13, 2013 and gathered information about individuals aged 15 and over whose daily activities are limited due to a long-term condition or health-related problem. The 2017 CSD survey was conducted from March 1 to August 31, 2017. Similar to the 2012 CSD, the 2017 CSD gathered information about individuals aged 15 and over whose daily activities are limited due to a long-term condition or health-related problem. This survey was based on a sample of persons who reported having a long-term condition or difficulty on the *Activities of Daily Living* question from the *2016 Census* long-form questionnaire.

[3] To update non-pecuniary awards for the rate of inflation each month as the *Consumer Price Index* (CPI) data is released, see www.browneconomic.com > **Economic loss calculators** > Non-pecuniary (free).

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A peer-reviewed article co-authored by Ms. Brown and Dr. Emery entitled "The Impact of Disability on Earnings and Labour Force Participation in Canada: Evidence from the 2001 PALS and from Canadian Case Law" was published in the April 2010 edition of the Journal of Legal Economics. This peer-reviewed article was cited in a Statistics Canada publication by Martin Turcotte entitled "Persons with disabilities and employment" published in the December 2014 edition of *Insights on Canadian Society*. Prior issues of **Brown's Economic Damages Newsletter** related to this topic include:[4]

- "The 'Wage Deficit' Approach—Straightforward & Reasonable Loss Estimates" December 2019, vol. 16, issue 4
- "2012 Canadian Survey on Disability: Wage Gaps by Type of Disability (Part III)" August 2017, vol. 14, issue 6
- "2012 Canadian Survey on Disability: Wage Gaps by Severity of Disability (Part II)" July 2017, vol. 14, issue 5
- "2012 Canadian Survey on Disability: Descriptive Statistics from the Actual Survey Data (Part I)" May/June 2017, vol. 14, issue 4
- "Assessing Impact of Disability by TYPE: impairments for seeing, hearing, speech, mobility, agility, pain and psychological/ development injuries" October 2016, vol. 13, issue #10
- "2012 Canadian Survey on Disability (CSD)", January 2015, vol. 12, issue 1
- "The Impact of Disability in Canada: Follow-up to the 2001/2006 PALS Surveys", January 2014, vol. 11, issue 1
- "2006 PALS: Wage deficits by education level & dealing with self-employed plaintiffs using the PALS data", May 2011, vol. 8, issue 4
- "2006 PALS: Wage deficits by degree of severity (replicating the 2001 PALS regression results)", February 2011, vol. 8, issue 1
- "2006 *Participation and Activity Limitation Survey* ('PALS'): preliminary results" January 2010, vol. 7, issue 1
- "Facial disfigurement: How do you measure economic loss and is there a loss of marriage benefit to be claimed?" December 2009, vol. 6, issue 9
- "Proving economic loss when injury isn't obviously manifest & magnitude of impact unknown at settlement" November/December 2007, vol. 4, issue 8
- "*Participation and Activity Limitation Survey* ('PALS') – Profile of Disability in Canada" March 2007, vol. 4, issue 3
- "Reduction in housework due to disability (2001 PALS & 1991 HALS data)" February 2007, vol. 4, issue 2
- "Additional findings from the 2001 PALS, with comparisons to the 1991 HALS" July/August 2005, vol. 2, issue 7
- "*Robinson v. Williams* (2005) decision – excerpts from judgment" December 2005, vol. 2, issue #10
- "Additional findings from the 2001 PALS, with comparisons to the 1991 HALS" July/August 2005, vol. 2, issue #7
- "2001 PALS (*Participation and Activity Limitation Survey*) Results: Wage gaps due to disability" June 2005, vol. 2, issue 6

[4] To request back issues of our newsletter, go to: www.browneconomic.com > **RESEARCH & PUBLICATIONS** > *Brown's Economic Damages Newsletter* > click on "Newsletter index" to view issues extending back to 2000 by topic.

