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Additional Living Costs and Barriers Faced by Families with Children with Disabilities: Evidence from the Participation and Activity Limitation Survey (PALS - 2006)
Technical Report Prepared for the Canada Disability Savings Grant and Bond Evaluation

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Executive Summary

The Registered disability savings plans (RDSPs), the Canada Disability Savings Grant and Bond were first introduced in 2007 to encourage Canadians to save for the long-term financial security of a person with disabilities. The Canada Disability Savings Program (CDSP)[1] became available to Canadians in December 2008. A Formative Evaluation of the CDSP was completed at the end of 2014, which focussed on the relevance and early directional impacts of the program.[2] This study is a component of the Summative Evaluation designed to assess program performance on the continued need for the RDSP, the grant and bond and program performance. The current report is one of a series of quantitative reports using Statistics Canada surveys' data for the summative evaluation. This study uses the microdata file of the Statistics Canada's 2006 Participation and Activity Limitation Survey (PALS) to gather background information on families with children with disabilities as well as data on additional living costs and work-related issues for those families.

This study uses an index developed by Statistics Canada to measure the degree of disability severity (as a proxy for the CDSP eligible population). The analysis compares families with children who have more severe disabilities (identified as severe or very severe disabilities by the index) to families with children who have less severe disabilities (identified as mild or moderate disabilities by the index).[3]

The analysis reveals that:

- In general, families with children with more severe disabilities had similar characteristics to families with children with less severe disabilities.
- Overall, families with children with more severe disabilities were more likely to have out-of-pocket expenses (not covered by insurance or a government program), and the expenses tended to be higher for drugs, specialized equipment, health care, help, and transportation when compared to families with children with less severe disabilities.
- The study identified several working barriers and work-related consequences that the health condition of children with disabilities had on their parents. The study shows that families who had a child with a more severe disability were more likely not to have taken a job, to have quit work, refused a job, or to have worked shorter hours as a result of health conditions related to a child with a disability compared to families with a child with a less severe disability.

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[1] CDSP is used to refer to the program as a whole, including its main components Registered Disability Savings Plan (RDSP), Canada Disability Savings Grant and Bond.
[2] ESDC (2015), "Evaluation of the Canada Disability Savings Grant and Bond 2008-2009 to 2011-2012: Phase I", February 2015.
[3] For more details about the index, refer to the Data and Methodology Section (3.0).

- 30.4% of families with a child with more severe disabilities indicated that during the last 12 months they had financial problems because of their child's condition, while 8.6% of families with children with less severe disabilities indicated that they were in that situation.

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1. Introduction

The Government of Canada announced in Budget 2007, the introduction of the Canada Disability Savings Program (CDSP). The objective of the CDSP was "*to help parents and others save toward the long-term financial security of persons with severe disabilities*".[4]

The CDSP has been designed to provide financial assistance through Registered Disability Savings Plans (RDSPs). Components of the RDSP are the Canada Disability Savings Bond (the bond) and the Canada Disability Savings Grant (the grant). The bond is available to the RDSP beneficiaries with low net family income, regardless of whether they contribute to the plan or not. On the other hand, the grant is a limited matching grant payable with respect to contributions made into an RDSP, the level of which is also a function of the family net income. Further details on the bond and grant are noted in Section 2.

As identified in the 2008 Treasury Board submission that launched the program, the program would be evaluated in accordance with the CDSP Integrated Results-Based Management and Accountability Framework (RMAF) and Risk-based Audit Framework (RBAF). The Integrated RMAF/RBAF included an evaluation strategy for the program, which consisted of a sequence of evaluation activities including: an evaluation framework, an evaluability assessment, a formative evaluation, and a summative evaluation. In light of this, the study is relevant and timely.

The formative evaluation of the CDSP was completed in the 2014-15 fiscal year and the summative evaluation of the CDSP is scheduled to be completed in the 2017-18 fiscal year. The formative evaluation focused on the program relevance and early directional impacts of the program, while the summative is expected to examine the continued need for the activities undertaken by the CDSP as well as performance of the program (i.e. effectiveness, efficiency and economy). The evaluation framework and evaluability assessment were completed by 2012.

1.1   Study Objectives

This study examines the 2006 PALS micro-data in order to address some of the limitations that the technical report for the formative evaluation has faced with the analysis of the Public-Use Micro File (PUMF). The objective is to better understand the impacts of additional costs borne by persons with disabilities and the kinds of barriers they face in terms of saving money which prevent them from establishing savings. As a result this study includes an analysis of children with disabilities under the age of 15, who are not included in the more recent 2012

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[4] Budget 2007, p.13

Canadian Survey on Disability (CSD). Furthermore, the formative Evaluation observed that there is limited research available on the financial situation of parents of children with disabilities. The report presents information on parents of children with disabilities and provides evidence to inform the following two evaluation questions:

1. What are the out-of-pocket expenses/costs for families with children with disabilities, and
2. What kinds of barriers (e.g. ongoing financial requirements for medical supplies, assistive devices, at-home care etc.) prevent families of children with disabilities from working and saving?

1.2   Limitations

The first limitation of this study is that the PALS survey naturally does not include any information on whether households are using the RDSP or have received any incentive from the bond and/or grant) because it was conducted before the RDSP, grant and bond were introduced.

A second limitation discussed in detail in Section 2.0, is that individuals eligible to open an RDSP are those who are eligible for the Disability Tax Credit (DTC). The DTC has been in place in its current form since 1988 and a medical practitioner has to certify that the person "*has severe and prolonged impairments in physical or mental functions".* Neither the CSD nor PALS identified persons with disabilities or children with disabilities who were eligible for the DTC. However, the PALS includes an index that categorizes the degree of severity of a person's disability that is determined based on questions on intensity and frequency of the disability/disabilities (for more details on the index, see Section 3). Using this index as a proxy for the DTC/RDSP eligibility, we can assume that individuals with a severe disability represent the population of individuals with a disability who qualified for the DTC and subsequently are eligible for an RDSP. Consequently, the index is used to measure if persons with more severe disabilities had additional living costs and faced more barriers than those with less severe disabilities. Despite this inference, it is still possible for a person to indicate minor disabilities in more than one area but be identified as having a more severe degree of disability than another person who reports a severe limitation in only one area but who has only a "moderate" disability based on the index. However, as noted in the Data and Methodology Section (Section 3.0); the index properly identifies the degree of severity of the disabilities in most of the cases.

Although Question 2 is related to barriers that prevent families with children with disabilities (CWDs) from saving, the surveys do not provide information on savings behavior. Nevertheless, the surveys provide information on barriers that

might affect earnings and contribute to financial hardship. It could be inferred that such families might have challenges in accruing wealth in the form of savings.

1.3   Report Outline

Section 2 of the report provides a summary of RDSP rules as well as a summary about the program, as it pertains to eligibility criteria and maximum allowable contributions as well as a description of how the different components of the CDSP were implemented over the years. Section 3 examines the data and the methodology used in the report and provides socio-demographic profiles of families with CWDs with different degrees of severity. Section 4 presents descriptive and statistical analyses of the additional living costs (referred to as out-of-pocket expenses in the survey and the report) for families with CWDs with different degrees of disability severity and barriers to employment.

2. RDSP, Grant, and Bond *Rules*

One of the major considerations for parents and grandparents of a child with a severe disability is to ensure that the child's financial security is ensured for when parents are no longer able to provide support. In July 2006, the Minister of Finance appointed an Expert Panel on Financial Security for Children with Severe Disabilities to examine this issue. In December 2006, the panel submitted its report "*A New Beginning*".[5] Following the report, the RDSP grant and bond were introduced in the Budget 2007 and became available in 2008 – to encourage long-term savings through RDSPs. This Section presents the general rules of the RDSP, the bond and grant.

2.1 Registered Disability Savings Plans (RDSP)

An RDSP is a tax-assisted savings vehicle legislated under provisions of the Income Tax Act and administered by Canada Revenue Agency (CRA). It is an arrangement between a financial Institution and a plan holder (beneficiary, parent, legal guardian or public department) designed to encourage savings for the long-term financial security of a person with a severe and prolonged disability. RDSP beneficiaries are limited to residents of Canada who qualify for the Disability Tax Credit (DTC), have a Social Insurance Number and are under the age of 60. Contributions to an RDSP for a beneficiary are limited to a lifetime maximum of $200,000.

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[5] Finance Canada, "*A new beginning: The report of the Minister of Finance's Expert Panel on Financial Security of Children with Severe Disabilities*", December 2006.

2.2 The Canada Disability Savings Program (CDSP)

As mentioned in the Section 1.0, the CDSP was introduced in order to encourage Canadians with severe and prolonged disability to save through an RDSP. It includes two components: the bond and the grant. The bond is provided to RDSP beneficiaries with low to modest family net income, regardless of whether or not they contribute to an RDSP. RDSP beneficiaries with a family net income of $25,500 or less (in 2013) received a bond of $1,000. The amount of bond is reduced as family income rises, and is not available to RDSP beneficiaries whose family net income was $43,900 or higher. The income thresholds are revised each year based on the inflation rate. There is a $20,000 lifetime limit on bond paid to an RDSP.

