The Effect of Age and Age of Onset on Involuntary Retirement for People with Disabilities in Canada

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Introduction

Research has shown that the three main reasons workers retire from the labour market in Canada are health, wealth and labour market redundancy (Myles, 2002). While some retirement is welcomed and on-time, other retirements are involuntary or forced due to: the loss of a job (Osberg, 1988), an early retirement incentive (Frenken, 1991), a health problem, mandatory retirement (Schellenberg, 1994), a lack of control with too many job strains (Trucotte & Schellenberg, 2005), or a need to provide care to a family member (McDonald et al., 2000b). Poor health is one of the most frequently reported reasons for early retirement (Morissette, Schellenberg & Silver 2004; Pyper, 2006). An analysis of the Canadian 2002 General Social Survey (GSS) reveals that 27% of retirees retired involuntarily (Schellenberg & Silver, 2004). Illness or disability is the number one reason for involuntary retirement in Canada (Statistics Canada, 1997).

The purpose of this paper is to examine age and age of onset as key factors that influence the retirement decisions of people with disabilities. For a more detailed analysis of factors associated with involuntary retirement for persons with disabilities in Canada see Denton, Plenderleith & Chowhan (2010).

Brief Literature Review

A review of the Canadian and international literature on the impact of disability on labour market outcomes revealed that most of the literature focused on labour force participation and wage discrimination. Study after study has demonstrated a consistent negative employment effect of health/disability on labour force participation and wage discrimination. Further, the literature review showed labour force participation rates for persons with disabilities varies by socio-demographic, socio-economic and health status (for a review of studies see Baldwin & Johnson, 2001; Jones, 2008; and Statistics Canada, 2008). Further, the type of disability, the severity of the disability, and the age of onset are all important determinants of labour force participation (Jenkins & Rigg, 2003; Zwerling et al., 2002; Galarneau & Radulescu, 2009).

The literature on retirement for health reasons is much more limited in scope. There is a small body of international literature that demonstrates that poor health or a change in health status is a risk or a pathway to early retirement (Disney, Emmerson, & Wakefield, 2004; Mein et al., 2000, Schuring et al., 2009). Bound and colleagues (1999) found that it is not just poor health but "health shocks" or declines in health that help explain early retirement behaviour. A recent Canadian study shows that one-third of recent retirees left for health reasons (Morissette et al., 2004). In an analysis of the 2003 Canadian Community Health Survey, Pyper (2006) reveals that while retirement was the reason given most often by Canadians, aged 50-69 as their reason for not working, nearly half a million Canadians aged 50-69 were not working for health-related reasons. The proportion not working for health related reasons decreased with age from 41% for those 50-54 to 6% for age 65-69.

There is very little research on involuntary retirement per se. Our review of the literature revealed three studies that focused on involuntary retirement (Szinovacz & Davey, 2005; Shultz, Morton, & Weckerle, 1998; McDonald et al., 2000b). While they did find that involuntary retirement is structured by socio-demographic, socio-economic and health factors, they did not consider age of onset as a determinant of involuntary retirement. The purpose of this paper is to consider age and age of onset as key factors that influence the retirement decisions of people with disabilities while also controlling for differences in socio-demographic, socio-economic, geographical factors and health status.

Methodology and Findings

The sample selected for analysis was from the 2006 Canadian Participation and Activity Limitations Survey (PALS). The PALS used the 2006 Canadian Census of Population as a sampling frame to identify its target population. The PALS data allows an investigation of how disability and the experience of barriers affect the decision to retire. The sample used for analysis includes persons with disabilities, aged 15-74, who had retired either voluntarily or involuntarily from the labour force during the period 2001 to 2006. The retirement questions were only asked to people aged 15-74 who had retired within this time frame.

The selection of variables for analysis was guided by the economic model of retirement (Shultz et al., 1998) and the life course perspective (Moen, 1996; Szinovacz & Davey, 2005). These perspectives provide a set of lens to aid in the understanding of involuntary retirement.

The profile of Canadians with disabilities who had retired from the labour force is very heterogeneous across socio-demographic, geographic and socio-economic characteristics. The data show that during the period 2001 to 2006, 39% of people with a disability retired involuntarily from the labour force. Results reported elsewhere indicate that some groups of people with a disability, however, were clearly at higher risk of involuntary retirement than others. For example, those who have lower levels of education, and those who were classified as having economic family or unattached individual household incomes below the low income cut off point after taxes had significantly higher rates of involuntary retirement (See Denton et al., 2010). We did not find significant associations with the retirement decision and the following characteristics gender, marital status, employment status prior to retirement, and type of employment compensation.