The 2017 CSD Sample

The sample taken from the 2017 CSD data set which we used for our regression analysis included both disabled and non-disabled individuals between 20 and 64 years old who participated in the labour force.[5] The total sample size for the 2017 CSD was 49,976 individuals with an overall response rate of 69.5%.[6] This compares favourably to the 2001 and 2006 PALS and 2012 CSD sample sizes which ranged from 43,276 to 47,793.

Table 1 below presents the prevalence of disabilities among Canadians (the proportion of the Canadian population that identifies as functionally disabled) based on results from the 2001/2006 PALS and 2012/2017 CSD surveys. Interestingly, the share of the Canadian population who identify as disabled increased in 2017 compared to prior years. By 2017, almost one-quarter of the Canadian population declared themselves functionally "disabled".

Table 1: Prevalance of Disabilities Among Canadians by Gender

Survey	% Disabled Males	% Disabled Females	Total in Canadian Population
2001	13.4	15.7	14.6
2006	15.4	17.7	16.6
2012	12.5	14.9	13.7
2017	20.0	24.0	22.0

Sources: *Canadian Survey on Disability, 2017: Concepts and Methods Guide* (November 2018) Statistics Canada Catalogue no. 89-654-X2018001, at p. 6; *Canadian Survey on Disability, 2012: Concepts and Methods Guide* (February 2014) Statistics Canada Catalogue no. 89-654-X – No. 2014001, at pp. 18 and 22; *Participation and Activity Limitation Survey 2006: Technological and Methodological report* (2007) Statistics Canada Catalogue no. 89-628-XIE, No. 001; and *A Profile of Disability in Canada, 2001* (2002) Statistics Canada Catalogue no. 89-577-XIE, at p. 6.

Table 2 below presents employment statistics by gender (males and females separately) for the disabled and non-disabled individuals from the 2017 CSD sample. The unemployment rate and the participation rate are key labour market metrics and signal the level of economic activity (low levels of economic activity are accompanied by higher unemployment rates). The participation rate measures the proportion of the population that are able to work *and* choose to work. Many able-bodied people (most of them women) delay or defer altogether paid work to raise families. Others may choose not to work but instead go travelling, care for other family members, or live a life of leisure. And still others are unable to work because their impairment prevents them from working. Indeed, we find from the literature on disability and earnings that disability operates initially on the capacity for work, i.e., the number of hours a person can supply to the labour market. There is a significant disparity in the *capacity* for work between disabled folks and people without disabilities.

[5] Individuals reported being at school at the time of the survey and those with unknown labour force participation status are excluded.
[6] As per *Canadian Survey on Disability, 2017: Concepts and Methods Guide* (November 2018) Statistics Canada Catalogue no. 89-654-X2018001, at p. 6.

Table 2: Employment Statistics by Gender and Disability Status, Canada, 20-64 Years Old, 2017 *Canadian Survey on Disability*

	Males		Females	
	Non-disabled individuals	Disabled individuals	Non-disabled individuals	Disabled individuals
Unemployment rate	9%	11%	6%	9%
Participation rate	89%	66%	83%	60%

Table 2 shows that both disabled men and women have unemployment rates 2 to 3 basis points higher than the rates shown by non-disabled persons which translate into +22% to +50% higher unemployment rates because of disability. This is a sizeable gap.

With respect to being in the labour force and working or seeking work (i.e., "participating"), Table 2 above shows an even greater difference between the disabled and non-disabled. The large majority of both non-disabled males and females are in the work force (89% to 83%). In contrast, the presence of disability hampers 23% of the population from working at all,[7] and for the disabled people who can work, their hours of work are often reduced from a full-time schedule.