The grant is a matching grant. An RDSP account may receive up to $3,500 a year in grant depending on the amount contributed and the beneficiary's family net income. RDSP beneficiaries with a family net income of $87,900 or less (in 2013) were eligible to receive 300% of the first $500 in contributions and 200% of the next $1000 in contributions. If the beneficiary's family income was greater than $87,900, the grant was 100% of the first $1000 in contributions. The lifetime grant limit is $70,000. An RDSP beneficiary is eligible to receive bond and/or grant until December 31st of the calendar year in which the beneficiary reaches 49 years of age.

Since the CDSP was launched in December 2008, there have been improvements. The Budget 2010 announced enhancements to RDSPs with the carry forward and RRSP/RRIF rollover provisions. The carry forward provision allows a 10-year carry forward of unused grant and bond entitlements. The RRSP/RRIF rollover allows a deceased individual's retirement savings proceeds to be transferred into the RDSP of a financially dependent child or grandchild on a tax free basis.

In addition, Budget 2011 and Budget 2012 proposed further enhancements to provide beneficiaries and their households with increased flexibility to establish, contribute to and access savings from their RDSPs.

3. Data and Methodology

PALS was a post-census survey designed to collect information on adults and children with disabilities, who have limited daily activities because of a condition or health problem.[6] A separate questionnaire was used for children due to

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[6] The questionnaire asks: "Have [you] any difficulty hearing, seeing, communicating, walking, climbing stairs, bending, learning or doing any similar activities?" and "Does a physical condition or mental condition or health problem reduce the amount or the kind of activity [you] can do at home/at work or at school/in other activities, for example, transportation or leisure?"

concerns that children and adults deal with disability differently. These differences include age and circumstances. However, similar to the adult questionnaire it collected information on the child's disability. PALS focused on the relationship between functional status, daily living activities and social participation by collecting data on the nature and severity of the activity limitations, and on the needs for assistive technology, social support and accommodation in all spheres of life. For this study, micro file data is used to conduct the analysis on families of CWDs. The PALS child survey sample consisted of 8,954 children (persons under 15 years of age) who reported at least one limitation to the Census on activity limitations and who were living in Canada at the time of the 2006 Census. It is important to mention that the census only covers household population and it does not include group homes, institutional settings, long-term care facilities and similar facilities. In addition, it excludes individuals on Indian Reserves.

The PALS sampling plan can be considered as a two stage stratified design which used the 2006 Census long-form sample. In stage 1, the census was distributed to approximately 1/5 of the population of Canada. Stage 2 involves the selection of individuals that reported activity limitations in the 2006 census. The long form contains two general filter questions on activity limitations and long-term disabilities. The 2006 PALS selected a sample of individuals from respondents on the Census long form who reported a positive response to at least one of these two filter questions. These respondents are said to be "individuals with disabilities" according to the Census. PALS used the same screening questions as the 2006 Census. Those questions are used to identify type and severity of disability. Individuals who go through the second set of questions are asked more specific questions in order to capture individuals that fail to provide a positive response in the second screening. This was done to determine if they were included in the sample based on a false positive response, or if their situation changed or the preliminary screening did not capture their disability. PALS data collection occurred between October 2006 and February 2007.

Although the PALS questionnaire identifies ten types of disabilities, they have been grouped together for the analyses in this report. However, the report used the scale developed in the PALS to measure the overall severity of the disabilities according to the intensity and frequency of the activity limitations reported by respondents.

As noted in the PALS Technical and Methodological Report, the "*disability severity index was developed using questions for each type of disability in the PALS questionnaires. At first, a standardized score for each type of disability was calculated based on severity, the maximum score given for someone who reports being completely disabled for a given disability. Questions on intensity and frequency of the limitation were used in order to determine the severity of the*

disability… Next, an overall score of severity was calculated taking the average of all standardized severity scores calculated for each type of disability."[7]

Then, individuals or children were divided into four groups:

- **Class 1:** Respondents with a score equivalent to less than half the maximum score for one disability – **mild disability category**.
- **Class 2:** Respondents with an equivalent score between half and the maximum score for one disability – **moderate disability category**.
- **Class 3:** Respondents with an equivalent score between one and two the maximum score for one disability – **severe disability category**. This cut-off class was established as it "*corresponds to the score of someone with the maximum score for one type of disability and no points for the other types*", which some could describe as severe and prolonged.
- **Class 4:** Respondents with a score equivalent to more than two the maximum score for one disability – **very severe disability category**.

As mentioned previously, the eligibility criteria of the DTC is to have "*severe and prolonged disability*", which is more likely to correspond to individuals or children with at least an equivalent score on the scale between one and two the maximum score for one disability (at least a complete disability). Nevertheless, as noted previously, it is possible for an individual or child to indicate minor difficulties in many areas and still end up with a more severe degree of disability, while another individual or child with a severe limitation in only one area has only a "moderate" disability as per the index.

However, the index more often than not, accurately orders the degree of severity of disabilities. Consequently, the scale is adopted in the report to make the distinction between groups with more severe and less severe disabilities. Those with more severe disabilities – identified by the index as having severe or very severe disabilities (i.e. those who are more likely to be eligible for the DTC) while those with less severe disabilities – identify by the index having mild or moderate disabilities (those who are less likely to be eligible for the DTC).

Our study sample included 7,070 children, including 2,530 children recoded as not having a disability, 4,540 children with disabilities—2,670 observations for those with less severe disabilities (Class 1 – mild disability category and Class 2 – moderate disability category) and 1,870 observations for those with more severe disabilities (Class 3 – severe disability category and Class 4 – very severe disability category).

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[7] For more details, please see Statistics Canada, "Participation and Activity Limitation Survey 2006: Technical and Methodological Report", Catalogue no. 89-628-XIE, 2006

3.1 Socio-demographic Profiles

In this section, the socio-demographic profile of children with disabilities (CWDs) is compared to that of children without disabilities (CWODs).

As indicated in Section 3.0, the group of CWDs is subdivided in two sub-groups using the disability severity scale to differentiate the groups (those with less severe disabilities and those with more severe disabilities)[8]. The socio-demographic profile of each group is provided to obtain a better understanding of the different characteristics of the populations.

It appears that males are overrepresented among CWDs that are more severe (66.8%) compared to CWDs that are less severe (61.7%). By age, the data shows that CWDs tend to be older than children without disabilities. Nonetheless, among CWDs, there is no evidence that the distribution by age varies by the degree of severity of the disabilities, as about 50% of those with less severe disability and those with more severe disability were aged between 10 and 14 years old.

Table 1 shows that 59.6% of parents were not living as a couple while another 18% were living as a couple. There was no information provided for the remaining 22% of parents. Since it is out of the scope of this analysis, no further inferences will be made. On the other hand, the proportion of families who were immigrants was significantly lower among families with CWDs (3.8%) compared to families with children without disabilities (CWOD) (15.8%).

The proportion distribution by location indicate that a slightly higher proportion of families with CWDs lived in urban areas (21.2%) compared to the proportion of families with CWOD (14.0%). By province however, the percentage of CWD and CWOD is similar in each. It also seems that size of families does not explain the presence of CWDs or the degree of severity of the disabilities.

Table 1 also shows that the percentage of families with CWDs renting their dwelling is similar to the percentage of families with CWOD that rent their dwelling. In terms of average incomes we can see that families with CWD's on average have lower income than families with CWOD. Even within families of CWDs, on average those with children who have severe disabilities have lower income compared to those with children with less severe disabilities. The degree of severity of the disabilities appears also to influence the family income.

Two statistical models were developed in order to determine the socio-demographic characteristics that mainly differentiate families with CWOD and families with CWDs. It attempted to profile families with CWDs that are less

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[8] The chosen degree of disability is an identifier to capture the degree of severity of disability for the eligibility for the Disability Tax credit (DTC) which in turn would make them eligible to open an RDSP.

severe and those with CWDs that are more severe disabilities, when taking other factors into account. The two models are presented in the Appendix A (table A-1 and A-2). The summary of the results of the models confirmed the above descriptive analysis in that it illustrated that:

- CWDs were more likely to be male and older than CWOD. They were also more likely to live in an urban area and to be non-immigrants and;
- CWDs with more severe disabilities were more likely to be male, aged between 5 and 9 years old, and to some extent living in a rural area.

