



ADDITIONAL FINDINGS FROM THE 2001 PALS, WITH COMPARISONS TO THE 1991 HALS

In the previous edition of *The Economics Editor* (June 2005, Vol. 2, Issue no. 6) I published results from the 2001 PALS in terms of wage gaps due to disability. Below I compare these to the 1991 HALS findings. All estimates have been corrected for sample selection bias (using the Heckman method) and all are statistically significant.

Severity of Disability	2001 PALS		1991 HALS	
	Males	Females	Males	Females
MILD	-15%	-21%	-10%	-7% on LFP ¹
MODERATE	-23%	-29%	-18%	-10% on LFP
SEVERE	-33%	-40%	-25%	-17% on LFP
VERY SEVERE	-49%	-57%	N/A	N/A

Additional findings from the 2001 PALS

To compare the impact on labour force participation (“LFP”) rates from the 2001 PALS to the figures in the table above, women who reported only a mild case of disability had a statistically significant effect of -14%, and those who reported a moderate level of disability experienced a statistically significant -23% chance of entering the labour force. Those in the severe range have a -40% probability of entering the labour force, which proves to be significant and women who indicated the level of severity to be very severe had a -58% chance of entering the labour force. With respect to the impact on male labour force participation rates, the probability of participating in the labour ranged from -19% for those in the mild category to over -70% in the very severe category when compared against non-disabled men. As was the case for women, the male LFP rates all proved to be statistically significant.

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¹ LFP = labour force participation. Wage gaps were not able to be calculated, so the estimation of the impact on women remained with labour force participation. This is used as a proxy for loss of wages. It likely understates the impact on wages.

The seven types of disability include agility, hearing, mobility, pain,² seeing, speech and “other”³ disability categories. Each category of disability is then separated into two classes that indicate if the particular disability is less or more severe. Those two levels of disability are then compared to non-disabled men and women to see how employment income and participation rates vary between the two groups.⁴ The findings indicate that for both men and women, disability has a negative and statistically significant effect on employment income and labour force participation when compared to non-disabled men and women. Women who indicated that they suffer from a mobility disability make between -29.5% to -41% less than non-disabled women and are -26% to -53% less likely to enter the labour force. Men who indicated a disability in the mobility category experience a -24% to -27% less employment income than non-disabled men and are -35% to -63% less likely to enter the workforce depending on the limitation of their mobility. The other categories tell a similar story with agility and speech affecting a disabled women’s employment income the most with a -35% to -53% and -35% to -48% reductions respectively. For the men, speech and the “other” category impact earnings the most with losses that range from -41% to -45% and -36% to -42% respectively. With respect to labour force participation, men with severe mobility limitations have the largest negative probability of joining the labour force with a rate of -64%. For the women, those whom indicated a severe disability in agility had the lowest probability of joining the labour force when compared to non-disabled women with a marginal effect of -55.1%.

When correcting for sample selection bias a negative and statistically significant marginal effect on income for men occurs in 7 of the 10 occupation categories. A male who is disabled and is in “management” is estimated to make -16% less annual income in 2000 than his non-disabled counterpart. In health related jobs a disabled man makes -35% less employment earnings than a non-disabled male in the same occupation category. All other employment categories are negative and follow the same trend, male disabled workers make less then their counterparts in each occupation category. For the women the same effect is true. Those disabled women in the business or administration occupation class make -29% less than non-disabled management women and disabled women who have jobs in the sales or services occupations make -37% less than non-disabled women in the same field.

The tables on page 3 summarize additional results from the 2001 PALS study.

NOTE: the 2001 PALS severity scale questionnaire is now available from Brown Economic Consulting. It is not published in the *User’s Guide* but rather the original questionnaire design has to be obtained from Statistics Canada and re-constructed using a statistical programming package (i.e., SAS). We have done this translation and now have the questionnaire available. It is ideal for medically trained professionals, or the plaintiff, to fill out and assess his/her level of disability.