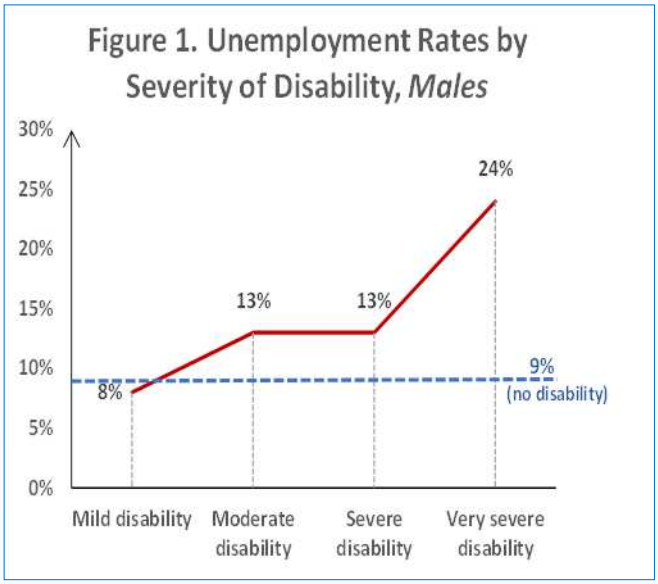
Table 3 shows the distribution of unemployment and participation rates by **severity of disability** from the 2017 CSD.

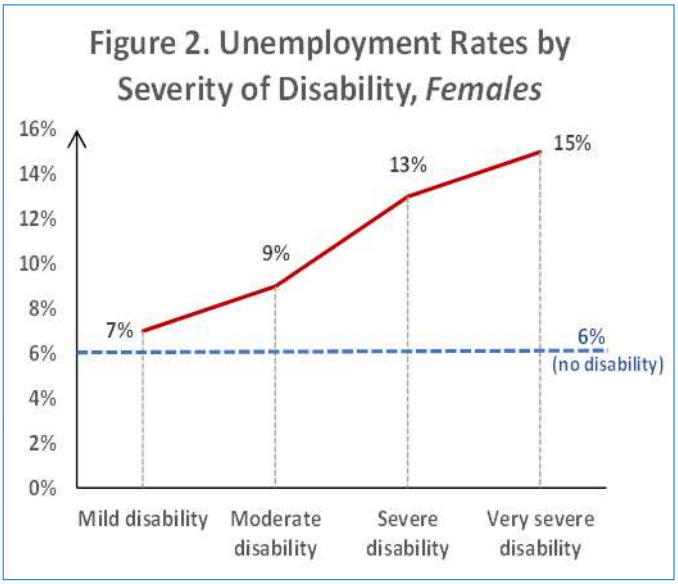
Table 3: Unemployment and Labour Force Participation Rates by Gender and SEVERITY of Disability, Canada, 20-64 Years Old, 2017 *Canadian Survey on Disability*

	Males		Females	
	Unemployment Rate	Participation Rate	Unemployment Rate	Participation Rate
No disability	***9.0%***	***89.0%***	***6.0%***	***83.0%***
Mild disability	8.0%	84.0%	7.0%	79.0%
Moderate disability	13.0%	78.0%	9.0%	69.0%
Severe disability	13.0%	51.0%	13.0%	51.0%
Very severe disability	24.0%	31.0%	15.0%	29.0%

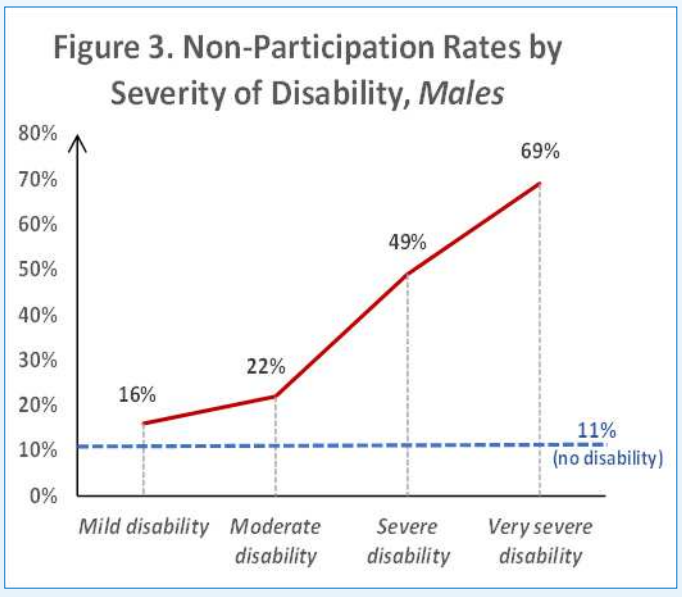
Table 3 shows that, for both males and females in our sample, unemployment rates *increased,* and labour force participation rates *decreased,* as the **severity of disability increases,** as expected. This pattern is observed in Figures 1 and 2.