Table 1 – Socio-demographic Profile of Families with Children with and without Disabilities by Degree of Severity of the Disabilities – 2006

	CWOD (no disability)	CWDS		
		All CWDs	Less severe	More Severe
Gender				
female	50.6	36.1	38.3	33.2
Male	49.4	63.9	61.7	66.8
Age				
Less than 5 years	32.3	13.6	14.8	12.0
5-9	31.5	36.9	34.4	40.3
10-14	36.3	49.5	50.8	47.8
Marital Status*				
Not in couple	N.A.	59.6	59.6	59.6
Couple	N.A.	18.0	16.9	19.5
No information	100.0	22.4	23.6	20.9
Immigrant (parents)				
No	84.2	96.2	96.2	96.3
Yes	15.8	3.8	3.8	3.7
Urban/Rural				
Urban	14.0	21.2	22.8	18.9
Rural	86.0	78.8	77.2	81.1
Province				
Newfoundland	1.1	1.3	1.7	1.2
Prince Edward Island	0.3	0.4	0.5	0.4
Nova Scotia	2.2	2.8	3.2	3.3
New Brunswick	1.6	2.4	3.4	2.1
Quebec	14.6	17.0	16.1	21.6
Ontario	46.4	42.5	41.1	38.8
Manitoba	3.2	3.8	4.0	4.4
Saskatchewan	2.2	2.8	3.4	2.9
Alberta	10.6	11.8	13.7	10.7
British Columbia	17.6	14.8	12.4	14.3
Territories**	0.3	0.4	0.5	0.4
Number of Person (household)				
Two	5.4	6.5	6.2	7.0
Three	23.4	20.5	20.8	20.1
Four	32.0	38.5	37.8	39.5
Five	24.4	21.9	22.5	21.0
Six persons and more	14.8	12.6	12.7	12.4
Dwelling				
Rented	68.2	68.9	69.9	67.6
Owned	31.8	31.1	30.1	32.4
Household Income				
Less than $19,999	11.4	12.4	12.1	12.9
From $20,000 to $39,999	21.8	20.8	19.5	22.8
From $40,000 to $59,999	19.1	16.8	17.1	16.2
From $60,000 to $79,999	15.2	18.5	19.4	17.4
$80,000 and more	32.5	31.5	32.0	30.7
Average	*73,680*	*68,940*	*71,530*	*65,310*
Low-income After Tax				
No	78.0	80.8	82.3	78.5
Yes	22.0	19.2	17.7	21.5
# Observations	*2,530*	*4,540*	*2,670*	*1,870*

Source: Statistics Canada – Participation and Activity Limitation Survey (PALS). * The marital status is derived from two other variables and should be used with caution. **Territories have been grouped for reliability.

Table 2 provides the percentage distribution of the presence of different types of disabilities by the severity of disability. It reveals that disabilities such as chronic condition (67.0%), learning (59.8%), and speech (38.7%) were identified more frequently as the types of disabilities CWDs had. While the less frequent type of disabilities identified by respondents were seeing and developmental delay. Table 2 also reveals that within each disability type, a higher proportion of children have more severe disability. This observation is more likely to be correlated with how the degree of severity scale has been developed (see Section 3.0).

Table 2 –Proportion of Families with Children with Disabilities by Degree of Severity and by Type of Disabilities – 2006

	CWDs		
	All CWDs	Less severe	More Severe
Types of disabilities			
Hearing	11.5	8.7	15.4
Seeing	9.7	5.3	15.9
Speech	38.7	17.7	68.1
Mobility	11.4	5.6	19.6
Agility	18.4	5.2	36.9
Chronic condition	67.0	52.6	87.1
Developmental Delay	8.2	5.9	11.3
Development	26.6	9.1	51.1
Learning	59.8	48.3	76.0
Psychological	29.8	9.7	58.0
# Observations	*4,540*	*2,670*	*1,870*

Source: Statistics Canada – Participation and Activity Limitation Survey (PALS). * Less than 15 years old.
Note: A respondent can indicate more than one disability for a child.

4.   Additional Costs for Persons with Diabilities (PWD) and Barriers

This Section examines the information regarding the additional out-of-pocket expenses of CWDs by disabilities. It will also discuss potential barriers that prohibit families with CWDs from working. It should be noted that there is no information available for CWOD on these issues since these questions were only asked to CWDs.

4.1   Additional Living Costs for Families of CWDs

This Section presents a descriptive analysis of the proportion of families with CWDs with additional out-of-pocket expenses. We also compare the proportion of families with CWDs with additional out-of-pocket expenses by severity of disability. It is inferred that out-of-pocket expenses may have a negative effect on saving for families with CWDs. Additional expenses could also mean the need for

additional revenue in order to contribute to an RSDP. The information collected by the PALS on the additional living costs is described as out-of-pocket expenses not reimbursed by any insurance or government program.

A series of six models were constructed to identify if the severity of disabilities was a significant predictor of out-of-pocket expenses among PWDs, when taking into account other socio-economic factors. The models could be described as:

Presence of out-of-pocket expenses (dummy) = X'α + β (severity of disabilities) + ε

In this equation, 'X' was defined as a vector that includes a constant and a set of CWDs characteristics such as age, sex, as well as family characteristics such as marital status, income, etc., while 'α' is a vector of coefficients. Beta (β) captures the differences between those with less severe disabilities and those with more severe disabilities, using a dummy variable. Each model shows the results of a probabilistic model (using probit regressions) to identify if the severity of disabilities and the characteristics of CWDs and their families impact the probability of having out-of-pocket expenses. The detailed regression results are presented in Tables B-1 to B-6.

In terms of direct expenses for prescription and non-prescription drugs, Table 3 reveals that the percentage of those with out-of-pocket expenses on drugs increased with the severity of disabilities, with 41.4% of those with more severe disabilities having out-of-pocket expenses compared to 34.3% for those with less severe disabilities. The statistical analysis confirms that those with more severe disabilities had significantly more frequent out-of-pocket expenses than those with less severe disabilities by 9.2 percentage points when taking into account other factors. Other significant factors in the model (see Table B-1) were mainly gender and age. Families with younger CWDs were more likely to have out-of-pocket expenses related to drugs compared to families with CWDs aged 5 years and older. Families that either rented or were low-income were also less likely to have out-of-pocket expenses related to drugs compared to families who owned their dwelling or with higher income. The present data could not address the reason for this relationship. Table 3 confirms that families with children with more severe disabilities had higher expenses on drugs ($1,000 and more) (22.0%) compared to families with children with less severe disabilities (11.1%).

Although a lower percentage of families with children with more severe disability (23.5%) had out-of-pocket expenses related to the purchase and maintenance of aids and specialized equipment than for drugs, it was also estimated that the percentage difference between the two groups was statistically significant (by 16.5 percentage points - see Table B-2).[9] Nonetheless, it is unclear whether families with children with more severe disabilities had disbursed a higher

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[9] The questions related to out-of-pocket expenses related to purchase and maintenance of aids and specialized equipment were only asked to families with a CWD aged more than 4 years old.

amount than those with children with less severe disabilities as illustrated in table 3.

Table 3 examines if the proportion of families with CWDs having out-of-pocket expenses related to health care and social services was relatively stable among the two different groups based on severity of disability (from 19.9% to 28.2%). After taking into account some socio-demographic factors, the statistical analysis reveals that those with more severe disabilities more often had out-of-pocket expenses related to health care and service than those with less severe disabilities by 9.3 percentage points. The statistical analysis in Table B-3 shows that families with higher-income were more likely to have indicated out-of-pocket expenses than families with lower-income. Families with older children (10 to 14 years old) were less likely to have out-of-pocket expenses for health care and social services compared to families with younger children. Table 3 also reveals that families with children with more severe disabilities have higher out-of-pocket expenses ($1,000 and more – 36.7%) than those with less severe disabilities ($1,000 and more – 22.8%).

Regarding additional expenses for transportation, it appears that a greater proportion of families with children with more severe disabilities (38.2%) had out-of-pocket expenses in this regard compared to those with children with less severe disabilities (18.4%). The difference in the average proportion of those having out-of-pocket expenses related to transport was significant – by 17.2 percentage points. As observed for the other out-of-pocket expenses, families with children with more severe disabilities appear to have higher expenses than those with children with less severe disabilities.

Table 3 also reveals that the proportion of families with CWDs that have out-of-pocket expenses related to help with everyday housework noticeably increased with the severity of the disabilities (from 3.6% to 17.3%). However, Table 3 indicates that families with CWDs with less severe disabilities had higher disbursements than families with CWDs with more severe disabilities.

When cumulating all families with out-of-pocket expenses together, Table 3 shows that approximately 95% of families with CWDs had at least one out-of-pocket expense regardless of the degree of severity of the disabilities. The regression results corroborate this finding by revealing that there was no difference in the probability of having one out-of-pocket expense by the degree of severity of disability. Finally, Table 3 also shows that the proportion of families with CWDs having 3 or more types of out-of-pocket expenses was higher among those with more severe disabilities (25.5%) than among those with less severe disabilities (9.9%).