**CALL 1-888-BEC-ASST (232-2778) and dial ext. 213, to
request your copy of the 2001 PALS severity questionnaire.**

² Limited in the amount or kind of activities one can do because of a long-term pain that is constant or reoccurs from time to time, for example, recurrent back pain. (Source: *User’s Guide to the Public Use Microdata File PALS 2001*, appendix G).

³ For confidentiality reasons related to the PUMF, 5 types of disabilities were reclassified into the “other” disabilities category. The disabilities included in this category are: “Learning”, “Memory”, “Developmental”, “Psychological”, and “Unknown”. (Source: *User’s Guide to the Public Use Microdata File PALS 2001*, appendix G).

⁴ Added in the regressions was a dummy variable to capture all disabled individuals whom did not indicate that the particular disability was the one they experienced.

Table 1 shows that the unemployment rate for disabled persons is twice as high as for non-disabled persons; the participation rate is 30 percentage points lower for the disabled; and the disabled work 3 to 4 fewer hours per week but their employment income is only two-thirds of the employment income earned by the non-disabled. It would seem that working fewer hours per week is not the only factor depressing the earnings of the disabled. (The figures for the non-disabled PALS respondents are similar to figures from the 2001 Census).

Factors	Canadian <u>Non-Disabled</u> Population Sampled in PALS		Canadian <i>Disabled</i> Population Sampled in PALS	
	Males	Females	Males	Females
Unemployment Rate	6.41%	5.56%	12.71%	11.10%
Participation Rate	90.00%	76.58%	54.50%	47.04%
Hours Worked per Week	43.5	36.0	39.1	32.8
Average Employment Income	\$31,353	\$20,238	\$15,797	\$10,237

10% more of disabled males and females do not graduate from high school compared to non-disabled persons (one-third of the disabled population versus 21 to 24% for non-disabled). Just more than half as many disabled finish university compared to the non-disabled population (9 or 12% versus 21%).

	MALES		FEMALES	
	Marginal Effect	<i>t</i> -Statistic	Marginal Effect	<i>t</i> -Statistic
Agility				
<i>Less Severe</i>	-22.18%	-3.47	-34.88%	-4.47
<i>More Severe</i>	-46.45%	-3.11	-52.63%	-3.22
Hearing				
<i>Less Severe</i>	-14.82%	-2.86	-32.95%	-5.36
<i>More Severe</i>	-16.68%	-2.12	-27.24%	-2.45
Mobility				
<i>Less Severe</i>	-23.58%	-3.77	-29.52%	-4.27
<i>More Severe</i>	-27.12%	-2.15	-41.36%	-2.67
Pain				
<i>Less Severe</i>	-17.09%	-4.43	-21.63%	-4.41
<i>More Severe</i>	-24.66%	-3.03	-33.46%	-3.42
Seeing				
<i>Less Severe</i>	-26.48%	-3.29	-38.26%	-4.01
<i>More Severe</i>	-36.42%	-2.25	-20.85%	-1.11
Speech				
<i>Less Severe</i>	-41.10%	-3.91	-35.33%	-2.48
<i>More Severe</i>	-45.52%	-4.86	-48.23%	-3.52
Other				
<i>Less Severe</i>	-36.25%	-5.84	-35.07%	-4.27
<i>More Severe</i>	-42.04%	-3.74	-44.86%	-3.28

*Statistical Significance Occurs when *t*-stat > 1.645 or 5% Interval

Table 2 demonstrates that disabilities of all types have a statistically significant negative impact on employment income, whether less or more severe.