[7] Derived as [89% - 66%] for males and [83% - 60%] for females.





In Figures 3 and 4 below, we graph non-participation rates. For instance, Table 3 shows that 89% of non-disabled males choose to work or seek work. This implies an -11% non-participation rate. Similarly, 83% of non-disabled females choose to work or seek work. This implies a -17% non-participation rate. In Figures 3 and 4, we show these "non-disabled" rates by a blue line, then we show with the red line how fewer and fewer of disabled males and females are able to work (i.e., "participate") as the severity of disability rises. By the time we reach the "very severely" disabled group, we can see that 69-71% cannot work, implying that only 29-31% *do* work – compared to an 83/89% participation rate for non-disabled persons.



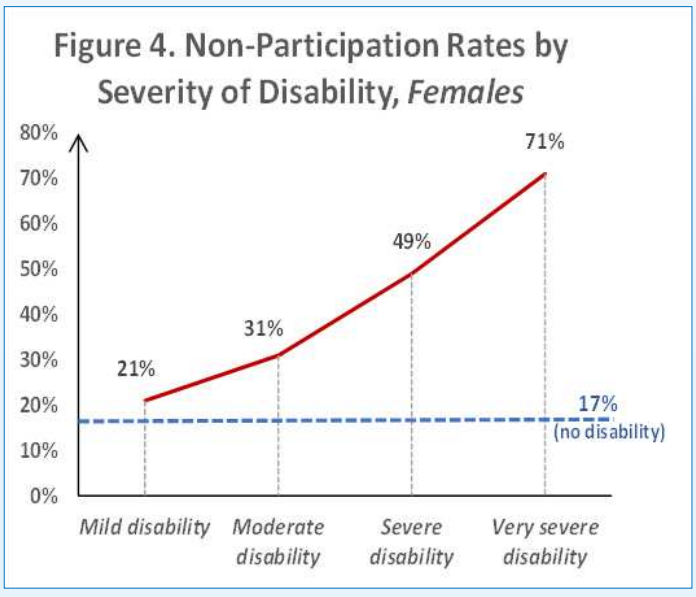


Table 4 shows unemployment and labour force participation rates by **type of disability** from the 2017 CSD.

Table 4: Unemployment and Labour Force Participation Rates by Gender and TYPE of Disability, Canada, 20-64 Years Old, 2017 *Canadian Survey on Disability*