Table 1 shows persons with disabilities aged 54 and under were much more likely than their older counterparts to experience involuntary retirement. The results also point to the importance of considering age of onset as a precursor to involuntary retirement. Employed Canadians who were born with or acquired a disability before the age of 35 were least likely to report involuntary retirement, whereas those most likely to report involuntary retirement were age 35-44. Poor health at the time of retirement, and severe or very severe disabilities, increase the likelihood of involuntary retirement. Those who retired due to their condition, either completely or partially, were much more likely to report involuntary retirement.

Researchers suggest that there may be socio-demographic and productivity differences between disabled and non-disabled workers that may magnify the "health effects" on employment outcomes (Smith & Twomey, 2002; Baldwin & Johnson, 2001). They find that when these differences are controlled, about half of the differences in labour market outcomes are explained (Blackaby et al., 1999; Madden, 2001). Further, we speculate that age differences may be due to cohort differences in these socio-demographic and socio-economic characteristics. The tabular analysis does not allow us to examine the relationship between the type of retirement and health while controlling for or taking into account differences in socio-demographic and socio-economic characteristics. Nor does it allow us to disentangle differences in retirement decisions that may be due to age cohort effects. Therefore, we conducted a multivariate logistic analyses to show the relationship of each of the possible determinants of involuntary retirements when other determinants are controlled or held constant.

Table 2 illustrates that age of onset mattered, even after controlling for socio-demographic, socio-economic and geographical determinants. People who acquired their disability after age 35 were much more likely to retire involuntarily. These results differed from

the tabular analysis that showed persons with the age of onset of disability at 35-44 to have the highest proportion of involuntary retirement of any age group (Table 1). In the multivariate analysis, people who acquired their disability, between ages 55-64, were the most likely to experience involuntary retirement. This group was over 5 times more likely to experience involuntary retirement than those whose age of onset was 0-34 (Table 2). Acquiring a disability between the ages of 55-64 may be a key factor contributing to involuntary retirement for this age group (Table 2).

Persons with disabilities who had to permanently retire because of their condition were 7 times more likely to retire involuntarily than those who did not have to retire because of their condition. Those who partially retired due to their condition were almost 3 times more likely to have faced involuntary retirement than those who were not made to do so (Table 2). Finally, age, health at retirement, and the degree of severity of the condition appear to not be significantly associated with involuntary retirement once other factors are controlled for in the model.

Discussion and Conclusion

Twenty-seven percent of Canadians retire involuntarily (Schellenberg & Silver, 2004) and illness or disability is the number one reason for involuntary retirement in Canada (Statistics Canada, 1997). The analysis of the 2006 PALS has shown that persons with a disability have a much higher rate of involuntary retirement than the general population. Of those who retired during the period 2001 to 2006, 39% of persons with a disability retired involuntarily from the labour force. Their higher rate of involuntary retirement means that many persons with disabilities are excluded from the labour market.

This paper seeks to investigate whether age and age of onset are key factors that influence the retirement decisions of people with disabilities. We find differences by age in the decision to retire involuntarily. The likelihood of involuntary retirement decreases with increases in age. That is younger persons with disabilities are more likely to retire involuntarily from the labour force than their older counterparts. There are also other groups who are at risk of involuntary retirement and they include immigrants and non-permanent residents, those with lower levels of education and those with low incomes.

As discussed in the literature review differences in socio-demographic characteristics (i.e., gender, age, marital status), human capital characteristics (i.e., education, work experience), economic incentives (i.e., wages), and regional effects may magnify the "health effects" on employment outcomes of the disabled. The multivariate analysis of the PALS data clearly revealed that the effects of disability on the decision to retire are very real. Involuntary retirement occurs when people with disabilities are no longer able to work as a result of their disability rather than due to differences in socio-economic and other characteristics.

These findings suggest that involuntary retirement is often due to a "health shock" - the sudden onset of a disability or a dramatic change in a disabling condition that prevents people from continuing in the workforce. It is important to distinguish the age of onset when investigating the labour market outcomes of the persons with disabilities because those who are disabled during childhood and those who are disabled later in life (after entering work) have different labour market experiences (Baldwin & Johnson, 2001). This study contributes to the literature in the consideration of the age of onset as a determinant of the retirement decision. The onset of disability in mid life is a trigger to an involuntary retirement. Employed persons born with a disability or who acquire it early in life are more likely to have a long career and retire

voluntarily from the labour force. This may be because they have been more likely to have benefited from workplace accommodations and the use of technology.

Implications

Policy analysts are concerned that with the retiring of the baby boom generation and the tendency for early retirement, there will be labour shortages in the very near future (Scherer, 2002; Statistics Canada, 2003; Human Resources and Social Development Canada, 2005). A recent analysis of the 2006 PALS has shown that the labour force participation rates are much lower for the disabled population (56%) as compared to those for all Canadians aged 15 to 64 (80%) (Statistics Canada, 2008) The analysis of the PALS data presented here show that three-quarters of persons with disabilities who retired from the labour force between 2001 and 2006 did so before the age of 65. In particular, persons who acquire a disability between the ages of 55 to 64 had the highest risk of involuntary retirement. Given that the gap between their expected retirement date and the onset of their disability is shorter than that for younger age groups, the onset of a disability may be the trigger that forces earlier than expected retirement. Some employers may be less willing to provide incentives or accommodation to their continued employment or the workers themselves may be less willing to continue working with a disability. Future research could focus more specifically on the retirement decision when the onset of disability occurs after the age of 55.