Table 3A – Out-of-Pocket expenses by Families with Children with Disabilities related to the Child's Disabilities by Degree of Severity of the Disabilities – 2006

	Total	Less severe	More Severe	Difference in % points between Less severe and More Severe (See B-1 to B-6)

In the past 12 months, did you (....) have any out-of-pocket or direct expenses for prescription and non-prescription drugs? Include amounts not covered by insurance such as exclusions, deductibles and expenses over limits. Exclude payments for which you have (.... has) been or will be reimbursed by any insurance or government program.

	Total	Less severe	More Severe	
No, out-of-pocket expenses	62.7	65.7	58.6	--
Yes, out-of-pocket expenses	37.3	34.3	41.4	9.2*
less than $100	26.3	32.0	19.6	--
$100 to less than $200	21.4	23.2	19.2	--
$200 to less than $500	22.3	17.5	27.8	--
$500 to less than $1,000	14.0	16.2	11.4	--
$1,000 to less than $2,000	10.0	8.1	12.3	--
$2,000 or more	6.1	3.0	9.7	--

In the past 12 months, did you (....) have any out-of-pocket or direct expenses for the purchase and maintenance of aids and specialized equipment?

	Total	Less severe	More Severe	
No, out-of-pocket expenses	84.6	90.4	76.5	--
Yes, out-of-pocket expenses	15.4	9.6	23.5	16.1*
less than $200	24.4	31.9	20.1	--
$200 to less than $500	25.3	26.2	24.8	--
$500 to less than $1,000	20.8	13.7	24.9	--
$1,000 to less than $2,000	13.1	7.4	16.4	--
$2,000 or more	16.4	20.9	13.8	--

In the past 12 months, did you (....) have any out-of-pocket or direct expenses for the health care and social services you (he/she) received? Include amounts not covered by insurance such as exclusions, deductibles and expenses over limits. Exclude payments for which you have (.... has) been or will be reimbursed by any insurance or government program.

	Total	Less severe	More Severe	
No, out-of-pocket expenses	76.6	80.1	71.8	--
Yes, out-of-pocket expenses	23.4	19.9	28.2	9.3*
less than $200	21.6	30.1	13.3	--
$200 to less than $500	25.5	26.6	24.4	--
$500 to less than $1,000	23.1	20.5	25.7	--
$1,000 to less than $2,000	12.5	12.0	13.1	--
$2,000 or more	17.2	10.8	23.6	--

Source: Statistics Canada – Participation and Activity Limitation Survey (PALS). "*" means significant at 5%

Table 3B – Out-of-Pocket expenses by Families with Children with Disabilities related to the Child's Disabilities by Degree of Severity of the Disabilities – 2006

	Total	Less severe	More Severe	Difference in % points between Less severe and More Severe (See B-1 to B-6)
You mentioned earlier that you usually receive help with everyday housework or help to allow you to attend to other family or personal activities. In the past 12 months, did you or your family have any out-of-pocket expenses (that are not reimbursed by any sources) for this help.				
No, out-of-pocket expenses	90.7	96.4	82.7	--
Yes, out-of-pocket expenses	9.3	3.6	17.3	15.7*
less than $500	37.8	20.3	42.9	--
$500 to less than $1,000	21.0	17.6	21.9	--
$1,000 to less than $2,000	14.3	17.4	13.4	--
$2,000 or more	27.0	44.4	21.8	--
In the past 12 months, did you (....) have any out-of-pocket or direct expenses for transportation; for example, travel to and from treatment, therapy or other medical or rehabilitation services; or extra expenses due to the need for more expensive transportation? Include amounts not covered by insurance such as exclusions, deductibles and expenses over limits. Exclude payments for which you have (.... has) been or will be reimbursed by any insurance or government program.				
No, out-of-pocket expenses	73.4	81.6	61.8	--
Yes, out-of-pocket expenses	26.6	18.4	38.2	17.2*
less than $100	32.9	39.3	28.5	--
$100 to less than $200	22.4	21.2	23.1	--
$200 to less than $500	25.9	26.1	25.7	--
$500 to less than $1,000	9.5	7.4	10.9	--
$1,000 to less than $2,000	5.4	4.5	6.0	--
$2,000 or more	4.0	1.6	5.7	--
Have at least one of the above listed out-of-pocket expenses.				
No	4.7	5.1	4.2	--
Yes	95.3	94.8	95.8	--
Have at least one of the above listed out-of-pocket expenses.				
0	4.7	5.1	4.2	--
1	47.1	55.4	38.4	--
2	30.7	29.6	31.8	--
3	12.6	8.7	16.7	--
4 or more	4.9	1.3	8.8	--

Source: Statistics Canada – Participation and Activity Limitation Survey (PALS). "*" means significant at 5%

4.2 Barriers preventing Parents or Guardians of CWDs from working

Section 4.1 showed that families with CWDs with more severe disabilities tend to have more additional out-of-pocket expenses than families with CWDs with less severe disabilities. Consequently, it might be more difficult for the former families

to contribute to an RDSP as they incur more expenses. Furthermore, it is essential to examine whether there are more barriers to prevent them from contributing to an RDSP.

Being prevented from working could be a barrier to contribute to an RDSP (facing more difficulty to generate savings), this section attempts to identify several work-related barriers for families with CWDs. The models used in Section 4.1 are detailed in Appendix C.

Based on the results from Table 4, it appears that 26.4% of families had someone in the family who did not take a job in order to care for CWDs. Furthermore, 39.8% of families with children with more severe disabilities faced this situation compared to 16.4% for those with children with less severe disabilities. Similarly, 21.6% of families with CWDs had a family member who quit their job. This proportion reaches 32.9% among families with children with more severe disabilities, which was 18.0 percentage points higher compared to those with children with less severe disabilities. The results from PALS also reveal that 11.0% of families with children with more severe disabilities had a family member who had lost a job due to the condition of their child, 8 percentage points higher than the other group.

Many families with CWDs were facing other types of difficulties related to their job. For instance, close to 20% of families with CWDs had a family member who turned down a promotion or a better job due to their child's condition. Thus, those with children with more severe disabilities were also more likely to have turned down a job promotion by 21.0 percentage points compared to those with children with less severe disabilities. It should be noted that most of the other factors were not significant (see Table C-4), with the exception of income.

Approximately 50% of the families with CWDs had a family member who had to modify their working schedule. As was the case for the other questions, the prevalence was greater among families who had children with more severe disabilities than among those who had children with less severe disabilities. As expected, those with children with more severe disabilities were more likely to reduce their number of working hours compared to those who had children with less severe disabilities.

Families with children with more severe disabilities have on average lower income (see Table 1) and more often face work-related consequences. Their situation may have prevented some of them from generating savings and limited their ability to contribute to an RDSP. Table 4 also seems to corroborate this assumption as 30.4% of families with children with more severe disabilities had financial problems because of their child's condition during the last 12 months, while 8.6% of families with children with less severe disabilities were in this situation.

Table 4 – Impact of a Child's Condition on Employment by Degree of Severity of the Disabilities – 2006

	Total	Less severe	More Severe	Difference in % points between Less severe and More Severe (See C-1 to C-7)
Because of [CHILD]'s condition or health problem, has anyone in your family				
Not taken a job in order to take care of [CHILD]?				
Yes	26.4	16.4	39.8	21.9*
No	73.6	83.6	60.2	--
Quit working (other than normal maternity or paternity leave)?				
Yes	21.6	13.2	32.9	18.0*
No	78.4	86.8	67.1	--
Lost a job?				
Yes	6.2	2.6	11.0	8.0*
No	93.8	97.4	89.0	--
Turned down a promotion or a better job?				
Yes	19.7	10.5	31.9	21.0*
No	80.3	89.5	68.1	--
Changed work hours to different times of day or night?				
Yes	36.5	26.9	49.4	23.0*
No	63.5	73.1	50.6	--
Worked fewer hours?				
Yes	38.4	29.1	50.8	22.3*
No	61.6	70.9	49.2	--
Who was most affected by these work-related issues?				
Mostly the mother	64.3	64.4	64.1	--
Mostly the father	8.3	8.9	7.9	--
Both mother and the				--
father	24.7	24.8	24.6	
Other	2.7	1.9	3.4	--
During the past 12 months, has your family had financial problems because of (____)'s condition or health problem?				
Yes	17.9	8.6	30.4	20.3*
No	82.1	91.4	69.6	--
# Observations	*4,540*	*2,670*	*1,870*	--

Source: Statistics Canada – Participation and Activity Limitation Survey (PALS). "*" means significant at 95%.

5. Conclusions

This is one in a series of studies to support the Summative Evaluation of the CDSP. It was developed to gather background information on families with children with disabilities as well as evidence on additional living costs and work-related issues for these families.

Using the microdata file from the PALS survey, the study demonstrates that families with children with disabilities which are severe tend to have further additional expenses (more often out-of-pocket expenses) than families with children with less severe disabilities.