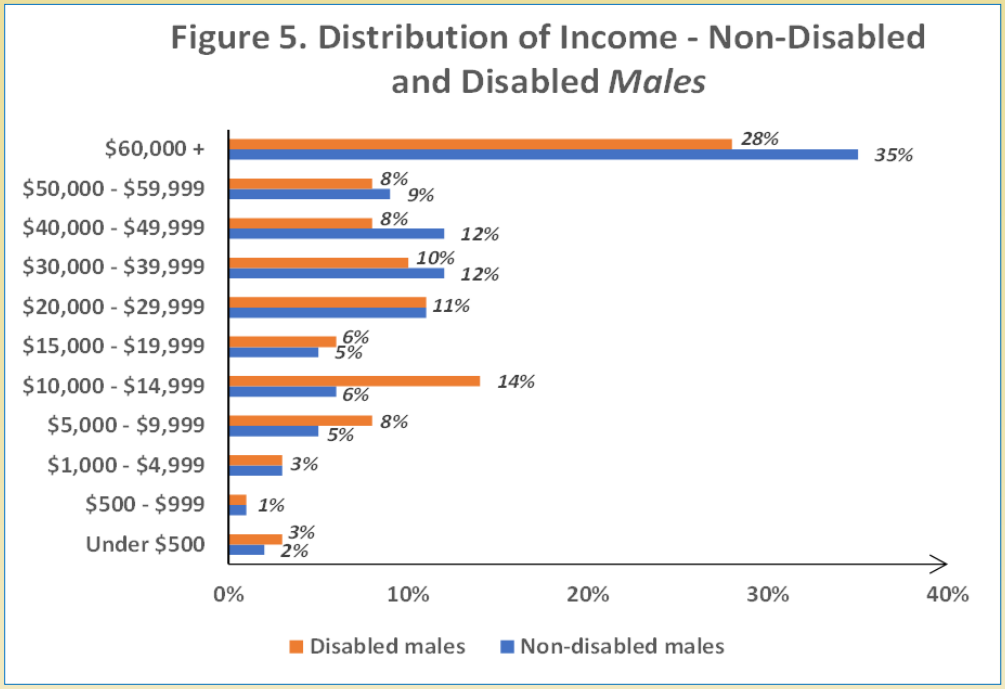
	Males		Females	
	Unemployment Rate	Participation Rate	Unemployment Rate	Participation Rate
No disability	***8.9%***	***89.0%***	***6.2%***	***82.9%***
All types of disability	14.0%	57.2%	10.5%	52.7%
Pain	12.6%	61.2%	9.9%	55.9%
Mobility	14.9%	41.3%	10.0%	40.5%
Flexibility	14.7%	49.4%	10.8%	43.0%
Dexterity	15.9%	44.8%	12.8%	33.9%
Hearing	9.4%	66.3%	8.4%	52.9%
Seeing	11.8%	65.2%	8.0%	56.1%
Mental/Psychological	17.0%	54.1%	11.7%	54.8%
Memory	22.0%	44.5%	11.3%	42.7%
Learning	19.7%	52.8%	12.0%	46.5%
Developmental	27.2%	45.0%	21.0%	32.0%

A review of data shown in Table 4 prompts the following observations:

- For almost every type of disability, unemployment rates are higher for persons with disabilities than without disabilities
- Compared to an 83/89% participation rate for non-disabled persons, participation rates for disabled Canadians are considerably lower. Along with memory and developmental disabilities, the physical impairments reduced the capacity for work the most (mobility, flexibility, and dexterity)
- What is surprising is that almost as many "seeing disabled" persons choose to participate as the "hearing disabled", for both males and females
- The category with the biggest "hit" due to disability is the developmental group[8]