Studies have shown that about half of all Canadian retirees would prefer to work full- or part-time jobs if they were available (Morissette et al., 2004). Given the interest of some older Canadians to continue to participate in the labour force and the benefit of their continued employment to the economy, future research could address issues that would remove impediments and provide incentives for persons with disabilities to extend their working lives including: the use of technology; the acceptance by employers and unions of greater flexibility of work days, work weeks and work years; changes in attitudes towards disabled people and their productive capabilities; and the need to provide work-place accommodation to persons with disabilities. Burkhauser, Butler, & Kim (1995) found that in the U.S. the receipt of accommodations could prolong employment. Most recently, Campolieti (2009) uses the 2001 PALS to consider labour market variations in accommodations provided and desired (such as modified duties, modified hours, human support, technical aids, specialized computer, communication aids and other accommodations). Desires for accommodations were much higher for persons who had to change jobs or leave the workforce than those who did not have to change jobs, suggesting that accommodation to the workplace would decrease the likelihood of involuntary retirement. Further, women had a greater desire for accommodations that involve reduced hours than men. There is a need for research on strategies for improving the ability of persons with disabilities to remain in the workforce or to return to the workforce through workplace accommodation.

Table 1. Voluntary and Involuntary Retirement by Age and Disability Characteristics of Persons with Disabilities, Age 15-74.

	Voluntary Retirement (%)	Involuntary Retirement (%)	F-Statistic
Total	60.6	39.4	
Age*			
15-44	31.1	68.9	F(2.55, 2548.44)=10.00, p=0.00
45-54	38.9	61.1	
55-64	63.9	36.1	
65-74	75.5	24.5	
Condition Onset (Age of Onset)			
0-34	71.0	29.0	F(2.98, 2973.21)=2.51, *p*=0.057
35-44	46.6	53.4	
45-54	60.9	39.1	
55-64	60.5	39.5	
Health at Retirement*			
Excellent/Very Good	74.0	26.0	F(2.95, 2950.40)=10.34, *p*=0.00
Good	72.8	27.2	
Fair	71.2	28.8	
Poor	39.2	60.8	
Degree of Severity*			
Mild	82.8	17.2	F(2.91, 2904.88)=19.18, *p*=0.00
Moderate	64.8	35.2	
Severe	47.5	52.5	
Very Severe	25.8	74.2	
Does condition prevent you from working*			F(1, 999)=55.95, *p*=0.00
Yes	43.7	56.3	
No	85.6	14.4	
Permanently retired due to condition*			
No	87.1	12.9	F(1.99, 1990.61)=37.76, *p*=0.00
Yes, partially	71.7	28.3	
Yes, completely	34.1	65.9	

Note: Due to missing data some cells do not add up to the total sample size listed.
* Significant difference found between voluntary and involuntary groups.

Table 2. Multivariate Logistic Regression and Involuntary Retirement by Age and Disability Characteristics of Persons with Disabilities, Age 15-74[i].

Variables	Odds Ratio[ii]	BRR Std. Err.	t	P>|t|
Age				
15-44 (ref.)				
45-54	1.08	0.85	0.10	0.92
55-64	0.54	0.38	-0.87	0.39
65-74	0.43	0.35	-1.03	0.31
Age of Onset				
0-34 (ref.)				
35-44	4.16	2.72	2.18	0.03
45-54	3.78	2.13	2.36	0.02
55-64	5.36	3.24	2.78	0.01
Health at Retirement				
Excellent/Very Good (ref.)				
Good	0.89	0.58	-0.17	0.86
Fair	0.80	0.49	-0.37	0.71
Poor	1.39	0.80	0.58	0.56
Degree of Severity				
Mild (ref.)				
Moderate	1.40	0.75	0.62	0.53
Severe	1.30	0.82	0.42	0.67
Very Severe	2.55	2.28	1.05	0.29
Permanently Retired Due to Condition				
No (ref.)				
Yes, Partially	3.14	1.77	2.03	0.04
Yes, Completely	7.50	4.56	3.31	0.00

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[i] Other characteristics that were controlled include: gender, marital status, education, immigration, region, size of urban residence, home ownership, employment status prior to retirement, employment compensation, low income status, does the condition prevent you from working, and various types of limitations.

[ii] Model summary: N-810, Design df-937, F(44,894)=1.86, p=00, Likelihood-ratio test: LR chi ^{2}(23) = 75134.26, p=0.00.