They also faced more work-related issues and challenges and had more financial hardships compared to those with children with less severe disabilities.

Appendix A – Econometric Results (Socio-Demographic Characteristics)

The following section discusses the estimated models described in Appendix A and Appendix B. Table A-1 to Table A-2 report results in Section 3.1 and Tables B-1 to B-6 report results using the model described in Section 4.1. The following shows the variables and functional forms used in the baseline model.

<u>Definition of Variables:</u>

CWDs	=	dummy for CWDs (dependent variable)
Dgree2	=	dummy for CWDs with more severe disabilities (dep. variable)
drugs	=	dummy for expenses on drugs (dependent variable)
equip	=	dummy for expenses on equipment (dependent variable)
health	=	dummy for expenses on health (dependent variable)
trans	=	dummy for expenses on transportation (dependent variable)
help	=	dummy for expenses on dwelling modification (dependent var.)
outofpocket	=	dummy for out-of-pocket expenses of any types (dependent var.)
sex	=	dummy for child gender
age1	=	dummy for respondent aged less than 5 years old
age2	=	dummy for respondent aged between 5 to 9 years old
age3	=	dummy for respondent aged between 10 to 14 years old
single	=	dummy for single, divorced, separated, and widowed person
couple	=	dummy for couple (reference)
abderr	=	dummy for aboriginals
immderr	=	dummy for immigrants
pers2	=	dummy for 2 individuals in the family
pers3	=	dummy for 3 individuals in the family
pers4	=	dummy for 4 and more individuals in the family (reference)
rural	=	dummy for living in rural area (reference)
RUIndFG	=	dummy for living in urban area
tenur	=	dummy for living in owned dwelling (reference)
hinc0_20	=	dummy for household income between $0 and $19,999
hinc20_40	=	dummy for household income between $20,000 and $39,999
hinc40_50	=	dummy for household income between $40,000 and $59,999
hinc60_80	=	dummy for household income between $60,000 and $79,999
hinc80&+	=	dummy for household income $80,000 and more

The following functional form has been used in the Probit regressions.

CWDs = F1(sex, age1, age2, age3, single, coup, RUIndFG, abderr, immder,
            pers2, pers3, pers4, tenur, hinc0_20, hinc20_40, hinc40_60,
            hinc60_80, hinc80more)

TABLE A-1: Bootstrap - Marginal Effect of the characteristics of a Child with Disabilities, Probit Regression

Iteration 0: log pseudolikelihood = -4752.1164					Number of obs	7040
Iteration 1: log pseudolikelihood = -4284.4489					Wald chi2(13)	277.41
Iteration 2: log pseudolikelihood = -4281.5449					Prob > chi2	0
Iteration 3: log pseudolikelihood = -4281.5443					Pseudo R2	0.099
Probit regression, reporting marginal effects						
Log pseudolikelihood = -4281.5443						
CWDs	**dF/dx**	**Std. Err.**	**z**	**P>z**	**[95% Conf.**	**Interval]**
sex*	-0.1163	0.0191	-6.08	0.000	-0.1537	-0.0788
age1*	-0.2467	0.0241	-10.25	0.000	-0.2938	-0.1995
age3*	0.0370	0.0218	1.69	0.091	-0.0058	0.0798
ruindfg*	0.0881	0.0246	3.58	0.000	0.0398	0.1364
abderr*	0.0733	0.0371	1.98	0.048	0.0006	0.1459
immder*	-0.3653	0.0342	-10.69	0.000	-0.4323	-0.2983
pers2*	0.0015	0.0483	0.03	0.975	-0.0932	0.0962
pers3*	-0.0190	0.0251	-0.76	0.448	-0.0681	0.0301
tenur*	0.0287	0.0242	1.19	0.236	-0.0188	0.0762
hinc0_20*	0.0629	0.0368	1.71	0.088	-0.0093	0.1350
hinc2~40*	0.0266	0.0305	0.87	0.383	-0.0332	0.0864
hinc6~80*	0.0584	0.0309	1.89	0.059	-0.0022	0.1190
hinc80~e*	0.0122	0.0277	0.44	0.660	-0.0420	0.0663

Source: Statistics Canada – Participation and Activity Limitation Survey (PALS) – tabulation HRSDC.

TABLE A-2: Bootstrap - Marginal Effect of being a Child with More Severe Disabilities, Probit Regression

Iteration 0: log pseudolikelihood = -2678.4291				Number of obs	3930
Iteration 1: log pseudolikelihood = -2639.113				Wald chi2(24)	31.12
Iteration 2: log pseudolikelihood = -2639.1041				Prob > chi2	0.0011
				Pseudo R2	0.0147
Probit regression, reporting marginal effects					
Log pseudolikelihood = -2639.1041					

CWDs	dF/dx	Std. Err.	z	P>z	[95% Conf.	Interval]
sex*	-0.0982	0.0281	-3.49	0.000	-0.1533	-0.0430
age1*	-0.0890	0.0406	-2.19	0.028	-0.1686	-0.0095
age3*	-0.0781	0.0265	-2.95	0.003	-0.1300	-0.0262
ruindfg*	-0.0214	0.0305	-0.70	0.483	-0.0813	0.0384
abderr*	0.1033	0.0475	2.17	0.030	0.0101	0.1964
immder*	0.0512	0.0737	0.70	0.487	-0.0931	0.1956
sing*	0.0263	0.0422	0.62	0.532	-0.0563	0.1090
pers2*	-0.0231	0.0652	-0.35	0.723	-0.1509	0.1046
pers3*	0.0108	0.0349	0.31	0.756	-0.0576	0.0793
tenur*	-0.0081	0.0338	-0.24	0.810	-0.0745	0.0582
hinc0_20*	0.0304	0.0568	0.53	0.593	-0.0810	0.1417
hinc2~40*	0.0331	0.0426	0.78	0.437	-0.0503	0.1166
hinc6~80*	0.0310	0.0428	0.72	0.470	-0.0530	0.1149
hinc80~e*	-0.0050	0.0367	-0.14	0.891	-0.0769	0.0668

Source: Statistics Canada – Participation and Activity Limitation Survey (PALS) – tabulation HRSDC.

Appendix B – Econometric Results (Out-of-Pocket Expenses)

The following functional form has been used in the Probit regressions.

Out-of-pocket expenses = F1(dgree, sex, age1, age2, age3, age4 age5, divsep,
single, coup, RUIndFG, lesshs, hs, trade, colle, univ, nokid, tenurp,
work, nowork, prevent, hinc0_10, hinc10_20, hinc20_30,
hinc30_40, hinc50_60, hinc60_80, hinc80more)

TABLE B-1: Bootstrap - Marginal Effect of Families with Children with Disabilities having Out-Of-Pocket Expenses for Prescription and Non-Prescription Drugs, Probit Regression

Iteration 0: log pseudolikelihood = -2589.0296				Number of obs	3910
Iteration 1: log pseudolikelihood = -2526.0423				Wald chi2(14)	50.49
Iteration 2: log pseudolikelihood = -2525.9555				Prob > chi2	0
Iteration 3: log pseudolikelihood = -2525.9555				Pseudo R2	0.0244
Probit regression, reporting marginal effects					
Log pseudolikelihood = -2525.9555					
drugs	**dF/dx**	**Std. Err.**	**z**	**P>z**	**[95% Conf.**	**Interval]**
cwdhigh*	0.0921	0.0250	3.68	0.000	0.0430	0.1411
sex*	0.0376	0.0266	1.41	0.158	-0.0146	0.0898
age1*	0.0757	0.0398	1.9	0.057	-0.0023	0.1536
age3*	-0.0094	0.0272	-0.35	0.729	-0.0628	0.0440
ruindfg*	0.0052	0.0287	0.18	0.857	-0.0511	0.0615
abderr*	0.0074	0.0444	0.17	0.868	-0.0797	0.0945
immder*	0.0411	0.0687	0.6	0.550	-0.0937	0.1758
sing*	-0.0410	0.0402	-1.02	0.308	-0.1197	0.0378
pers2*	0.2499	0.0615	4.07	0.000	0.1294	0.3704
pers3*	0.0490	0.0360	1.36	0.174	-0.0217	0.1196
tenur*	-0.0794	0.0329	-2.41	0.016	-0.1439	-0.0149
hinc0_20*	-0.1157	0.0539	-2.15	0.032	-0.2215	-0.0100
hinc2~40*	0.0540	0.0395	1.37	0.172	-0.0235	0.1316
hinc6~80*	-0.0087	0.0412	-0.21	0.833	-0.0895	0.0721
hinc80~e*	-0.0093	0.0358	-0.26	0.796	-0.0795	0.0610

Source: Statistics Canada – Participation and Activity Limitation Survey (PALS) – tabulation HRSDC.