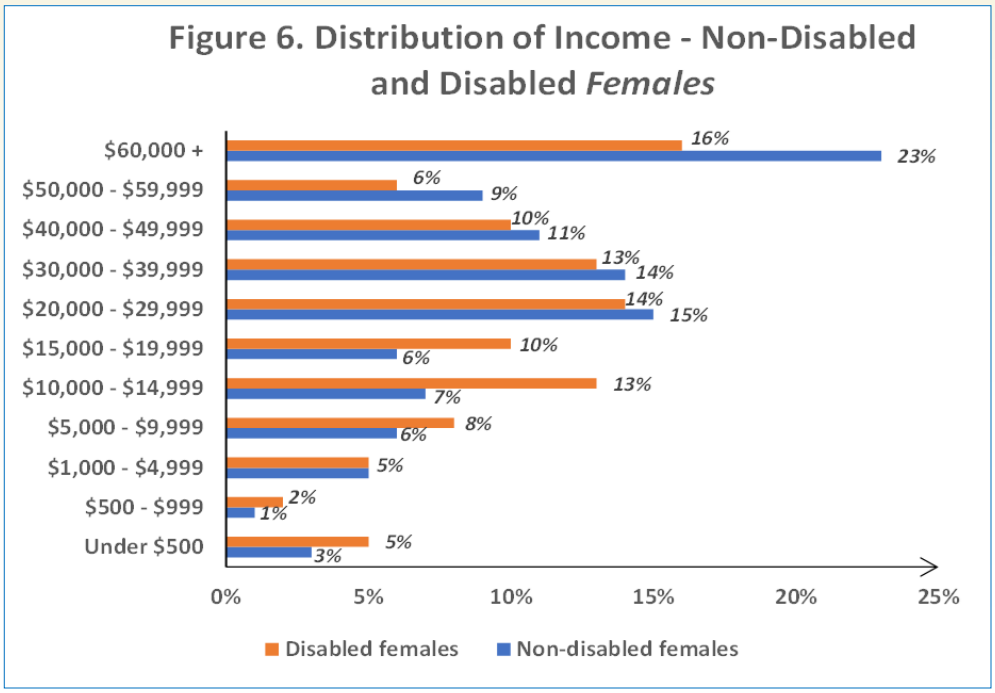
Figures 5 and 6 below show the distribution of income ranges among non-disabled and disabled persons based on 2017 CSD data. The blue bars represent the non-disabled, whereas the orange bars represent the disabled.

[8] "Persons with a developmental disability are identified as persons who have been diagnosed with this condition, regardless of the level of difficulty or the frequency of the activity limitations reported. One question is used to identify persons with a developmental disability. Respondents were asked if a doctor, psychologist or other health care professional ever said that they had a developmental disability or disorder. Where the respondent said "yes" to this question, they were identified as having a developmental disability". Examples of such disorders include Down's syndrome, Asperger's syndrome, Autism, etc. (Source: E. Cloutier, C. Grondin and A. Lévesque. *Canadian Survey on Disability, 2017: Concepts and Methods Guide* (November 2018). Statistics Canada Catalogue No. 89-654-X2018001, Appendix B – Identifying disability types, pp. 58-64).



In both Figures 5 and 6, we see that the gap in income is in the highest income category, namely $60,000+ per annum. Almost twice as many non-disabled males and females earned $60,000 or more compared to the disabled. At the other end of the income distribution, we see that there are far more disabled Canadians earning $19,999 or less per year compared to non-disabled Canadians.

In the next few newsletter issues, we present the outcome of regression analysis on the 2017 CSD data along with other barriers encountered by the disabled in the labour market.



The 2017 CSD Definition of Disability

Similar to the 2012 CSD, the 2017 CSD uses a definition of disability based on a *social* model premised on the idea that disability is the result of the *interaction* between a person's functional limitations and barriers in the environment, including social and physical barriers that make it harder to function day-to-day. Under the 2017 CSD definition, *disability is a social disadvantage* that an unsupportive environment imposes on top of an individual's impairment.[9] In other words, the social model of disability implies that the presence of a difficulty alone is not sufficient for the identification of a disability – ***a limitation in daily activities must also be declared***.

The concepts and methods used to determine disability in the 2012/2017 CSD represent a departure from those used in the 2001/2006 PALS. The screening questions in the 2001/2006 PALS used a hybrid approach to identify types of disabilities and a medical model for other types, whereas the 2012/2017 CSD screening questions (described as the disability screening questions, or "DSQ") were designed to provide greater consistency in disability identification by type. According to Statistics Canada's *Canadian Survey on Disability, 2012: Concepts and Methods Guide*:[10]

> Based on their responses to the DSQ, *respondents are identified as having a disability only if their activities are limited as a result of any impairment or difficulty with particular tasks* (p. 44, emphasis added).[11]