UPDATING NON-PECUNIARY AWARDS FOR INFLATION (JUNE 2005, CANADA)

Year of Accident/ Year of Settlement or Trial	"Inflationary" Factors*	Non-Pecuniary Damages - Sample Awards				
		\$10,000	\$25,000	\$50,000	\$75,000	\$100,000
June 2004-June 2005	1.021	\$10,207	\$25,517	\$51,034	\$76,552	\$102,069
Avg. 2003-June 2005	1.029	\$10,286	\$25,715	\$51,431	\$77,146	\$102,862
Avg. 2002-June 2005	1.057	\$10,569	\$26,422	\$52,844	\$79,266	\$105,688
Avg. 2001-June 2005	1.081	\$10,808	\$27,019	\$54,038	\$81,057	\$108,076
Avg. 2000-June 2005	1.108	\$11,084	\$27,709	\$55,419	\$83,128	\$110,837
Avg. 1999-June 2005	1.138	\$11,385	\$28,462	\$56,923	\$85,385	\$113,846
Avg. 1998-June 2005	1.158	\$11,584	\$28,959	\$57,919	\$86,878	\$115,838
Avg. 1997-June 2005	1.169	\$11,691	\$29,229	\$58,457	\$87,686	\$116,914
Avg. 1996-June 2005	1.188	\$11,879	\$29,698	\$59,396	\$89,093	\$118,791
Avg. 1995-June 2005	1.207	\$12,073	\$30,182	\$60,365	\$90,547	\$120,729
Avg. 1994-June 2005	1.233	\$12,333	\$30,833	\$61,667	\$92,500	\$123,333
Avg. 1993-June 2005	1.236	\$12,358	\$30,894	\$61,788	\$92,682	\$123,576
Avg. 1992-June 2005	1.258	\$12,580	\$31,450	\$62,900	\$94,350	\$125,800
Avg. 1991-June 2005	1.277	\$12,772	\$31,929	\$63,858	\$95,787	\$127,716
Avg. 1990-June 2005	1.348	\$13,483	\$33,708	\$67,417	\$101,125	\$134,834
Avg. 1989-June 2005	1.413	\$14,135	\$35,337	\$70,674	\$106,011	\$141,348
Avg. 1988-June 2005	1.483	\$14,835	\$37,087	\$74,175	\$111,262	\$148,349
Avg. 1987-June 2005	1.544	\$15,436	\$38,589	\$77,178	\$115,767	\$154,356
Avg. 1986-June 2005	1.611	\$16,108	\$40,269	\$80,538	\$120,807	\$161,076
Avg. 1985-June 2005	1.677	\$16,773	\$41,933	\$83,867	\$125,800	\$167,733
Avg. 1984-June 2005	1.745	\$17,448	\$43,620	\$87,240	\$130,860	\$174,480
Avg. 1983-June 2005	1.821	\$18,205	\$45,514	\$91,027	\$136,541	\$182,055
Avg. 1982-June 2005	1.926	\$19,265	\$48,162	\$96,325	\$144,487	\$192,649
Avg. 1981-June 2005	2.136	\$21,358	\$53,396	\$106,791	\$160,187	\$213,582
Avg. 1980-June 2005	2.398	\$23,981	\$59,952	\$119,903	\$179,855	\$239,806
Avg. 1979-June 2005	2.642	\$26,418	\$66,045	\$132,090	\$198,135	\$264,180
Jan. 1978-June 2005	3.012	\$30,121	\$75,304	\$150,607	\$225,911	\$301,215

\$77,178 = \$50,000 x 1.544 represents the dollar equivalent in June 2005 of \$50,000 based on inflation increases since 1987. Similarly, \$301,215 (= \$100,000 x 3.012) represents the dollar equivalent in June 2005 of \$100,000 in 1978 based on inflationary increases since 1978.

* Source: Statistics Canada, Consumer Price Index, monthly CPI release

Consumer Price Index		Unemployment Rate	
From June 2004 to June 2005* (rates of inflation)		For the month of June 2005	
Canada:	2.1%	Canada:	6.7%
Vancouver:	2.1%	Vancouver:	5.9%
Toronto:	1.5%	Toronto:	7.5%
Edmonton:	1.5%	Edmonton:	4.5%
Calgary:	1.7%	Calgary:	3.4%
Halifax:	2.4%	Halifax:	6.0%
St. John's, NF:	2.6%	St. John's, NF:	9.8%
Saint John, NB:	2.1%	Saint John, NB:	7.0%
Charlottetown:	2.8%	Charlottetown:	11.9%

* Based on 12-month rolling average. Source: Statistics Canada

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