TABLE B-2: Bootstrap - Marginal Effect of Families with Children** with Disabilities having Out-Of-Pocket Expenses for Purchase and Maintenance of Aids and Specialized Equipment, Probit Regression

Iteration 0: log pseudolikelihood = -1612.6248					Number of obs	3380
Iteration 1: log pseudolikelihood = -1510.1018					Wald chi2(14)	71.3
Iteration 2: log pseudolikelihood = -1509.0816					Prob > chi2	0
Iteration 3: log pseudolikelihood = -1509.081				Pseudo R2	0.0642
Probit regression, reporting marginal effects						
Log pseudolikelihood = -1509.81						
equip	**dF/dx**	**Std. Err.**	**z**	**P>z**	**[95% Conf.**	**Interval]**
cwdhigh*	0.1605	0.0212	7.58	0.000	0.1190	0.2020
sex*	0.0432	0.0231	1.87	0.062	-0.0021	0.0885
age3*	0.0392	0.0205	1.91	0.056	-0.0010	0.0794
ruindfg*	-0.0064	0.0255	-0.25	0.801	-0.0564	0.0435
abderr*	0.0289	0.0419	0.69	0.490	-0.0533	0.1111
immder*	-0.0754	0.0654	-1.15	0.249	-0.2036	0.0527
sing*	0.0231	0.0336	0.69	0.491	-0.0428	0.0891
pers2*	0.0437	0.0528	0.83	0.408	-0.0598	0.1471
pers3*	-0.0202	0.0309	-0.65	0.513	-0.0808	0.0403
tenur*	-0.0696	0.0304	-2.29	0.022	-0.1291	-0.0101
hinc0_20*	-0.0295	0.0500	-0.59	0.555	-0.1275	0.0685
hinc2~40*	0.0044	0.0374	0.12	0.907	-0.0690	0.0777
hinc6~80*	0.0120	0.0336	0.36	0.721	-0.0538	0.0778
hinc80~e*	0.0528	0.0303	1.74	0.081	-0.0065	0.1121

Source: Statistics Canada – Participation and Activity Limitation Survey (PALS) – tabulation HRSDC.

** This question was asked to families with children older than 4 years old.

TABLE B-3: Bootstrap - Marginal Effect of Families with Children with Disabilities having Out-Of-Pocket Expenses for Health Care and Social Services, Probit Regression

Iteration 0: log pseudolikelihood = -2141.9219					Number of obs	3920
Iteration 1: log pseudolikelihood = -2035.7752					Wald chi2(15)	76.25
Iteration 2: log pseudolikelihood = -2034.9688					Prob > chi2	0
Iteration 3: log pseudolikelihood = -2034.9686					Pseudo R2	0.0499
Probit regression, reporting marginal effects						
Log pseudolikelihood = -2034.9686						

health	dF/dx	Std. Err.	z	P>z	[95% Conf.	Interval]
cwdhigh*	0.0928	0.0219	4.25	0.000	0.0500	0.1357
sex*	0.0608	0.0230	2.65	0.008	0.0158	0.1058
age1*	-0.0167	0.0343	-0.49	0.627	-0.0839	0.0505
age3*	-0.0484	0.0229	-2.11	0.035	-0.0932	-0.0035
ruindfg*	-0.0559	0.0258	-2.17	0.030	-0.1064	-0.0053
abderr*	-0.0038	0.0503	-0.08	0.940	-0.1024	0.0948
immder*	0.0384	0.0605	0.63	0.526	-0.0802	0.1569
sing*	0.0208	0.0373	0.56	0.577	-0.0523	0.0938
pers2*	0.1581	0.0542	2.92	0.004	0.0519	0.2643
pers3*	0.0161	0.0313	0.51	0.608	-0.0453	0.0775
tenur*	-0.1146	0.0300	-3.82	0.000	-0.1735	-0.0558
hinc0_20*	-0.0218	0.0517	-0.42	0.674	-0.1230	0.0795
hinc2~40*	0.0134	0.0386	0.35	0.728	-0.0622	0.0891
hinc6~80*	0.0819	0.0340	2.4	0.016	0.0151	0.1486
hinc80~e*	0.1012	0.0291	3.48	0.001	0.0442	0.1582

Source: Statistics Canada – Participation and Activity Limitation Survey (PALS) – tabulation HRSDC.

TABLE B-4: Bootstrap - Marginal Effect of Families with Children** with Disabilities having Out-Of-Pocket Expenses for Transportation, Probit Regression

Iteration 0: log pseudolikelihood = -2061.0068				Number of obs	3330
Iteration 1: log pseudolikelihood = -1967.1962				Wald chi2(14)	75.95
Iteration 2: log pseudolikelihood = -1966.9611				Prob > chi2	0
Iteration 3: log pseudolikelihood = -1966.9611				Pseudo R2	0.0456
Probit regression, reporting marginal effects					
Log pseudolikelihood = -1966.9611					

trans	dF/dx	Std. Err.	z	P>z	[95% Conf.	Interval]
cwdhigh*	0.1723	0.0248	6.94	0	0.1236	0.2210
sex*	-0.0126	0.0284	-0.44	0.659	-0.0683	0.0432
age3*	-0.0468	0.0252	-1.85	0.064	-0.0962	0.0027
ruindfg*	0.0869	0.0294	2.96	0.003	0.0294	0.1444
abderr*	0.0136	0.0468	0.29	0.77	-0.0780	0.1053
immder*	0.1146	0.0701	1.63	0.102	-0.0229	0.2521
sing*	0.0267	0.0426	0.63	0.531	-0.0567	0.1101
pers2*	0.0656	0.0641	1.02	0.306	-0.0600	0.1911
pers3*	0.0410	0.0362	1.13	0.258	-0.0300	0.1120
tenur*	-0.0056	0.0327	-0.17	0.863	-0.0696	0.0584
hinc0_20*	-0.1133	0.0506	-2.24	0.025	-0.2125	-0.0141
hinc2~40*	0.0442	0.0389	1.14	0.255	-0.0319	0.1204
hinc6~80*	-0.0274	0.0424	-0.65	0.518	-0.1104	0.0557
hinc80~e*	0.0064	0.0364	0.18	0.861	-0.0650	0.0778

Source: Statistics Canada – Participation and Activity Limitation Survey (PALS) – tabulation HRSDC.

** This question was asked to families with children older than 4 years old.

TABLE B-5: Bootstrap - Marginal Effect of Families with Children with Disabilities having Out-Of-Pocket Expenses for help with everyday housework or help to allow you to attend to other family or personal activities, Probit Regression

Iteration 0: log pseudolikelihood = -602.67565					Number of obs	900
Iteration 1: log pseudolikelihood = -576.07487					Wald chi2(15)	22.56
Iteration 2: log pseudolikelihood = -575.95012					Prob > chi2	0.0939
Iteration 3: log pseudolikelihood = -575.95009					Pseudo R2	0.0443
Probit regression, reporting marginal effects						
Log pseudolikelihood = -575.95009						
house	**dF/dx**	**Std. Err.**	**z**	**P>z**	**x-bar**	**[95% Conf.**	**Interval]**
cwdhigh*	0.1574	0.0604	2.61	0.009	0.0390	0.2757	0.1574
sex*	0.0009	0.0556	0.02	0.987	-0.1080	0.1099	0.0009
age1*	0.0217	0.0763	0.28	0.776	-0.1279	0.1713	0.0217
age3*	0.0217	0.0607	0.36	0.721	-0.0972	0.1406	0.0217
ruindfg*	-0.0452	0.0651	-0.69	0.488	-0.1727	0.0824	-0.0452
abderr*	0.0082	0.0932	0.09	0.93	-0.1745	0.1910	0.0082
immder*	-0.1627	0.1671	-0.97	0.33	-0.4902	0.1648	-0.1627
sing*	0.0189	0.0724	0.26	0.794	-0.1231	0.1609	0.0189
pers2*	-0.0144	0.1358	-0.11	0.916	-0.2805	0.2517	-0.0144
pers3*	0.0367	0.0660	0.56	0.578	-0.0927	0.1660	0.0367
tenur*	-0.1301	0.0685	-1.90	0.057	-0.2644	0.0041	-0.1301
hinc0_20*	0.0488	0.1079	0.45	0.651	-0.1628	0.2603	0.0488
hinc2~40*	0.0054	0.0884	0.06	0.952	-0.1679	0.1787	0.0054
hinc6~80*	0.0787	0.0834	0.94	0.345	-0.0848	0.2423	0.0787
hinc80~e*	0.1249	0.0715	1.75	0.081	-0.0153	0.2651	0.1249

Source: Statistics Canada – Participation and Activity Limitation Survey (PALS) – tabulation HRSDC.