The CSD methodology allows respondents to determine whether they face activity limitations as a result of these difficulties or impairments. Some people who indicate that they have some difficulty with certain tasks or have an impairment of some type go on to indicate that this never interferes with their daily activities. In PALS, these individuals were considered to have a disability, but in the 2012/2017 CSD, they are not.[12]

[9] E. Cloutier, C. Grondin and A. Lévesque. *Canadian Survey on Disability, 2017: Concepts and Methods Guide* (November 2018) Statistics Canada catalogue no. 89-654-X2018001, p. 6; Statistics Canada, *Canadian Survey on Disability, 2012: Concepts and Methods Guide,* Social and Aboriginal Statistics Division, (Minister of Industry: 2013), catalogue no. 89-654-X, no. 2014001 at p. 5; and Mackenzie, A., Hurst, M., and Crompton, S., "Defining disability in the Participation and Activity Limitation Survey", *Canadian Social Trends,* (Statistics Canada: 2009/2012), catalogue no. 11-008-X.
[10] Statistics Canada, *Canadian Survey on Disability, 2012: Concepts and Methods Guide,* Social and Aboriginal Statistics Division, (Minister of Industry: 2013), catalogue no. 89-654-X, no. 2014001.
[11] The only exception to this is for developmental disabilities where a person is considered to be disabled if the respondent has been diagnosed with this condition.
[12] Statistics Canada, *Canadian Survey on Disability, 2012: Concepts and Methods Guide,* Social and Aboriginal Statistics Division, (Minister of Industry: 2013), catalogue no. 89-654-X, no. 2014001, p. 44.

Consumer Price Index

Unemployment Rate

From July 2020 to July 2021* (rates of inflation)		For the month of July 2021	
Canada**	3.7%	Canada:	7.5%
Vancouver:	3.1%	Vancouver:	7.6%
Toronto:	2.8%	Toronto:	9.8%
Ottawa:	4.6%	Ottawa:	7.6%
Montréal:	4.2%	Montréal:	7.5%
Edmonton:	3.2%	Edmonton:	8.8%
Calgary:	4.0%	Calgary:	9.8%
Halifax:	4.5%	Halifax:	8.7%
St. John's, NF:	4.0%	St. John's, NF:	8.3%
Saint John, NB:	3.6%	Saint John, NB:	8.8%
Charlottetown (PEI):	6.0%	Charlottetown (PEI):	9.6%
* Using month-over-month indices. Source: Statistics Canada			
** 12 month rolling average up to July 2021 is 1.8% (see non-pecuniary awards table).			

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Updating Non-Pecuniary Awards for Inflation (July 2021, Canada)

		Non-Pecuniary Damages - Sample Awards				
Year of Accident/	**"Inflationary"**	$10,000	$25,000	$50,000	$75,000	$100,000
Year of Settlement or Trial	**Factors***					
July 2020-July 2021	1.018	$10,176	$25,439	$50,878	$76,318	$101,757
Avg. 2019-July 2021	1.022	$10,224	$25,559	$51,118	$76,677	$102,236
Avg. 2018-July 2021	1.042	$10,423	$26,057	$52,114	$78,171	$104,229
Avg. 2017-July 2021	1.066	$10,659	$26,646	$53,293	$79,939	$106,586
Avg. 2016-July 2021	1.083	$10,829	$27,072	$54,144	$81,216	$108,288
Avg. 2015-July 2021	1.098	$10,984	$27,459	$54,918	$82,377	$109,836
Avg. 2014-July 2021	1.111	$11,107	$27,768	$55,537	$83,305	$111,074
Avg. 2013-July 2021	1.132	$11,319	$28,298	$56,595	$84,893	$113,190
Avg. 2012-July 2021	1.143	$11,425	$28,563	$57,125	$85,688	$114,250
Avg. 2011-July 2021	1.160	$11,599	$28,996	$57,993	$86,989	$115,985
Avg. 2010-July 2021	1.194	$11,936	$29,840	$59,681	$89,521	$119,361
Avg. 2009-July 2021	1.215	$12,149	$30,372	$60,745	$91,117	$121,489
Avg. 2008-July 2021	1.221	$12,207	$30,516	$61,033	$91,549	$122,065
Avg. 2007-July 2021	1.247	$12,474	$31,184	$62,369	$93,553	$124,738
Avg. 2006-July 2021	1.274	$12,740	$31,850	$63,701	$95,551	$127,401
Avg. 2005-July 2021	1.299	$12,995	$32,487	$64,975	$97,462	$129,950
Avg. 2004-July 2021	1.328	$13,283	$33,208	$66,415	$99,623	$132,830
Avg. 2003-July 2021	1.353	$13,530	$33,825	$67,650	$101,474	$135,299
Avg. 2002-July 2021	1.390	$13,903	$34,758	$69,517	$104,275	$139,034
Avg. 2001-July 2021	1.422	$14,218	$35,544	$71,088	$106,632	$142,176
Avg. 2000-July 2021	1.458	$14,575	$36,438	$72,877	$109,315	$145,754
Avg. 1999-July 2021	1.497	$14,973	$37,431	$74,863	$112,294	$149,725
Avg. 1998-July 2021	1.523	$15,232	$38,079	$76,159	$114,238	$152,317
Avg. 1997-July 2021	1.538	$15,383	$38,459	$76,917	$115,376	$153,834
Avg. 1996-July 2021	1.563	$15,633	$39,081	$78,163	$117,244	$156,325
Avg. 1995-July 2021	1.588	$15,879	$39,697	$79,395	$119,092	$158,789
Avg. 1994-July 2021	1.622	$16,220	$40,550	$81,099	$121,649	$162,198
Avg. 1993-July 2021	1.625	$16,246	$40,616	$81,232	$121,848	$162,463
Avg. 1992-July 2021	1.655	$16,550	$41,375	$82,750	$124,125	$165,500
Avg. 1991-July 2021	1.680	$16,796	$41,990	$83,980	$125,970	$167,959
Avg. 1990-July 2021	1.774	$17,741	$44,353	$88,706	$133,059	$177,412
Avg. 1989-July 2021	1.859	$18,591	$46,476	$92,953	$139,429	$185,905
Avg. 1988-July 2021	1.952	$19,517	$48,793	$97,585	$146,378	$195,171
Avg. 1987-July 2021	**2.030**	$20,301	$50,752	**$101,504**	$152,256	$203,008
Avg. 1986-July 2021	2.119	$21,186	$52,964	$105,928	$158,892	$211,856
Avg. 1985-July 2021	2.207	$22,074	$55,184	$110,368	$165,553	$220,737
Avg. 1984-July 2021	2.295	$22,948	$57,370	$114,741	$172,111	$229,482
Avg. 1983-July 2021	2.394	$23,936	$59,840	$119,680	$179,520	$239,360
Avg. 1982-July 2021	2.534	$25,341	$63,352	$126,704	$190,057	$253,409
Avg. 1981-July 2021	2.807	$28,068	$70,170	$140,339	$210,509	$280,678
Avg. 1980-July 2021	3.157	$31,574	$78,935	$157,870	$236,804	$315,739
Avg. 1979-July 2021	3.477	$34,772	$86,931	$173,862	$260,793	$347,724
Jan. 1978-July 2021	**3.961**	$39,607	$99,017	$198,034	$297,051	**$396,068**

$101,504= $50,000 x 2.030 represents the dollar equivalent in July 2021 of $50,000 based on inflation increases since 1987. Similarly, $396,068 (=$100,000 x 3.961) represents the dollar equivalent in July 2021 of $100,000 in 1978 based on inflationary increases since the month of January 1978.

* Source: Statistics Canada, Consumer Price Index, monthly CPI release, rolling average (except for Jan. 1978).

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