TABLE B-6: Bootstrap - Marginal Effect of Having Out-Of-Pocket Expenses for any of the Five Types, Probit Regression

Iteration 0: log pseudolikelihood = -422.21998			Number of obs	2310
Iteration 1: log pseudolikelihood = -405.57624			Wald chi2(14)	24.55
Iteration 2: log pseudolikelihood = -404.5094			Prob > chi2	0.0393
Iteration 3: log pseudolikelihood = -404.50661			Pseudo R2	0.042
Probit regression, reporting marginal effects				
Log pseudolikelihood = -404.50661				

outofpocket	dF/dx	Std. Err.	z	P>z	x-bar	[95% Conf.	Interval]
cwdhigh*	0.0001	0.0120	0.01	0.993	-0.0234	0.0236	0.0001
sex*	-0.0106	0.0111	-0.95	0.341	-0.0324	0.0112	-0.0106
age3*	0.0051	0.0115	0.44	0.658	-0.0174	0.0276	0.0051
ruindfg*	0.0063	0.0133	0.48	0.632	-0.0196	0.0323	0.0063
abderr*	-0.0292	0.0261	-1.12	0.263	-0.0803	0.0219	-0.0292
immder*	0.0271	0.0252	1.07	0.282	-0.0223	0.0764	0.0271
sing*	-0.0095	0.0216	-0.44	0.659	-0.0518	0.0328	-0.0095
pers2*	0.0467	0.0323	1.45	0.148	-0.0166	0.1101	0.0467
pers3*	0.0069	0.0156	0.44	0.658	-0.0237	0.0376	0.0069
tenur*	0.0144	0.0192	0.75	0.453	-0.0233	0.0521	0.0144
hinc0_20*	-0.0579	0.0243	-2.38	0.017	-0.1056	-0.0102	-0.0579
hinc2~40*	0.0022	0.0190	0.12	0.907	-0.0350	0.0394	0.0022
hinc6~80*	0.0192	0.0206	0.93	0.352	-0.0212	0.0596	0.0192
hinc80~e*	0.0085	0.0191	0.44	0.657	-0.0289	0.0458	0.0085

Source: Statistics Canada – Participation and Activity Limitation Survey (PALS) – tabulation HRSDC.

Appendix C – Econometric Results (Barriers to Work)

The following section discusses the estimated models that are used to measure the impact of severe disability on different working barriers for PWDs. Table C-1 to C-7 reports results using the same model described in Appendix A, with a series of new dependent variables related with barriers to work. The following shows the variables and functional forms used in the baseline model.

Definition of Variables:
nojob	=	dummy for not taken a job (dependent var.)
quitjob	=	dummy for quitting a job (dependent variable)
lossjob	=	dummy for losing a job (dependent var.)
noprom	=	dummy for turning down a promotion or a better job (dep. var.)
changhr	=	dummy for changing work hours (dep. var.)
lesshr	=	dummy for working fewer hours (dep.var.)
finprob	=	dummy for having financial problems (dep. var.)

The following functional form has been used in the Probit regressions.

Barriers to work = F1(dgree, sex, age1, age2, age3, single, coup, RUIndFG, abderr, immder, pers2, pers3, pers4, tenur, hinc0_20, hinc20_40, hinc40_60, hinc60_80, hinc80more)

TABLE C-1: Bootstrap - Marginal Effect of Having a Family Member not Taking a Job in Order to Care for CWDs due to a Child's Condition, Probit Regression

Iteration 0: log pseudolikelihood = -2276.4891					Number of obs	3930
Iteration 1: log pseudolikelihood = -2107.2418					Wald chi2(15)	133.8
Iteration 2: log pseudolikelihood = -2106.4187					Prob > chi2	0
Iteration 3: log pseudolikelihood = -2106.4186					Pseudo R2	0.0747
Probit regression, reporting marginal effects						
Log pseudolikelihood = -2106.4186						
nojob	**dF/dx**	**Std. Err.**	**z**	**P>z**	**[95% Conf.**	**Interval]**
cwdhigh	0.2185	0.0198	11.01	0.000	0.1796	0.2574
sex	-0.0216	0.0241	-0.90	0.369	-0.0688	0.0255
age1	0.0336	0.0368	0.91	0.361	-0.0385	0.1056
age3	-0.0222	0.0234	-0.95	0.343	-0.0680	0.0237
ruindfg	-0.0249	0.0265	-0.94	0.348	-0.0768	0.0271
abderr	0.0074	0.0430	0.17	0.863	-0.0769	0.0917
immder	0.0461	0.0554	0.83	0.405	-0.0625	0.1547
sing	-0.0352	0.0355	-0.99	0.322	-0.1048	0.0344
pers2	-0.0741	0.0555	-1.33	0.182	-0.1828	0.0347
pers3	-0.0033	0.0302	-0.11	0.913	-0.0626	0.0560
tenur	-0.0130	0.0277	-0.47	0.639	-0.0673	0.0413
hinc0_20	0.0123	0.0445	0.28	0.782	-0.0749	0.0994
hinc20_40	0.1087	0.0345	3.15	0.002	0.0411	0.1762
hinc60_80	-0.0185	0.0361	-0.51	0.609	-0.0891	0.0522
hinc80more	-0.0147	0.0322	-0.46	0.649	-0.0778	0.0484

Source: Statistics Canada – Participation and Activity Limitation Survey (PALS) – tabulation HRSDC.

TABLE C-2: Bootstrap - Marginal Effect of Having a Family Member Quit Working (other than normal maternity and paternity leave) due to a Child's Condition , Probit Regression

Iteration 0: log pseudolikelihood = -2058.7148				Number of obs	3930
Iteration 1: log pseudolikelihood = -1904.2521				Wald chi2(15)	127.72
Iteration 2: log pseudolikelihood = -1902.9535				Prob > chi2	0
Iteration 3: log pseudolikelihood = -1902.953				Pseudo R2	0.0757
Probit regression, reporting marginal effects					
Log pseudolikelihood = -1902.953					

quitjob	dF/dx	Std. Err.	z	P>z	[95% Conf.	Interval]
cwdhigh	0.1799	0.0189	9.54	0.000	0.1430	0.2169
sex	-0.0508	0.0222	-2.28	0.022	-0.0944	-0.0072
age1	-0.0141	0.0309	-0.46	0.648	-0.0746	0.0464
age3	-0.0543	0.0219	-2.48	0.013	-0.0971	-0.0114
ruindfg	-0.0138	0.0241	-0.57	0.566	-0.0611	0.0334
abderr	0.0196	0.0410	0.48	0.632	-0.0608	0.1000
immder	0.0209	0.0648	0.32	0.747	-0.1061	0.1479
sing	-0.0120	0.0334	-0.36	0.720	-0.0774	0.0534
pers2	0.0236	0.0498	0.47	0.636	-0.0741	0.1213
pers3	-0.0233	0.0295	-0.79	0.429	-0.0812	0.0345
tenur	-0.0195	0.0287	-0.68	0.497	-0.0758	0.0368
hinc0_20	-0.0011	0.0466	-0.02	0.981	-0.0924	0.0902
hinc20_40	0.0345	0.0324	1.06	0.287	-0.0290	0.0980
hinc60_80	-0.0357	0.0339	-1.05	0.292	-0.1022	0.0307
hinc80more	-0.0899	0.0301	-2.98	0.003	-0.1490	-0.0309

Source: Statistics Canada – Participation and Activity Limitation Survey (PALS) – tabulation HRSDC.

TABLE C-3: Bootstrap - Marginal Effect of Having a Family Member Lose a Job due to a Child's Condition, Probit Regression

Iteration 0: log pseudolikelihood = -914.3074				Number of obs	3930
Iteration 1: log pseudolikelihood = -797.46179				Wald chi2(15)	71.74
Iteration 2: log pseudolikelihood = -791.04456				Prob > chi2	0
Iteration 3: log pseudolikelihood = -790.95371				Pseudo R2	0.1349
Probit regression, reporting marginal effects					
Log pseudolikelihood = -790.95371					
lostjob	**dF/dx**	**Std. Err.**	**z**	**P>z**	**[95% Conf.**	**Interval]**
cwdhigh	0.0797	0.0132	6.02	0.000	0.0538	0.1056
sex	0.0014	0.0131	0.11	0.915	-0.0243	0.0271
age1	-0.0056	0.0202	-0.28	0.782	-0.0452	0.0340
age3	0.0022	0.0126	0.17	0.864	-0.0225	0.0269
ruindfg	-0.0084	0.0143	-0.59	0.555	-0.0365	0.0196
abderr	0.0158	0.0243	0.65	0.514	-0.0317	0.0634
immder	0.0090	0.0306	0.29	0.769	-0.0510	0.0691
sing	-0.0289	0.0159	-1.82	0.069	-0.0601	0.0022
pers2	0.0201	0.0275	0.73	0.464	-0.0337	0.0740
pers3	0.0209	0.0165	1.27	0.204	-0.0114	0.0532
tenur	0.0524	0.0137	3.82	0.000	0.0255	0.0793
hinc0_20	0.0268	0.0201	1.33	0.183	-0.0126	0.0661
hinc20_40	0.0238	0.0170	1.4	0.161	-0.0095	0.0571
hinc60_80	0.0177	0.0195	0.91	0.365	-0.0206	0.0560
hinc80more	-0.0290	0.0189	-1.54	0.124	-0.0660	0.0079

Source: Statistics Canada – Participation and Activity Limitation Survey (PALS) – tabulation HRSDC.

TABLE C-4: Bootstrap - Marginal Effect of Having a Family Member Turn Down a Promotion or a Better Job due to a Child's Condition, Probit Regression

Iteration 0: log pseudolikelihood = -1959.5587				Number of obs	3930
Iteration 1: log pseudolikelihood = -1773.2617				Wald chi2(15)	138.97
Iteration 2: log pseudolikelihood = -1770.8699				Prob > chi2	0
Iteration 3: log pseudolikelihood = -1770.8673				Pseudo R2	0.0963
Probit regression, reporting marginal effects					
Log pseudolikelihood = -1770.8673					

noprom	dF/dx	Std. Err.	z	P>z	[95% Conf.	Interval]
cwdhigh	0.2100	0.0175	11.98	0.000	0.1757	0.2444
sex	0.0185	0.0215	0.86	0.390	-0.0237	0.0607
age1	0.0069	0.0309	0.22	0.823	-0.0537	0.0675
age3	0.0286	0.0222	1.29	0.198	-0.0149	0.0722
ruindfg	-0.0191	0.0247	-0.77	0.440	-0.0675	0.0294
abderr	0.0071	0.0428	0.17	0.868	-0.0767	0.0910
immder	0.0874	0.0492	1.78	0.075	-0.0090	0.1838
sing	0.0545	0.0316	1.72	0.085	-0.0075	0.1165
pers2	0.0783	0.0460	1.7	0.089	-0.0118	0.1684
pers3	0.0050	0.0279	0.18	0.857	-0.0497	0.0598
tenur	-0.0237	0.0253	-0.94	0.349	-0.0733	0.0259
hinc0_20	-0.1258	0.0397	-3.17	0.002	-0.2036	-0.0479
hinc20_40	-0.0236	0.0309	-0.77	0.443	-0.0841	0.0368
hinc60_80	0.0462	0.0308	1.5	0.133	-0.0140	0.1065
hinc80more	0.0380	0.0270	1.41	0.159	-0.0149	0.0909

Source: Statistics Canada – Participation and Activity Limitation Survey (PALS) – tabulation HRSDC.

TABLE C-5: Bootstrap - Marginal Effect of Having a Family Member Change Work Hours to Different Times of Day or Night due to a Child's Condition, Probit Regression

Iteration 0: log pseudolikelihood = -2587.0479					Number of obs	3930
Iteration 1: log pseudolikelihood = -2412.4047					Wald chi2(15)	139.08
Iteration 2: log pseudolikelihood = -2410.8977					Prob > chi2	0
Iteration 3: log pseudolikelihood = -2410.8963					Pseudo R2	0.0681
Probit regression, reporting marginal effects						
Log pseudolikelihood = -2410.8693						
changhr	**dF/dx**	**Std. Err.**	**z**	**P>z**	**[95% Conf.**	**Interval]**
cwdhigh	0.2299	0.0224	10.26	0.000	0.1860	0.2738
sex	-0.0014	0.0260	-0.06	0.956	-0.0525	0.0496
age1	0.0253	0.0378	0.67	0.504	-0.0489	0.0994
age3	0.0010	0.0265	0.04	0.969	-0.0509	0.0529
ruindfg	-0.0255	0.0311	-0.82	0.412	-0.0864	0.0354
abderr	-0.0112	0.0486	-0.23	0.818	-0.1065	0.0841
immder	-0.0557	0.0629	-0.88	0.376	-0.1790	0.0677
sing	-0.0048	0.0382	-0.13	0.899	-0.0796	0.0699
pers2	0.0183	0.0623	0.29	0.769	-0.1038	0.1404
pers3	0.0108	0.0336	0.32	0.747	-0.0550	0.0766
tenur	0.0267	0.0314	0.85	0.396	-0.0349	0.0882
hinc0_20	-0.2445	0.0519	-4.71	0.000	-0.3462	-0.1429
hinc20_40	0.0074	0.0383	0.19	0.847	-0.0677	0.0826
hinc60_80	0.0400	0.0384	1.04	0.298	-0.0353	0.1153
hinc80more	0.0798	0.0343	2.32	0.020	0.0125	0.1471

Source: Statistics Canada – Participation and Activity Limitation Survey (PALS) – tabulation HRSDC.

TABLE C-6: Bootstrap - Marginal Effect of Having a Family Member Work Fewer Hours due to a Child's Condition, Probit Regression

Iteration 0: log pseudolikelihood = -2623.3805					Number of obs	3930
Iteration 1: log pseudolikelihood = -2440.9934					Wald chi2(15)	147.69
Iteration 2: log pseudolikelihood = -2439.0601					Prob > chi2	0
Iteration 3: log pseudolikelihood = -2439.0581					Pseudo R2	0.0703
Probit regression, reporting marginal effects						
Log pseudolikelihood = -2439.0581						
lesshr	**dF/dx**	**Std. Err.**	**z**	**P>z**	**[95% Conf.**	**Interval]**
cwdhigh	0.2225	0.0227	9.82	0.000	0.1781	0.2669
sex	0.0236	0.0270	0.88	0.381	-0.0292	0.0764
age1	0.0212	0.0386	0.55	0.583	-0.0545	0.0968
age3	0.0066	0.0255	0.26	0.796	-0.0434	0.0566
ruindfg	0.0007	0.0312	0.02	0.981	-0.0605	0.0619
abderr	-0.0268	0.0510	-0.53	0.599	-0.1267	0.0731
immder	-0.1306	0.0735	-1.78	0.076	-0.2746	0.0134
sing	0.0690	0.0393	1.75	0.080	-0.0082	0.1461
pers2	0.0693	0.0594	1.17	0.243	-0.0471	0.1858
pers3	-0.0511	0.0326	-1.57	0.117	-0.1149	0.0127
tenur	-0.0246	0.0322	-0.76	0.445	-0.0877	0.0385
hinc0_20	-0.2245	0.0511	-4.39	0.000	-0.3247	-0.1243
hinc20_40	0.0170	0.0387	0.44	0.660	-0.0588	0.0929
hinc60_80	0.0897	0.0383	2.34	0.019	0.0147	0.1648
hinc80more	0.1157	0.0352	3.29	0.001	0.0467	0.1846

Source: Statistics Canada – Participation and Activity Limitation Survey (PALS) – tabulation HRSDC.

TABLE C-7: Bootstrap - Marginal Effect of Having Financial Problems in the Previous 12 Months due to a Child's Condition, Probit Regression

Iteration 0: log pseudolikelihood = -1849.9646				Number of obs		3920
Iteration 1: log pseudolikelihood = -1620.0858				Wald chi2(15)		190.51
Iteration 2: log pseudolikelihood = -1615.0757				Prob > chi2		0
Iteration 3: log pseudolikelihood = -1615.0621				Pseudo R2		0.127
Probit regression, reporting marginal effects						
Log pseudolikelihood = -1615.0621						
finprob	**dF/dx**	**Std. Err.**	**z**	**P>z**	**[95% Conf.**	**Interval]**
cwdhigh	0.2033	0.0181	11.26	0.000	0.1679	0.2387
sex	0.0247	0.0205	1.2	0.228	-0.0155	0.0649
age1	0.0449	0.0281	1.6	0.110	-0.0102	0.0999
age3	-0.0247	0.0210	-1.18	0.239	-0.0659	0.0164
ruindfg	-0.0288	0.0232	-1.24	0.214	-0.0742	0.0167
abderr	0.0259	0.0359	0.72	0.471	-0.0445	0.0963
immder	-0.0311	0.0557	-0.56	0.576	-0.1403	0.0780
sing	-0.0246	0.0290	-0.85	0.395	-0.0814	0.0321
pers2	0.0762	0.0452	1.69	0.092	-0.0124	0.1647
pers3	-0.0348	0.0270	-1.29	0.197	-0.0877	0.0181
tenur	0.0475	0.0235	2.02	0.043	0.0015	0.0936
hinc0_20	-0.0048	0.0434	-0.11	0.912	-0.0898	0.0802
hinc20_40	0.0262	0.0291	0.9	0.368	-0.0308	0.0833
hinc60_80	-0.0553	0.0299	-1.85	0.064	-0.1140	0.0033
hinc80more	-0.0923	0.0283	-3.26	0.001	-0.1477	-0.0369

Source: Statistics Canada – Participation and Activity Limitation Survey (PALS) – tabulation HRSDC.